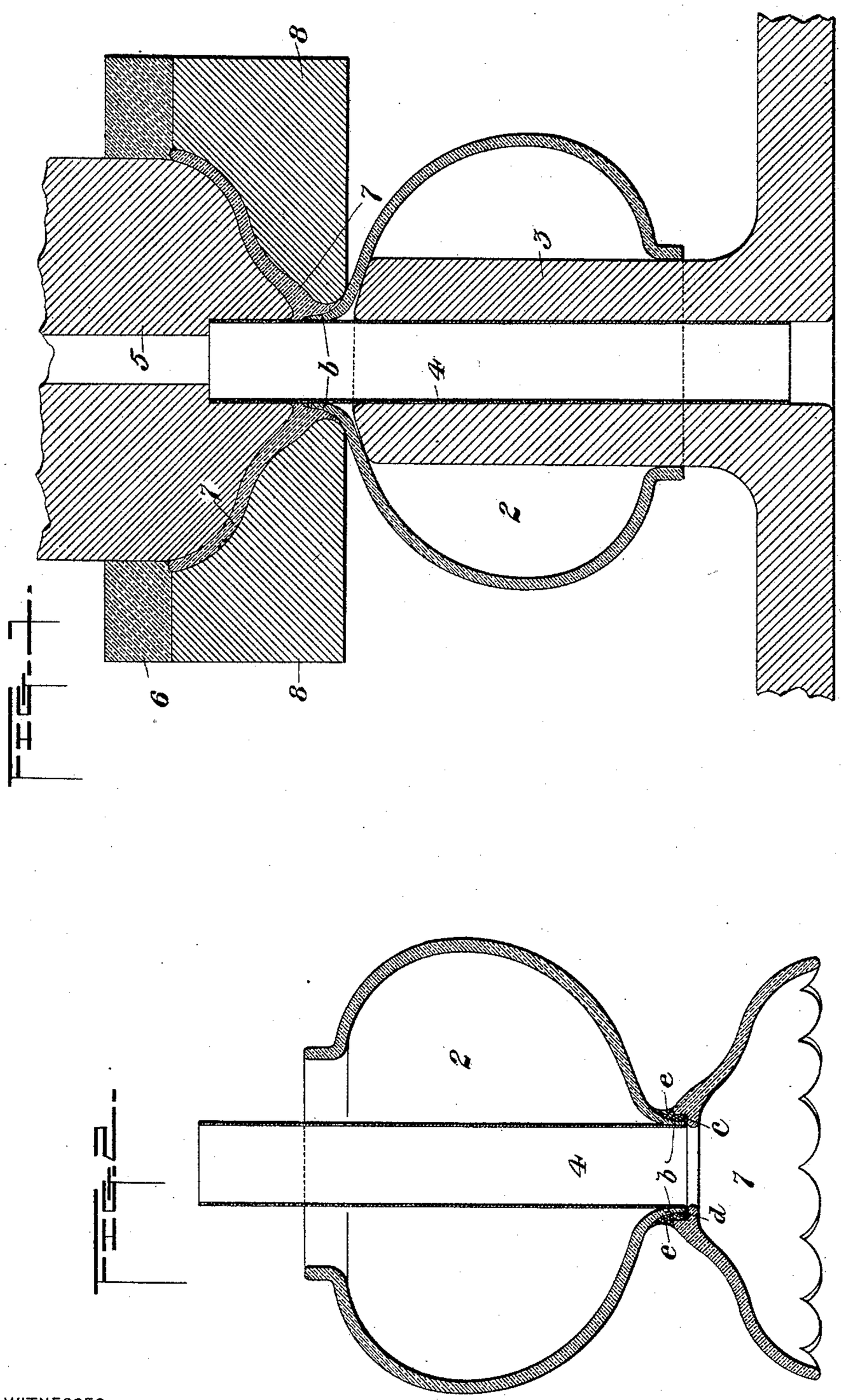
(No Model.)

A. W. PAULL.

CENTRAL DRAFT LAMP.

No. 409,863. Patented Aug. 27, 1889.



WITNESSES.

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ARCHIBALD W. PAULL, OF WHEELING, WEST VIRGINIA.

CENTRAL-DRAFT LAMP.

SPECIFICATION forming part of Letters Patent No. 409,863, dated August 27, 1889.

Application filed January 17, 1889. Serial No. 296,614. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD W. PAULL, of Wheeling, in the county of Ohio and State of West Virginia, have invented a new and useful Improvement in Central-Draft Lamps, of which the following is a full, clear, and exact description.

My invention relates to an improvement in central-draft lamps of that class which are provided with a bowl or receptacle for holding the oil and an air-draft tube which extends from the foot of the lamp up through the bowl for the purpose of supplying air to the burner. Lamps of this sort have commonly been made with both bowl and draft-tube of brass, the parts being soldered together at the base. They have also been made experimentally with glass bowls and glass tubes and with glass bowls and metal tubes united by cement. They have also been made with glass bowls and metal tubes having a flanged-shaped cup-bottom to receive the base of the bowl, which is connected therewith by vitreous enamel.

The lamps with metal bowls and tubes are subject to the objection of being expensive in their manufacture. Lamps with glass tubes are unsafe because of the liability of the tubes to break, and lamps with glass bowls and cemented metal tubes are objectionable because of their liability to leak at the juncture of the bowl and tube.

My invention is designed to afford a lamp which shall be cheap in cost, and which shall be perfectly safe and oil-tight for purposes of use.

To this end my invention consists in forming a lamp with a glass bowl and a metal draft-tube secured to the bowl by welding or adhesion of the glass to the metal.

The lamp can be constructed in various ways, some of which I illustrate in the accompanying drawings for the purpose of enabling others skilled in the art to reproduce the same.

Figure 1 shows in vertical section an apparatus adapted to the manufacture of my improved article, showing it in use in attaching the draft-tube to the lamp. Fig. 2 is a vertical section of a lamp made by another method of manufacture.

Like symbols of reference indicate like parts in each.

In making the lamp by means of the apparatus shown in Fig. 1 I first form the bowl 2, preferably, by blowing in a mold, so that it may have at the end a blow-over *b*. I then place the bowl while hot on a suitable hollow support 3, in which is the draft-tube 4, which is made of metal, and is of proper diameter to fit neatly within the blow-over *b* of the bowl. I then place around the end of the bowl and the projecting end of the draft-tube a mold 8, which is provided with a suitable cavity for forming the foot of the lamp, and with the usual mold-ring 6 and plunger 5. Molten glass is placed in the cavity of this mold on the end of the bowl and around the tube, and then by depressing the plunger the glass is caused to flow out in the mold-cavity to form the foot 7, and is pressed tightly around the tube and the blow-over of the bowl, and is caused to adhere and weld itself firmly to both, as shown in the drawings. This causes a perfect union between the parts, and affords a lamp which possesses all the desirable features of a strong serviceable lamp. If it be desired, the tube may be heated by means of a gas-flame during the pressing of the foot thereto.

In Fig. 2 I illustrate a lamp made in a slightly-different way. The foot 7 and the bowl 2 are separately formed, the foot being open at the top and being provided with an annular recess or seat *c* around the opening. The brass draft-tube 4 is made with an annular flange *d* at the end, which is set on the seat *c* of the foot. A ring *e*, of plastic glass, is then placed around the draft-tube in the recess *c* on the flange *d*, and the bowl 2, whose lower end is made with an opening of the diameter of the draft-tube, is pressed down upon the ring of glass *e*, which is thereby caused to adhere to the bowl, to the foot, and to the flange of the draft-tube, welding all these parts firmly together. In performing these operations the bowl and foot should first be suitably heated to cause the glass to adhere thereto with greater security.

I am aware that glass lamps have been provided with a central-draft tube of metal having a cup-shaped ring or shell secured thereto

by an intermediate coupling-piece, and said ring or shell secured to the lamp-bowl by vitreous enamel; but this I do not claim.

I claim—

1. The combination, in a central-draft lamp, of a bowl-section and a base-section of glass and a central metal draft-tube, said bowl and base section being united directly with each other and with the central-draft tube by welding, substantially as and for the purposes described.

2. In a central-draft glass lamp, the combination of a bowl-section, a base-section, and a metal draft-tube having a flange interposed between and welded with both sections, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 3d day of January, A. D. 1889.

ARCHIBALD W. PAULL.

Witnesses:

W. B. CORWIN,

JNO. K. SMITH.