

A. R. PRITCHARD.
 LANTERN HEAD.
 APPLICATION FILED APR. 30, 1908.

935,324.

Patented Sept. 28, 1909.

FIG.2.

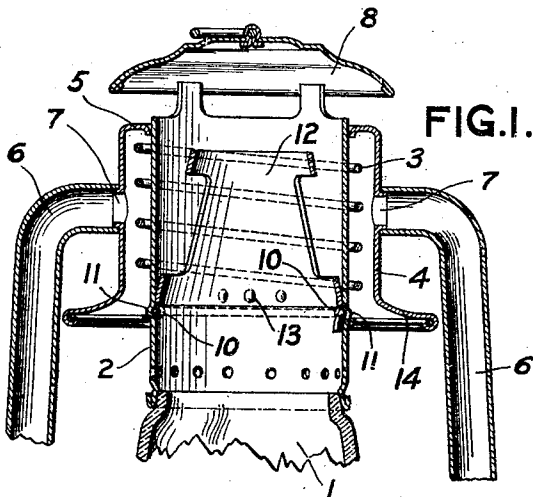
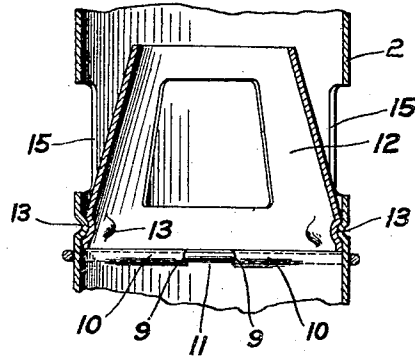


FIG.3.

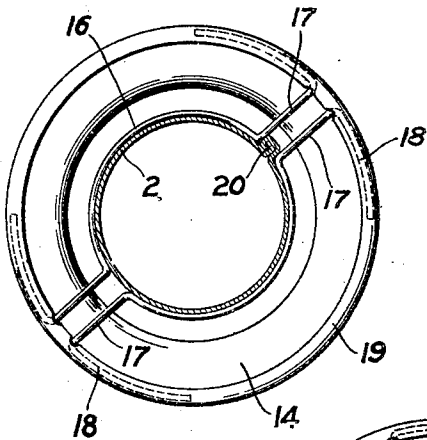


FIG.4.

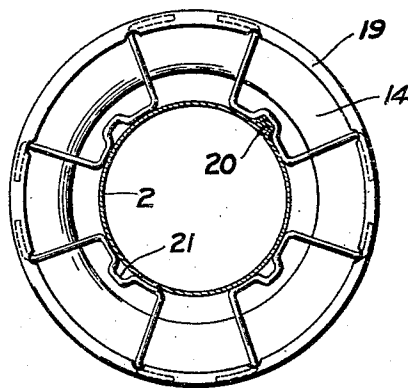
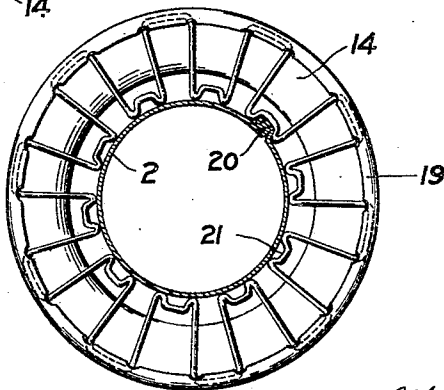


FIG.5.



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UNITED STATES PATENT OFFICE.

ALBERT R. PRITCHARD, OF ROCHESTER, NEW YORK.

LANTERN-HEAD.

935,324.

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To all whom it may concern:

Be it known that I, ALBERT R. PRITCHARD, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Lantern-Heads, of which the following is a specification.

This invention relates to lantern heads, and consists in the apparatus hereinafter described and claimed.

The object of the invention is to provide a lantern head having an ample supply of fresh air; also means for guiding the globe-holder, composed of formed-wire guiding parts attached to the head; also means for attaching the spring of the globe-holder thereto; and also means for holding the air guide in the interior of said globe-holder.

In the drawings:—Figure 1 is a vertical section through the upper part of a lantern embodying this invention; Fig. 2 is an enlarged vertical section through a portion of the globe-holder taken on a plane at right angles to the plane of the section in Fig. 1; Fig. 3 is a bottom plan view of the head shown in Fig. 1, and a transverse section of the globe-holder; and Figs. 4 and 5 are like bottom plan views and sections of modified forms of the globe-holder.

In the drawings, 1 is the globe of an ordinary cold blast lantern; 2 is the spring-actuated globe-holder; 3 is a spring actuating the same; 4 is a tubular collar surrounding the said globe-holder, and formed at the top 5 to fit closely around said globe-holder and adapted to act as an abutment; and 6, 6 are the air tubes connecting with the air space between the collar 4 and the globe-holder 2, by perforations 7, 7, through said collar. A protecting top 8 is fastened to and above the globe-holder 2.

The spring 3 presses against the inner face of the top 5 of the collar 4, and is fastened at the other end to the globe-holder 2. This fastening is effected, as shown in Fig. 2, by cutting two short, vertical, parallel slits 9, 9, in the side of the globe-holder and indenting portions of the globe-holder running in opposite directions from said slits, to produce beads 10, 10, projecting inwardly into said globe-holder, and in a plane at right angles to the axis thereof. The end of the spring wire 3 lies in the beads 10, and is held therein by that portion of the globe-holder which lies between the slits 9, 9.

The two beads 10, 10, are largest at the slits 9, 9, and diminish in opposite directions. Four of these beads are best produced in the lantern head, the pairs being at opposite sides of the globe-holder.

That portion of the globe-holder between the slits 9, 9, is formed into the external projecting short bead 11 in the same plane as the beads 10, 10 and this external projecting bead 11 is employed as a stop to limit the downward movement of the globe-holder through the collar 4 as will be described.

Inside the globe-holder is fastened an air director or guide 12 of general conical form. The bottom of this hollow cone rests upon the upper faces of the beads 10, 10, and, as it fits the interior of the globe-holder, cannot pass said beads. In order to hold the air guide in place, the globe-holder 2 and the air guide 12 (both being formed of sheet metal) are indented together, as shown at 13, Fig. 2, at a sufficient number of points around the circumference of the two parts, to hold them together and to maintain the position of the air guide against the beads 10. Thus soldering is avoided, and a firm union of the parts is produced.

The collar 4 has an integral, outwardly-projecting flange 14, which constitutes a deflector for guiding air into the tubes 6, and also into the interior of the globe-holder through apertures 15 therein, Fig. 2. Heretofore, a perforated collar made of sheet metal has been employed to guide the globe-holder in the lower end of the collar 4, while the closed top 5 of the collar is used to guide the upper end of said globe-holder as well as to act as an abutment for the spring 3. In this mode of manufacture, a separate, flat ring must be cut from sheet metal and perforated, and then must be fastened either by solder or otherwise to the collar 4. In order to avoid this expensive construction, the guiding means herein set forth have been produced. In the form shown in Figs. 1 and 3, this guiding means consists of two pieces of wire, each having a nearly semi-circularly curved portion 16, Fig. 3, end portions 17 projecting therefrom, parallel to a radius on the curved portion 16, and recurved terminals 18, shown in dotted lines, which terminals are, in the present case, concentric with the portion 16, but on a larger radius. The edge 19 of the flange 14 is rolled around the terminals 18 of the wire guides, so that they are held firmly in

place with the curved portions 16 at such a distance from each other as to fit with proper closeness around the tubular globe-holder 2.

In order to prevent the globe-holder 2 from turning, it is made of a piece of sheet metal, and its edges are double-seamed together to form an outwardly projecting rib 20, which rib may fit between adjacent portions of the two parts 17 of the wire guides. The globe-holder then, of course, cannot turn in the guide, and can move only longitudinally therein. By the use of wire of a suitable gage, a strong, light globe guide is produced with the least obstruction to the passage of air upward into the space between the collar 4 and the globe-holder 2.

In Figs. 4 and 5, are shown other forms of wire guides for the globe-holder. In Fig. 4 are shown four such guides instead of two, as in Figs. 1 and 3. These four guides are each formed of a piece of wire having outwardly turned ends adapted to fit in the rolled edge 19 of the flange 14, and thereby firmly held in place. The middle portions of the guides fit against the outer surface of the globe-holder 2, and each of the guides (or only one, if desired), has an indentation 21 to fit the bead 20 on said globe-holder, in order to prevent the rotation of the latter. In Fig. 4 these guiding pieces are made separately.

In Fig. 5 the guiding pieces are all formed of one piece of wire, and are narrower than those shown in Fig. 4, but of the same general construction. Connecting portions of the guiding pieces are fastened into the roll 19 of the flange 14, and the guide is held firmly in place.

What I claim is:—

1. In a lantern top, a globe-holder tube; a collar surrounding said tube, and in which the latter is movable longitudinally, which collar has a rolled edge; and bent wire guides engaging the periphery of said tube, and having supporting portions inclosed in the rolled edge portion of said collar.

2. In a lantern top, a globe-holder tube; a collar having a flange around its bottom surrounding said tube, and in which the tube is movable longitudinally, which flange has a rolled edge; and bent wire guides having supporting portions inclosed in the rolled edge of said flange.

3. In a lantern top, a globe-holder tube having an external longitudinal rib; a collar surrounding said tube and in which the tube is movable longitudinally; and bent wire guides attached to a portion of said collar and engaging the periphery of said tube and the sides of said rib.

4. In a lantern top, a globe-holder tube; a collar surrounding said tube, and in which the tube is movable longitudinally, which collar has a rolled edge portion; and bent wire guides having substantially semi-circu-

lar portions engaging the periphery of said tube and having supporting portions inclosed in the rolled edge of said collar.

5. In a lantern top, a globe-holder tube; a collar having an outwardly projecting flange around its bottom and surrounding said tube and in which the tube is movable longitudinally, which flange has a rolled edge; and bent wire guides having substantially semi-circular portions engaging the periphery of said tube and having supporting portions inclosed in the rolled edge of said flange.

6. In a lantern top, a globe-holder tube of sheet metal having a projecting bead lying in a plane transverse to the axis of the tube; a collar surrounding said tube and having an abutment; and a coiled spring in said collar and around said tube having one end held in said bead and the other end against said abutment.

7. In a lantern top, a globe-holder tube of sheet metal having a projecting bead lying in a plane transverse to the axis of the tube; a collar surrounding said tube and having an abutment; a coiled spring in said collar and around said tube having one end held in said bead and the other end against said abutment; and an air guide having its lower end resting on said bead.

8. In a lantern top, a globe-holder tube of sheet metal having a projecting bead lying in a plane transverse to the axis of the tube; a collar surrounding said tube and having an abutment; a coiled spring in said collar and around said tube having one end held in said bead and the other end against said abutment; an air guide having its lower edge resting on said bead; and interlocking projections and indentations in the tube and the air guide.

9. In a lantern top, a globe-holder tube of sheet metal having one or more inwardly projecting beads; a collar surrounding said tube and having an abutment; and a coiled spring in said collar around said tube having one end held in said beads, and the other end resting against said abutment in said collar.

10. In a lantern top, a globe-holder tube of sheet metal having two inwardly projecting beads and an outwardly projecting bead between the ends of said inwardly projecting beads; a collar surrounding said tube and having an abutment; and a coiled spring in said collar and around said tube having a portion held in said inwardly and outwardly projecting beads, and another portion resting against said abutment in said collar.

11. In a lantern top, a globe-holder tube of sheet metal having two inwardly projecting beads and an outwardly projecting bead between the ends of said inwardly projecting beads; a collar surrounding said tube and having an abutment; a coiled spring in said collar, and around said tube, having a

portion held in said inwardly and outwardly projecting beads, and another portion resting against said abutment in said collar; and guiding means attached to a portion of said collar and engaging the exterior of said tube, against which said outwardly projecting bead strikes to prevent removal of the tube from the collar.

12. In a lantern top, a globe-holder tube; a collar surrounding said tube and in which the tube is movable longitudinally; and bent wire guides engaging the periphery of said tube and having supporting portions inclosed in a part of said collar.

13. In a lantern top, a globe-holder tube; a collar surrounding said tube and in which the tube is movable longitudinally; and bent wire guides engaging the periphery of said tube and having supporting portions rigidly fixed to a part of said collar.

14. In a lantern top, a globe-holder tube having an external longitudinal rib; a collar surrounding said tube and in which the tube is movable longitudinally; and bent wire guides rigidly fixed to a part of said collar

and engaging the periphery of the rib, one of which guides has an indentation engaging the sides of said rib.

15. In a lantern top, a globe-holder tube constituting one part; a collar surrounding said tube and in which the tube is movable longitudinally, and constituting another part; and bent wire guides rigidly fixed on one part and engaging the surface of the other part for guiding the movements of the collar in the tube.

16. In a lantern top, a globe-holder tube constituting one part; a collar surrounding said tube and in which the tube is movable longitudinally, and constituting another part, one of said parts having a projecting longitudinal rib; and bent wire guides rigidly fixed on one part and engaging the surface of the other part and the sides of the rib for guiding the movements of the collar in the tube.

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Witnesses:

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