

No. 846,952.

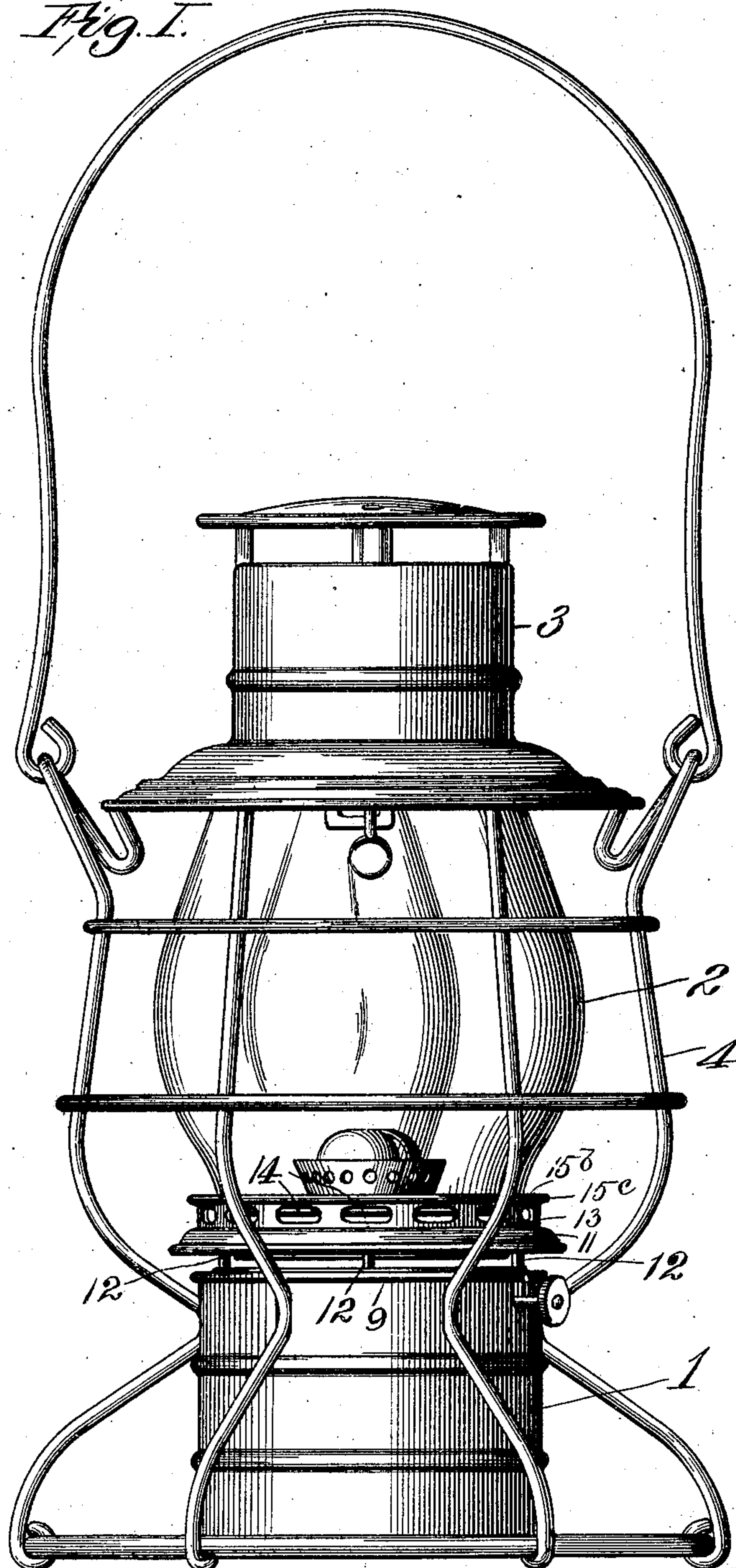
PATENTED MAR. 12, 1907.

G. H. ROLFES.
LANTERN.

APPLICATION FILED NOV. 30, 1906.

2 SHEETS—SHEET 1.

Fig. I.



Attest:
Wm. H. H. H.
Ernest W. Belt

Inventor.
George H. Rolfes,
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2 SHEETS—SHEET 2.

Fig. II.

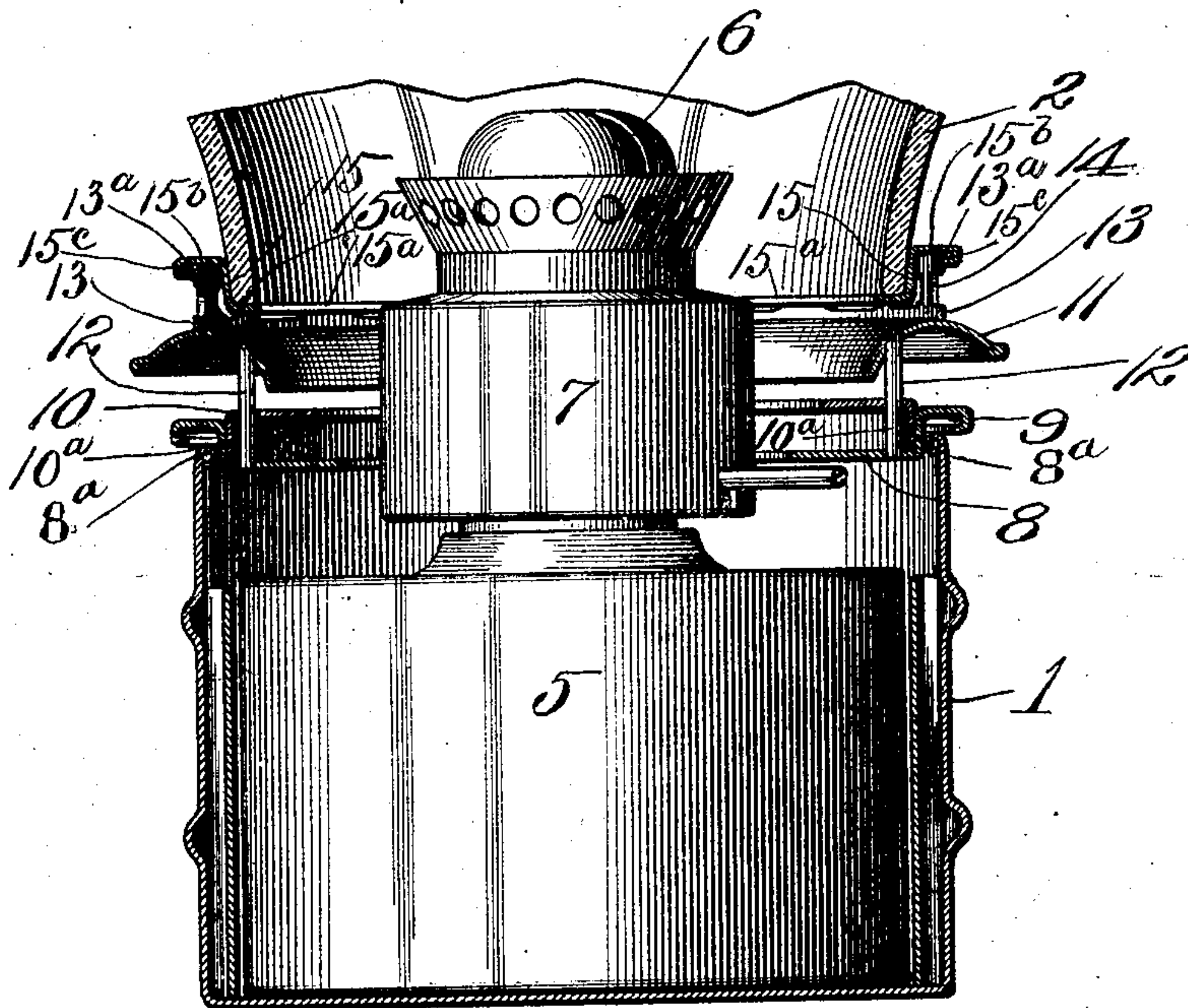
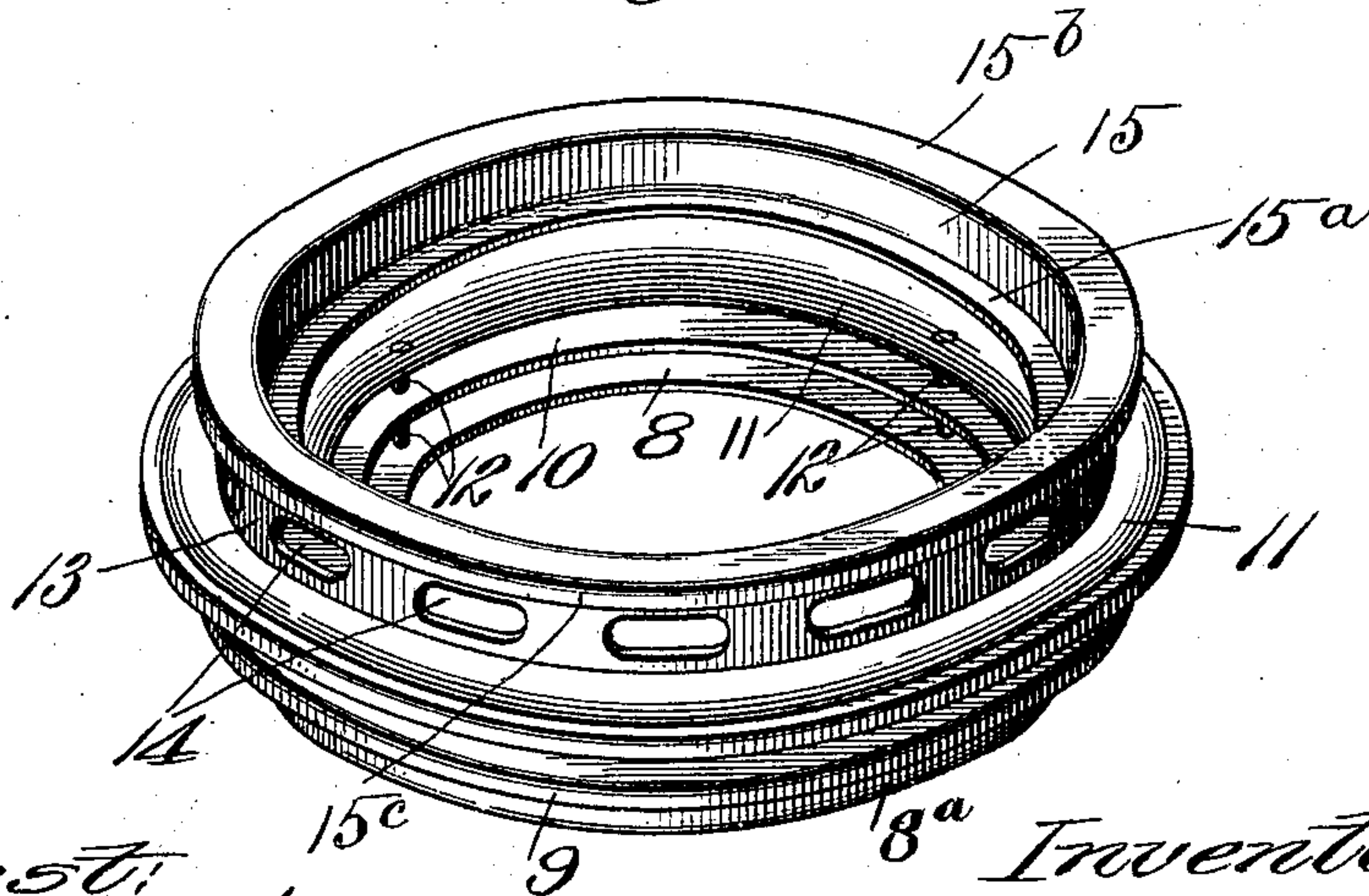


Fig. III.



Attest:
Wm. H. Scott
Anton S. Belt.

8a Inventor:
George H. Rolfes,
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UNITED STATES PATENT OFFICE.

GEORGE H. ROLFES, OF ST. LOUIS, MISSOURI.

LANTERN.

No. 846,952.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed November 30, 1906. Serial No. 345,658.

To all whom it may concern:

Be it known that I, GEORGE H. ROLFES, a citizen of the United States of America, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Lanterns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved form of ventilator located between the font-receptacle of a lantern and the lantern-globe.

The object of my invention is to produce a lantern which has ventilation of such character that petroleum may be used as an illuminant instead of using lard-oil, the illuminant usually employed in lanterns utilized in railway service.

A further object of my invention is to provide a ventilator of such character that it will, while affording the necessary ventilation, so direct the ingress of air to the interior of the lantern as to prevent sudden drafts of such air against the flame to extinguish it, due to strong air-currents striking the lantern either when it is at rest or when it is being carried and swung to and fro or raised and lowered during the act of the user of the lantern in furnishing signals therewith.

Figure I is an elevation of my lantern. Fig. II is an enlarged vertical section taken through the lower portion of the lantern. Fig. III is a perspective view of my ventilator.

1 designates the font-receptacle of the lantern, 2 the globe, and 3 the dome, and 4 the guard connecting the font-receptacle and dome. 5 is the font, seated in the receptacle 1 and surmounted by the burner 6, which is encircled by a skirt 7. The parts just described may be of any preferred construction, as no invention *per se* is herein claimed for them.

8 designates the main base-ring of my ventilator, which is provided with a vertical rim 8^a, whereby it is suspended from an annular flange 9. The flange of this base-ring is adapted to rest upon the upper edge of the font-receptacle 1 for the support of the ventilator, and the main body of the ring is located above the bottom of the burner-skirt 7 when the ventilator is in use, so that air admitted to the ventilator from a point above the base-ring must pass downwardly through

the space between the wall of the contracted aperture in said base-ring and the burner-skirt before it can gain access to the space between the burner-skirt and the burner proper.

10 designates a supplemental base-ring surmounting the main base-ring and suitably secured thereto by a depending rim 10^a. This supplemental ring is provided with an aperture of greater diameter than the aperture in the main base-ring in order that air may pass with great freedom through the aperture in the supplemental ring to reach the aperture in the main base-ring.

11 designates a deflector-ring surmounting the main and supplemental base-rings and spaced apart therefrom to provide a continuous passage-way for air from the exterior of the ventilator to the interior thereof. This deflector-ring, which is preferably supported by posts 12, seated in the base-rings and attached to the deflector ring, is of concavo-convex shape in cross-section, its concave side being lowermost and its outer edge higher than its inner edge. The deflector-ring preferably projects outwardly to a greater degree than the base-rings. It will be seen that air may readily pass through the continuous passage-way between the base-rings and the deflector-ring to gain access to the interior of the lantern, and during this passage of the air it is deflected in a downward direction toward the supplemental base-ring and the main base-ring to move through the apertures therein instead of moving upwardly to occasion a draft against the burner of the lantern and the flame emitted from said burner. The air therefore partakes of a downward course toward the font of the lantern and passes beneath the skirt of the burner to rise through said skirt to the burner-flame without there being any semblance of strong draft upon such flame.

13 designates a vertical rim surmounting the deflector-ring having an annular top flange 13^a and provided with horizontal perforations 14. Extending downwardly and inwardly from the top of this rim is an annular imperforate flange 15, the downwardly-extending portion of which is disposed approximately parallel with the vertical rim, but is spaced apart therefrom to a sufficient degree to provide an air passage-way between said members through which air may enter the ventilator-wall. The inwardly-

extending portion 15^a of the flange serves as a seat for the lantern-globe. The imperforate flange 15 is also formed with an annular outwardly-extending portion 15^b, capping the rim 13 and having an inturned edge 15^c, forming an annular groove receiving the annular top flange 13^a of the rim 13. The degree to which the downwardly-extending portion of the flange 15 extends within the rim 13 is sufficient to prevent a draft in a horizontal direction into the interior of the ventilator through the perforations in the rim 13 to the detriment of the burning of the flame in the lantern, and as air enters through said rim it spreads around the burner and rises without draft to the burner to supply the necessary oxygen at the top of such burner. The air entering through the perforated rim also acts by pressure upon the air entering between the deflector-ring and the base-rings to force it downwardly toward the lantern-font and cause it to follow the course previously specified.

I claim—

1. In a lantern, the combination with a font-receptacle, a font and burner in said receptacle; of a ventilator surmounting said receptacle and comprising a base-ring having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle and a concavo-convex deflector-ring above said base-ring extending inwardly beyond the outer edge of the base-ring and spaced apart therefrom to provide an air passage-way between said members, substantially as set forth.

2. In a lantern, the combination with a font-receptacle, a font and burner in said receptacle; of a ventilator surmounting said receptacle and comprising a base-ring having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle and a deflector-ring extending inwardly beyond the outer edge of the base-ring above said base-ring and spaced apart therefrom to provide an air passage-way between said member; said deflector-ring being concaved at its lower side and having its outer edge higher than its inner edge, substantially as set forth.

3. In a lantern, the combination with a font-receptacle, a font in said receptacle, a burner carried by said font, a skirt depending from said burner; of a ventilator surmounting said receptacle and comprising a base-ring surrounding said skirt and spaced apart from it and having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle, and a concavo-convex deflector-ring above said base-ring extending inwardly beyond the outer edge of the base-ring, substantially as set forth.

4. In a lantern, the combination with a font-receptacle, a font in said receptacle, a

burner carried by said font, a skirt depending from said burner; of a ventilator surmounting said receptacle and comprising a base-ring surrounding said skirt and spaced apart from it and having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle, and a deflector-ring above said base-ring extending inwardly beyond the outer edge of the base-ring; said base-ring being concaved at its lower side and having its outer edge higher than its inner edge, substantially as set forth.

5. In a lantern, the combination with a font-receptacle, a font in said receptacle, a burner carried by said font, a skirt depending from said burner; of a ventilator surmounting said receptacle and comprising a main lower base-ring surrounding said skirt and spaced apart therefrom and having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle, a supplemental base-ring above said main base-ring and having an aperture therein larger than the aperture in said main base-ring and a depending rim fitted within the rim of the lower base-ring, and a deflector-ring above said first-mentioned rings extending inwardly beyond the outer edge of said supplemental base-ring, substantially as set forth.

6. In a lantern, the combination with a font-receptacle, a font in said receptacle, a burner carried by said font, a skirt depending from said burner; of a ventilator surmounting said receptacle and comprising a main lower base-ring surrounding said skirt and spaced apart therefrom and having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle, a supplemental base-ring above said main base-ring and having an aperture therein larger than the aperture in said main base-ring and having a depending rim fitted within the rim of the lower base-ring, and a deflector-ring above said first-mentioned rings extending inwardly beyond the outer edge of said supplemental base-ring; said deflector-ring being of greater diameter than either of said first-mentioned rings, substantially as set forth.

7. In a lantern, the combination with a font-receptacle, a font in said receptacle, a burner carried by said font, a skirt depending from said burner; of a ventilator surmounting said receptacle and comprising a main lower base-ring surrounding said skirt and spaced apart therefrom and having a vertical rim provided with an annular flange whereby it is suspended from the font-receptacle, a supplemental base-ring above said main base-ring and having an aperture therein larger than the aperture in said main base-ring and having a depending rim fitted within the rim of the lower base-ring, and a

deflector-ring above said first-mentioned rings extending inwardly beyond the outer edge of said supplemental base-ring; said deflector-ring being concaved at its lower side, substantially as set forth.

8. In a lantern, the combination with a font-receptacle, a font and burner in said receptacle; of a ventilator surmounting said receptacle and comprising a lower base-ring having a vertical rim provided with an annular flange, a supplemental base-ring having a dependent rim fitted within the rim of the lower base-ring, a deflector-ring, a vertical rim surmounting said deflector-ring and having horizontal perforations therein, and an imperforate annular flange above said surmounting vertical rim, substantially as set forth.

9. In a lantern, the combination with a font-receptacle, a font and burner in said receptacle; of a ventilator surmounting said receptacle and comprising a lower base-ring having a vertical rim provided with an annular flange, a supplemental base-ring having a depending rim fitted within the rim of the lower base-ring, a deflector-ring, a verti-

cal rim surmounting said deflector-ring and having horizontal perforations therein, and an imperforate annular flange above said surmounting vertical rim; said flange being bent downwardly within said surmounting vertical rim, substantially as set forth.

10. In a lantern, the combination with a font-receptacle, a font and burner in said receptacle; of a ventilator surmounting said receptacle and comprising a lower base-ring having a vertical rim provided with an annular flange, a supplemental base-ring having a depending rim fitted within the rim of the lower base-ring, a deflector-ring, a vertical rim surmounting said deflector-ring and having horizontal perforations therein, and an imperforate annular flange above said surmounting vertical rim; said flange being bent downwardly and inwardly within said surmounting vertical rim, substantially as set forth.

GEO. H. ROLFES.

In presence of—

NELLIE V. ALEXANDER,
BLANCHE HOGAN.