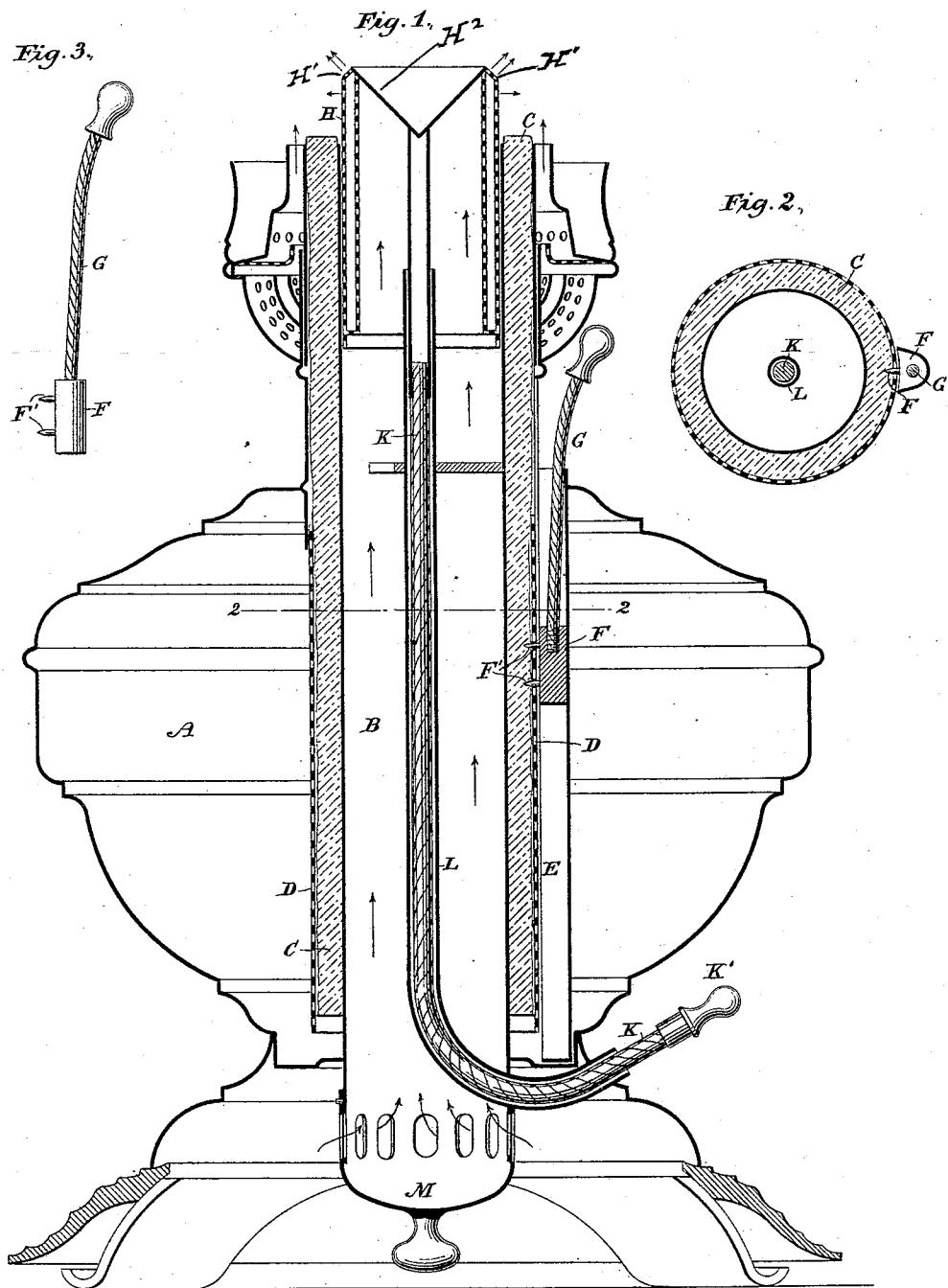


(No Model.)

C. M. RICHMOND.
OIL LAMP AND BURNER.

No. 454,686.

Patented June 23, 1891.



Witnesses

Geo. W. Bruck
Edward Thorpe.

Inventor

C. M. Richmond

UNITED STATES PATENT OFFICE.

CASSIUS MONTEZUMA RICHMOND, OF NEW YORK, N. Y.

OIL LAMP AND BURNER.

SPECIFICATION forming part of Letters Patent No. 454,686, dated June 23, 1891.

Application filed October 9, 1890. Serial No. 367,593. (No model.)

To all whom it may concern:

Be it known that I, CASSIUS MONTEZUMA RICHMOND, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Oil Lamps and Burners, of which the following is a specification.

My invention relates to certain new and useful improvements in oil-lamps.

It has for its object to so construct and arrange the several parts that it may be easily rewicked and the internal parts so simple in their mechanical construction that any one can at once understand and manage the same.

In order that those skilled in the art may know how to construct and use my improved lamp, I will proceed to describe its construction and operation, referring by letters to the accompanying drawings, wherein—

Figure 1 represents a central vertical section of a lamp embodying my improvements; Fig. 2, a section of the air-tube on the line 2, and Fig. 3 a detail of the wick-raiser.

25 A represents the oil-reservoir, B the central air-tube, and C the wick surrounding the air-tube B. The wick C may for a part of its extent be surrounded with a perforated covering D.

30 Within the reservoir A, and on one side of the space occupied by the wick C, I form a vertical channel E, open at the side next to the wick. F is a short block of metal or other suitable material so proportioned that it will 35 exactly fit within the channel E and be capable of vertical movement therein. This block E is provided on its exposed side with one or more short teeth or spurs F', adapted to penetrate the wick or the perforations in the wick-cover D. The block F is connected by a screw-thread or otherwise to a flexible operating-rod G, composed of coiled wire or flat spring metal provided with an operating knob or handle at its upper or free end. From the 40 construction described, it will be seen that when the teeth F' of the block F are located in the perforations of the wick-cover D or caused to penetrate the wick fabric, and the block is then caused to enter the channel E from the top, that owing to the proportions and relations of the block and channel it is 45 impossible to disconnect the teeth or spurs

F' from the wick or its perforate covering without raising the wick sufficiently to permit the block to entirely leave the channel, 55 and consequently any movement of the block through the medium of the rod G necessarily produces a corresponding adjustment of the wick. The operating-rod G, whether made of coiled wire or of flat spring metal, is made 60 with a slight curve, as shown, so that it is always in frictional contact with one side of the channel E, and any accidental falling or lowering of the wick is avoided.

Within the central air-tube B and centrally 65 therein is constructed a small tube L, terminating at its upper end a short distance below the top of the air-tube B and extending downward to the base of the reservoir and curved outwardly and through the side of the lamp 70 to a point near the base of the bowl. Within this tube L is arranged a coiled wire or other flexible operating-rod K, provided at its outer end with an operating-knob K', and the opposite end of the rod extends upwardly to a sufficient height to form a proper contact or connection with a central leg or pedestal secured to the air-distributer H, and from the construction and arrangement shown it will be seen that the air-distributer H may be readily 75 and expeditiously raised or lowered to control the proper distribution of air to the flame by simply raising or lowering the rod K, and the frictional contact between the spring-rod and the curved bottom portion of the tube L prevents any accidental movement of the rod after the proper adjustment has been made. The air-distributer H, which forms one part 80 of my invention, consists of a double-walled tube made of gauze or properly-perforated 85 sheet metal, and these walls are parallel or concentric except at the immediate top portion, where the exterior wall is turned inward at an angle of about forty-five degrees, as clearly illustrated at H' in the drawings, and 90 connected with the closing non-perforate cap H', which is made in the form of an inverted cone. The upper or exposed surface of this cone is nickel-plated or otherwise highly polished to form a reflector, and the under side 95 of said cone acts as a deflector to control and direct the air toward the perforations in the oblique (or mansard) portion of the air-distributer in such manner that it will be delivered 100

ered to the top of the flame at an angle of about forty-five degrees.

M is a cap adjustably connected to the lower end of the tube B, and said tube and cap are provided with openings through the sides thereof in order that a greater or less supply of air may be admitted to the tube B accordingly as the openings referred to register to a greater or less degree, and the cap M ⁵ also serves as a drip-cup to catch any oil which may leak or flow down the tube B. I have shown the wick-raising device as applied to an Argand or tubular-wick lamp; but it will of course be understood that it may with ¹⁰ equal advantage be employed in a flat-wick lamp.

What I claim as new, and desire to secure by Letters Patent, is—

1. The wick-raising device consisting of the open-sided channel E, the block F, having spurs F', and the bent flexible operating-rod G, in combination with the wick-supporting ²⁰

tube B and the interposed wick C, substantially as hereinbefore set forth.

2. The air-distributer H, composed of double ²⁵ perforated walls, the outer wall obliqued or inclined inwardly and closed at the top by an inverted-cone-shaped cap polished on its exposed surface and arranged to act as a deflector of the air and a reflector of light, substantially as hereinbefore set forth.

3. As a means for adjusting the air-distributer H, the central tube L, terminating at the base of the bowl in a curve, in combination with an interiorly-arranged flexible rod K, ³⁰ substantially as shown and described.

Signed at New York, in the county of New York and State of New York, this 23d day of September, A. D. 1890.

CASSIUS MONTEZUMA RICHMOND.

Witnesses:

ALVAN S. RICHMOND,
L. A. LEFLER.