

J. H. HUME.
FURNACE FRONT.
APPLICATION FILED MAR. 30, 1912.

1,048,970.

Patented Dec. 31, 1912.

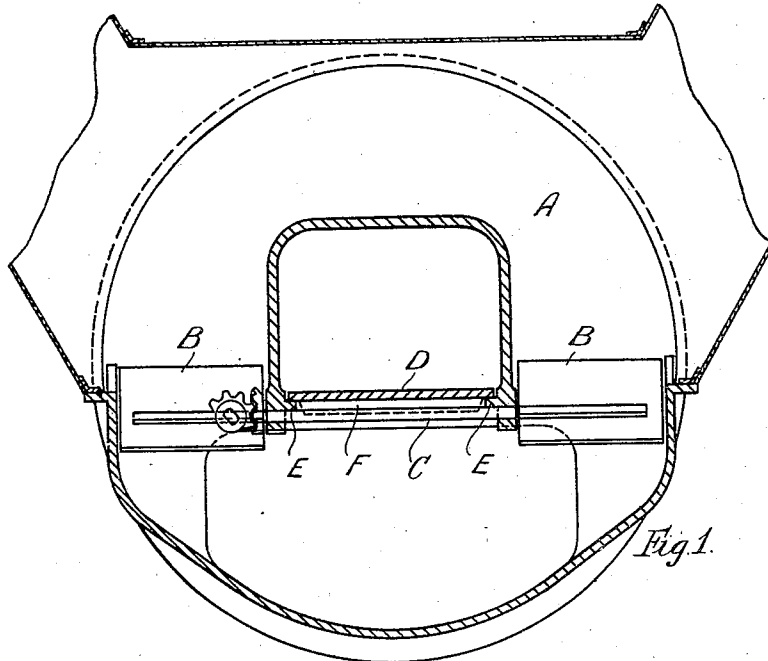


Fig. 1.

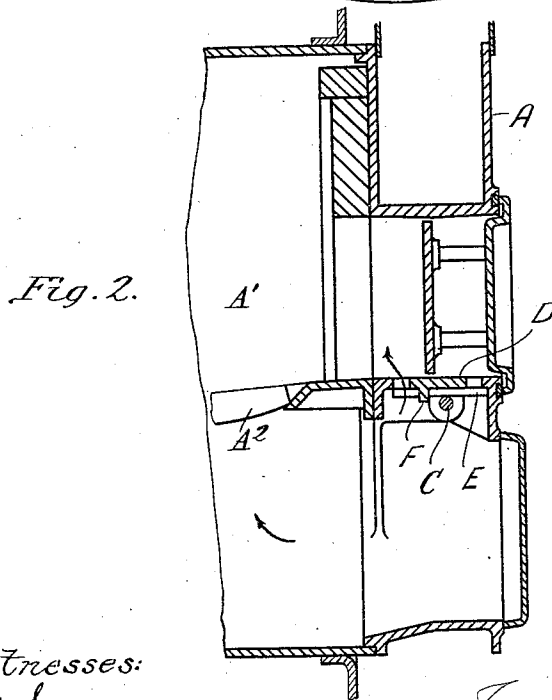


Fig. 2.

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UNITED STATES PATENT OFFICE.

JAMES HOWDEN HUME, OF GLASGOW, SCOTLAND.

FURNACE-FRONT.

1,048,970.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed March 30, 1912. Serial No. 687,403.

To all whom it may concern:

Be it known that I, JAMES HOWDEN HUME, a subject of the King of the United Kingdom of Great Britain and Ireland, and residing at Glasgow, Scotland, have invented a certain new and useful Improvement in Furnace-Fronts, of which the following is a specification.

This invention, which is an improvement on or modification of that described in the specification of Letters Patent No. 1019155, relates to improvements in the fronts of furnaces designed particularly for burning liquid fuel but also suitable for burning solid fuel.

In the construction embodying the invention the usual upper auxiliary air-supply valve referred to in said specification is dispensed with, and the auxiliary air-supply is admitted to the furnace through an opening at the underside of the firing entrance, which opening may be fully open when liquid fuel is used but partly closed when solid fuel is used, the area of the air opening being regulated by adjustment of a movable (and also removable) base portion which only partly fills a gap formed in the underside of the firing entrance.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a part elevation part vertical section and Fig. 2 is a cross section showing a furnace front fitted with a removable base portion as aforesaid.

Referring to the drawings, the furnace front A is fitted as usual with side air-supply valves B mounted on a rotatable spindle C, or otherwise operated, the aforesaid upper auxiliary air-supply valve being dispensed with. A gap is formed in the underside of the firing entrance, which gap serves for admission of a large quantity of air when liquid fuel is used. The said gap may be partly closed by the removable base por-

tion D so that when said base portion is in place, *i. e.*, when solid fuel is used, a restricted opening is formed through which an auxiliary supply of air from the side valves B may pass by way of the firing entrance to the furnace A' which is shown equipped with the firebars A², the main supply of air passing from beneath the firebars A² to the furnace.

The base portion D is adjustable to permit regulation of the area of the auxiliary air opening. In the construction shown the base portion is movable longitudinally of the furnace, said base portion resting on ledges E and being provided with a strengthening rib or flange F and being movable relatively to said ledges to regulate the auxiliary air supply to the furnace.

Having now described my invention what I claim and desire to secure by Letters Patent of the United States is:—

In a furnace, the combination with a furnace front provided at its sides with valves serving to control or regulate a forced draft supply of air to the furnace, said front having between said valves a firing entrance and a space or gap adjacent said entrance arranged to permit an auxiliary forced-draft supply of air to said furnace, and a door for closing said firing entrance, of a base portion removably located in said space or gap, said base portion only partly filling said space or gap and being movable or adjustable therein and coöperating with said door to regulate said auxiliary air supply.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES HOWDEN HUME.

Witnesses:

WALLACE FAIRWEATHER,
JOHN M. CLEARY.