June 18, 1929. J. W. H. AINSCOW 1,718,101

SUPPORTING MEANS FOR LIQUID FUEL BURNERS

Original Filed Nov. 10, 1927

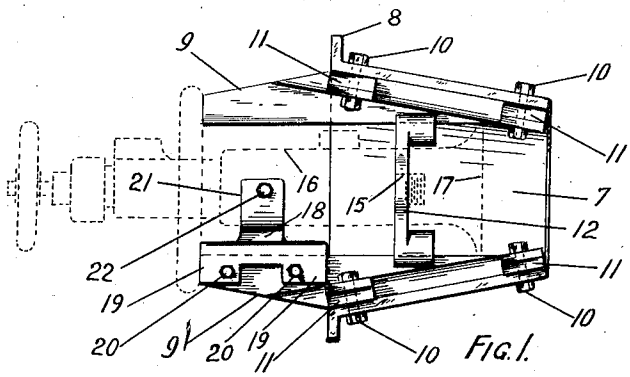

FIG. 1.

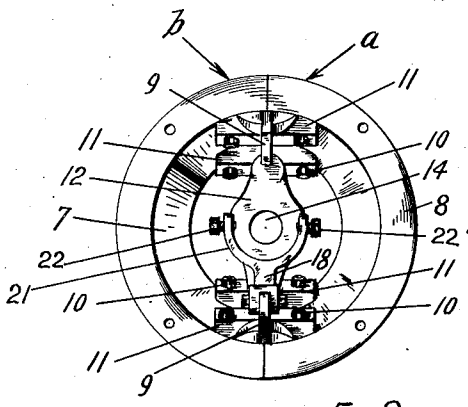

FIG. 2.

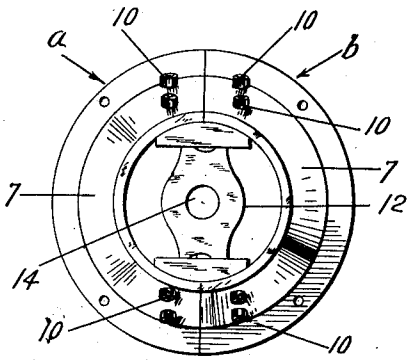

FIG. 3.

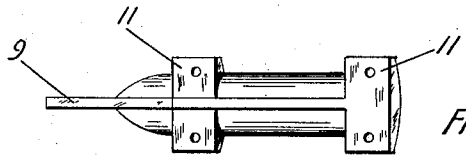

FIG. 4.

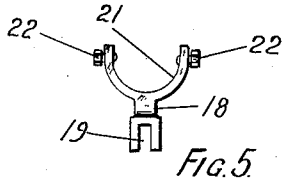

FIG. 5.

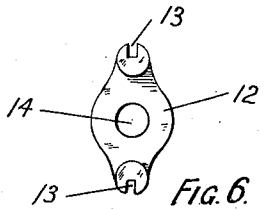

FIG. 6.

INVENTOR.

Joseph W. H. Ainscow.

By William C. Linton
Attorney.

Patented June 18, 1929. 1,718,101

UNITED STATES PATENT OFFICE.

JOSEPH WILLIAM HORACE AINSCOW, OF LINDFIELD, NEAR SYDNEY, NEW SOUTH WALES, AUSTRALIA.

SUPPORTING MEANS FOR LIQUID FUEL BURNERS.

Original application filed November 10, 1927, Serial No. 232,438, and in Great Britain September 12, 1927. Divided and this application filed August 10, 1928. Serial No. 298,643.

This invention relates to spray burners used for atomizing and projecting liquid fuel into furnaces and the like and has been specially devised in order to provide improved supporting means for liquid fuel burners whereby a burner is adjustably supported outwardly of and in the furnace mouth and is readily accessible for manipulation and may be adjusted, or advanced and retired in or upon said means, in relation thereto and to the furnace mouth in order to assist in regulation of the flame resulting from the atomized fuel projected from the burner. The present application is a division of my copending application Serial No. 232,438 filed Nov. 10, 1927.

The improved supporting means for liquid fuel burners comprise a frusto-conical flame concentrator and indraught guard affixable in the furnace mouth, arms or rails secured to and within said guard and projecting therefrom parallel with the axis thereof, and brackets longitudinally slidable upon said arms or rails and adapted to receive and carry the burner.

In order that the invention and a practical application of the same will be readily understood the same will be described with reference to the accompanying drawings in which;

Figure 1 is an elevation of one-half of the improved supporting means for liquid fuel burners with a burner shown in dotted lines,

Figure 2 is a front elevation of the same with the two halves fitted together.

Figure 3 is a rear elevation of the improved supporting means with burner omitted,

Figure 4 is a plan of one of the supporting arms or rails, and

Figures 5 and 6 are elevations of the brackets for the outer and inner ends respectively of the burner.

Referring to the drawings a frusto-conical flame concentrator and indraught guard 7 which may conveniently be in two longitudinal halves *a* and *b* adapted to fit together is affixable in the furnace mouth by flange or lugs 8 which is or are secured by suitable means to the furnace front, and has a pair of spaced arms or rails 9 each secured therein by bolts 10 through their bored lugs 11 and which arms or rails project beyond the mouth of the concentrator parallel with the axis thereof.

Slidable on and between said rails is a bracket 12 having slotted ends 13 to ride upon the rails 9 and a bore 14 in which the inner or forward reduced end 15 of the burner 16 is positioned and secured by connecting thereon a bell mouthed flame deflector 17.

Slidable on the lower rail 9 is a bracket 18 having longitudinally spaced slotted lugs 19, one or both of which may have a set screw 20 therethrough for locking the bracket at desired position upon said lower rail 9, and having upwardly disposed laterally spaced arms 21 forming a seat for the burner 16 and which arms 21 or one of them may have a set screw 22 therethrough to secure the burner, or to adjust its vertical position, in said bracket 18.

In use the burner is readily slidable longitudinally upon the arms or rails 9 in order to adjust the position of the nozzle of the burner 16 and the flame deflector 17 thereon in relation to flame concentrator and indraught guard 7.

I claim:—

1. Improved means for adjustably supporting a liquid fuel burner in a furnace mouth and regulating the indraught of air to the furnace, consisting of the combination with a flame concentrator and indraught guard affixed in said mouth, of rails affixed internally to said flame concentrator and indraught guard and projecting outwardly therefrom parallel with the axis thereof, and means slidably mounted on said rails and adapted to be removably secured to the inner end of the burner and means slidably mounted on said rails and adapted to support the outer end of the burner.

2. Improved means for adjustbly supporting a liquid fuel burner in a furnace mouth and regulating the indraught of air to the furnace, consisting of the combination with a frusto-conical flame concentrator and indraught guard affixed in said mouth, of rails affixed internally to said flame concentrator and indraught guard and projecting outwardly therefrom parallel with the axis thereof, a bracket having opposite ends slotted to slide upon and between said rails and adapted to be secured to the forward

end of the burner, and a bracket having slotted lugs to slide upon the lower of said rails and upward arms to support the outer end of the burner.

3. Improved means for adjustably supporting a liquid fuel burner in a furnace mouth and regulating the indraught of air to the furnace, consisting of the combination with a frusto-conical flame concentrator and indraught guard affixed in said mouth, of oppositely arranged rails affixed internally to said flame concentrator and indraught guard and projecting outwardly therefrom parallel to the axis thereof, a bracket mounted to move upon and between said oppositely arranged rails and engageable with the forward end of the burner, a second bracket mounted to move upon one of said rails and engageable with the outer end of the burner, and means carried by said second bracket for locking the same upon its rail.

JOSEPH WILLIAM HORACE AINSCOW.