

C. E. BROWN.
FUEL OIL BURNER.
APPLICATION FILED DEC. 11, 1911.

1,034,577.

Patented Aug. 6, 1912.

Fig. 1.

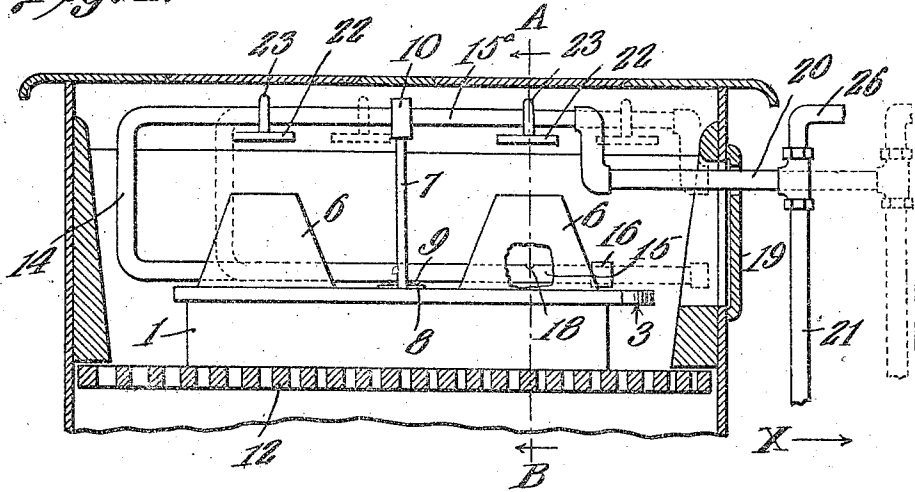


Fig. 2.

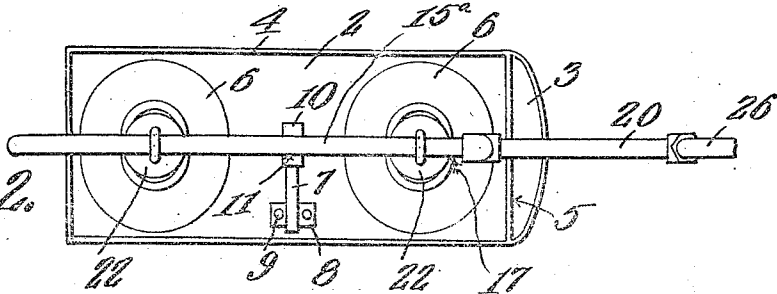


Fig. 4.

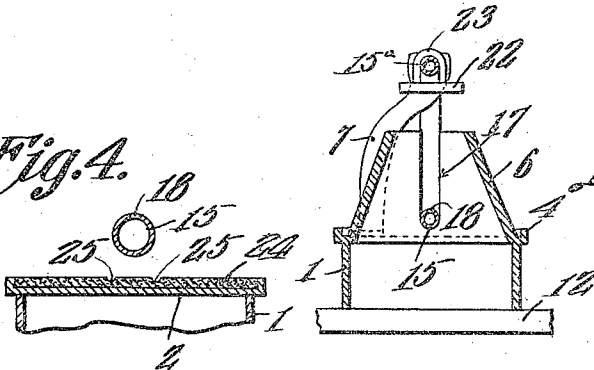
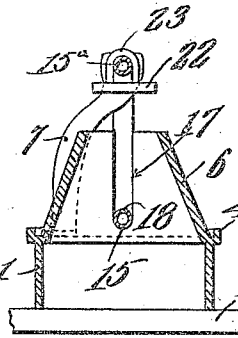


Fig. 3.



Witnesses

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FUEL-OIL BURNER.

1,034,577.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL E. BROWN, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Fuel-Oil Burner, of which the following is a specification.

The present invention aims to provide, in a simple, merchantable and inexpensive form, a device, adapted to be placed in an ordinary cook stove, or other like structure, without seriously mutilating the same, for the purpose of enabling a stove or other structure to burn a liquid fuel.

Specifically, the invention aims to provide an air receptacle of novel form, and to assemble slidably with the air receptacle, a fuel-supply pipe, the construction being such that the fuel-supply pipe may be slid, whereby its ports will discharge into the air receptacle, or upon the top of the receptacle for the purpose of depositing, in the latter instance, a priming whereby the pipe may be initially heated.

A further object of the invention is to provide novel means for slidably supporting the fuel-supply pipe, and to equip the fuel-supply pipe with deflectors which may be adjusted upon the pipe, to assume the proper positions with respect to the hoods in which combustion is normally effected.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings,—Figure 1 shows the invention in side elevation, the same being mounted in a sectionally-shown stove of ordinary construction; Fig. 2 is a top plan of the device, removed from the stove; Fig. 3 is a section upon the line A—B of Fig. 1; and Fig. 4 is a fragmental transverse section of the air receptacle, the view being diagrammatic in nature, and illustrating the manner of depositing the priming upon the top of the air receptacle.

In carrying out the invention there is provided an air receptacle 1, which may be of any desired contour. The air receptacle 1 is open at its bottom, but is peripherally

integral. The top 2 of the air receptacle 1 projects at one end beyond the body of the receptacle, as shown at 3. The top 2 is surrounded by an upstanding flange 4, and adjacent the protruding end 3 there is a cross flange 5, the flanges 4 and 5 causing the top 2 to constitute a fuel-receiving element, as will be set forth hereinafter.

In the top 2 of the air receptacle there are one or more openings, two being shown in the present instance. These openings are surrounded by upstanding hoods 6, of frusto-conical form, the hoods 6 being connected with the top 2.

A bracket 7 is provided, the same having at its lower end, a laterally projecting foot 8, united by securing elements 9 in the top 2, the foot 8 being located to one side of the longitudinal center of the air receptacle 1. At its upper end, the bracket 7 terminates in a head 10, preferably located above the longitudinal center of the air receptacle, the bracket, as clearly shown in Fig. 3, being preferably curved slightly, so as to effect this result. In the upper edge of the head 10 there is a notch 11.

The air receptacle 1 may be placed upon the grate 12 of an ordinary stove, as shown in Fig. 1, and a U-shaped fuel-supply pipe 14 is provided, whereby the fuel may be conducted from any suitable source of supply, within the stove. The fuel-supply pipe 14 includes a lower branch 15 and an upper 15^a, the lower branch 15 being closed at one end by a cap 16. The lower branch 15 of the fuel-supply pipe is slidably received within notches 17 formed in the upper edges of the hoods 6. The upper branch 15^a of the fuel supply pipe is slidably received in the notch 11 which is formed in the upper edge of the head 10 of the bracket 7. In the lower branch 15 there are fuel-supply ports 18 which are normally positioned within the contour of the hoods 6. The upper branch 15^a terminates in a depressed end 20 which may be carried through the end door 19 of the stove; or, if desired, the end door 19 may be removed, and a special closure, having an opening adapted to receive the end 20, may be provided. The latter expedient renders unnecessary, a mutilation of the door 19 of the stove; but Fig. 1 will serve to illustrate both of the arrangements above referred to. The exposed end of the portion 20 of the fuel-supply pipe is connected with a source of fuel-supply, indicated at 21, and

a suitable valve 26 is provided, for controlling the supply of fuel.

A plurality of deflectors are provided, there being one deflector for each of the hoods 6, the deflectors being denoted by the numeral 22, and preferably consisting of flat, horizontally disposed disks, slidably mounted upon the upper branch 15^a of the fuel-supply pipe, by means of arched suspension members 23, embracing the branch 15^a of the fuel-supply pipe. The slidably mounting of the deflectors upon the branch 15^a of the fuel supply pipe permits these deflectors to be moved longitudinally of the branch 15^a, and likewise permits them to be swung circumferentially of the branch 15^a, the latter adjustment of the deflectors serving to direct the products of combustion emanating from the hoods 6, either toward the front or toward the rear of the stove.

In practical operation, presupposing that the parts are positioned as shown in Fig. 1, the fuel-supply pipe 14 is slid in the direction of the arrow X, until the fuel-supply ports 18 are disposed outside of the hoods 6. As shown in Fig. 4, a thin layer of ashes, or like material, denoted by the numeral 24, may be placed upon the top 2 of the air receptacle 1. In this layer of ashes, below, but upon both sides of the branch 15 of the fuel supply pipe, troughs 25 may be formed. The valve 26 may then be manipulated, permitting the oil to traverse the pipe 21, the branch 15^a and the branch 15, a small quantity of oil trickling out the ports 8, into the troughs 25 which are formed in the layer of ashes 24. The oil which has been deposited in the troughs 25 is ignited, and the fuel-supply pipe is thereby heated. When the fuel-supply pipe has become sufficiently hot, the pipe is slid manually in a direction opposite to that indicated by the arrow X, until the ports 18 lie within the hoods 6, whereupon the combustion will progress, the air entering the open bottom of the receptacle 1, and passing upwardly through the hoods 6, to mingle with the burning vapor proceeding from the ports 18.

As will be readily understood, the hoods

6 and the bracket 7 constitute a means whereby the fuel supply pipe 14 is slidably mounted. Moreover, since the branch 15 of the fuel-supply pipe is received in the notches 17 of the hoods 6, the fuel-supply pipe is prevented from swinging laterally. Since the deflectors 22 are slidable upon the branch 15^a these deflectors may be adjusted manually, longitudinally of the branch 15^a of the supply pipe, so that they will be vertically alined with the axes of the hoods 6, the function of the deflectors being obvious, from an inspection of Fig. 1.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, an air receptacle provided with a fuel-receiving top having an opening; a bracket fixed to and rising from the top; a U-shaped fuel-supply pipe comprising upper and lower branches, the upper branch being received in the bracket; a deflector slidable upon the upper branch, and adapted to be positioned above the opening; there being a fuel-supply port in the lower branch adapted to be disposed above the opening, the pipe being slidable in the bracket, to position the port to one side of the opening.

2. In a device of the class described, an air receptacle provided with openings in its top; conical hoods surrounding the openings and provided in their upper edges with notches; a bracket fixed to and rising from the top, between the hoods; a fuel-supply pipe consisting of upper and lower branches, the lower branch being slidably received in the notches, and the upper branch being slidably received in the bracket; deflectors slidable upon the upper branch, and adapted to be positioned above the hoods; the lower branch being provided with openings, normally located within the hoods.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CARL E. BROWN.

Witnesses:

W. E. KESSELRIARG,

H. J. COOK.