

July 27, 1954

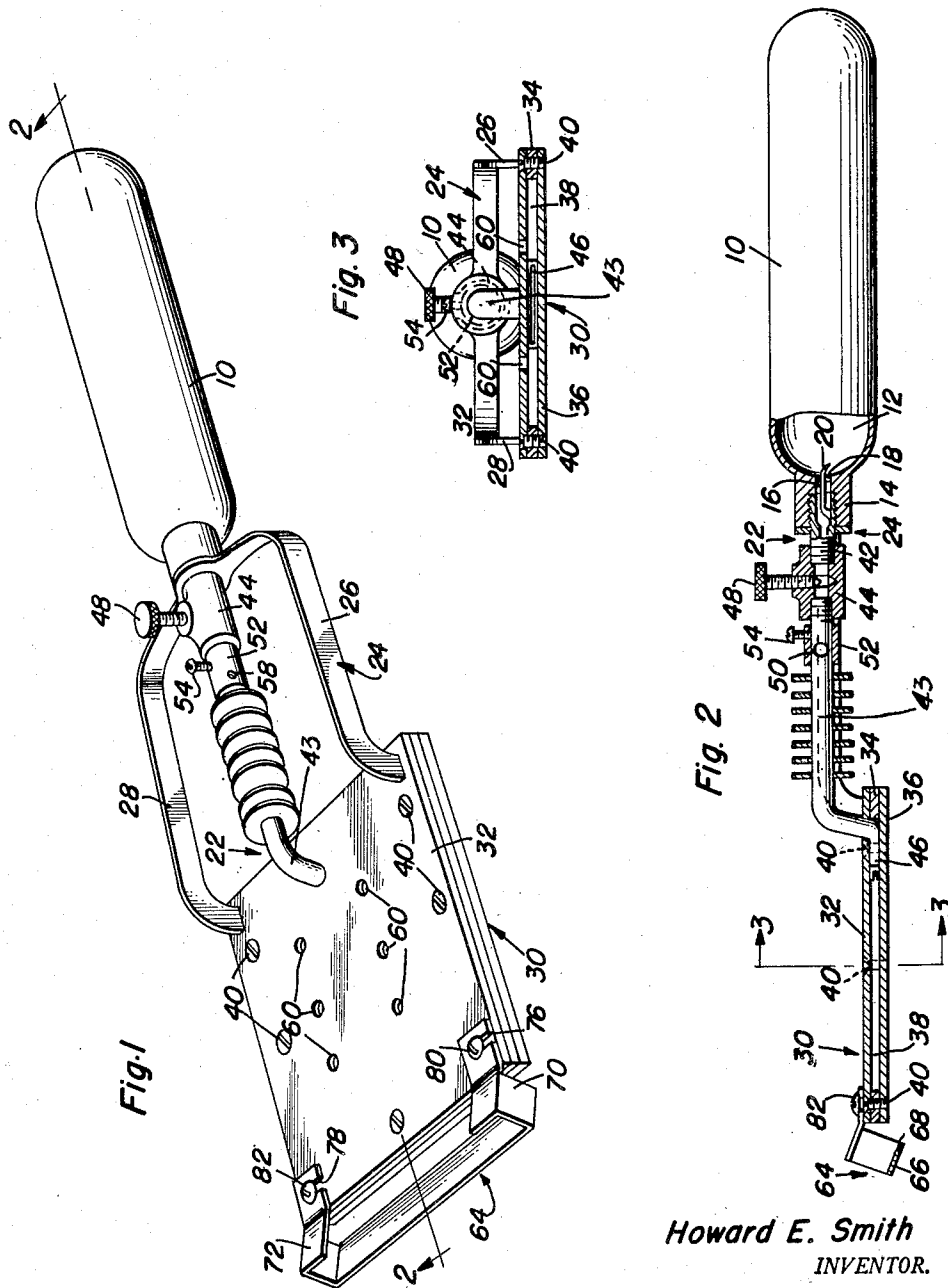
H. E. SMITH

2,684,531

PAINT REMOVER OF THE HEATER TYPE

Filed June 25, 1951

2 Sheets-Sheet 1



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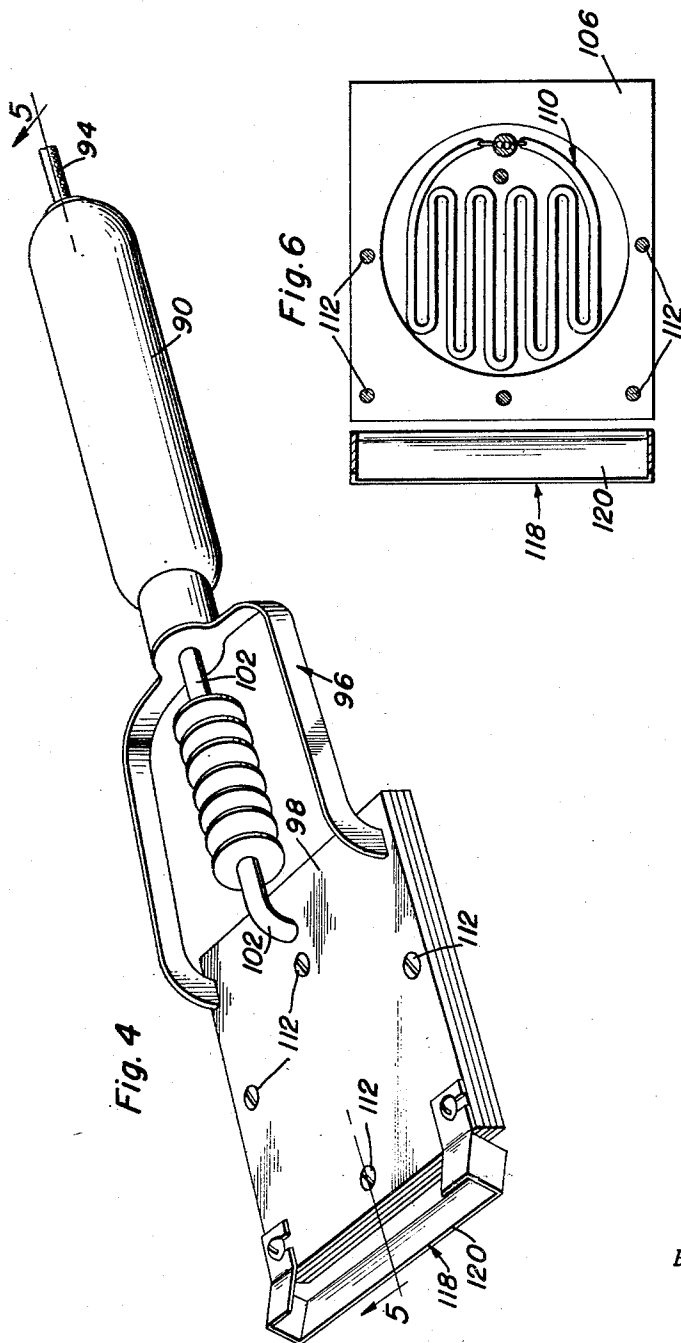
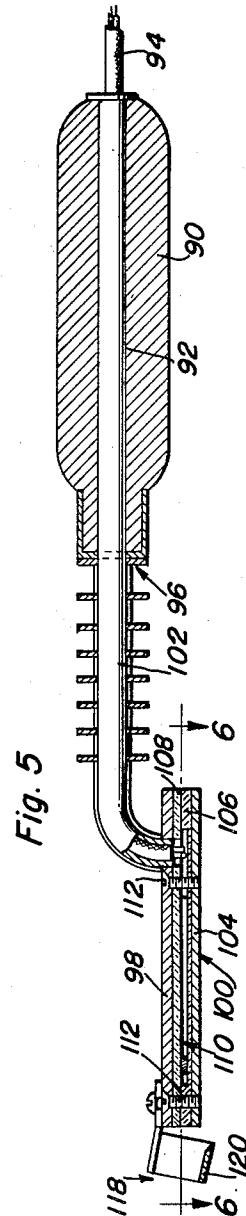
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UNITED STATES PATENT OFFICE

2,684,531

PAINT REMOVER OF THE HEATER TYPE

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Application June 25, 1951, Serial No. 233,467

5 Claims. (Cl. 30—140)

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This invention relates to improved paint removers.

An object of this invention is to provide a mechanically simple paint remover which includes a handle connected to a head, the head accommodating a heating unit of the gaseous fuel burning type or the electrically operative type, said head having a scraper blade which projects below the bottom surface of the heater plate of the head and which is readily removable for repair and/or replacement with blade or blades to fit the different types of mouldings.

Another object of this invention is to provide, a heater type paint remover having a handle for passage of an electrical conductor to conduct current for energizing the electric heater of the head or which alternatively considered constitutes a gas chamber to supply a heating unit of the gaseous fuel burning type with fuel.

Ancillary objects and features of importance will become apparent in following the description of the illustrated forms of the invention.

In the drawings:

Figure 1 is a perspective view of the device;

Figure 2 is a longitudinal sectional view of the device shown in Figure 1, parts shown in elevation and taken on the line 2—2 of Figure 1;

Figure 3 is a transverse sectional view taken substantially on the line 3—3 of Figure 2;

Figure 4 is a perspective view of a second form of the invention;

Figure 5 is a longitudinal sectional view, portions being shown in elevation, taken substantially on the line 5—5 of Figure 4, and

Figure 6 is a sectional view taken substantially on the line 6—6 of Figure 5.

In the accompanying drawings, attention is first invited to Figures 1—3, wherein there is disclosed a handle 10 provided with a gaseous fuel chamber 12 and which includes a neck portion 14, the neck portion having a passage 16 therein which communicates with the chamber 12. There is a seal 18 located in the passage 16, the seal being adapted to be pierced by the knife 20 when the conduit or tube 22 has its inner end threaded in the passage inasmuch as the knife 20 is fastened to the tube and projects outwardly from the inner end thereof to the required extent.

A yoke 24 is provided with legs 26 and 28 which are fastened at their outer ends to one end of a head 30. This head is made of three plates, 32, 34 and 36 which are disposed on top of each other, the plate 34 being in the form of a frame thereby providing a heating unit chamber 38

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within the head. Standard means, as the screws 40, are used to hold the plates assembled. The tube 22 is made of a first pipe length 42 adapted to be threadedly received in the passage 16, whereby the handle 10 may be removed and replaced with another one when the fuel in the chamber 12 has become exhausted, and a second pipe length 43 connected to the first pipe length by means of a valve body 44. The outer end of the pipe length 43 has a heating unit in the form of a gas nozzle or burner 46 connected therewith, this heating unit being located in the chamber 38 inasmuch as a portion of the pipe length 43 is passed through a suitable opening in the upper plate 32 of the head 30.

The valve body 44 has a valve chamber within which the needle valve 48 operates in order to control the rate of flow of fuel from the chamber 12 to the nozzle 46.

A lateral opening 50 is provided in the pipe length 43 and there is a sleeve 52 slidable thereover, this sleeve being supplied with a set screw 54 adapted to contact the outer surface of the pipe length 43 in order to hold the sleeve 52 in a proper adjusted position. An air inlet port 58 is provided in the sleeve 52 and is adapted to align with the lateral opening 50 whereby upon movement of the sleeve 52 the openings 58 and 50 may be regulated with respect to each other to allow the necessary quantity of air to be introduced in the conduit for supporting combustion within the head 30.

The upper plate 32 of the head 30 has a number of apertures 60 therein which may be used for igniting the fuel of the heating unit 46 and which are used to provide air to support combustion and/or exhaust.

The lower plate 36 serves as a heater plate. Disposed below the lower surface of the heater plate 36 is a scraper 64 which includes either a flat blade or a formed moulding blade 66 having a cutting edge 68 located adjacent to the burner plate 36. Means releasably connecting the scraper blade 66 to the head 30 are attached at the outer ends of the scraper blade 66 and comprise brackets 70 and 72 so shaped as to hold the blade 66 at an angle with respect to the bottom surface of the burner plate 36. The brackets 70 and 72 have slots 76 and 78 therein, each slot opening laterally of its respective bracket, so that the brackets 70 and 72 may be slipped under the heads of the screws 80 and 82 and then the screws tightened thereby releasably holding the scraper 64 in place on the head. The screws 80 and 82 are located in the head adjacent to the

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end thereof opposite from the end to which the yoke 24 is attached.

Attention is now invited to Figures 4-6. There is a handle 90 provided with a passage 92 which extends axially through it in order to accommodate the electrical conductor 94. A yoke 96 identical to the yoke 24, has its legs connected to the upper plate 98 of the head 100. Since the yoke is connected intermediate its ends to the tube 102 and the tube, being located in the passage 92, is connected to the handle 90, the yoke 96 holds the handle 90 fastened to the head 100. The head 100 includes the upper plate 98, a lower burner plate 104 and two intermediate heat and electric resistant plates 106 and 108, the plate 106 constituting a part of a heating unit 110, which in this instance includes a filament of the electrically operative type, this filament being connected to the conductor 94 which is adapted to be energized from suitable source of current. The plate 108 is of heat insulating material and is disposed above the filament 110 so that the burner plate 104 will derive most of the heat of the filament.

As in the first described embodiment, screws 112 identical in function and structure to the screws 40, are used. There is a scraper 118 located at the front end of the head 100, the scraper 118 being identical in function and construction to the scraper 64 and held fastened to the head 100 by a means identical to the means used in this connection in the embodiment of Figure 1. In regard to the scraper blades 66 and 120 of the scrapers 64 and 118 respectively, it will be noted that they are located below the lower surface of the lowest plate of the heads, slightly in front of them and at an angle of inclination with respect to the substantially planar lower surface of the lower burner plates.

In operation, the handle is grasped in the hand and the scraper disposed on the surface to be cleaned. By locating the device in this manner, the heat radiates from the burner plate of either embodiment and loosens the paint or other type of surface material to be removed and the device is then manually pulled so that the cutting edge of the scraper blade skims beneath the soft paint, and being at an angle raises the paint continuously from the surface, and in one movement.

In the embodiment of Figure 4, the electrical conductor 94 may be provided with a switch or thermostat for control purposes and has a plug to fit in a standard outlet. In the embodiment of Figure 1, the handle 10 is removable, whereby when the fuel from the chamber 12 is exhausted, it may be recharged when practical, or another handle may be substituted, this new handle having a full charge of gaseous fuel as would be the case of the recharged original handle.

Emphasis is to be attached to the self-cleaning blades and has to do with a construction which permits the removal of paint, putty and varnish in one continuous movement. The paint remover prepares and/or softens the paint before the self-cleaning blade is drawn forcibly into it. The construction is such that it permits replacement of component parts and allowance is made for detachable self-cleaning blades.

Having described the invention, what is claimed as new is:

1. A self-contained paint remover comprising a thermal head embodying an imperforate heat radiating plate adapted to be held in closed spaced proximity to the painted surface which

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is to be heated and then scraped, a yoke situated at the leading end of said head and having arms rigidly joined with said head and its bight portion spaced away from said leading end, said yoke being offset and essentially in a plane above the plane of said head, handle means abutting the bight portion of said yoke, a tube paralleling and coplanar with said arms and operatively connected at one end with said head, the opposite end of said tube abutting said bight portion, and a scraper unit at the trailing end of said head and having a blade portion with a scraping edge located in a plane spaced below said plate, said blade being at an oblique angle to the plane of said plate and having lateral end brackets detachably mounted on the trailing end portion of said head.

2. For use in heating a given painted surface to soften up the paint and ready it for removal and thereafter scraping of the thus loosened paint, a self-contained instrumentality for both heating and scraping the paint comprising a hollow head having heating means therein and embodying a flat bottom plate which is adapted to be held over the surface to be heated in close proximity to the surface, said head being generally rectangular in form and having leading and trailing ends, an oblique-angled scraper blade spaced from and paralleling the trailing end and having end brackets separably mounted on said trailing end, said blade having a scraping edge occupying a plane below the plane of said plate, a substantially U-shaped yoke disposed at the leading end and having horizontal arms parallel to said head, said arms being essentially in a plane above the plane of the head and rigidly joined at corresponding ends with the head, said yoke having a bight portion spaced from said leading end, tube means joined at one end to the leading end portion of said head and having its opposite end connected with said bight portion of the yoke, and a handle connected with said tube means and having one end portion abutting said bight portion of said yoke, said tube means being essentially coplanar with said arms and located in a position centrally between said arms.

3. For use in heating a given painted surface to soften up the paint and to thus ready it for removal and subsequent scraping, a portable self-contained device for both heating and scraping the paint comprising a hollow head having heating means therein and embodying a flat bottom plate which is adapted to be held over the surface to be heated in close proximity to said surface, said head being generally rectangular in form and having leading and trailing ends, an oblique-angled scraper blade spaced from and paralleling the trailing end and having end brackets separably mounted on said head, said blade having a scraping edge occupying a plane below the plane of said plate, a U-shaped yoke embodying arms with laterally bent ends secured to said head at the leading end of the head, the major portions of said arms projecting beyond said leading end in a plane above the plane of said head, said arms being joined at their opposite ends by a centrally apertured bight portion situated remotely from said head, conduit means located centrally between said arms in a plane with said arms and having one end laterally directed and joined to said head, the other end of said conduit means passing through and beyond the aperture in said bight portion, and a handle

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joined with said last named end and having one end directly abutting said bight portion.

4. The structure defined in claim 3 wherein said heating means is in the form of an electrical heating element, said conduit being a tube passing through a bore provided therefor in said handle, and an electrical conductor passing through said conduit and having one end electrically connected with said electric heating element.

5. The structure defined in claim 2 wherein the operatively joined one end of said tube is laterally bent toward said head and is extended through an opening provided therefor in the top of the head, and a gas-burner-nozzle carried by said extended end and confined for operation in said head.

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