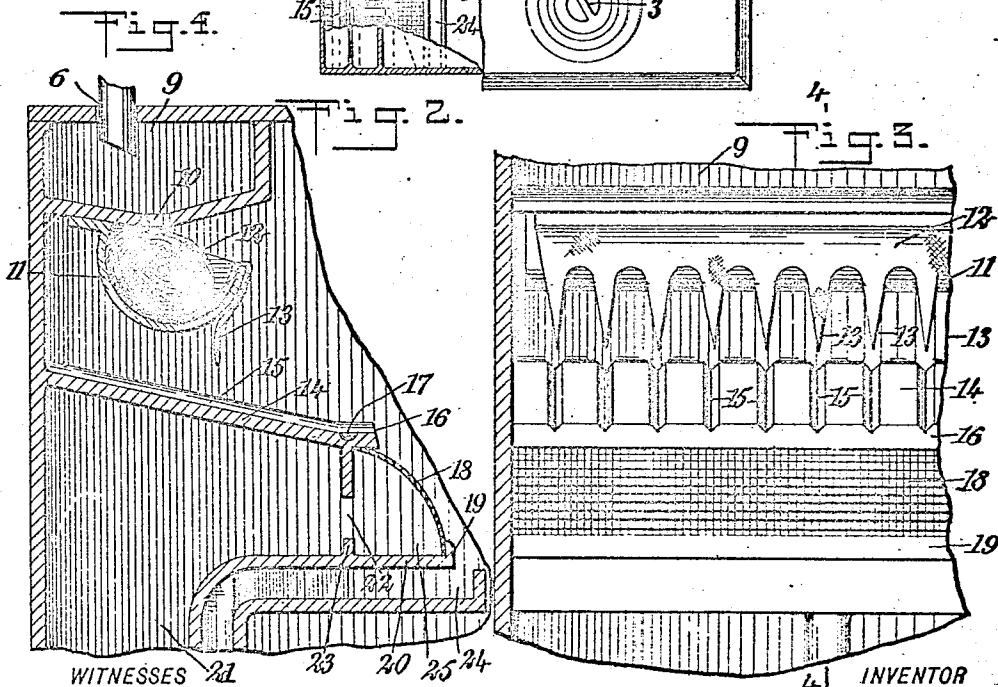
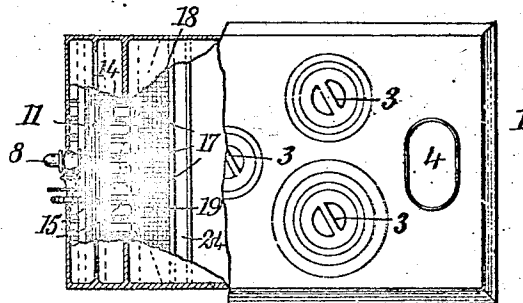
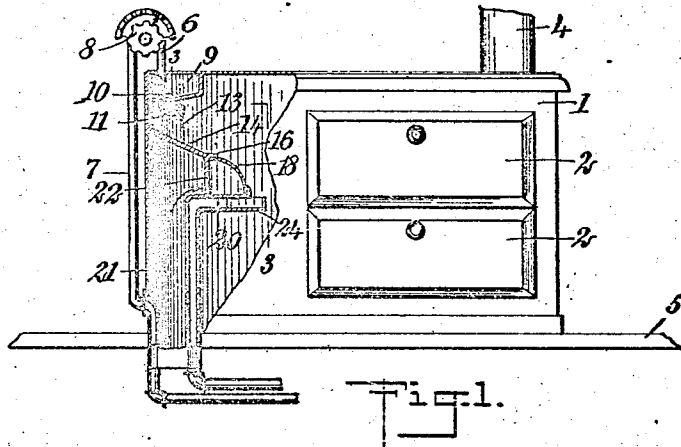


No. 895,338.

PATENTED AUG. 4, 1908.

W. H. CALLIHAN.
HYDROCARBON BURNER.
APPLICATION FILED JULY 19, 1907.



Ben. Jaffe
E. B. Marshall

INVENTOR
Willie H. Callihan
BY *Mum & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIE H. CALLIHAN, OF BEAUMONT, TEXAS.

HYDROCARBON-BURNER.

No. 895,338.

Specification of Letters Patent.

Patented Aug. 4, 1908.

Application filed July 19, 1907. Serial No. 384,542.

To all whom it may concern:

Be it known that I, WILLIE H. CALLIHAN, a citizen of the United States, and a resident of Beaumont, in the county of Jefferson and State of Texas, have invented new and useful Improvements in Hydrocarbon-Burners, of which the following is a full, clear, and exact description.

My invention relates to hydrocarbon burners, and has for its object to provide a burner for stoves in which the hydrocarbon is fed over a wire screen through which the air passes and in this way form a proper mixture for combustion.

Another object is to provide a trough in which the hydrocarbon is contained and from which it is fed by absorbent material by capillary action.

Still another object of my invention is to provide a table with longitudinal grooves over which the hydrocarbon may flow; the grooves being adapted to preserve the even distribution of the hydrocarbon over the said table.

Still further objects of the invention will be pointed out in the following more complete description.

In this specification I will describe the construction shown in the accompanying drawings forming a part of this specification, but I do not limit myself thereto as I consider myself entitled to all forms and embodiments of the invention which may be held to fall within the scope of the appended claims.

In the drawings similar characters of reference refer to like parts in all the figures, in which

Figure 1 is a front elevation of the stove, part of which is broken away to show how my burner is applied thereto; Fig. 2 is a plan view of the same with part of the top of the stove removed to show the arrangement of the burner; Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 1, and Fig. 4 is a sectional fragmentary view on the line 4—4 of Fig. 3.

In the drawings a cooking stove 1, of the usual construction, is shown with oven doors 2, lids 3 and a flue 4. This stove is shown resting on a floor 5. At one side of the stove is shown my burner and the arrangement by which I am able to feed the hydrocarbon thereto. The hydrocarbon is fed into the stove by a pipe 6 which is in communication with an inlet pipe 7, and between the said

pipes 6 and 7 I have arranged a meter 8 by means of which it is possible to ascertain the amount of hydrocarbon consumed in the stove. Under the pipe 6 which leads from the said meter to the interior of the stove, is a fountain 9 which extends from the front of the stove to the back thereof, said fountain 9 having a longitudinal slot 10, which communicates with a trough 11, disposed beneath the said fountain 9 and secured thereto for its full length. This trough 11 has its forward end considerably lower than the rear portion which is secured to the said fountain, and in this trough 11 is disposed an absorbent material 12 which has tassels 13 which hang over the said low forward end of the said trough 11. Beneath the said trough is an inclined-table 14, which is secured to the side of the stove, and has grooves 15, running from the said side of the stove to its free terminal 16. The free terminal of the said inclined-table 14 has indentures 17 therein, which check the flow of the hydrocarbon and cause it to spread evenly over a wire screen 18 thereunder. This wire screen 18 is arched between the lower free terminal 16 of the inclined-table 14, and a lug 19 which extends upwardly from the floor 20.

Below the table there is an air-inlet pipe 21 which supplies air to the stove, the said air entering the chamber below the wire screen 18 through an opening 22. The floor 20 in addition to having the upwardly-turned flange 19 has a wall 23 which is slightly higher than the flange 19, the flange 19 and the wall 23 forming the dish 25. In the receptacle formed by the said wall 23 and the flange 19, any hydrocarbon will fall which is not consumed. Should the hydrocarbon fill this receptacle, it will overflow the flange 19 into a receiving pipe 24 whence it will flow to a suitable receptacle.

In the operation of the burner, the hydrocarbon is fed to the pipe 6, from which it enters the fountain 9, passing through the slot 10 to the trough 11, from which it drops by capillary action through the absorbent material 12 on the inclined-table 14, the tassels 13 being distributed evenly over the said inclined-table. The hydrocarbon flows on the inclined table; it being distributed thereover, and this distribution being preserved by the grooves 15. When the hydrocarbon reaches the indentures 17 it tends to distribute itself over the free terminal of the table for its full length, when it drops on the wire

gauze 18. The air entering the inlet-pipe 21 passes through the opening 22 and through the gauze 18, carrying with it the hydrocarbon in suspension. This is the combustion mixture which is used in the stove to secure the desired heat. As stated, if any of the hydrocarbon is not consumed it will fill the receptacle 20, and if it overflows therefrom it will enter the pipe 24 through which it will flow to a suitable receptacle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a hydrocarbon burner, a screen, a reservoir, means to feed continuously the hydrocarbon from the reservoir to the screen where it is burned, and means to direct a current of air approximately at right angles to the plane of and against the screen.

2. In a hydrocarbon burner, an arched wire screen to which the hydrocarbon is fed and where it is burned, and an air-inlet which directs a current of air against the inner side of the arched wire screen.

3. In a hydrocarbon burner, a fountain, a table which is adapted to feed the hydrocarbon from the fountain to the burner, longitudinal grooves on the said table which are adapted to preserve the even distribution of the hydrocarbon over the table, and indentures in the said table which are adapted to temporarily check the flow of the hydrocarbon.

4. In a hydrocarbon burner, a member having tassels by which the hydrocarbon is fed, and a table on which the hydrocarbon falls from the said tassels, the said table having longitudinal grooves which are adapted to preserve the even distribution of the hydrocarbon on the table.

5. In a hydrocarbon burner, a fountain, an

inclined table which is adapted to feed the hydrocarbon from the fountain to the burner, and a burner consisting of a wire screen to which the hydrocarbon is fed, and an air inlet which directs an air current against the said wire screen.

6. In a hydrocarbon burner, a fountain a table which is adapted to feed the hydrocarbon from the fountain to the burner, the said burner consisting of a dish, a wire screen disposed thereover, and an air inlet which directs an air current against the said screen.

7. In a hydrocarbon burner, a reservoir, a wire screen to which the hydrocarbon is fed from the reservoir, an air inlet which directs an air current at approximately right angles to the plane of and through the said screen, and an overflow which is adapted to receive any of the hydrocarbon which is not burned.

8. A hydrocarbon burner, consisting of a reservoir having a slot in its bottom, a trough thereunder, an absorbent material disposed in the said trough, said absorbent material having tassels which hang over its rim, an inclined-floor disposed under the said trough, the said floor having longitudinal grooves, a wire screen disposed at the terminal of the said inclined-floor, and an air inlet in communication with said wire screen.

9. In a hydrocarbon burner, an absorbent material disposed above an inclined floor, a wire screen disposed at the lower end of the said inclined floor, and an air inlet in connection with the said wire screen.

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

WILLIE H. CALLIHAN.

Witnesses:

H. W. VAUCHELET,
SINGLETON BRYAN.