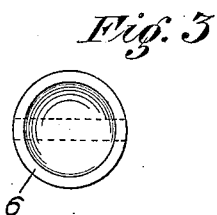
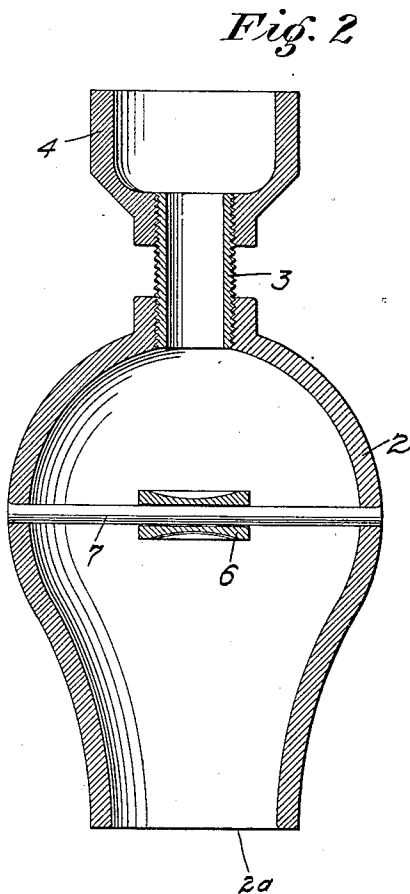
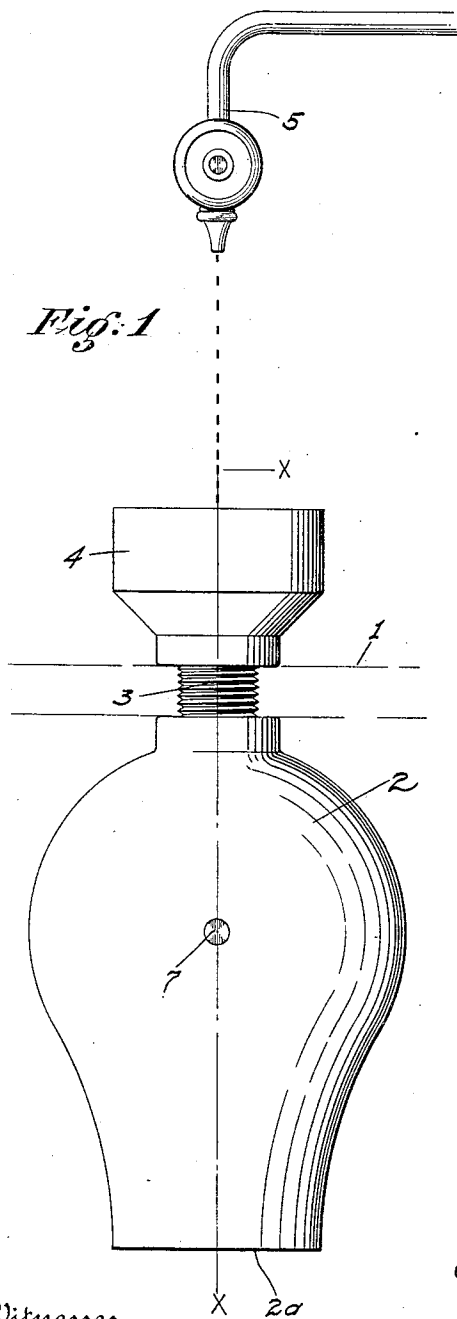


N. W. MAHAFFEY.
HYDROCARBON BURNER.
APPLICATION FILED DEC. 4, 1911.

1,041,828.

Patented Oct. 22, 1912.



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UNITED STATES PATENT OFFICE.

NEWTON W. MAHAFFEY, OF STOCKTON, CALIFORNIA.

HYDROCARBON-BURNER.

1,041,828.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed December 4, 1911. Serial No. 663,855.

To all whom it may concern:

Be it known that I, NEWTON W. MAHAFFEY, a citizen of the United States, residing at Stockton, in the county of San Joaquin, State of California, have invented certain new and useful Improvements in Hydrocarbon-Burners; and I do declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in hydrocarbon burners of all kinds, particular to one used for burning crude oil, distillate or similar fuel.

The object of this invention is to provide a burner in which combustion will take place within the burner itself and thence burn outside of the burner and in the stove and around the burner, whereby a greater degree of heat sufficiency will be obtained with the minimum amount of fuel used.

A further object of the invention is to produce a simple and inexpensive device, and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings, similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a side elevation of the complete burner. Fig. 2 is a sectional view taken on a line X—X of Fig. 1. Fig. 3 is a top plan view of a combustion plate.

Referring now more particularly to the characters of reference on the drawings, I will let 1 designate the top plate of the stove.

In constructing my improved burner I first provide a lower chambered member 2, having an opening 2^a in its bottom of a lesser diameter than the chamber of said member 2, said member 2 is provided at its upper end with a projecting pipe 3 of a lesser diameter than the opening 2^a, adapted to project through the lid of the stove and receive upon its upper end a cup 4 which screws down against the cover 1 and holds the member 2 in suspended position inside

of the stove. The oil is then admitted through a supply pipe 5 and drips through the cup 4 and pipe 3 into the chamber member 2 and on to a combustion plate 6 turnably mounted on a pin 7 projecting through the chambered member 2.

In practice a small fire of paper or shavings is started in the stove in the chambered member 2 which heats the member 6, and as the oil drips upon said member, it is scattered and atomized and bursts into flame within the member 2 and then burns through the lower opening of said member 2 and around and above said member and keeps said member intensely hot, which causes complete combustion of the gasified oil within said chamber.

The structure of the opening 2^a being smaller than the chamber in the member 2, and also larger than the pipe 3 the draft caused when the burner is in operation causes a tendency to vacuum within the chambered member 2, and this causes the gasified and burning oil to whirl around rapidly in said chambered member 2 and become partially consumed before it passes out of the opening 2^a.

The member 6 being turnable on the member 7, it can be turned easily from side to side and no carbon accumulates on one side or the other. Said member 6 can also be of any shape desired or found most desirable.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfils the object of this invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:—

1. A device of the character described comprising a chambered member having an opening in its lower end, a pin disposed across said chambered member, a combustion plate turnably mounted on said pin, an upwardly projecting pipe extending through the upper end of said chambered member, and a cup-like member screw mounted on the upper end of said pipe as described.

2. A device of the character described comprising a chambered member having an opening in its upper and lower ends of a lesser diameter than the diameter of the chamber in said member, a plate suspended centrally in the chamber of said chambered member, an upwardly projecting threaded pipe on said chambered member, and a cup mounted on the upper end of said threaded pipe, as described.

3. A device of the character described comprising a chambered member, such chambered member gradually reducing in diameter toward its lower end to a single opening of a lesser diameter than the diameter of said chamber, and a combustion

member suspended centrally in said chambered member, as described.

4. A device of the character described comprising a chambered member having an opening in its lower end, such opening being of a lesser width than the width of the central diameter of the chamber, a pin disposed across the center portion of said chambered member, and a combustion plate mounted centrally on said pin, as described.

In testimony whereof I affix my signature in presence of two witnesses.

NEWTON W. MAHAFFEY.

Witnesses:

FRANK H. CARTER,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."