

H. W. DOPP.

Lamp Burner.

No. 59,898.

Patented Nov. 20, 1866.

Fig. 1

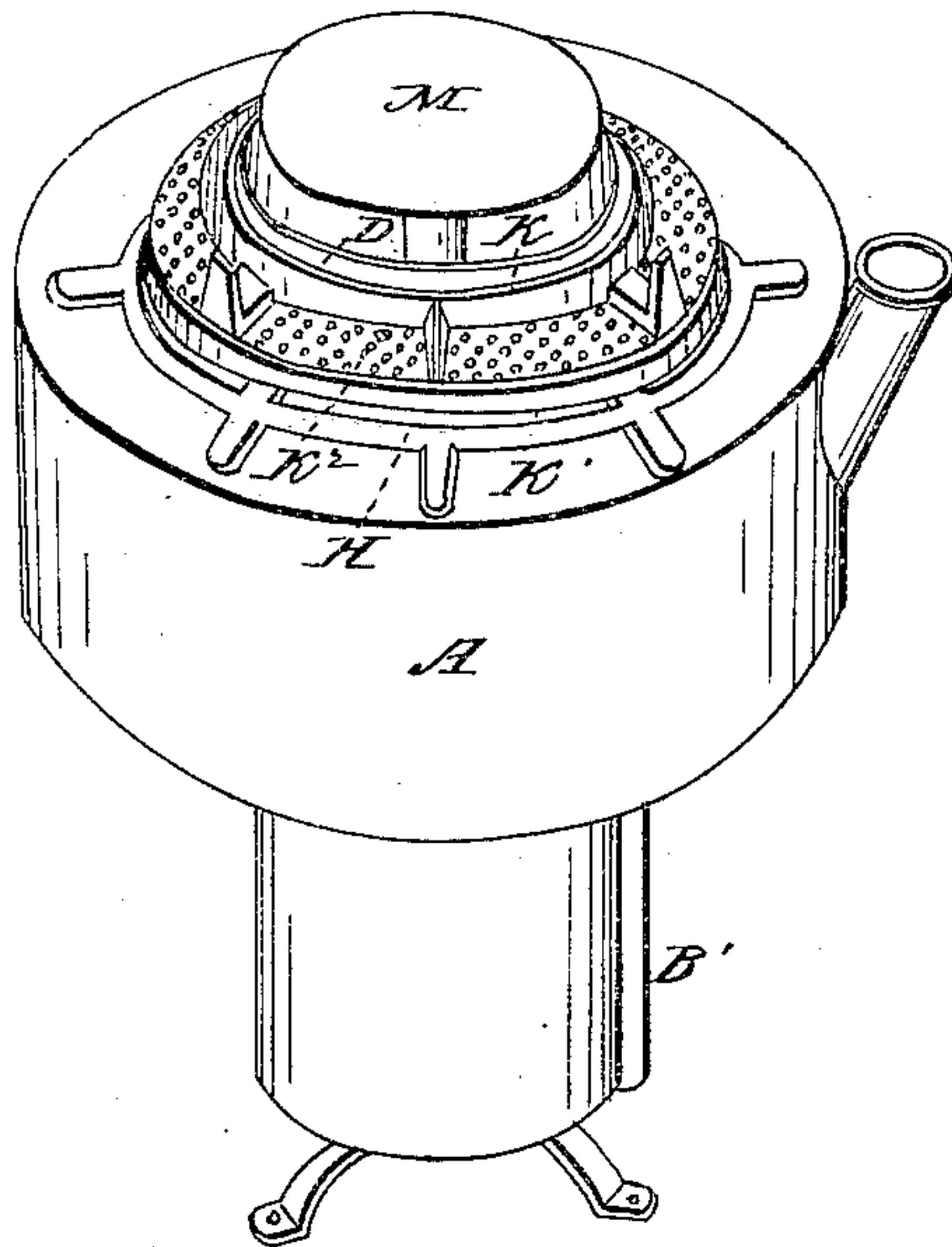
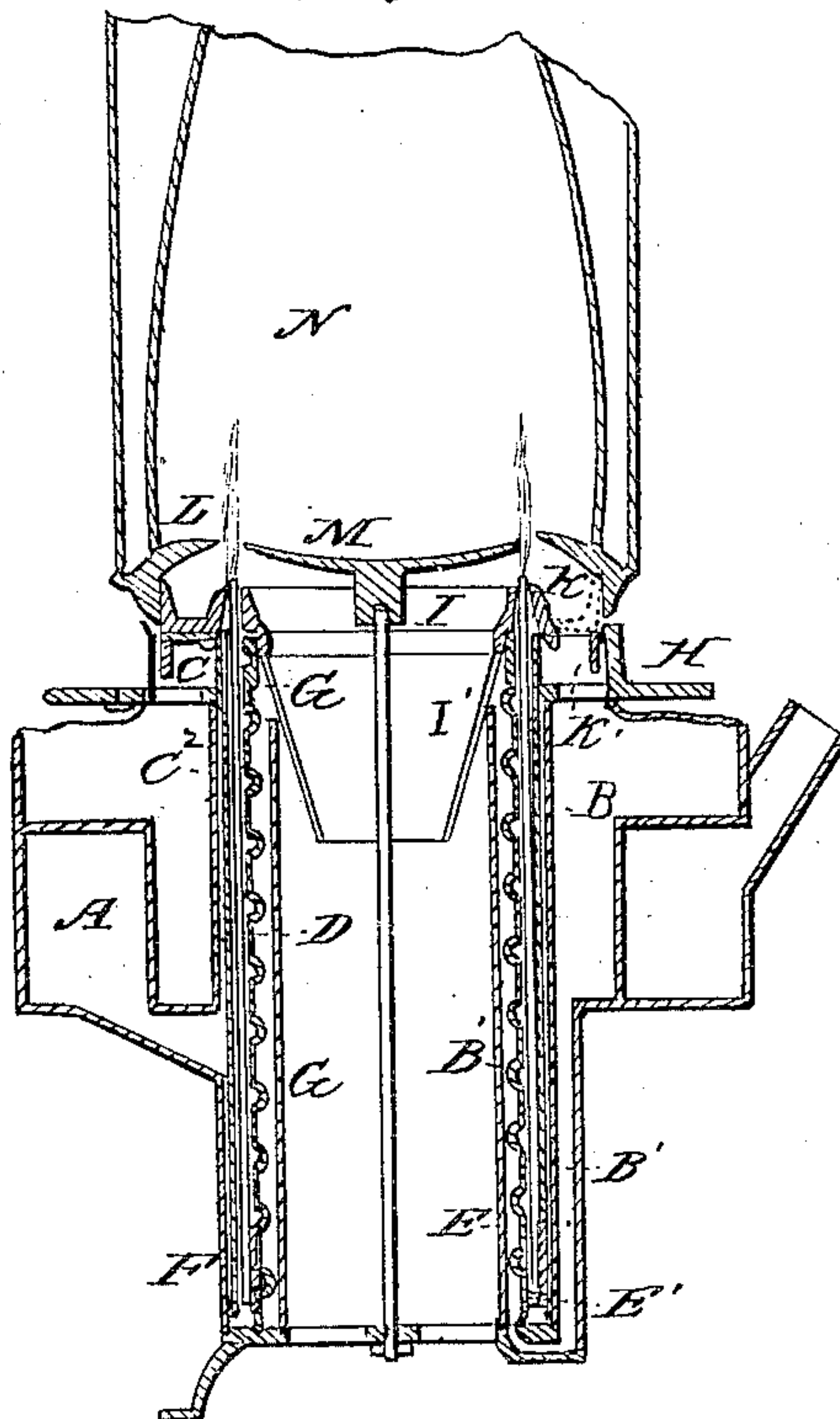


Fig. 2



Witnesses:

J. Forsyth
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UNITED STATES PATENT OFFICE.

H. W. DOPP, OF BUFFALO, NEW YORK.

IMPROVED TUBULAR WICK-BURNERS.

Specification forming part of Letters Patent No. 59,898, dated November 20, 1866.

To all whom it may concern:

Be it known that I, H. W. DOPP, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Tubular Wick-Burner for burning petroleum and all other inflammable oils for illuminating as well as cooking and heating purposes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and letters of reference marked thereon.

Figure I is a perspective view. Fig. II is a perpendicular cut through the center.

A is the oil-reservoir. B is a water-reservoir surrounding wick-tubes. This forms a water-jacket in connection with B' for the outside and inside tubes of tubular wick D, for the purpose of keeping the wick-tubes cold. C is the outside wick-tube. This is provided with a slot through its entire length, and is held within tube C², in which it is movable, for the purpose of raising or lowering the wick. C¹ is the inside wick-tube, provided with three screw-threads around it, over its entire length. These three screw-threads are for the purpose of raising and lowering the wick, and to guard against the sticking or clogging of band or nut E, to which the wick is secured. This imparts a perfect and easy movement to the wick under all circumstances. D is a tubular wick secured at the lower end to a sheet-metal band, E. This is placed between tubes C and C¹. E is a sheet-metal band surrounding inside wick-tube C¹. Said band is provided on its inner side with three pins, which fit into the three screw-threads of wick-tube C¹, and is secured to the lower end of tubular wick D. This serves the purpose of a screw-nut, by means of which the wick is raised or lowered. E' is a pin on sheet-metal band E. Its end fits into the slot of wick-tube C, and remains in that position for the purpose of carrying the band E around the wick-tube C¹ whenever wick-tube C shall be turned. F is a sheet-metal band, for the purpose of securing the wick to the band E, so that the wick remains in position with one end between E and F. G is a tube, inside tube C¹. This forms a space, B', which is capable of containing water

needed to keep C¹ cool. H is a compensation-ring with a number of handles on it. This is secured around and to the upper end of wick-tube C, for the purpose of turning C, and therewith wick D, by means of E' and E. The object of attaching the handles to the compensation-ring for raising the wick is to prevent said handles from getting hot. I is a ring, resting on inside wick-tube C¹. It forms a continuation of wick-tube, and is constructed so as to come in contact with the wick by its upper edge only. This guards against charring the wick inside the wick-tube; but its main office is to prevent the conducting of heat to the tube C¹ to a large extent. It is also provided with a sheet-metal cone, I', on its under side, for the purpose of preventing the deflecting of heat; also of preventing the ignition of vapor that might escape from the joints formed by C¹ and I. K is a ring, resting on the outside wick-tube C. This answers the same purpose for C that I does for C¹. It is provided with three arms on its outside, for the purpose of carrying or guarding the oxygenating cap L, and with a ring, K¹, around its lower part, and a perforated flange, K², said flange being fastened in between K and K¹. Said ring and perforated flange are used to prevent the ignition of any escaping vapor below K² until it has passed through the perforations and mingled with the flame as obtained from the wick. L is an oxygenating cap resting on the three arms of K. This conducts the atmosphere to the outside of the flame that issues from the tubular wick D, the atmosphere passing in between said arms of K. M is an oxygenating cap placed over the center of wick D, resting on ring I. This conducts the atmosphere, which passes up through the tubes G and I, to the inside of the flame from wick D. N represents a chimney of glass, should this burner be used for illuminating purposes, or a metal cylinder secured to cap L, when used for heating and cooking purposes. This is used to create the necessary draft for perfect combustion in the first place; and, secondly, to conduct the heat, when used for cooking and heating purposes, to the cooking-utensil.

To operate this burner, oil is placed into

the reservoir A, and water into reservoir B. The cap L is to be removed from K. Then the wick is to be raised, so it can be ignited. The cap L is then to be replaced. The burner is now in operation. To raise the wick, turn H from the left to the right. To lower it, turn H from the right to the left.

I claim—

1. The water-jacket B and B', in combination with a wick-burner, for the purpose set forth.

2. The combination of the two rings I and K with the pipes C and C¹.

3. The combination of K² with a tubular wick-burner, when operated as set forth.

4. The combination of the cone I' and I, for the purpose specified.

H. WM. DOPP.

Witnesses:

J. FORSYTH,
F. R. NOBLE.