J. A. L. WILSON.
COAL OIL BURNER.

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1,220,385.

Witnesses 227 - 72, a 9.4.22.

J. A. L. Wilson
Inventor

Witnesses

Attorneys

J. L. Wilson
To all whom it may concern:

Be it known that I, JOHN A. L. WILSON, a citizen of the United States, residing at Watseka, in the county of Iroquois and State of Illinois, have invented a new and useful Coal-Oil Burner, of which the following is a specification.

The device forming the subject matter of this invention is a burner adapted to be employed in connection with cook stoves and like structures, the burner being adapted to handle oil of a low grade, and to convert the same readily into gas.

With the above 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 the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawing:—

Figure 1 shows the invention in perspective;

Fig. 2 is a transverse section showing a portion of a stove in which the device forming the subject matter of this application has been mounted.

In the drawings the numeral 1 indicates a portion of the wall of a stove, the fire bricks being shown at 2 and the numeral 3 indicating the grate, which may be of any desired construction.

In carrying out the present invention a base 4 is placed on the grate 3, the base 4 preferably being in the form of a flat sheet of metal. The space between the periphery of the base 4 and the fire bricks 2 is closed by means of asbestos, cement or the like, shown at 5, and upon the base 4 a layer of ashes 6 is placed.

The invention contemplates the use of a face plate 7 which ordinarily replaces one of the stove doors (not shown) the face plate 7 being held in place by means of buttons 8 or any other structures adapted for the ends in view. An air shaft 9 stands approximately at right angles to the plate 7, the outer end of the air shaft 9 opening through the plate 7 as shown at 10 and the inner end of the air shaft being closed as indicated at 11. In its top and adjacent its inner end, the air shaft 9 is equipped with an opening 12. Projecting inwardly from the inner end of the air shaft 9 is an arm 14 terminating in an upstanding finger 15.

The invention includes a U-shaped pipe, one arm of which is denoted by the numeral 16. The outer end 16 of the arm 16 is open. The arm 16 of the U-shaped pipe passes through the plate 7 and is supported therein, as shown at 17. The arm 16, outside of the face plate 7 carries a needle valve 18 of any desired construction, the fuel inlet being shown at 18. The other arm 19 of the U-shaped pipe is supported upon the finger 15 and extends forwardly to a point adjacent the opening 12 in the air shaft 9, the extremity of the arm 19 carrying a burner head 20, disposed above the opening 12, the burner head 20 preferably being in the form of an elbow provided with perforations 21 and having its depending end closed by means of a plug 22 or the like.

In practical operation, the air shaft 9 rests on the layer 6 of ashes, as clearly shown in Fig. 2. Oil is admitted into the pipe 16—19 by opening the valve 18. The oil at 80 first is consumed at the perforations 21 in the head 20 and as the oil burns, the arm 16 of the U-shaped pipe is heated, thereby converting the oil into gas before it reaches the perforations 21. Sufficient air to promote combustion at the perforations 21 is applied through the medium of the air shaft 9 and its openings 12.

The arm 16 of the U-shaped pipe slants downwardly as it extends inwardly and there is fall enough to cause the oil to gravitate toward the head 20. Further, the suction of hot air up flue (not shown) of the stove wherewith the device is assembled, tends to draw the oil through the arms 16 and 19 of the pipe.

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

1. In a device of the class described, a face plate; an air shaft projecting from the face plate and provided with an opening; and a U-shaped pipe, one arm of which is mounted in the face plate, the other arm of which is provided with a burner head located above the opening.

2. In a device of the class described, a face plate; an air shaft projecting from the face plate; an arm projecting from the air
shaft in substantial alinement with the shaft; a U-shaped pipe, one leg of which is supported upon the arm, the other leg of which is assembled with the face plate; and a burner head upon the first specified leg, the air shaft being provided with an opening located adjacent the burner head.

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

JOHN A. L. WILSON.

Witnesses:
PORTER MARTIN,
RUBY B. McNAMEE.