(No Model.)

C. BERGENER.

SWITCH AND SIGNAL LAMP.

No. 573,501. Patented Dec. 22, 1896.

Fig. 1.

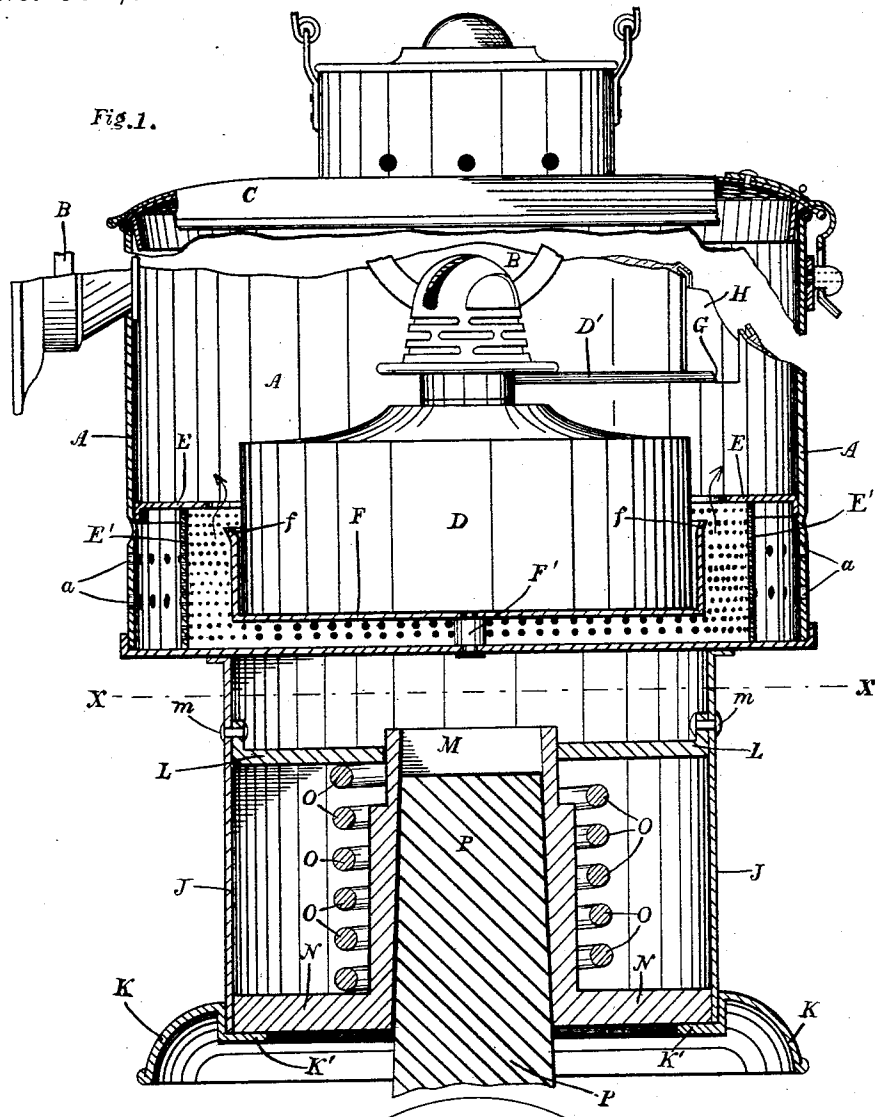
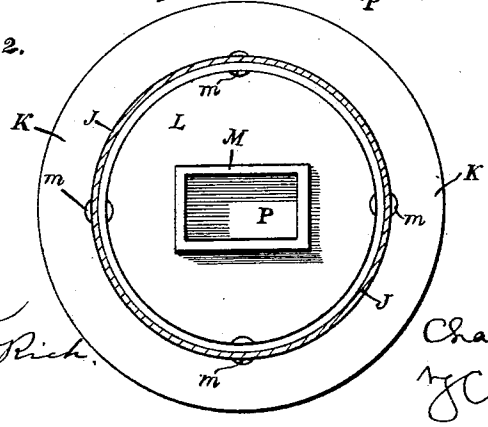


Fig. 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

CHARLES BERGENER, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE C. T. HAM MANUFACTURING COMPANY, OF SAME PLACE.

SWITCH AND SIGNAL LAMP.

SPECIFICATION forming part of Letters Patent No. 573,501, dated December 22, 1896.

Application filed June 22, 1896. Serial No. 596,501. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BERGENER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Switch and Signal Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-letters marked thereon.

My present invention has for its objects to improve the construction and operation of that class of lamps employed for railroad-signals and particularly adapted for use on switch posts or standards, though portions are well adapted for use on the ordinary signal-lamps; and it consists in certain improvements, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a vertical sectional view of my lamp or lantern; Fig. 2, a horizontal sectional view on the line *x x* of Fig. 1.

Similar reference-letters in the two figures indicate similar parts.

A indicates the usual tubular body or casing of a lamp of this general description provided with three or more lenses B; C, the top, having a suitable dome thereon and hinged at one side, as usual, to permit access to the interior of the body and permit the introduction and removal of the lamp proper, D. The lower portion of the body A is provided with the perforations *a* for the introduction of air to support combustion, and above these perforations is a rigid circular plate or diaphragm E, the central aperture in which is somewhat larger than the diameter of the oil-pot of the lamp D.

F indicates a cup or pan in which the lamp D rests, secured by a rivet F′ or similar fastening to the bottom of the body, being slightly smaller than the space in the center of the ring or plate E and preferably provided with the slightly-flaring upper edge *f* to facilitate the introduction of the lamp and further retard and deflect slightly the air passing up at the side of the lamp D. The ring or plate E is not provided with small perforations, as is usually the case with lamps of this description, but is provided with a vertical perforated plate or apron E beneath it, and this prevents the decrease in the air-supply for supporting combustion and facilitates the cleaning of the lamp, which is usually a difficult operation with lamps having horizontal perforated diaphragms, whether removable or not. Further, this rigid diaphragm decreases the number of loose parts of the lamp as a whole, and the vertical perforated plate E′ prevents its being pressed down at the center.

The lamp D is removable, as usual, and rests in the cup, the wick-raising shaft D′ of the burner extending to the exterior of the body through an aperture G, provided with a suitable sliding door H.

In the present embodiment of my lamp the body A is provided with a base composed of a barrel J, secured to the under side, having a flaring base-ring K, of sheet metal, at its lower end, formed with the internal flange K′, the vertical walls formed by depressing the flange K′ serving as a means of fastening the barrel and base-ring together by soldering or otherwise. At the upper end of the barrel J is a diaphragm or plate L, preferably of cast metal, secured to the sides by rivets *m* or otherwise and having an angular aperture for the passage of an extension-sleeve M, secured to or forming part of a plate N, fitting and sliding in the barrel J, a spring O, between the plates N and L, serving to keep the former down against the flange K′. The smooth standard or arm P enters the socket formed in the sleeve M and serves as the support for the lamp, so that any jar or concussion to which said standard may be subjected by passing trains will be taken up by the spring O and will not be communicated to the lamp to jar it out.

This lamp is, by reason of its superior burning qualities and the facility and cheapness with which it may be constructed, admirably adapted for the purpose intended.

I claim as my invention—

1. The combination with the lamp-body having the perforations *a* and the hinged top, of the cup F having the outwardly-turned edge *f* the removable lamp D, the vertically-extending annular perforated plate E′ around

the cup, and the horizontal imperforate ring E having its inner edge extending inwardly beyond the plate E′, substantially as described.

2. In a lamp of the character described, the combination with the body and the barrel at its lower end having the internal flange and the rigid plate L having the angular aperture, of the movable plate N adapted to engage the flange in the barrel and having the angular extension moving in the aperture in the plate L, and the spring O arranged between the plates L and N, substantially as described.

3. In a lamp of the character described, the combination with the body and the barrel at its lower end, the base-ring having the depressed internally-projecting flange, the vertical walls of the depressed portion being secured to the barrel, of the plate L having the aperture, the plate N having the sleeve extension passing through the aperture, and the spring O arranged and operating substantially as described.

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