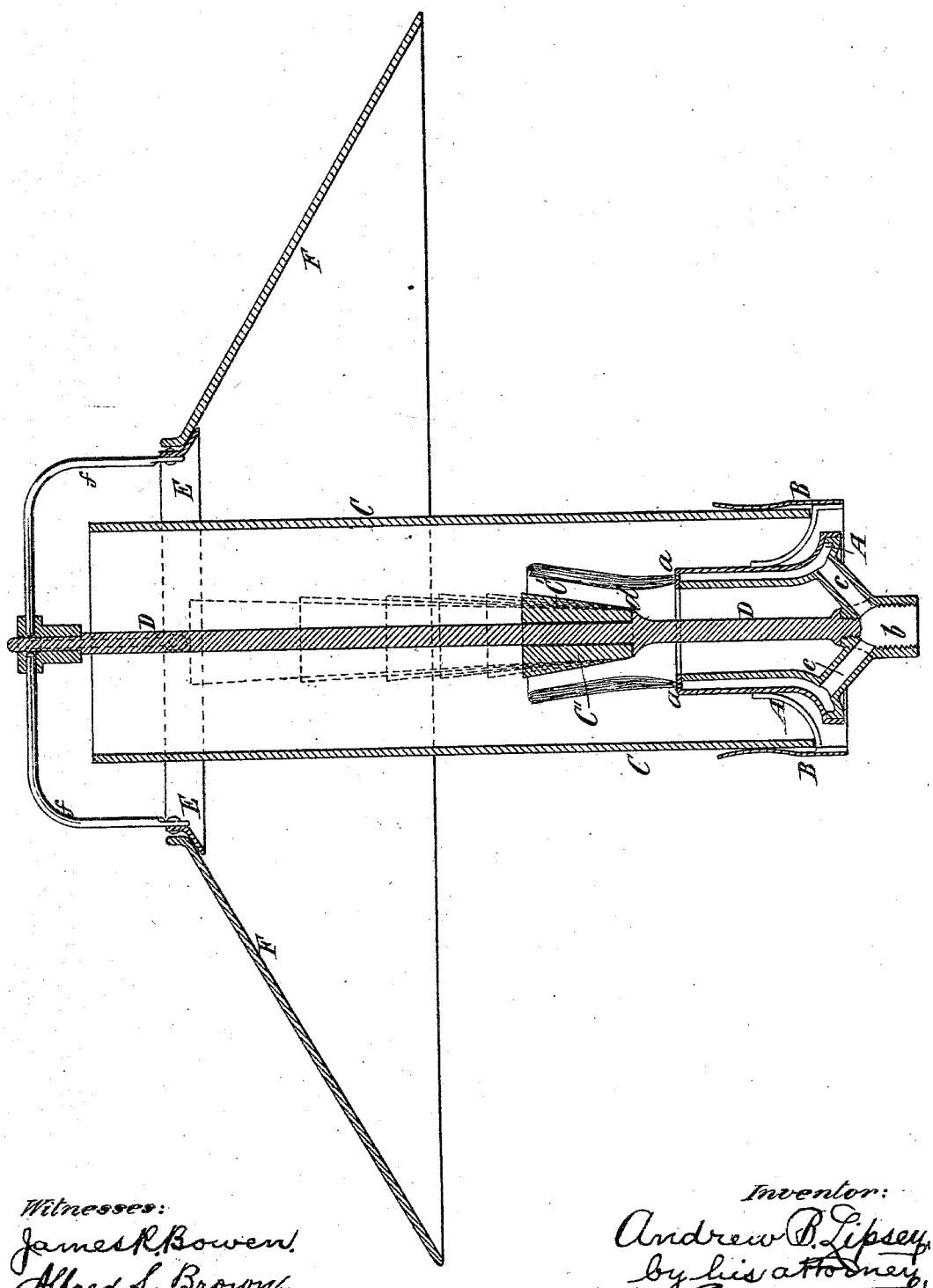
(No Model.)

A. B. LIPSEY.

BURNER.

No. 296,587. Patented Apr. 8, 1884.



Witnesses:
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UNITED STATES PATENT OFFICE.

ANDREW B. LIPSEY, OF WEST HOBOKEN, NEW JERSEY, ASSIGNOR TO WILLIAM BELL, OF NEW YORK, N. Y.

BURNER.

SPECIFICATION forming part of Letters Patent No. 296,587, dated April 8, 1884.

Application filed May 21, 1883. (No model.)

To all whom it may concern:

Be it known that I, ANDREW B. LIPSEY, of West Hoboken, in the county of Hudson and State of New Jersey, have invented a certain new and useful Improvement in Burners, of which the following is a specification.

My improvement relates to gas and oil burners of the annular or Argand type, such as are used for illuminating purposes.

The object of the improvement is to enable such burners to produce a larger quantity of light than they ordinarily do; and to this end the improvement consists, principally, in the combination, with such a burner, of a peculiarly-shaped deflector.

The accompanying drawing is a central vertical section of a gas-burner and appurtenances embodying the improvement.

A designates the burner. It has an annular burner-tip, *a*, and consequently is of the well-known Argand type. At the lower end it has a socket, *b*, whereby it may be attached to the nipple of a gas-fixture, and from this socket hollow arms or tubes *c* extend to the burner-tip *a*.

B is a chimney-gallery, with which the burner is provided. This chimney-gallery, as also the burner, may be made of metal in the ordinary manner. A chimney, C, made of glass and of cylindric shape, is supported on the chimney-gallery and extends above the burner.

C′ designates a deflector arranged within the chimney. As shown, it is supported on a rod, D, extending up from the junction of the hollow arms or tubes *c*, and screwed thereto. The deflector may be of cylindrical form, but preferably it will flare or increase in diameter upwardly. It may be an integral part of the rod D, but preferably it will be made separately therefrom and slipped over the same, so as to rest on a shoulder, *d*, formed on the rod. When thus made separately from the rod, it will preferably be made of porcelain or asbestus, or any white material which will become incandescent when heated. The distinctive features of this deflector consist in its being as long as the flame intended to be produced, and nearly as large in diameter as the inner wall of the burner-tip. When made cylindrical, it will, of course, be of the same diameter throughout its length, and when made flaring the base portion will be considerably smaller than the inner wall of the burner-tip; but at the upper end will be nearly as large in diameter as the inner wall of the burner-tip.

It is of great advantage to make the deflector as long as the flame intended to be produced, for then the air will not be forced violently against the flame, and then allowed to turn back to the center of the chimney and pass off through the same, as when a short deflector is used, but is forced gently and gradually toward the flame and kept in contact with the flame until it is all utilized in combustion. Of course I make deflectors of different lengths for different-sized burners accordingly as the flames to be produced by them vary in length. The rod D, as here shown, extends considerably above the deflector C′, and supports a shade-holder, E. The rod is shouldered near the upper end, and the shade-holder is provided with a socket, which fits on the rod and rests on its shoulder. Arms *f* extend between the shade-holder and its socket. A shade, F, fits outside the shade-holder, and is thereby supported.

Although I have only shown my improvement in connection with a gas-burner, it may be used in connection with an oil-burner. The deflector will have the same size relatively to the flame and interior wall of the burner tip or tube as in the gas-burner.

The rod supporting the deflector may be erected on a spider or open-work frame arranged in the burner tip or tube when the deflector is combined with an oil-burner.

I do not claim, broadly, a deflector made flaring from end to end, nor a deflector as high as the flame produced; nor do I claim, broadly, a deflector of approximately the same size as the inner wall of the burner-tube.

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

1. The combination, with a burner, of a deflector destitute of any air-passage, extending approximately the same height as the flame to be produced by the burner, having its largest portion approximately the same size as the inner wall of the burner-tube, and adapted to

direct air toward the flame through its entire length, substantially as and for the purpose described.

2. The combination, with a burner, of a deflector destitute of any air-passage extending approximately the same height as the flame to be produced by the burner, flaring upward, and having its largest portion approximately the same size as the inner wall of the burner-tube, and adapted to direct air toward the flame through its entire length, substantially as and for the purpose described.

A. B. LIPSEY.

Witnesses:
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