F. B. SHAFER.

OIL BURNER.

APPLICATION FILED SEPT. 25, 1918.

1,362,192. **Patented Dec. 14, 1920.**

Fig. 2.

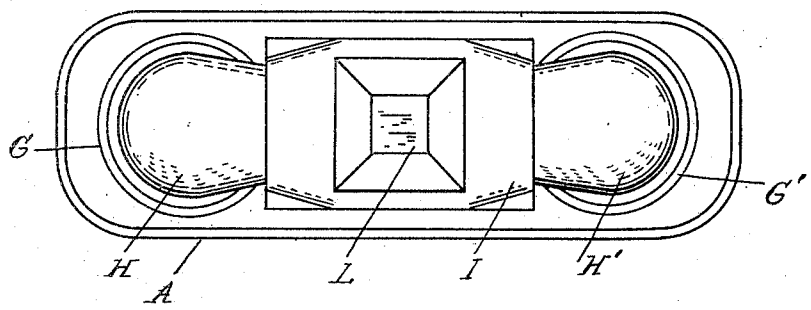


Fig. 3.

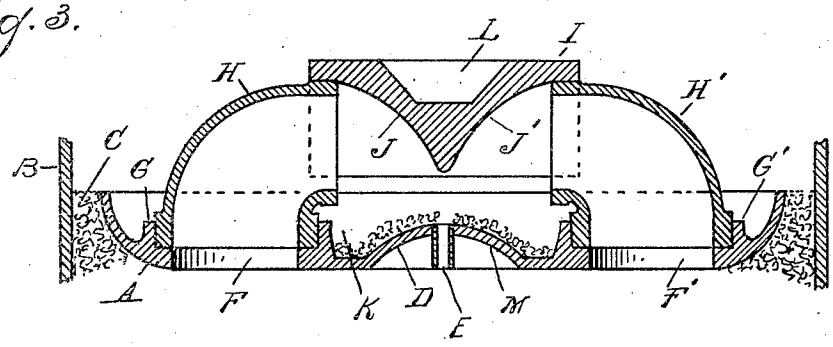
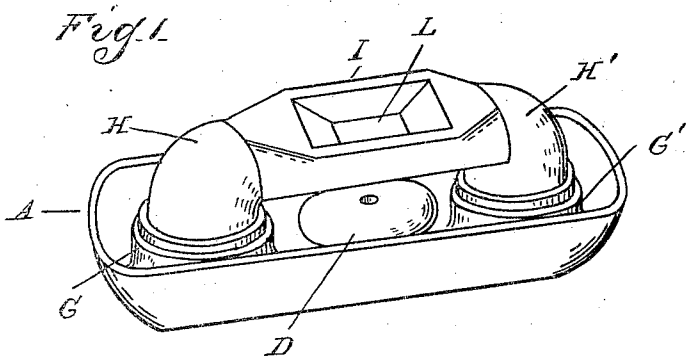


Fig. 1.



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UNITED STATES PATENT OFFICE.

FRANK B. SHAFER, OF NORTHVILLE, MICHIGAN, ASSIGNOR OF ONE-HALF TO ROBERT B. THOMPSON, OF NORTHVILLE, MICHIGAN.

OIL-BURNER.

1,362,192. Specification of Letters Patent. Patented Dec. 14, 1920.

Application filed September 25, 1918. Serial No. 255,634.

To all whom it may concern:

Be it known that I, FRANK B. SHAFER, a citizen of the United States of America, residing at Northville, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to oil burners more particularly designed for use in house heating and cooking stoves, and the invention comprises the novel features as hereinafter set forth.

In the drawings:

Figure 1 is a perspective view of the burner;

Fig. 2 is a plan view thereof;

Fig. 3 is a vertical longitudinal section.

A is a pan shaped element which is adapted to be set into the stove with the peripheral edge adjacent to the walls B of the fire box and sealed to make a substantially air-tight joint, as indicated at C. In the center of the pan is a raised convex portion D which centrally is apertured for the passage of the liquid fuel supply pipe E. F and F′ are apertures upon opposite sides of the pan which are surrounded with seats G and G′ for receiving the elbow elements H and H′. I is a hood element which rests upon the inner ends of the elbow elements H and H′ and is provided with the down turned inner faces J and J′ meeting at a point above and in registration with the fuel supply pipe E. At the sides and beneath the hood I are openings K and in the top of the member I is a recess L.

With the construction as described, in operation oil is fed through the pipe E into the pan and flows down over the convex surface D. This may be covered with absorbent material of a non-combustible nature, such as asbestos, this being indicated at M. To start the burner, oil or other combustible material may be placed in the recess L and as soon as heat generated is sufficient to vaporize a portion of the oil absorbed by the asbestos pad M, said vapor, will be ignited by the operator. When the burner is in full operation draft created by the flame will draw the air in through the apertures F and F′, the two streams being opposed to each other and being deflected downward by the surfaces J and J′ over the convex surface D. This will cause a swirling of the air and gas, thoroughly commingling the same and causing it to burn at the sides with a blue flame.

The construction is one which is simple to manufacture, the elements A, H, H′, and I being castings requiring no machining but loosely engaging each other. This construction also facilitates the easy assembly as well as detachment for cleaning or repairs.

What I claim as my invention is:—

An oil burner, comprising a pan having a substantially central fuel discharge opening and provided with relatively large air openings at each side of said fuel opening, and with annular flanges bordering said air openings, a pair of elbow pipes respectively seated in said annular flanges and opening toward each other, and a hood member having semi-cylindrical end portions loosely resting upon said elbow members, and having downwardly convergent deflecting faces intermediate said semi-cylindrical portions, the top of said hood member being recessed to form a fuel receptacle.

In testimony whereof I affix my signature.

FRANK B. SHAFER.