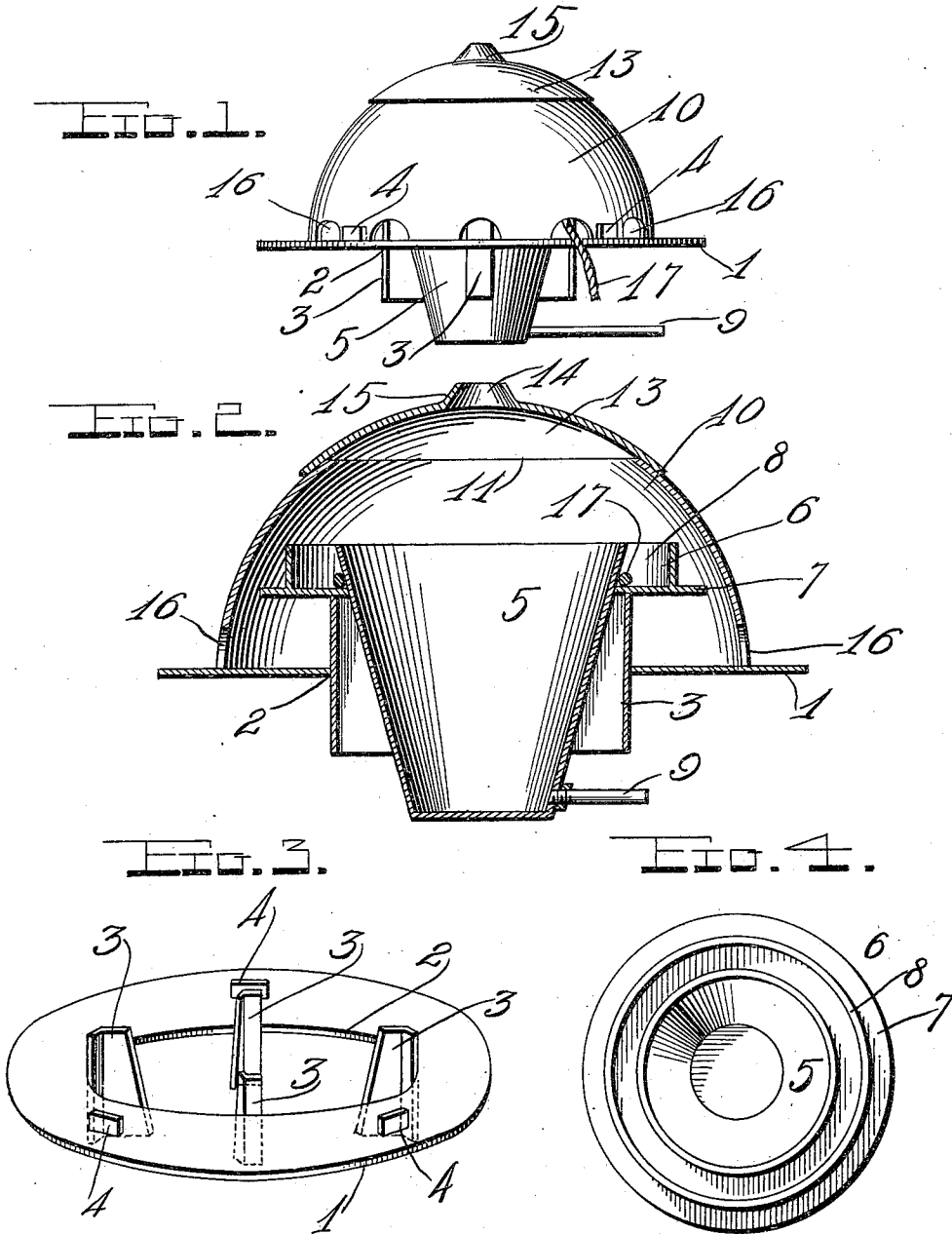


L. DUNCAN.  
OIL BURNER.  
APPLICATION FILED NOV. 14, 1910.

990,347.

Patented Apr. 25, 1911.



Witnesses

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# UNITED STATES PATENT OFFICE.

LEE DUNCAN, OF MUSKOGEE, OKLAHOMA.

OIL-BURNER.

990,347.

Specification of Letters Patent.

Patented Apr. 25, 1911.

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*To all whom it may concern:*

Be it known that I, LEE DUNCAN, a citizen of the United States, residing at Muskogee, in the county of Muskogee and State of Oklahoma, have invented certain new and useful Improvements in Oil-Burners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in oil burners.

One object of the invention is to provide an improved construction of oil burner adapted to be employed for heating stoves, furnaces, boilers, and the like and which is especially adapted for domestic purposes.

Another object is to provide an oil burner of this character which will be simple, strong and durable in construction, efficient in operation, and provided with means for catching smoke and soot and for burning the latter.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:—Figure 1 is a side view of a burner constructed in accordance with the invention; Fig. 2 is a central vertical sectional view of the same; Fig. 3 is a perspective view of the base plate or grate of the burner; and, Fig. 4 is a plan view of the oil cup and catch basin of the burner.

In the embodiment of the invention I have provided a base plate or grate 1 on which the burner is arranged and supported. The plate or grate 1 is here shown and is preferably of circular shape and has formed therein a concentrically arranged circular opening 2. Secured at diametrically opposite points to the edge of the opening 2 are right angularly formed spacing lugs 3, the inner edges of which are formed on an angle, as shown. On the upper side of the plate or grate 1 and arranged at suitable intervals thereon are a series of stop lugs, the purpose of which will be hereinafter described.

Arranged in the opening 2 of the plate 1 and spaced a suitable distance from the edges of the opening by the lugs 3 is an oil cup 5,

the side walls of which are inclined or flared outwardly toward the upper end of the cup, as shown. Secured to the outer side of the cup adjacent to its upper edge is a catch basin 6 comprising a circular plate 7 having on its upper side an annular upwardly projecting flange 8. The flange 8 projects upwardly to the height of the upper edge of the oil cup and thus forms the catch basin by means of which any oil overflowing from the cup is caught therein and thus increases the size of the flame and the heating capacity of the burner. Connected to the inner side of the oil cup near its lower end is an oil supply pipe 9 by means of which the oil is fed to the cup from any suitable source of supply.

Arranged over the oil cup and catch basin and resting on the plate 1 is a dome-shaped hood 10 having in its upper side an opening 11 which is normally closed by a cap 13 in the center of which is formed a small draft opening 14 surrounded by an upwardly projecting inclined flange 15. The cap 13 is provided to afford ready access to the interior of the burner or for lighting in case the wick end 17 is destroyed and also for cleaning and other purposes. The opening 14 in the top of the cap is provided to facilitate draft through the burner. The lower edge of the hood 10 engages the base plate 1 and is held in a concentric position thereon by means of the stop lugs 4 which engage the outer side of the hood, as shown. In the lower edge of the hood are formed a plurality of burner openings 16 through which the flame from the burning oil in the cup and catch basin is drawn by the draft passing up through the opening in the base plate or grate and through the notches 16 in the hood. Arranged in the catch basin 6 around the upper edge of the oil cup, is an asbestos wick 17, one end of which is brought down and out through one of the notches 16 in the hood and serves as a means for lighting the burner.

The hood 10 of the burner is provided to catch the smoke and soot and to evenly distribute the flame of the burner which is drawn through the openings formed by the notches 16 in the lower edge of the hood, thus uniformly heating the hood and burning or consuming the soot caught thereby.

It will be noted that the parts of the burner are constructed and arranged in such

a manner that the same may be readily separated for cleaning or any other purpose and again readily assembled when desired.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

Having thus described my invention, what I claim is:—

1. In an oil burner, a base plate having formed therein an opening, an oil cup arranged in said opening, a series of spacing lugs adapted to space the sides of the cup from the edges of the opening and to hold said cup in the center of the opening, a catch basin arranged around the upper end of the cup, a dome-shaped hood arranged over the cup and catch basin, said hood having in its lower edge a series of notches adapted to form burner openings through which the flame from the burning oil is drawn, and a removable cap arranged on the upper end of said hood.

2. In an oil burner, a base plate having

formed therein a centrally disposed opening, a series of spacing lugs secured to the edges of said opening, said lugs having inclined inner edges, a tapered oil cup arranged in the opening of said base plate and adapted to engage the inclined edges of said spacing lugs, an annular catch basin arranged around the upper end of the oil cup, a supply pipe connected to the lower end of said oil cup, a dome-shaped hood arranged over said oil cup and catch basin, said hood having its lower edge engaged with said base plate and having formed in said edge a series of notches adapted to provide burner openings, stop lugs arranged on said base plate to hold said hood in position thereon, a removable cap engaged with the open upper end of said hood, said cap having formed therein a draft passage, and a wick arranged in said overflow basin and extending down and out through one of the notches formed in the lower edge of the hood.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEE DUNCAN.

Witnesses:

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W. S. HARSHA.