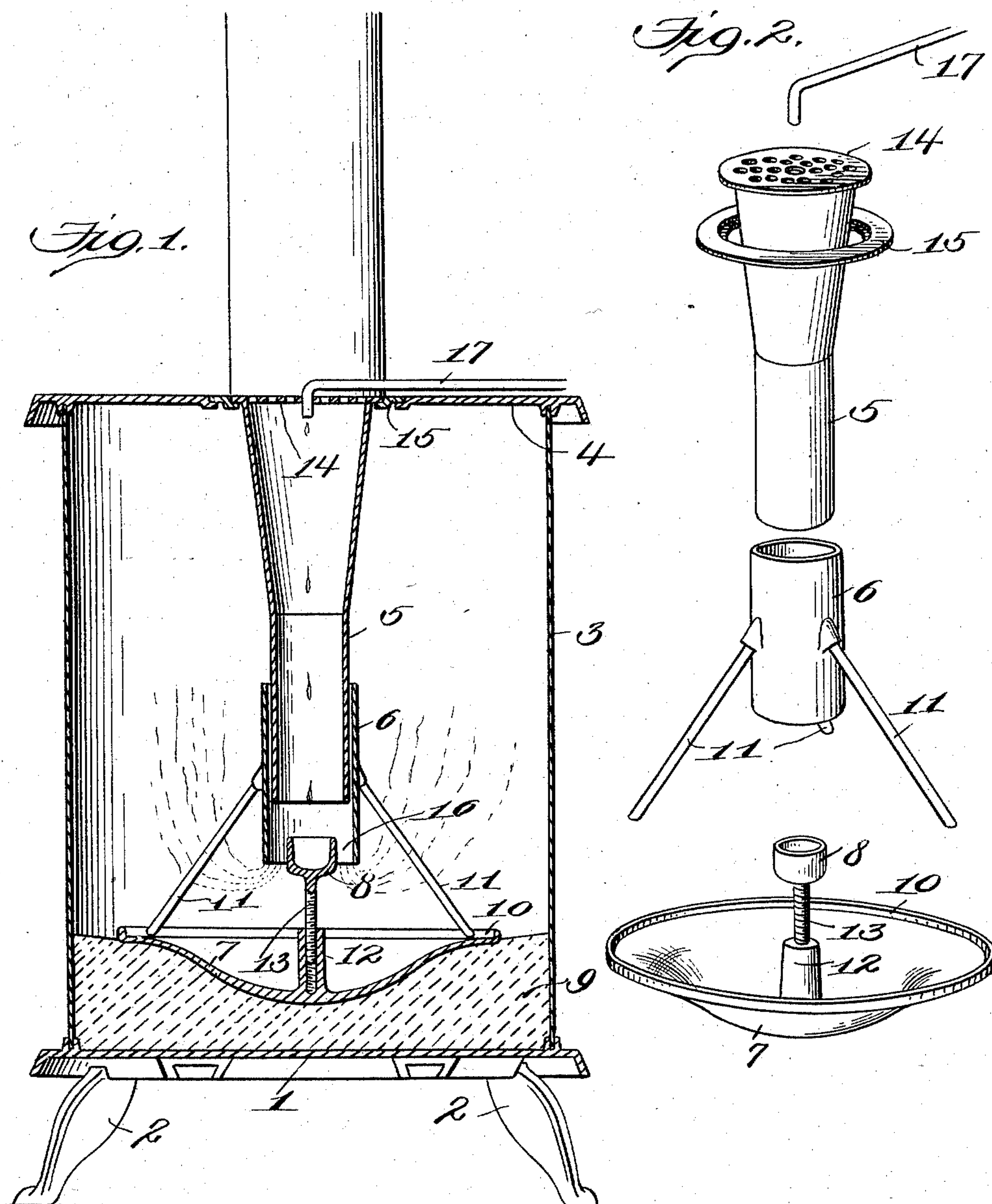


H. L. WADLEY.
OIL BURNER.
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967,089.

Patented Aug. 9, 1910.



Witnesses:
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UNITED STATES PATENT OFFICE.

HENRY L. WADLEY, OF SENTINEL, OKLAHOMA.

OIL-BURNER.

967,089.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, HENRY L. WADLEY, a citizen of the United States, residing at Sentinel, in the county of Washita and State of Oklahoma, have invented new and useful Improvements in Oil-Burners, of which the following is a specification.

This invention relates to new and useful improvements in oil burners and it proposes an oil burner which is particularly applicable to heating stoves and toward this end, embodies novel features of construction and relation, to be hereinafter set forth and claimed, and by virtue of which the mixing of the air and vaporized fuel is rendered more efficient and the better distribution of the flame with relation to the wall of the radiating drum is had.

An embodiment of the invention is illustrated by way of example, in the accompanying drawings, wherein—

Figure 1 is a vertical central view of an oil burner in accordance with the present invention and showing its relation to the well known form of heating stove; and Fig. 2 is a detail perspective view of the oil burner with the parts thereof in disassembled relation.

Similar characters of reference designate corresponding parts throughout the several views.

The stove in connection with which the arrangement is employed may advantageously consist of a base 1 supported on legs 2, and in turn supporting a cylindrical drum 3, upon which is carried a top plate 4.

The oil burner consists essentially of a down draft tube, as 5, a burner tube, as 6, a basin, as 7, in which the burner tube is supported, and a fuel cup, as 8, which is also supported by the basin 7. The basin 7 resting upon a bed, as 9, of refractory material, in the lower portion of the stove, is provided at its edge with a circumscribing flange, as 10. The burner tube 6 is provided with three or more outwardly divergent strut arms, as 11, which constitute supports for said burner tube and which rest upon the edge portion of the basin 7, bearing against the flange 10 thereof. Centrally of the basin 7 is an upstanding internally-threaded boss, as 12, which receives a depending screw stem, as 13, that is carried by the cup 8. The down draft tube 5 has a cylindrical

lower portion which telescopes into the burner tube 6, and at its upper end is provided preferably with a perforated cap, as 14, the edge portion of which projects beyond the down draft tube and takes its seating upon a reducing ring, as 15, which in turn seats in a flanged opening in the top plate 4, in the well known manner. The down draft tube is thus suspended from the top plate of the stove and may be removed by simply lifting the same from its seat. The fuel cup 8 is practically inclosed within the burner tube 6 and is of materially smaller diameter than said burner tube, from which it follows that an annular throatway, as 16, intervenes between the fuel cup and the burner tube, and the efficient length of this throatway may be regulated by adjustably positioning the fuel cup with relation to the burner tube; that is to say, if the fuel cup is moved upwardly and farther into the burner tube, the length of the throatway 16 is increased, and if it is moved downwardly, the length of the throatway 16 is correspondingly decreased.

The oil feed pipe is designated by the numeral 17 and its discharge end projects through a central perforation in the cap 14, the oil dripping into the fuel cup in the usual manner.

It will be observed that the relation of the throatway 16, formed by disposing the fuel cup within the burner tube, provides for a more efficient admixture of the descending air and the vaporized fuel, from which it follows that combustion is more efficient than in the known arrangements, wherein the down draft tube is spaced from the fuel cup. Moreover, the relation of the fuel cup and the burner tube is such that the flame is caused to pass downwardly around the lower edge of said tube and then upwardly and is thus more efficiently and uniformly distributed within the confines of the radiating drum. The structure possesses a further advantage in that the telescoping relation of the down draft tube 5 and of the burner tube 6, provides for an adjustment of the length of the burner in accordance with the height of the stove; that is to say, the burner as an entirety, may be lengthened or shortened in accordance with the greater or less height of the stove in connection with which it is employed. It will

also be apparent that by lengthening or shortening the throatway the intensity of the flame may be increased or decreased as desired.

5 Having fully described my invention, I claim:

1. An oil burner consisting of a down draft tube, a burner tube surrounding the same, a fuel cup disposed within the burner tube, and a common supporting means for
10 the burner tube and the fuel cup.

2. An oil burner consisting of a down draft tube, a burner tube surrounding the same, an axially adjustable fuel cup disposed in the lower portion of the burner tube, and a support for the burner tube and
15 for the fuel cup.

3. An oil burner consisting of a down draft tube, a burner tube axially alined with the down draft tube and surrounding the lower end portion thereof, a basin arranged below the burner tube, strut arms carrying the burner tube and resting upon the basin, a fuel cup, and a connection between the
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fuel cup and the central portion of the basin to support the former in a position coincident with the axial center of the burner tube. 25

4. An oil burner consisting of a burner tube provided with strut arms, a basin, the strut arms resting upon the basin, and a fuel cup supported by the basin and disposed within the burner tube. 30

5. An oil burner comprising a basin, a down-draft tube, a burner tube axially alined with the down draft tube and associated with the lower end portion thereof, the burner tube being supported by the basin, and a fuel cup arranged concentrically with relation to the burner tube and likewise supported by the basin. 35 40

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

HENRY L. WADLEY.

Witnesses:

H. D. PORTER,

J. A. COMMONS.