C. L. BETTS.

SIGNAL LANTERN.

APPLICATION FILED SEPT. 6, 1907.

910,637.

Patented Jan. 26, 1909.

2 SHEETS—SHEET 1.

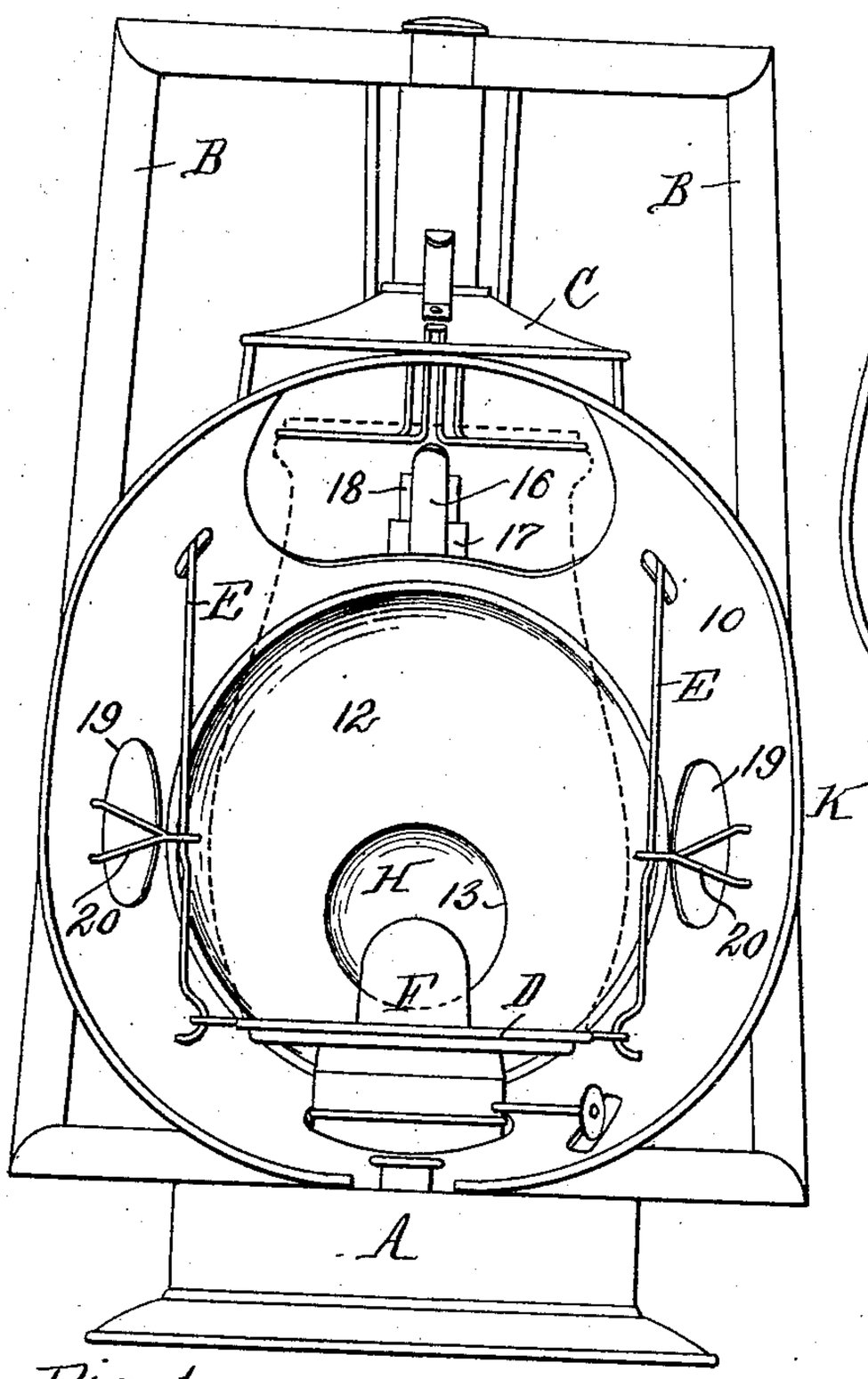

Fig. 1.

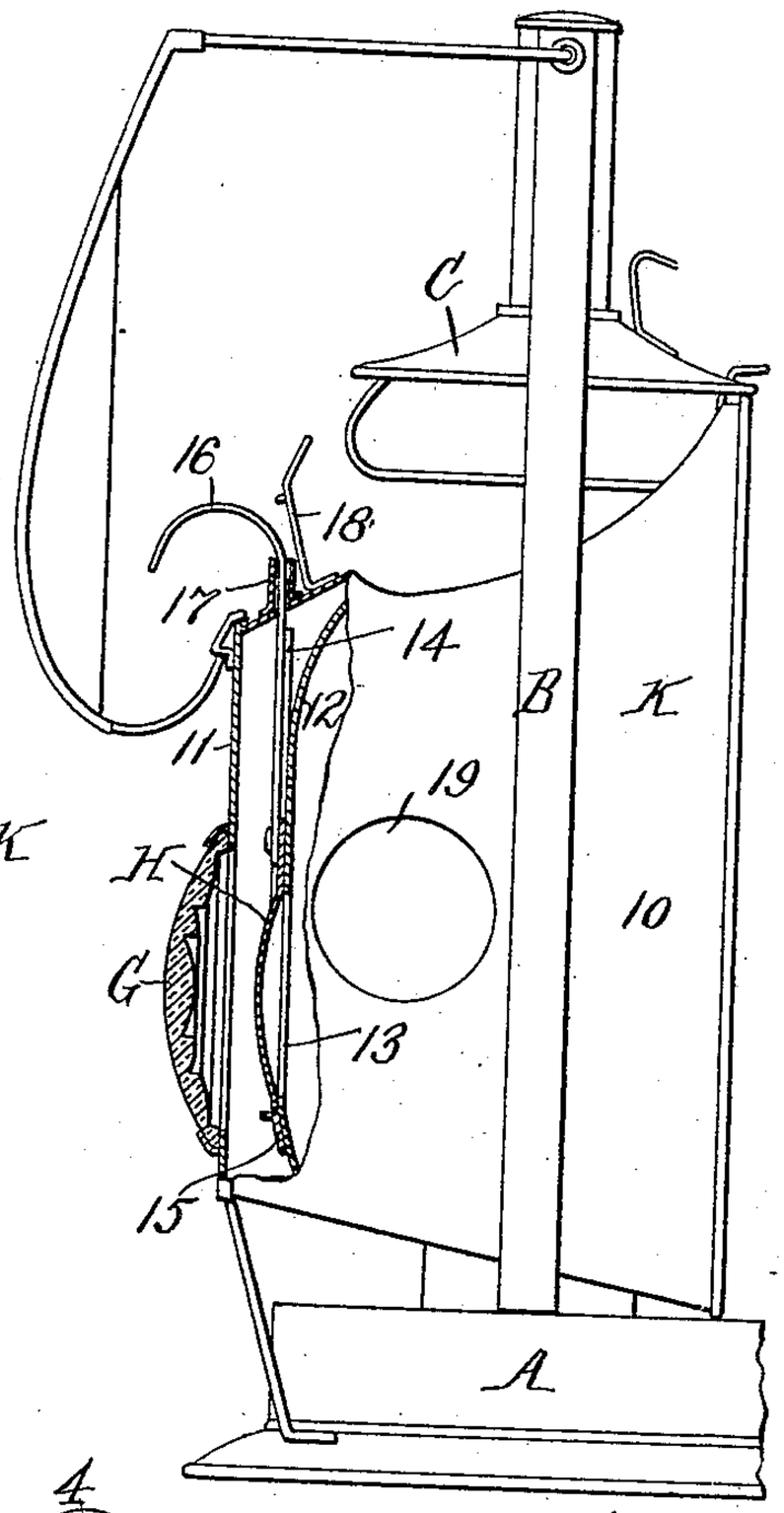

Fig. 2.

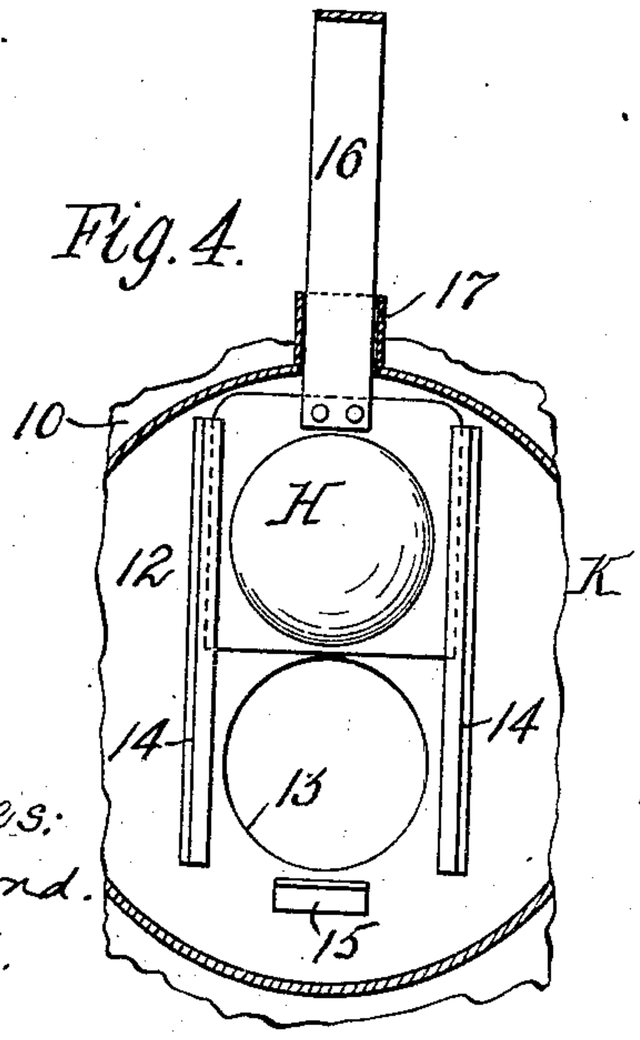

Fig. 4.

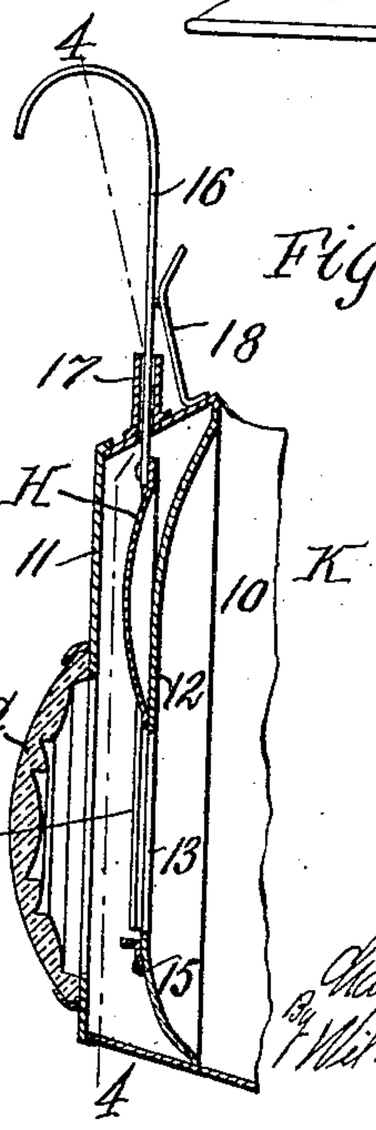

Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 5.

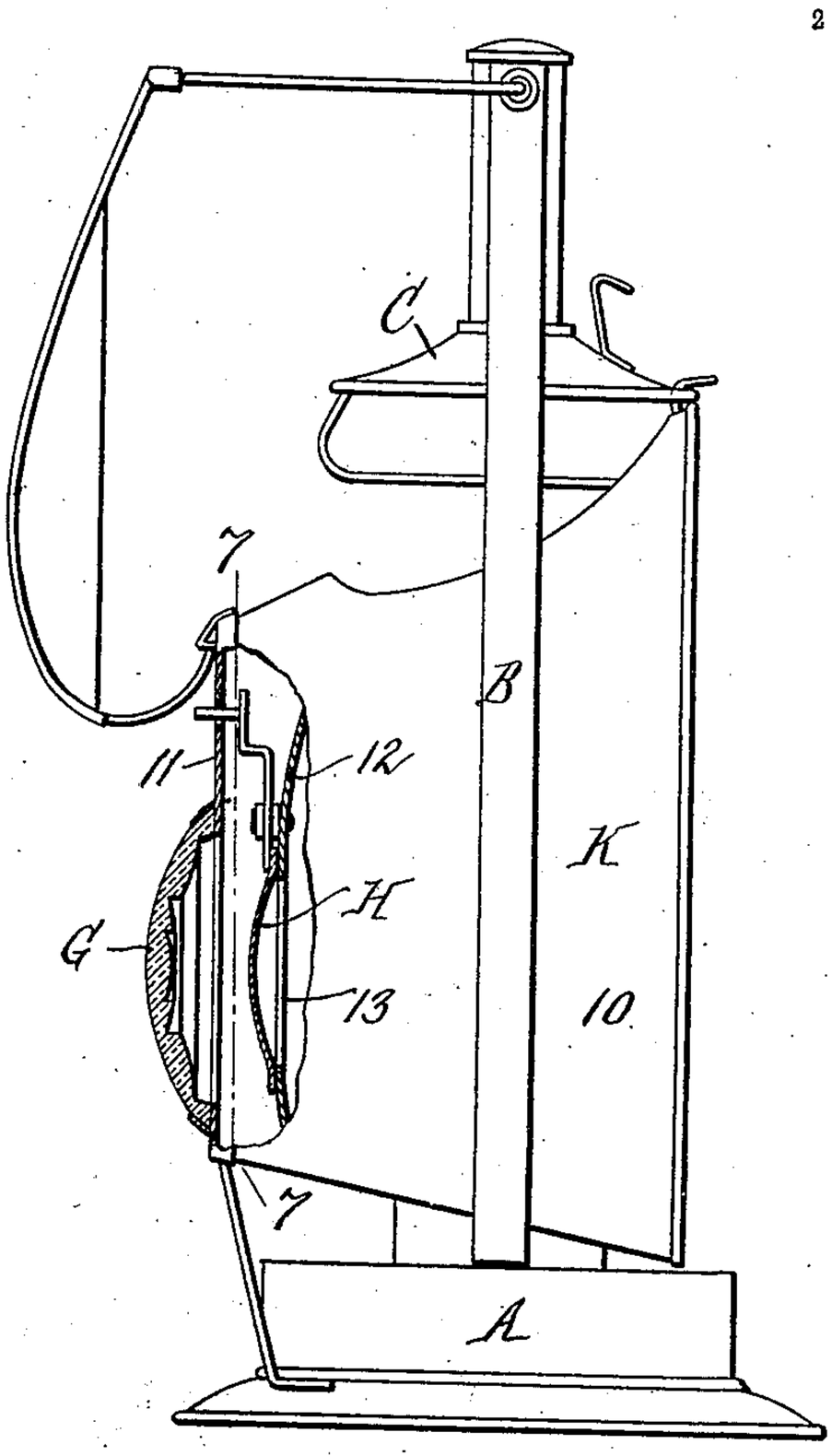


Fig. 6.

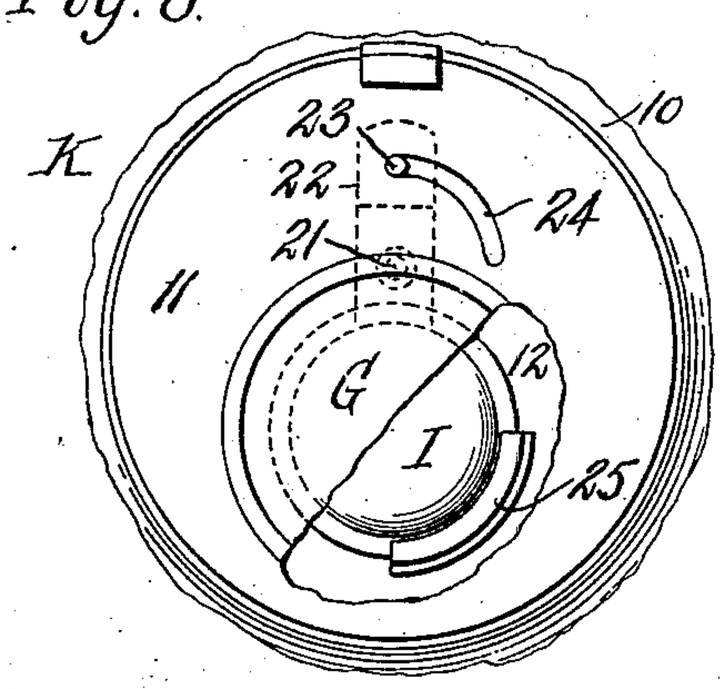
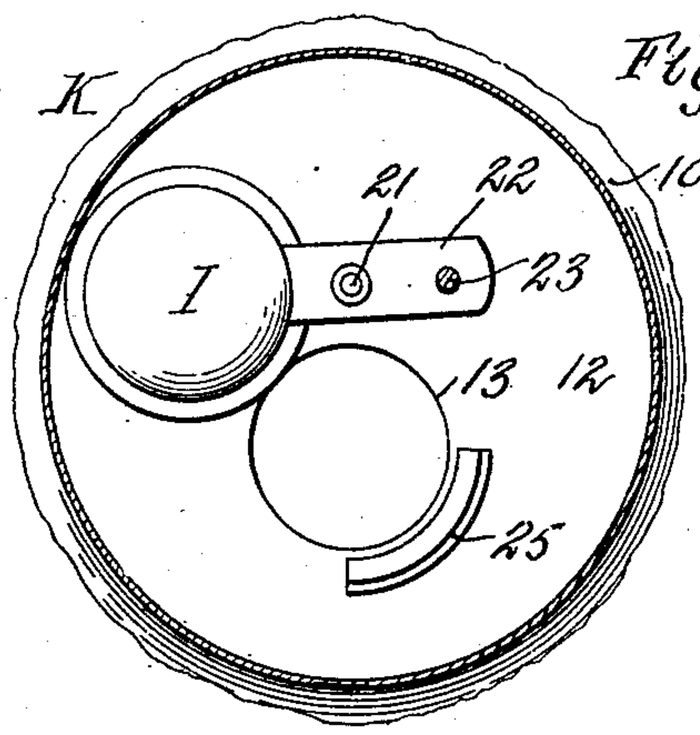


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES L. BETTS, OF NEW YORK, N. Y., ASSIGNOR TO R. E. DIETZ COMPANY, OF NEW YORK, N. Y.

SIGNAL-LANTERN.

No. 910,637. Specification of Letters Patent. Patented Jan. 26, 1909.

Application filed September 6, 1907. Serial No. 391,616.

To all whom it may concern:

Be it known that I, CHARLES L. BETTS, a citizen of the United States, residing at New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Signal-Lanterns, of which the following is a specification.

This invention relates more particularly to lanterns which are carried by track walkers and other railroad men in inspecting the track and for similar purposes. Lanterns of this kind are provided with a reflector hood which throws the light forwardly and prevents light from issuing backwardly. It often becomes necessary for the man carrying the lantern to signal an approaching engine or train, and the main object of this invention is to provide the lantern with simple and convenient means for exhibiting a colored signal when desired.

In the accompanying drawings, consisting of two sheets: Figure 1 is a front elevation of a tubular lantern provided with my improvement. Fig. 2 is a side elevation thereof with the rear portion of the reflector hood in vertical section. Fig. 3 is a vertical longitudinal section of the rear portion of the reflector hood. Fig. 4 is a vertical transverse section in line 4—4, Fig. 3. Fig. 5 is a side elevation, partly in vertical section, showing a modified construction of my improvement. Fig. 6 is a rear elevation of the reflector hood with part of the rear wall broken away. Fig. 7 is a transverse vertical section in line 7—7, Fig. 5.

Like reference characters refer to like parts in the several figures.

A represents the oil pot, B the side tubes, C the bell, D the globe plate, E the side wires connecting the bell with the globe plate, and F the burner of a tubular lantern, all of any suitable or well known construction, the globe being indicated by dotted lines in Fig. 1.

K represents the reflector or hood which is secured to the tubes and the base of the lantern by any usual or suitable means and which comprises a forwardly flaring wall 10, an upright rear wall 11 and a curved wall 12 arranged in front of the rear wall 11. The burner projects upwardly through an opening in the lower portion of the flaring wall 10 in front of the curved wall 12 and is inclosed by the flaring wall 10 and the curved wall 12, which walls form the reflecting surfaces and confine the light emitted by the flame and reflect the same forwardly.

The upright rear wall 11 is provided with a colored signal lens G, usually of ruby color, which is arranged in line with the flame, and the reflecting wall 12 is provided with a light opening 13 in line with this lens. This light opening is opened or closed by a shutter H which is arranged on the rear side of the reflecting wall 12. This shutter is concave on its front side and forms the apex portion of the reflecting surface, so that the shutter in its closed position, shown in Figs. 1 and 2, completes the reflector and reflects forwardly the light which is emitted rearwardly by the flame and falls upon the shutter. In this closed position the shutter excludes the light from the signal lens G and the latter is not illuminated.

The shutter is made movable on the rear side of the reflecting wall 12 by any suitable means. In the construction represented in Figs. 3 and 4, the shutter is arranged to slide up and down between two vertical guides 14 which are secured to the rear side of the wall 12 and the shutter rests in its closed position upon a bottom rest 15. The shutter is provided with a handle bar 16 which extends upwardly through a guide sleeve 17 on the top of the reflector hood and against which bears a friction spring 18 which is secured to the hood. This spring creates sufficient resistance to the movement of the shutter and handle bar to hold the shutter in its raised position, shown in Figs. 3 and 4. When the shutter has been raised the signal lens is illuminated.

The track walker carries the lantern with the shutter closed and the lantern throws the light forwardly and illuminates the track in front of the track walker. In order to enable the engineer of an engine or train approaching the track walker from behind to notice the track walker, the hood is preferably provided with side openings 19 through which enough light is emitted in a sidewise direction to render the lantern visible from behind at a short distance.

When the track walker desires to give a signal to an approaching engine or train or to place a signal on the track, he raises the shutter, thereby illuminating the signal lens. The lantern can now be used like any ordinary signal lantern until the occasion for such

use has passed, when the shutter is again closed.

20 represents the usual guides secured to the hood for guiding the side wires E.

In the construction represented in Figs. 5–7, the shutter I is pivoted at 21 to the rear side of the reflecting wall 12. The shutter is provided with a stem or shank 22 to which the pivot is applied and which is provided with a handle or thumb-piece 23 which projects rearwardly through a slot 24 in the rear wall 11 of the hood. The shutter rests in its closed position, shown in Figs. 5 and 6, against a curved bottom rest 25 secured to the rear side of the reflecting wall 12. When the shutter is swung away from the light opening 13, as shown in Fig. 7, the signal lens G is illuminated.

I claim as my invention:

The combination with a lantern, of a reflector hood having in its rear portion a reflecting wall which is arranged in rear of the burner and provided with an opening adapted to emit light rearwardly, a movable shutter which is adapted to close said opening and arranged on said reflecting wall, of which it forms part when it closes said opening, and a signal lens which is arranged in the rear wall of said hood in rear of said light opening and shutter, substantially as set forth.

Witness my hand in the presence of two subscribing witnesses.

CHARLES L. BETTS.

Witnesses:
J. W. Van Dwyer,
Fred H. Twombly.