Nov. 20, 1951 R. W. BOARMAN 2,575,613

OIL BURNER MOUNTING

Filed Feb. 21, 1950

FIG. 1

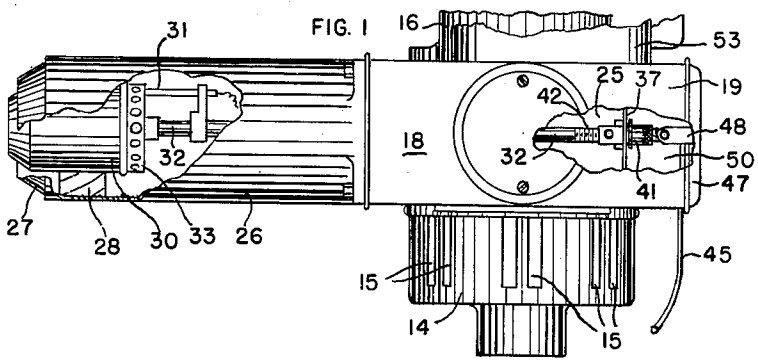


FIG. 2

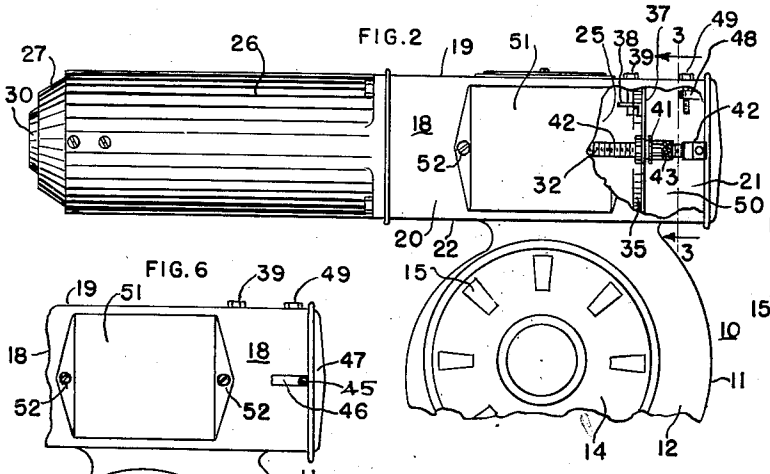


FIG. 3

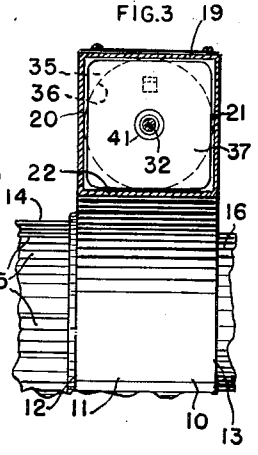


FIG. 6

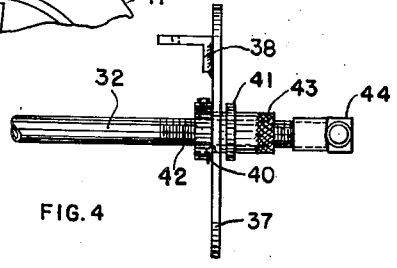


FIG. 4

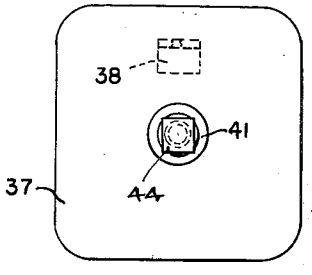


FIG. 5

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OIL BURNER MOUNTING

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1 Claim. (Cl. 158—76)

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This invention relates to mountings for oil burners and more particularly to an improved housing for oil burner units for domestic heating and the like.

It is the principal object of the present invention to provide improved mountings for oil burners which will be simple in construction, and which will permit of adjustment of the oil burner head, as well as renewal of the same, in a simple and expeditious manner.

It is a further object of the present invention to provide in apparatus of the character aforesaid, a closed chamber in which parts are accessible for an adjustment of the oil burner head.

Other objects and advantageous features of the invention will be apparent from the specification and claim.

The nature and characteristic features of the invention will be more readily understood from the following description, taken in connection with the accompanying drawings forming part hereof, in which:

Figure 1 is a top plan view of an oil burner in accordance with the present invention, parts being broken away to show the details of construction;

Fig. 2 is a fragmentary side elevational view of the burner shown in Fig. 1, parts also being broken away to show the details of construction;

Fig. 3 is a fragmentary sectional view taken approximately on the line 3—3 of Fig. 2;

Fig. 4 is a fragmentary view showing certain of the details of construction;

Fig. 5 is a view in elevation of the structure shown in Fig. 4; and

Fig. 6 is a fragmentary view of a portion of the structure shown in Fig. 2.

It should, of course, be understood that the description and drawings herein are illustrative merely, and that various modifications and changes may be made in the structure disclosed without departing from the spirit of the invention.

Like numerals refer to like parts throughout the several views.

Referring now more particularly to the drawings a fan housing 10 is provided, with a spiral or eccentric outer wall 11 and side walls 12 and 13. The fan housing 10 functions as a collector or scroll, and on one side thereof an inlet housing section 14 is provided, with inlet openings 15, and on the other side thereof a fan motor 16 is mounted for operating the fan rotor (not shown) in the housing 10.

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On the upper part of the housing 10 and preferably cast integrally therewith a casing section 18 is provided preferably having a top wall 19, side walls 20 and 21, and a bottom wall 22, to which the fan housing wall 11 is joined.

An interior air compartment or space 25 is provided, enclosed within the walls 19, 20, 21, and 22, and with which the interior of the fan housing 10 is in communication.

On the front ends of the walls 19, 20, 21, and 22, a blast tube 26 is mounted, of cylindrical shape, the interior of which is in communication with the compartment 25. The front end of the blast tube 26 has a frusto-conical deflector section 27 secured thereto, and in the interior of the blast tube 26, at the front end thereof, vanes 28 are provided in the customary manner for imparting a rotary movement to the air. The vanes 28 are adapted to slidably support a burner head 30, which may be of any preferred type.

One suitable burner head is that known in the trade as the "Shell" head and this is shown in the patent to Glendenning, No. 2,393,897.

The burner head 30 has, extending rearwardly therefrom, the usual ignition electrodes 31 and a fuel supply pipe 32 for supplying fuel for atomization, and has a sleeve 33 adjustable by manually turning the same for determining the quantity of air admitted to the interior of the head.

Within the interior of the casing section 20, a wall 35 is provided, spaced forwardly from the rear ends of the walls 19, 20, 21, and 22, and preferably adjacent the junction of the rear portion of the wall 11 and the wall 22. The wall 35 preferably has a central circular opening 36 therethrough and the remaining portions of the wall 35 provide abutments for engagement by a closure plate 37. The closure plate 37 by reason of its shape, complemental to that of the interior of the casing section 20, does not turn within the casing section 20.

The closure plate 37 preferably has a bracket 38 thereon, with which a bolt 39, insertible through the top wall 19, is adapted to engage for clamping the plate 37 in position and in engagement with the abutments provided by the wall 35. The plate 37 has a central opening 40 within which an adjusting sleeve 41 is mounted. The sleeve 41 is internally threaded for engagement with threads 42 provided on the rear portion of the fuel pipe 32 and has an operating portion 43 with a knurled end for manual engagement. At the rear end of the pipe 32, a fitting 44 is provided into which the fuel sup-

ply pipe 45 from the fuel pump (not shown) is connected for the delivery of the fuel. The fuel supply pipe 45 preferably passes through a slot 46 in the rear portion of the side wall 20, the front terminal of the slot being located rearwardly of the abutment wall 35.

At the rear end of the casing section 20, an end cover plate 47 is provided, preferably having a bracket 48 thereon, in which a bolt 49, extending through the wall 19 is adapted to engage, for drawing the cover plate 47 to closure position and holding the same.

A chamber 50 is thus provided between the closure plate 37 and the end cover plate 47 within which, upon removal of the cover plate 47, suitable forward and rearward adjustment of the burner head 30 may be effected.

Each of the side walls 20 and 21 is provided with a rectangular opening in communication with the compartment 25. At one of the openings, a cover plate 51 may be secured, by screws 52, in closing relation and, at the other, a closed control housing 53 may be secured in a similar manner, and within which the connections (not shown) to the electrodes 31 are provided.

The mode of operation will, it is thought, be clear from the foregoing.

It may be noted that by the provision of the rear chamber 50 within the housing 18 and with the removable cover plate 47, access may readily be had to the adjusting sleeve 41 for positioning the burner head 30, as desired, to obtain the best combustion conditions. At the same time the adjusting sleeve 41 is normally enclosed so that undesired tampering is avoided.

It may also be noted that upon removal of the cover plate 47, disconnection of the electrodes 31 and removal of bolt 39 the entire burner head 30 may be withdrawn for inspection or replacement.

The oil burner assembly may be employed in the position illustrated but may also, if desired, be turned with the fan housing 10 above the casing 20.

I claim:

In an oil burner having an air blast tube and a burner head axially movable within said tube and having a rearwardly extending fuel supply pipe for axial movement of said head, the combination comprising a casing having spaced side walls enclosing an interior compartment and at the front end of which said blast tube is supported in communication therewith, means for supplying air under pressure to the interior of said compartment, abutments in the rear portion of said casing spaced from the rear end, a removable closure plate for engagement with said abutments for providing with said casing a separate rear chamber, a bracket on said closure plate, a bolt extending through a wall of said casing for engagement with said bracket, adjusting means carried by said closure plate for axially moving said fuel supply pipe, and a removable cover plate for the rear end of said rear chamber.

ROBERT W. BOARMAN.

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