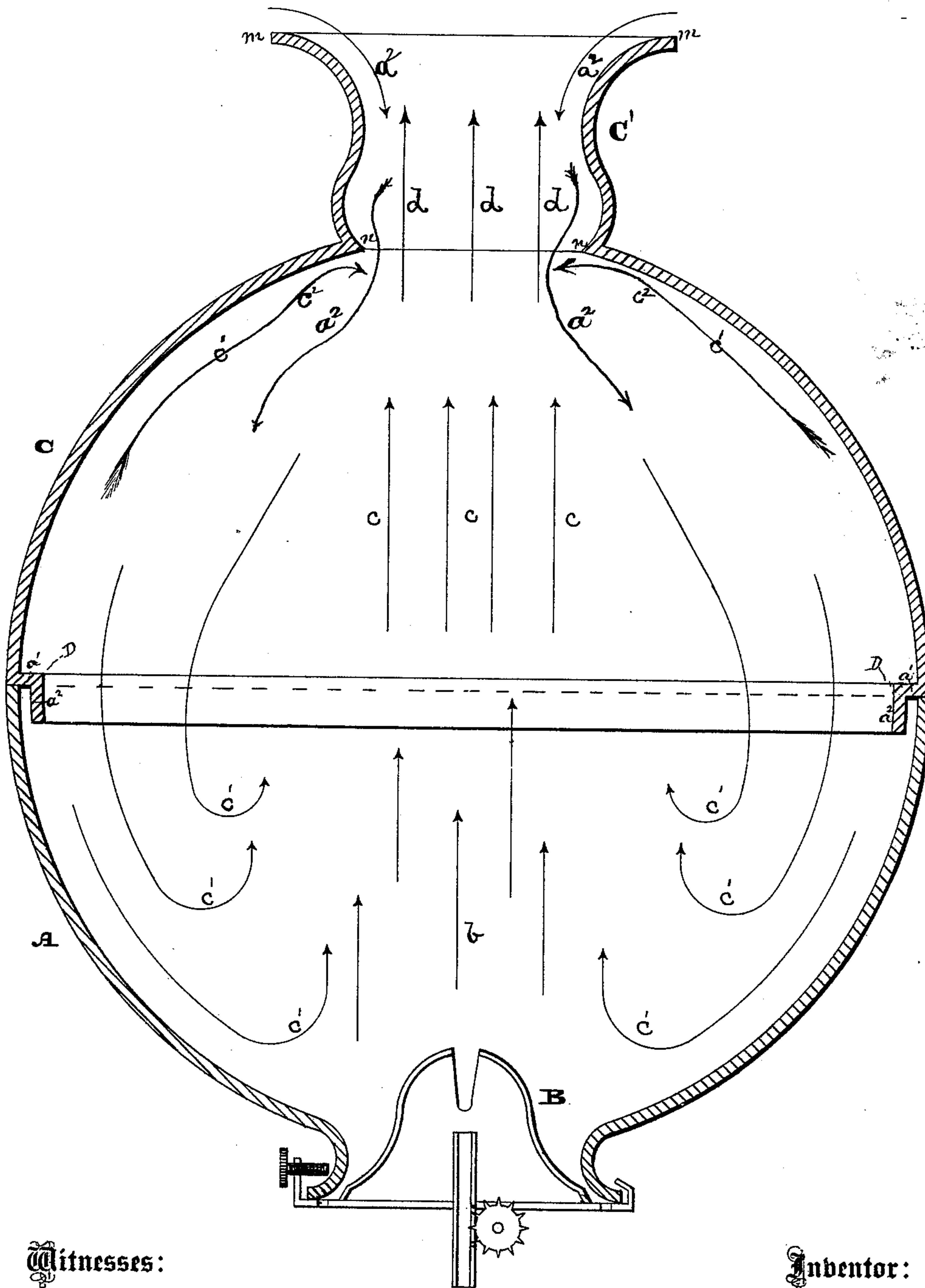


H. E. BUTLER.
Lamp-Globe.

No. 214,238.

Patented April 15, 1879.



Witnesses:

Ap. P. Grant,
W. F. Fisher

Inventor:

H. E. Butler,
by *John A. Diederichs*
ATTORNEY.

UNITED STATES PATENT OFFICE.

HIRAM E. BUTLER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO L. CASE
AND A. REX, OF SAME PLACE, ONE-FOURTH TO EACH.

IMPROVEMENT IN LAMP-GLOBES.

Specification forming part of Letters Patent No. **214,238**, dated April 15, 1879; application filed
March 30, 1878.

To all whom it may concern:

Be it known that I, HIRAM E. BUTLER, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Lamp Shades or Globes, which improvement is fully set forth in the following specification and accompanying drawing, in which the figure is a central vertical section.

My invention relates to chimneyless-lamp globes; and consists in certain improvements therein, as hereinafter more fully set forth.

In the accompanying drawing, A represents a hemispherical transparent body surrounding the burner B and supported on the body of the lamp, on the upper edge of which hemisphere A rests the horizontal flange a^1 of the hemisphere C, of the same curvature as A, and having the vertical flange a^2 projecting downward into the hemisphere A, leaving a slight annular space between them to allow for expansion and contraction.

The upper end of the hemisphere C is provided with a rim, C', having a flaring mouth, m . The lower end or base of the rim C', at its junction with the hemisphere C, is contracted, and an annular flange, n , is formed at its base.

The operation of the chimneyless-lamp globe is as follows: The products of combustion will mainly ascend from the burner in vertical lines, as shown by the arrows $b\ c\ d$, out through the central portion of the rim C'. A portion of the

products of combustion will pass around the interior of the globe, between the vertical ascending column above described and the interior spherical face of the globe, until in ascending they reach the projecting flange n , which will deflect them downwardly, as shown by the arrows e^2 , into the currents of cold air a^2 , entering the rim C', by which they are carried, as shown by the arrows e^1 , down to the burner B, where they will be consumed. The currents of cold air e^1 will act thus as vehicles to carry back the unconsumed products of combustion to the burner, and will also supply an additional amount of oxygen to the burner from that derived from below the burner, thus increasing the light and obviating the use of a chimney.

I claim as new and of my invention—

The lamp-globe herein described, consisting of the two transparent hemispherical bodies A C, of the same curvature, the top hemisphere, C, having a vertical rim, C', with a flaring mouth, m , and a contracted throat, with a flange, n , at its lower end, whereby the products of combustion near the interior face of the globe are deflected and returned to the burner by currents of cold air, substantially as described.

H. E. BUTLER.

Witnesses:

JOHN A. WIEDERSHEIM,
H. E. Garsed.