No. 864,803. PATENTED SEPT. 3, 1907.

F. A. SCHUETZ.

SIGNAL LANTERN BURNER.

APPLICATION FILED JAN. 15, 1906.

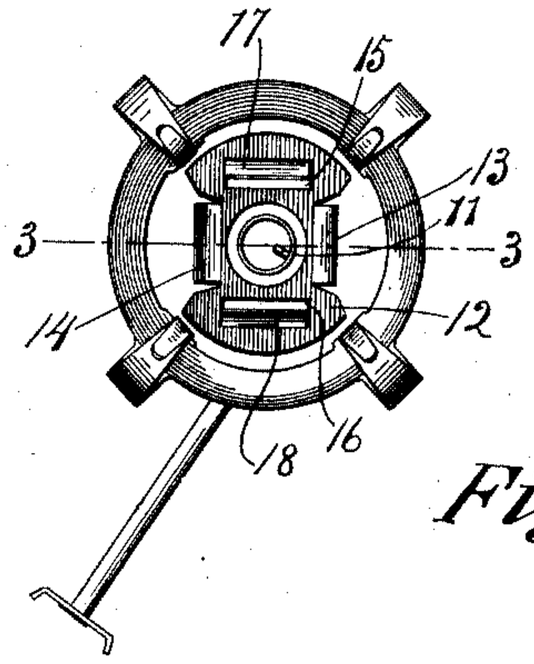

Fig. 1.

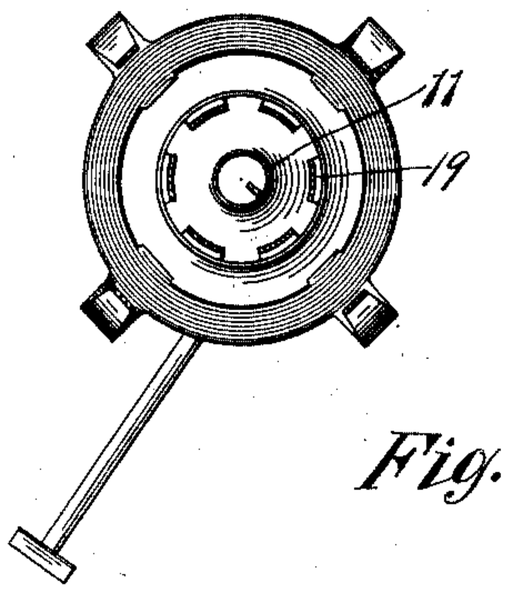

Fig. 4.

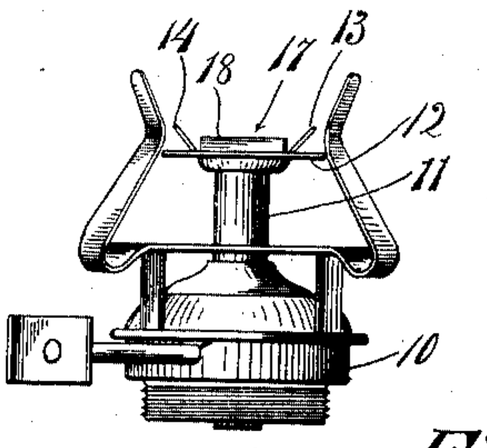

Fig. 2.

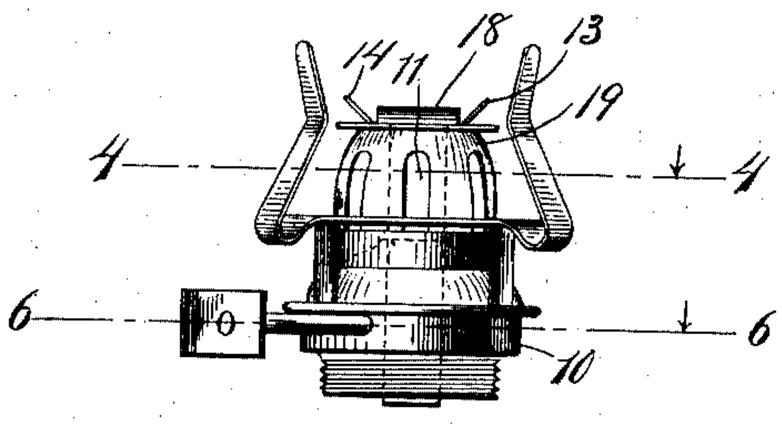

Fig. 5.

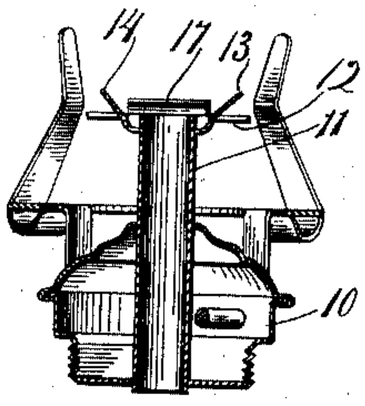

Fig. 3.

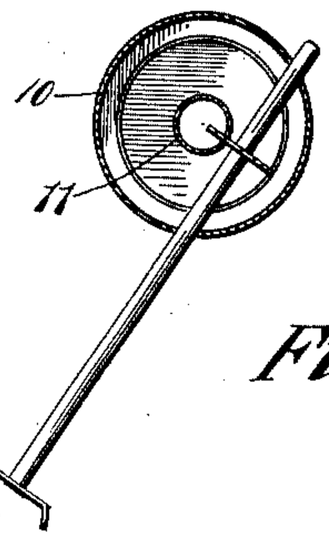

Fig. 6.

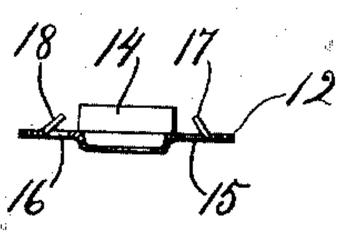

Fig. 7.

Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK A. SCHUETZ, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ADAMS & WESTLAKE COMPANY, A CORPORATION OF ILLINOIS.

SIGNAL-LANTERN BURNER.

No. 864,803. Specification of Letters Patent. Patented Sept. 3, 1907.

Application filed January 15, 1906. Serial No. 296,164.

To all whom it may concern:

Be it known that I, FRANK A. SCHUETZ, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Signal-Lantern Burners, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to that type of burners, for use in connection with switch and signal lanterns in railway service, which have become known in the trade as the long time burner, being capable of continuous use for a number of days without attention. In burners of this type a round wick is ordinarily employed with view to reducing the consumption of oil. As heretofore made the burners have given from such a wick but a small flame, having the general form of a pencil point, and the illumination has consequently not been adequate to the requirements of the service.

The object of the present invention is to secure a wide flame from a round wick, and this object is attained by the burner hereinafter described and which is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view; Fig. 2 is a side elevation; Fig. 3 is a central vertical section; Fig. 4 is a sectional view on the line 4—4 of Fig. 5, representing a modified form of construction; Fig. 5 is a side elevation of the burner thus modified; Fig. 6 is a sectional view on the line 6—6 of Fig. 5; and Fig. 7 is a sectional detail of one of the parts.

The burner comprises the usual threaded head 10 for fitting within the aperture of a font, and the wick-tube 11 passing centrally through and extending above the head. A plate 12 is apertured to fit over the end of this tube, and is shown as slightly depressed at the center, so that while its engagement with the tube is below the end thereof its body portion is substantially in the horizontal plane of such end.

On diametrically opposite sides of the tube the edges of the plate are turned upwardly to form a pair of wings 13, 14, the plate being cut or notched to permit of the upward folding of these wings. The lower ends of the wings are spaced apart from the wick-tube a short distance and the wings preferably flare apart somewhat, as shown. The flame spreads to these wings and follows up their inner surfaces, and is thereby flattened, and its width increased to substantially twice the diameter of the wick-tube.

The portions of the plate 12 intermediate of the wings 13, 14, serve as shields to guard the flame from the air currents, and they are slotted for the purpose of directing these currents against the flame in such manner as to assist in flattening it. This action is best secured by so forming the apertures that they are inclined upwardly and inwardly towards the axis of the wick-tube, and as illustrated this is secured in the following manner:—

A cut is made in the portions of the plate intermediate of the wings, as shown at 15, 16, this cut being substantially U-shape, the opening of the U being directed away from the wick-tube. The lips 17, 18, formed by thus cutting the plate are turned upwardly, thereby forming draft apertures and deflectors for supplying air to and directing it upon the flame. By making these deflectors of considerable horizontal width the air currents are supplied to the flame throughout its width and supplement the flame-flattening action of the wings while supplying oxygen to all parts of the flame, and thus securing uniform luminosity.

In the modification of Figs. 4 and 5, that portion of the wick-tube which lies below the plate is inclosed within an apertured cone 19, the walls of which will carry off the heat and assist in maintaining the wick-tube at a low temperature, while the apertures in the cone permit the circulation of air for a like purpose.

I claim as my invention—

1. In a burner, in combination, a wick tube, separated flaring wings rising from the end of the tube and on opposite sides thereof, and slotted shield plates extending laterally from the tube between the wings.

2. In a burner, in combination, a round wick tube, separated flaring wings rising from the end of the tube and on opposite sides thereof, and slotted shield plates extending laterally from the tube between the wings.

3. In a burner, in combination, a wick-tube, wings rising at opposite sides of and extending beyond the ends of the tube, and slotted shield plates extending laterally from the tube between the wings and having upwardly directed and inwardly inclined lips at the outer margins of their slots.

FRANK A. SCHUETZ.

Witnesses:
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