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C. H. HOFFSTETTER

1,451,072

BURNER

Filed July 1, 1921

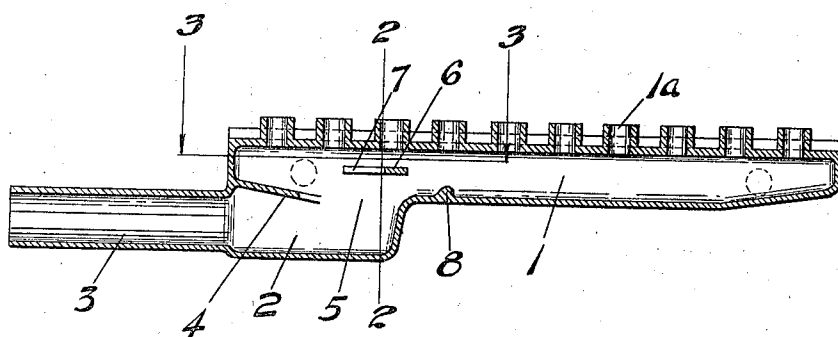


Fig. 1.

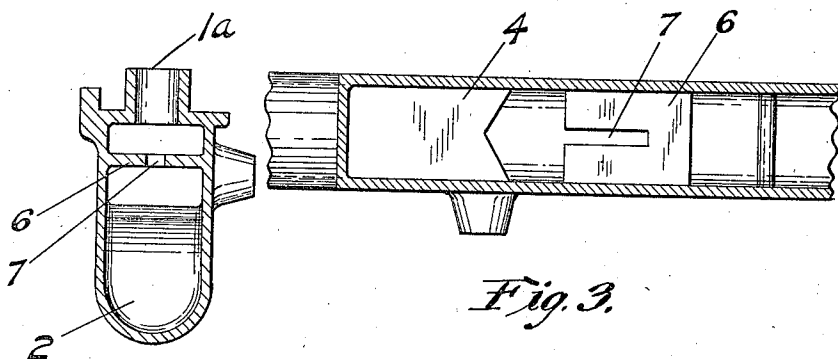


Fig. 2.

Fig. 3.

Carl H. Hoffstetter
Inventor.

By *W. L. ...*
Attorney.

UNITED STATES PATENT OFFICE.

CARL H. HOFFSTETTER, OF ERIE, PENNSYLVANIA, ASSIGNOR TO ODIN STOVE MANUFACTURING COMPANY, OF ERIE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BURNER.

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To all whom it may concern:

Be it known that I, CARL H. HOFFSTETTER, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in Burners, of which the following is a specification.

With burners having their passages at the end and particularly burners used for heating radiants it is difficult to so distribute the incoming mixture as to have a uniform flow of fuel from each jet, or portion of the burner. The present invention is designed to obviate this difficulty especially with long burners.

The invention is illustrated in the accompanying drawings as follows:—

Fig. 1 shows a central vertical section through the burner.

Fig. 2 a section on the line 2—2 in Fig. 1.

Fig. 3 a section on the line 3—3 in Fig. 1.

1 marks the burner chamber from which jet projections 1^a extend for forming the jet openings, the jet openings 1^a being provided with any diffusing material such as gauze (not shown). The chamber is provided with a depression 2 to which the inlet 3 leads. A baffle 4 extends from the inlet end over the depression 2, this baffle being preferably inclined toward the center of the burner and forming with the end of the depression an upturned passage 5. A deflector 6 is arranged over the top of the passage 5, the passage between the deflectors 4 and 6 being somewhat larger than the passage between the deflector 6 and the wall of the burner at the end of the depression. I have found it necessary with a burner of this type to slot the deflector 6 at 7 so as to allow a slight movement of mixture through it to feed the jet openings 1^a directly above it. It is also desirable to form a slight projecting shoulder 8 in advance of the depression 2 to assure the feeding of fuel to the openings 1^a near the deflector 6. With this burner equal jets are provided throughout the burner.

What I claim as new is:—

1. A burner having a burner chamber with jet openings leading therefrom and with a depression at the inlet end to which the inlet

leads; and a baffle extending from the end of the chamber over the depression and forming an up-turned passage nearer the inlet end of the burner than the center of the burner, said baffle being inclined downwardly toward the center.

2. A burner having a burner chamber with jet openings leading therefrom and with a depression at the inlet end to which the inlet leads; a baffle extending from the end of the chamber over the depression and forming an up-turned passage nearer the inlet end of the burner than the center of the burner; and a second baffle over the up-turned passage.

3. A burner having a burner chamber with jet openings leading therefrom and with a depression at the inlet end to which the inlet leads; a baffle extending from the end of the chamber over the depression and forming an up-turned passage nearer the inlet end of the burner than the center of the burner; and a second baffle over the up-turned passage, said second baffle being slotted.

4. A burner having a burner chamber with jet openings leading therefrom and with a depression at the inlet end to which the inlet leads; a baffle extending from the end of the chamber over the depression and forming an up-turned passage nearer the inlet end of the burner than the center of the burner; and a second baffle over the up-turned passage forming a larger passage between the baffles than the opening between the second baffle and the wall of the chamber.

5. A burner having a burner chamber with jet openings leading therefrom and with a depression at the inlet end to which the inlet leads; a baffle extending from the end of the chamber over the depression and forming an up-turned passage nearer the inlet end of the burner than the center of the burner; a second baffle over the up-turned passage; and a shoulder at the bottom of the chamber in advance of the opening between the second baffle and the wall of the chamber at the end of the depression.

In testimony whereof I have hereunto set my hand.

CARL H. HOFFSTETTER.