

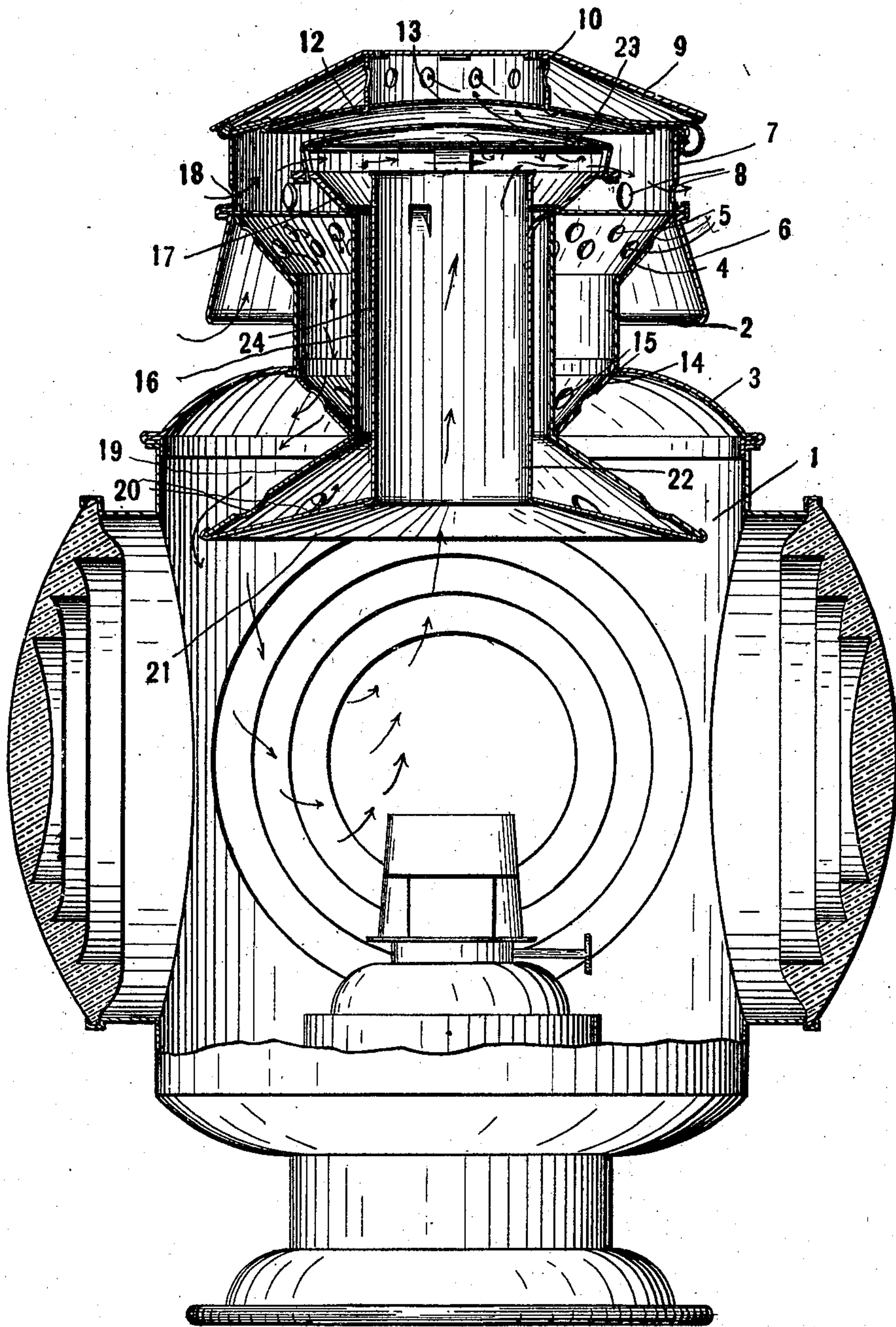
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A. F. PRAHM.
VENTILATING JACK FOR LANTERNS.

(Application filed May 2, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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VENTILATING-JACK FOR LANTERNS.

SPECIFICATION forming part of Letters Patent No. 698,053, dated April 22, 1902.

Application filed May 2, 1901. Serial No. 58,410. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH F. PRAHM, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Ventilating-Jack for Lanterns, of which the following is a specification.

My invention relates to an improvement in that class of lanterns used in the open, and especially that class of railroad-lanterns subjected to great wind velocity.

The object of my invention is to provide a ventilating-jack for lanterns which may be used at the upper end of any of the usual lantern-bodies and of such construction as to carry the entire arrangement for ventilating the lantern-body and for supplying the necessary fresh air to the flame, the lower portion of the body being practically impervious to air-currents.

The accompanying drawing, which is a central vertical section, illustrates my invention.

In the drawing, 1 indicates the main body of a lantern, the form shown being that commonly used in railroad service for switch-lights, outside train-lights, &c.

The open upper end of the body 1 is covered by a jack, the peculiar construction of which constitutes my invention. This jack consists of a short cylindrical body 2, to the lower end of which is secured an outwardly and downwardly flaring flange 3, the edge of which fits within the upper end of the lantern-body 1. The upper end 4 of the body 2 is flared outwardly and upwardly and provided with a number of ventilating openings or perforations 5. Depending from the upper end of portion 4 is a flange 6, which extends considerably below the perforations 5. Extending upward from the upper end of portion 4 is a cylinder 7, provided with perforations 8, and hinged to the upper end of cylinder 7, at one side thereof, is a cap 9, corrugated, if desired, provided at its center with a depending cylinder 10, to which is attached a bell 12, having a central perforation 13, opening into the cylinder 10. Secured to the lower end of the body 2, so as to form a part thereof, is an inwardly and downwardly flaring flange 14, provided with perforations 15, leading into the interior of body 2. Secured to the lower end of flange 14 is a cylindrical shell 16, which projects upward through body 2 to and above the upper end of portion

4, and preferably flaring at its upper end, as at 17. Extending across the upper end of portion 4 is an annular imperforate plate 18, which extends to and is secured to the shell 16, thus preventing communication between the interior of body 2 and the upper portion of the jack. Secured to the lower end of flange 14 and shell 16, so as to form a part and continuation of said shell, is a downwardly and outwardly flaring flange 19, provided with a few perforations 20, and secured to the lower end of flange 19 is a bell 21, provided with a central opening, which is extended upward by means of the cylindrical shell 22, said shell extending up to the upper end of the flaring portion 17 of the shell 16. Secured to the upper end of the flaring end 17 of shell 16 is a bell 23, which extends over the upper end of shell 22 a short distance from the upper end thereof, a free passage for gases from the shell 22 being provided beneath the edge of the bell 23. By the arrangement of shells 16 and 22 an annular passage 24 is formed around shell 22.

In operation the fresh air strikes the exterior of body 2 and is deflected upward, passing into the interior of said body through the perforations 5, and is deflected downward by the imperforate plate 18. This air passes downward through perforations 15, and a major portion thereof is deflected outward by the flange 19 and passes down beyond the edge of the bell 21 and into contact with the flame. A portion of the fresh air, however, passes through perforations 20 and up through the passage 24, thus keeping the shell 22 comparatively cool. The burned gases pass directly upward through shell 22 and pass out over the top of said shell and from beneath the bell 23, passing out either through the perforations 8 in the leeward side of cylinder 7 or passing up through perforation 13 of bell 12 and from thence out through perforations 11 and out from beneath the corrugated cap 9. Fresh air also enters the perforations 8 on the windward side; but said air passes directly through the body over the tops of the shells 16 and 22, thus aiding the draft, but not of such character as to cause any flicker of the lights.

I claim as my invention—

1. In a ventilating-jack for lanterns, the combination with a cover adapted to close the upper end of a lantern-body, of a tubular

main body having a series of openings leading therein near its upper end and openings leading from its lower end inside the cover, a shell of less diameter than the body mounted
 5 therein and leading upwardly therethrough, a second open-ended shell mounted within the first shell and extending therethrough, an annular plate or bell closing the lower end of the annular space between the two shells,
 10 openings leading to the interior of the first shell near its lower end, and an annular imperforate plate connecting the upper end of the main body to the first shell.

2. In a ventilating-jack for lanterns, the
 15 combination with a cover adapted to close the upper end of a lantern-body, of a tubular main body having a series of openings leading therein near its upper end and openings leading from its lower end, a shield protect-
 20 ing the upper openings, a shell of less diameter than the body mounted therein and leading upwardly therethrough said shell having openings leading to its interior near the lower end, a second open-ended shell mounted with-
 25 in the first shell and extending therethrough, an annular plate or bell closing the lower end of the annular space between the two shells, and an annular imperforate plate connecting the upper end of the main body to the first
 30 shell.

3. In a ventilating-jack for lanterns, the combination with a cover adapted to close the upper end of a lantern-body, of a tubular
 35 main body having a series of openings leading therein near its upper end and openings leading from its lower end, an open-ended shell of less diameter than the body mounted therein and leading upwardly therethrough, an imperforate annular plate connecting the
 40 upper end of the main body with the open-ended shell, a perforated cylindrical shell carried by the upper end of the main body, a bell mounted in said shell and extending over the internal shell, and a ventilated cap
 45 covering the end of the perforated shell.

4. In a ventilating-jack for lanterns, the combination with a cover adapted to close the upper end of a lantern-body, of a tubular
 50 main body having a series of openings leading therein near its upper end and openings leading from its lower end, a shell of less diameter than the body mounted therein and leading upwardly therethrough said shell having openings leading to its interior near
 55 the lower end, a second open-ended shell mounted within the first shell and extending therethrough, an annular plate or bell closing the lower end of the annular space between the two shells, an annular imperforate plate
 60 connecting the upper end of the main body to the first shell, a perforated cylindrical shell carried by the upper end of the main body, a bell mounted in said shell and extending over the internal shell, and a venti-
 65 lating-cap covering the end of the perforated shell.

5. In a jack for lanterns, the combination with a cover adapted to close the upper end of a lantern-body, of a tubular main body
 having openings leading therein near its up- 70 per end and openings leading from the lower end, a shell of less diameter than the main body mounted in said body, a deflecting-flange secured to the lower end of said shell and having perforations extending there- 75 through, a bell supported by the lower end of said flange, a second shell of less diameter than the first shell mounted in said first shell and secured at its lower end to said bell, an imperforate annular plate closing the upper 80 end of the main body, a perforated shell mounted above said plate, a ventilated cap covering said perforated shell, and a bell arranged above the upper ends of first and sec- 85 ond shells.

6. In a ventilating-jack for lanterns, the combination with a cover adapted to close the upper end of the lantern-body, of a tubular
 main body having an outwardly-flared upper end 4, the said flaring upper end being per- 90 forated with a series of openings, and a series of openings leading from the lower end of the tubular main body inside the cover, a shell of less diameter than the body mounted there- 95 in and leading upwardly therethrough, a second open-ended shell mounted within the first shell and extending therethrough, an annular plate or bell closing the lower end of the annular space between the two shells, openings leading to the interior of the first 100 shell near its lower end, and an annular imperforate plate connecting the upper end of the main body to the first shell.

7. In a ventilating-jack for lanterns, the combination with a cover adapted to close 105 the upper end of a lantern-body, of a tubular main body having series of openings leading therein near its upper end, the said openings being formed in an outwardly-flaring flange forming the upper end of the tubular main 110 body, and the said main body having series of openings leading from its lower end inside its cover, an open-ended shell of less diameter than the body mounted therein and lead- 115 ing upwardly therethrough, an imperforate annular plate connecting the upper flaring end of the main body with the open-ended shell, a perforated cylindrical shell carried by the upper end of the main body, a bell mounted in said shell and extending over the 120 internal shell, a ventilated cap covering the end of the perforated shell, and a depending guard secured at its upper end to the upper end of the flaring portion of the main body and extending downward so as to overhang 125 the openings through said flaring end of the main body, substantially as described.

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