

C. L. BETTS.  
SIGNAL LANTERN.

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906,681.

Patented Dec. 15, 1908.

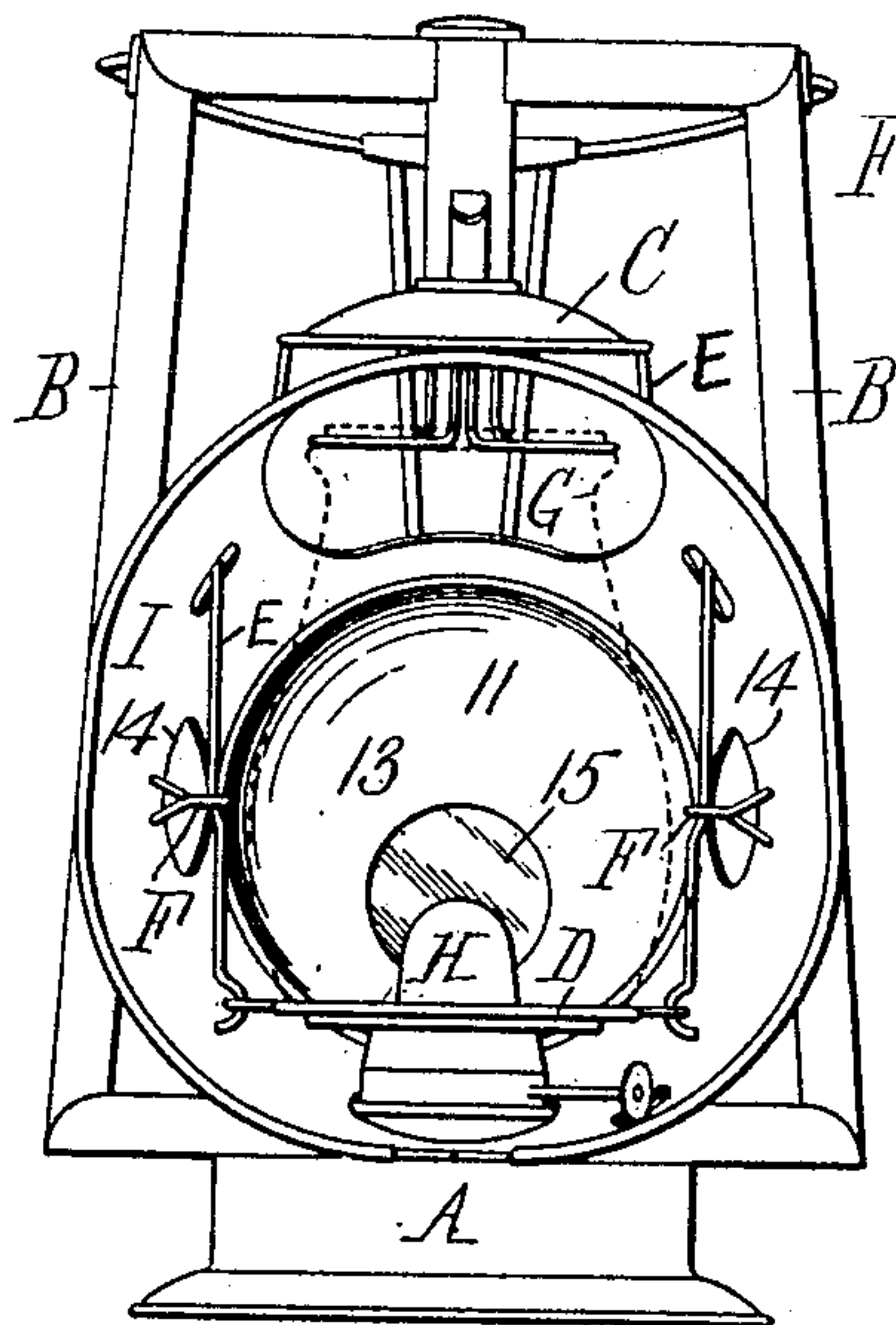


Fig. 1.

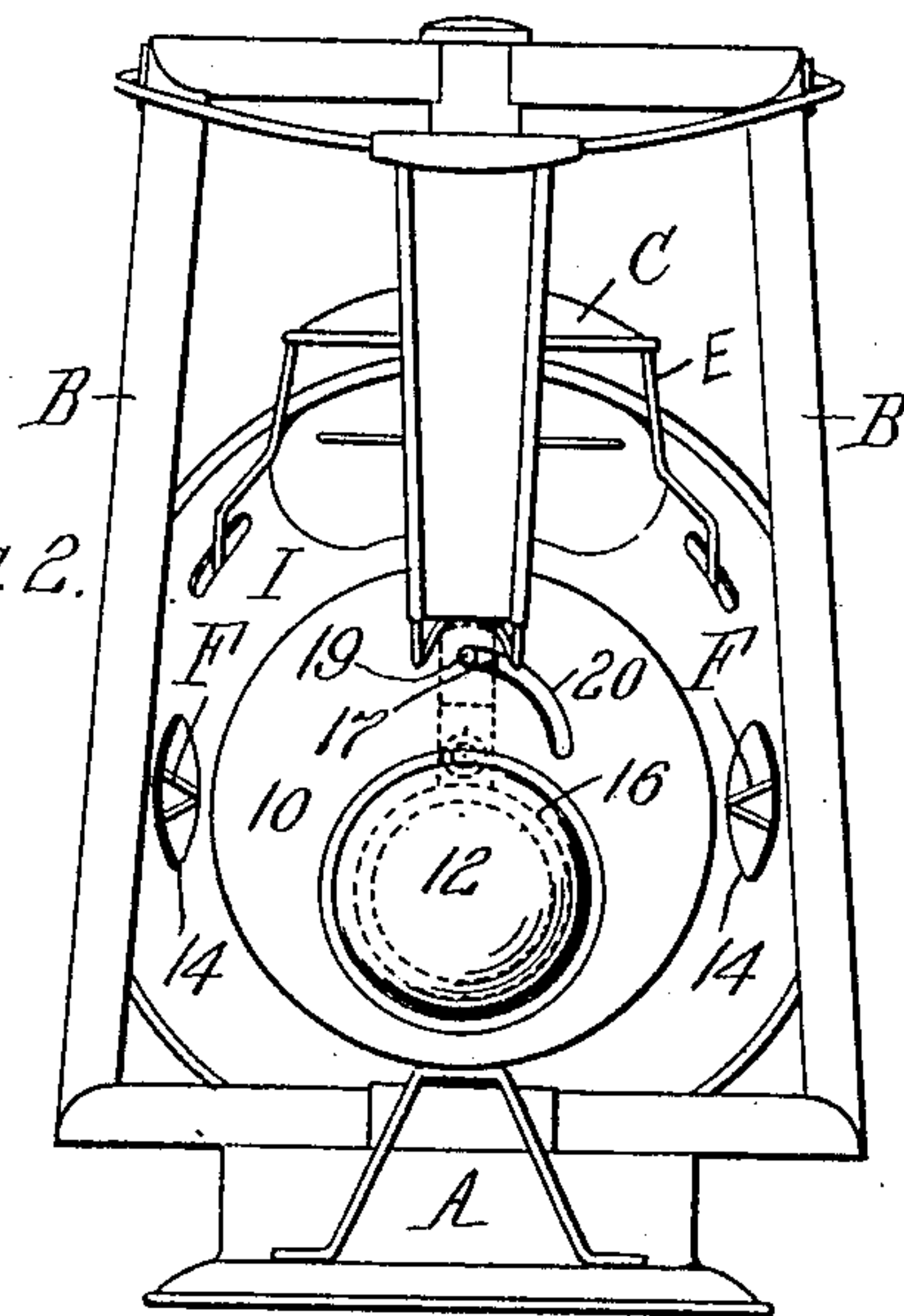


Fig. 2.

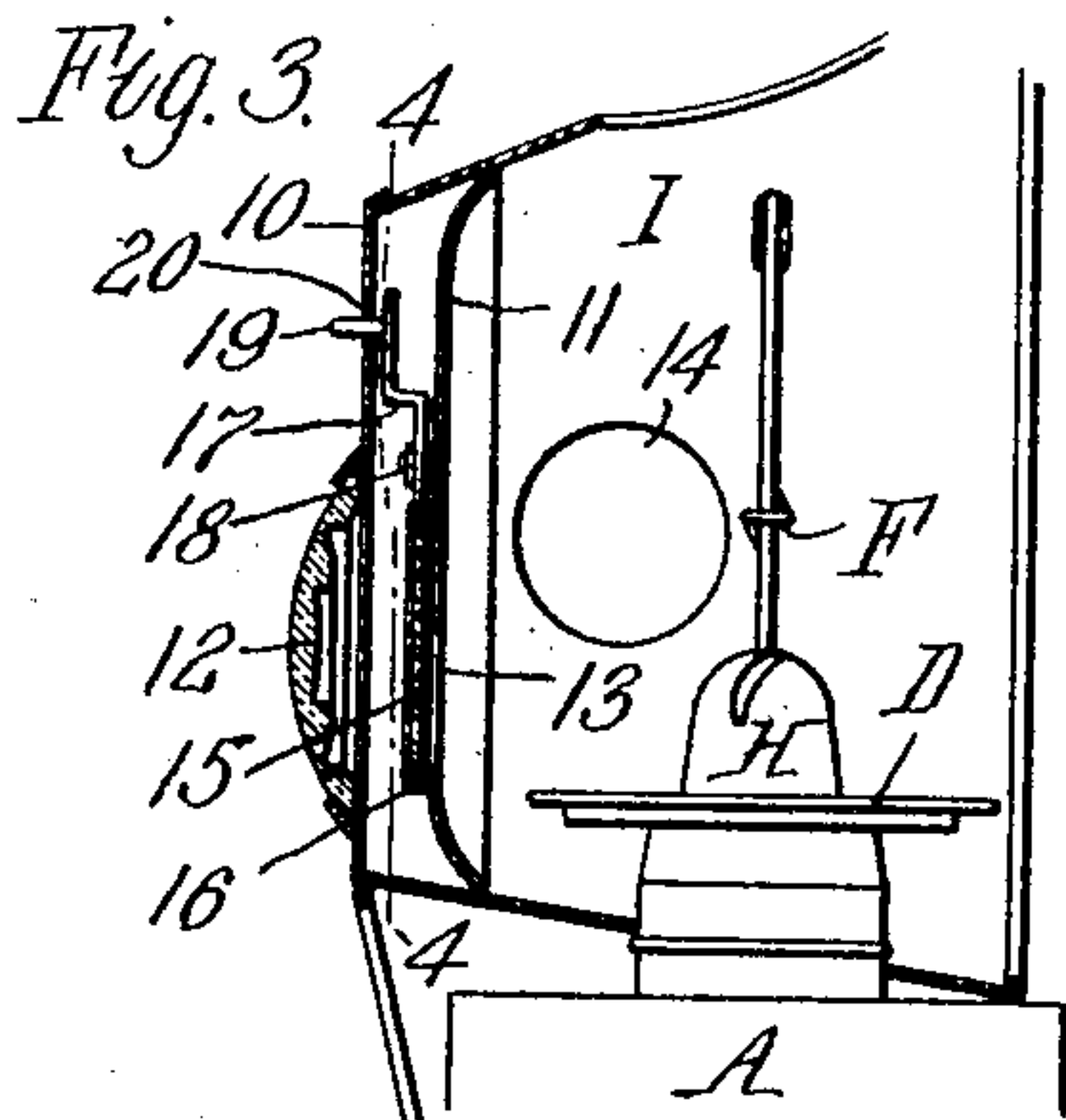


Fig. 3.

Fig. 4.

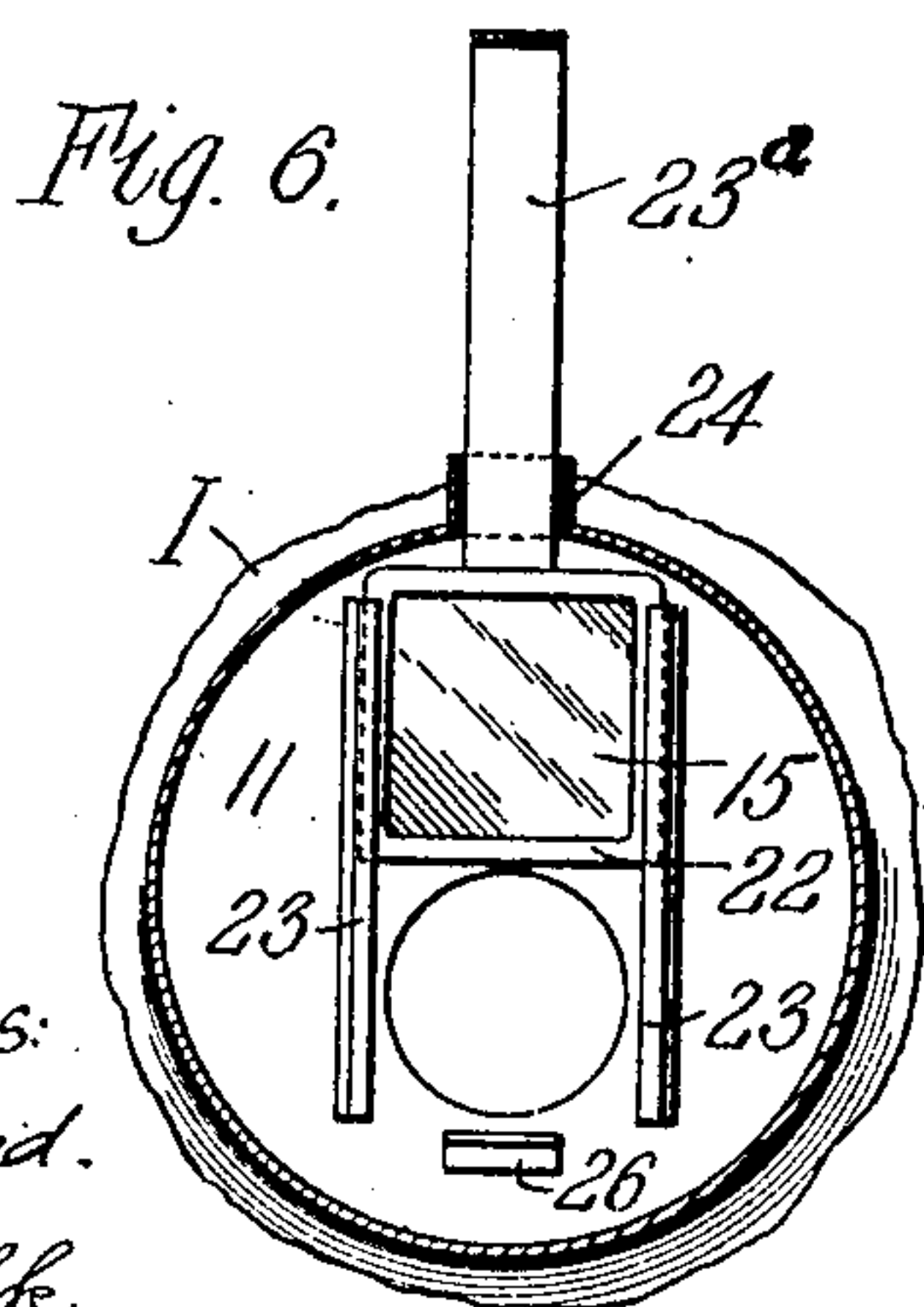
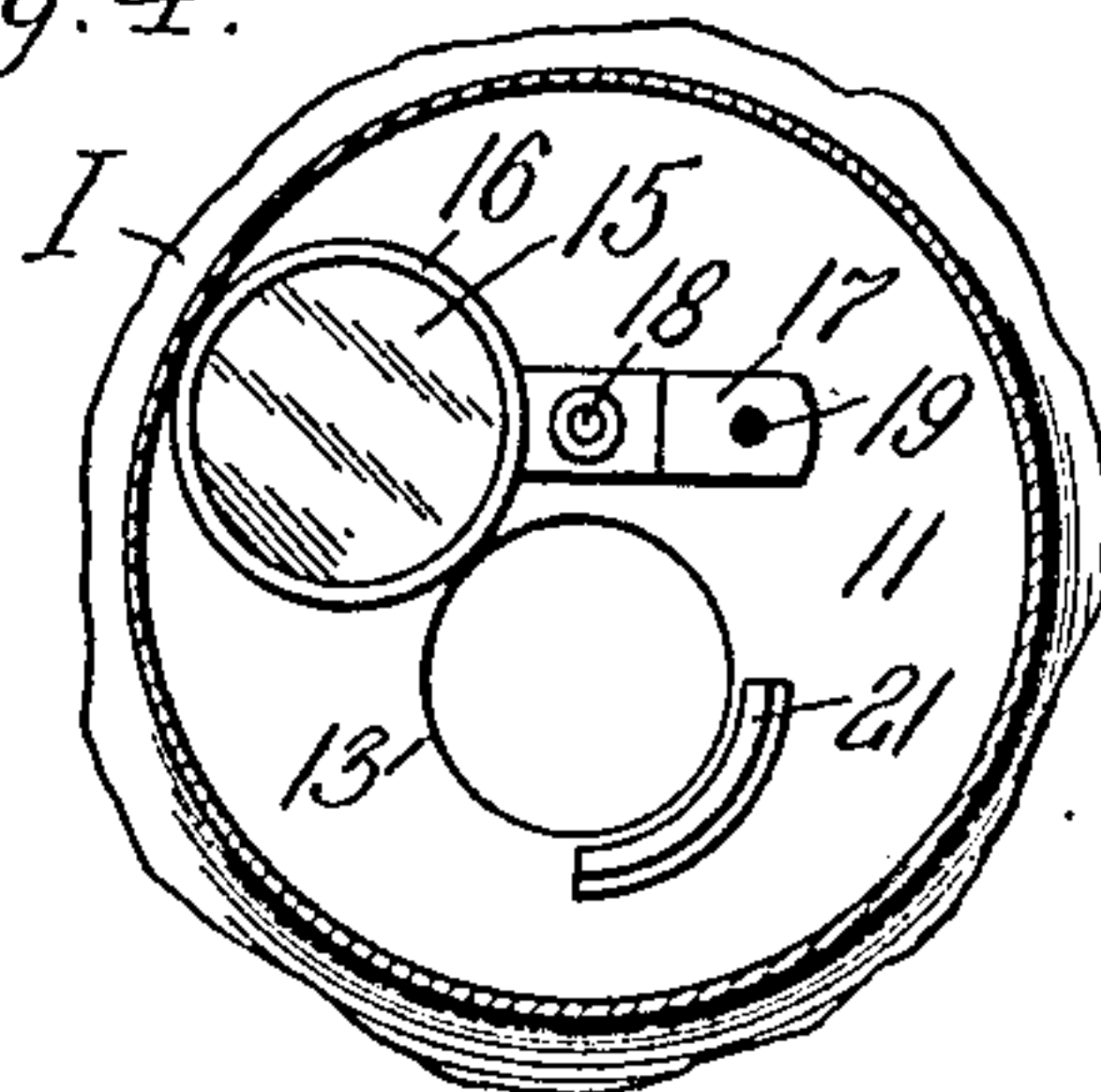


Fig. 6.

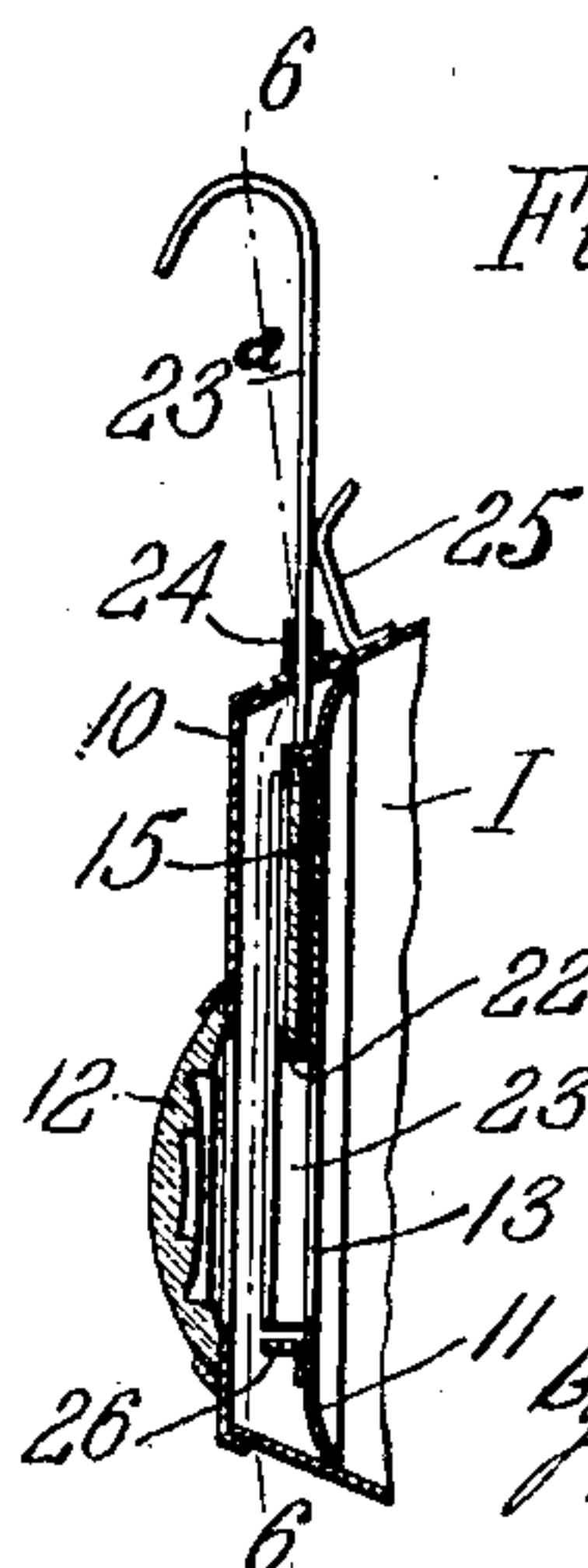


Fig. 5.

Witnesses:  
A. J. Diamond.  
E. A. Volk.

Inventor:  
Charles L. Betts,  
By Wilhelm Parker & Hand,  
Attorneys.



# 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. 906,681.

Specification of Letters Patent.

Patented Dec. 15, 1908.

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*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  
5 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 to lanterns which  
10 are carried by track walkers and other railroad men in inspecting the track and for similar purposes and which are usually of the kind known as tubular lanterns and provided with a reflector hood which is secured  
15 to the tubular frame and which confines the light and reflects the same forwardly upon the track. It is desirable that such a lantern should also exhibit a white light rearwardly so that the track walker may be seen  
20 by the engineer of an engine following him and so be protected against accident from that direction, and it is further desirable that the lantern should be provided with means for giving a danger signal whenever  
25 required.

The objects of this invention are to produce a lantern which meets these requirements.

In the accompanying drawings: Figure 1  
30 is a front elevation and Fig. 2 a rear elevation of a lantern embodying this invention. Fig. 3 is a fragmentary vertical longitudinal section through the reflector hood. Fig. 4 is a transverse vertical section in line 4—4,  
35 Fig. 3. Fig. 5 is a vertical longitudinal section of the rear portion of the reflector hood, showing a modified construction of the movable signal plate. Fig. 6 is a transverse vertical section in line 6—6, Fig. 5.

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

A represents the oil pot, B the air tubes, C the bell or canopy, D the globe plate, E the side wires connecting the bell with the  
45 globe plate, F the guides for the wires, G the globe, and H the burner, all of any suitable or well known construction.

I represents the reflector hood which is secured to the upper side of the oil pot and  
50 the inner sides of the air tubes and which flares forwardly. This hood is closed at the rear and extends forwardly beyond the burner and globe so as to confine the light side-wise and rearwardly. This hood is provided  
55 with a rear wall 10 and in front of the latter

and in rear of the burner with a concave reflector 11 so shaped as to reflect the light forwardly. The burner projects upwardly through an opening in the lower portion of the hood.

The rear wall 10 of the hood is provided  
60 with a white lens 12 and the reflector 11 with a light opening 13, both the lens and the opening being arranged in line in rear of the flame, so that a portion of the light is  
65 emitted rearwardly through this opening and the white lens. This rearwardly emitted light renders the lantern visible to a person located rearward of the person carrying the lantern and so protects the person  
70 carrying the lantern against an engine approaching from the rear. The hood may also be provided with openings 14 in its sides for rendering the lantern visible in a lateral direction.

15 represents a transparent colored signal  
75 plate, usually of ruby glass, which is movably arranged in the space between the reflector and the rear wall of the hood so that it can be interposed between the light opening 13 and the lens when it is desired to  
80 give a danger signal. In the normal condition of the lantern this signal plate is moved out of line with the white lens and a white light is shown rearwardly. When the track  
85 walker desires to give a danger signal he places the colored signal plate between the light opening and the lens. For this purpose the signal plate may be movably connected with the hood in various ways.

As shown in Figs. 2, 3 and 4, the signal  
90 plate is secured in a frame 16 formed on a lever 17 which is attached to the rear side of the reflector by a pivot 18 and provided with a handle 19 which projects rearwardly  
95 through a curved slot 20 in the rear wall 10 of the hood.

21 represents a stop or rest on the rear  
100 side of the reflector which arrests the movement of the signal plate when the latter is alined with the light opening and the lens, as represented in Figs. 2 and 3.

In Fig. 4 the signal plate is shown swung  
105 away from the light opening so that a white light is shown rearwardly.

As shown in Figs. 5 and 6, the signal  
110 plate 15 is secured in a frame 22 which is arranged between upright guides 23 on the rear side of the reflector on opposite sides of the light opening, so that the signal plate



can be moved up and down between these guides. The frame 22 is provided with a handle 23<sup>a</sup> which extends upwardly through a guide sleeve 24 on the hood and which is frictionally engaged by a spring 25. The downward movement of the plate is arrested by a stop 26 when the plate is properly aligned with the light opening and the lens.

I claim as my invention:

10 1. The combination with a lantern, of a hood which incloses the burner at the sides and rear and directs the light forwardly, a white lens arranged in the rear wall of the hood, a reflector arranged within the rear  
15 portion of the hood and provided with a light opening in line with said lens, and a transparent colored signal plate which is arranged between the reflector and the lens and adapted to be moved into and out of  
20 line with said lens and said light opening, substantially as set forth.

25 2. The combination with a lantern, of a hood which incloses the burner at the sides and rear and directs the light forwardly, a white lens arranged in the rear wall of the hood, a reflector arranged within the rear portion of the hood and provided with a

light opening in line with said lens, a transparent colored signal plate, and a movable support for said plate which is attached to said reflector on the rear side thereof and adapted to permit said plate to be moved into and out of line with said lens and light opening and which is provided with a handle projecting through said hood, substantially as set forth.

3. The combination with a lantern, of a hood which incloses the burner at the sides and rear and directs the light forwardly, a white lens arranged in the rear wall of the hood, a reflector arranged within the rear portion of the hood and provided with a light opening in line with said lens, a transparent colored signal plate, and a shifting lever to which said plate is secured and which is pivoted to said reflector on the rear side thereof, substantially as set forth.

Witness my hand in the presence of two subscribing witnesses.

CHARLES L. BETTS.

Witnesses:

JAMES SORIONO,

HOWARD L. FLETCHER.