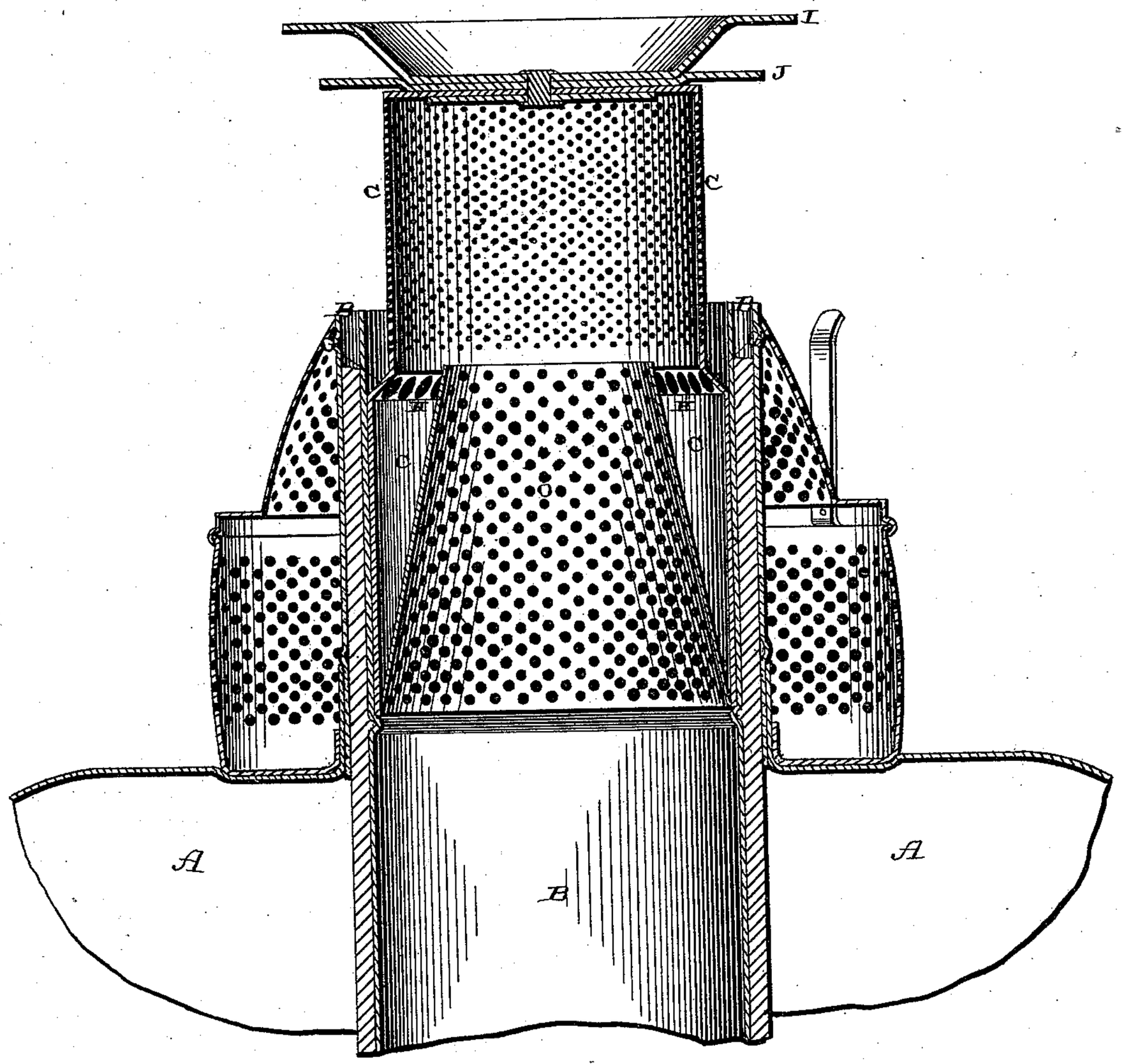
(No Model.)

Z. DAVIS.

BURNER FOR CENTRAL DRAFT LAMPS.

No. 408,592. Patented Aug. 6, 1889.



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UNITED STATES PATENT OFFICE.

ZEBULON DAVIS, OF CLEVELAND, OHIO.

BURNER FOR CENTRAL-DRAFT LAMPS.

SPECIFICATION forming part of Letters Patent No. 408,592, dated August 6, 1889.

Application filed August 15, 1888. Serial No. 282,763. (No model.)

To all whom it may concern:

Be it known that I, ZEBULON DAVIS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Burners for Central-Draft Lamps; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in burners for central-draft lamps.

The objects of my invention are to make the upper portion of the burner-tube smaller than its lower portion, and to form through the shoulder which extends around the tube below the small perforations a series of holes, through which a large quantity of heated air is allowed to pass, and to place inside of the smaller end of this burner-tube a perforated open-ended conical tube, which serves to break up the currents of air as they rise around the sides of the burner, and thus cause a greater portion of the air which is rising through the central-draft tube to rise upward and strike against the heated spreaders which form the top of the burner-tube, and thus become thoroughly heated because it passes through the small perforations in the burner-tube.

The accompanying drawing represents a vertical section of a lamp-burner which embodies my invention.

A represents the lamp-bowl, B the central-draft tube provided with an internal supporting-bead, and C the burner-tube. This burner-tube is made large enough at its lower end to snugly fit the inside of the central-draft tube and is supported in position upon the bead in the tube B. At that point in this burner-tube C where the tube is reduced in size an inclined shoulder G is formed, and through this shoulder are made a series of air-holes H. This shoulder and the air-holes are located a suitable distance below the upper end of the central-draft tube, so that all of the air which passes through these openings must pass between the heated upper end of the draft-tube and the outer side of the burner-tube, and thus be heated to a higher degree before reaching the flame. The smaller perforated upper end of this burner-tube extends a suitable distance above the top of the central-draft tube and has its upper end closed by the two spreader-plates I J, which are secured together, the upper one of the plates being the larger. The function of the upper larger spreader-plate is to offer a second surface for the rising air-currents to impinge against, forcing them into the flame, which is deflected outwardly, and which, meeting and mingling with the air-currents rising through the cone and up near the sides of the chimney, is caused to burn very white without odor and remarkably steady.

Inside of the lower solid portion of the burner-tube is secured the conical perforated tube O, which is open at both of its ends, and which serves to break up the currents of air which rise through the central-draft tube into the lower end of this burner-tube, and thus prevent the air which is rising through the openings H from-forming currents of sufficient force to interfere with the steadiness of the flame. This cone also serves to direct the rising current of air which passes through its upper open end against the center of the under side of the lower spreader-plate, where it is highly heated before it spreads out into the chamber formed by the upper end of the burner-tube and escapes through its fine perforations. The upper end of this open-ended perforated cone extends only above the openings H in the shoulder and up to or below the lower line of the perforations in the burner-tube, as its only object is to break up and heat the currents of air which are rising around the inner sides of the burner-tube, and which would pass through the openings H in the shoulder. The outer portion of the burner upon which the lamp-chimney rests will be made of the shape shown.

Having thus described my invention, I claim—

1. The combination of the lamp-bowl and the central-draft tube with a burner-tube consisting of the lower imperforate portion which snugly fits the draft-tube and the smaller upper perforated portion, the tube being provided with a series of perforations H, which

extend around the side of the burner below the small openings in its upper end, so that the air which rises through the perforations H will be heated between the outer side of the perforated part of the burner-tube and the inner side of the upper end of the central-draft tube, substantially as shown.

2. The combination of the lamp-bowl and the central-draft tube with the perforated burner-tube provided with a series of openings H below the fine perforations in its upper end and the open-ended conical tube which is secured in the lower end of the burner-tube and in a different vertical plane from the fine perforations in the burner-tube, substantially as described.

3. In a burner for a central-draft lamp, the combination of the burner-tube provided with perforations at its upper end and a series of larger perforations H near its center with a conical open-ended perforated tube which has its upper end to project to a point at or below the lower line of the smaller perforations through the upper end of the burner-tube, substantially as set forth.

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

ZEBULON DAVIS.

Witnesses:
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