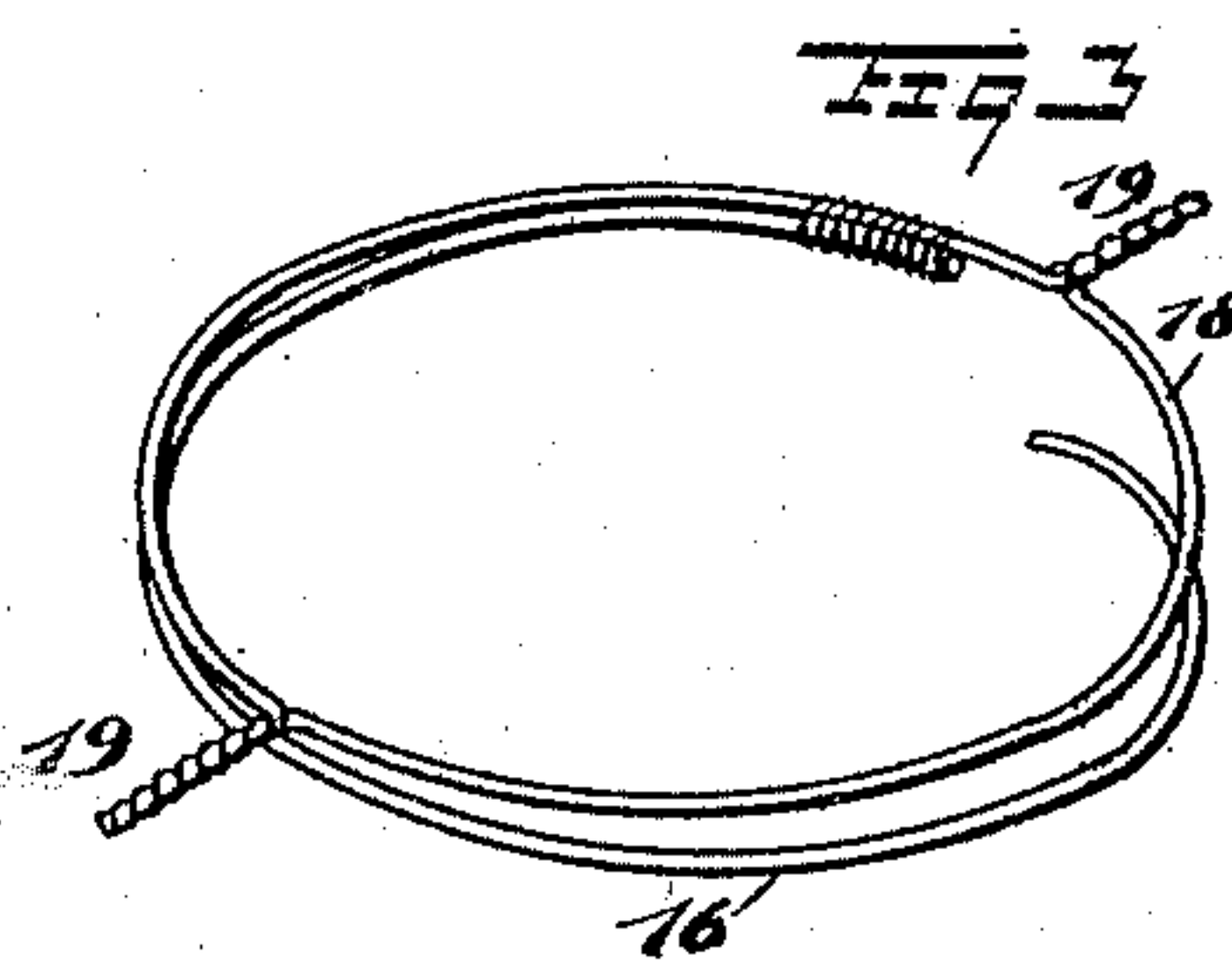
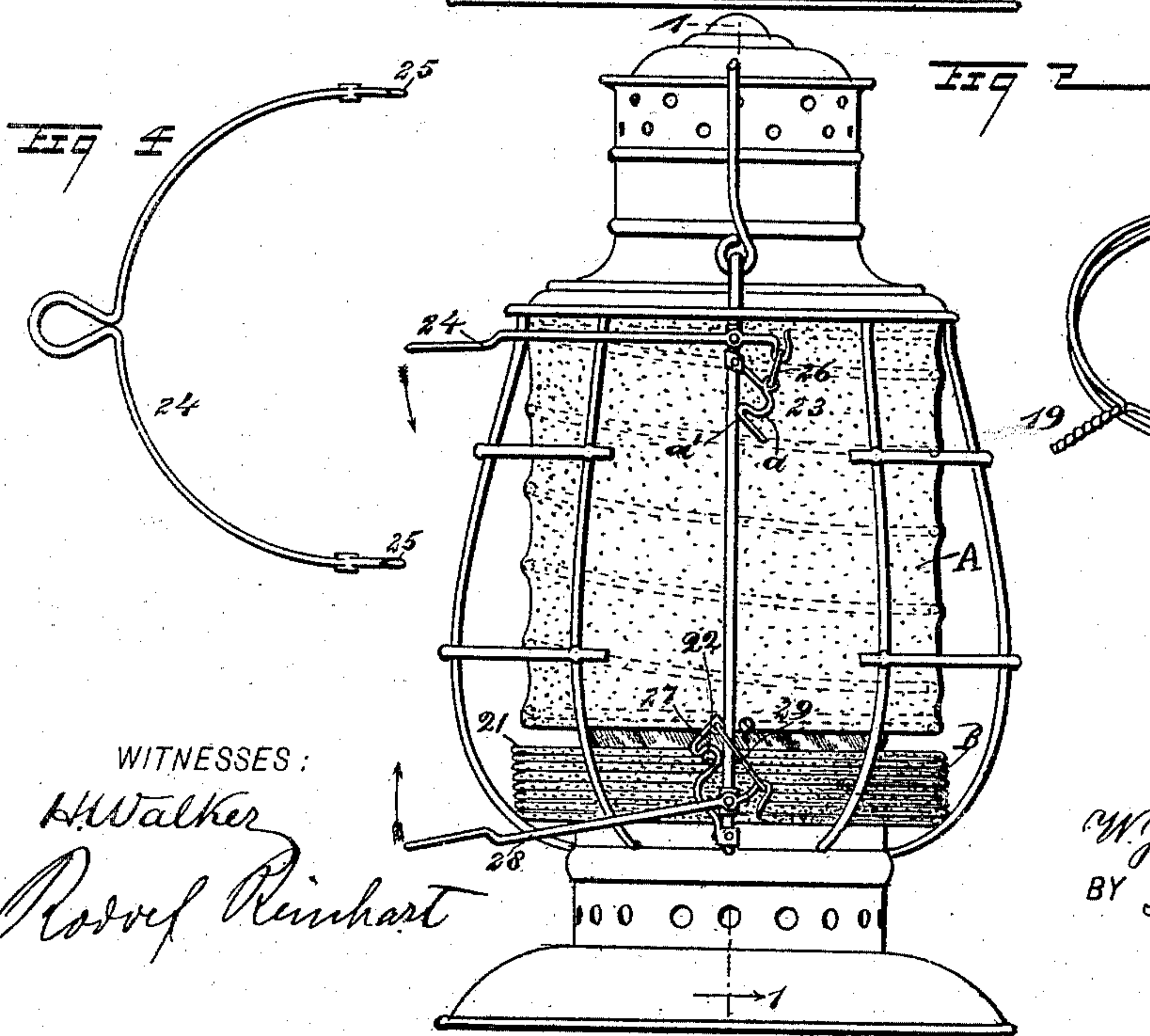
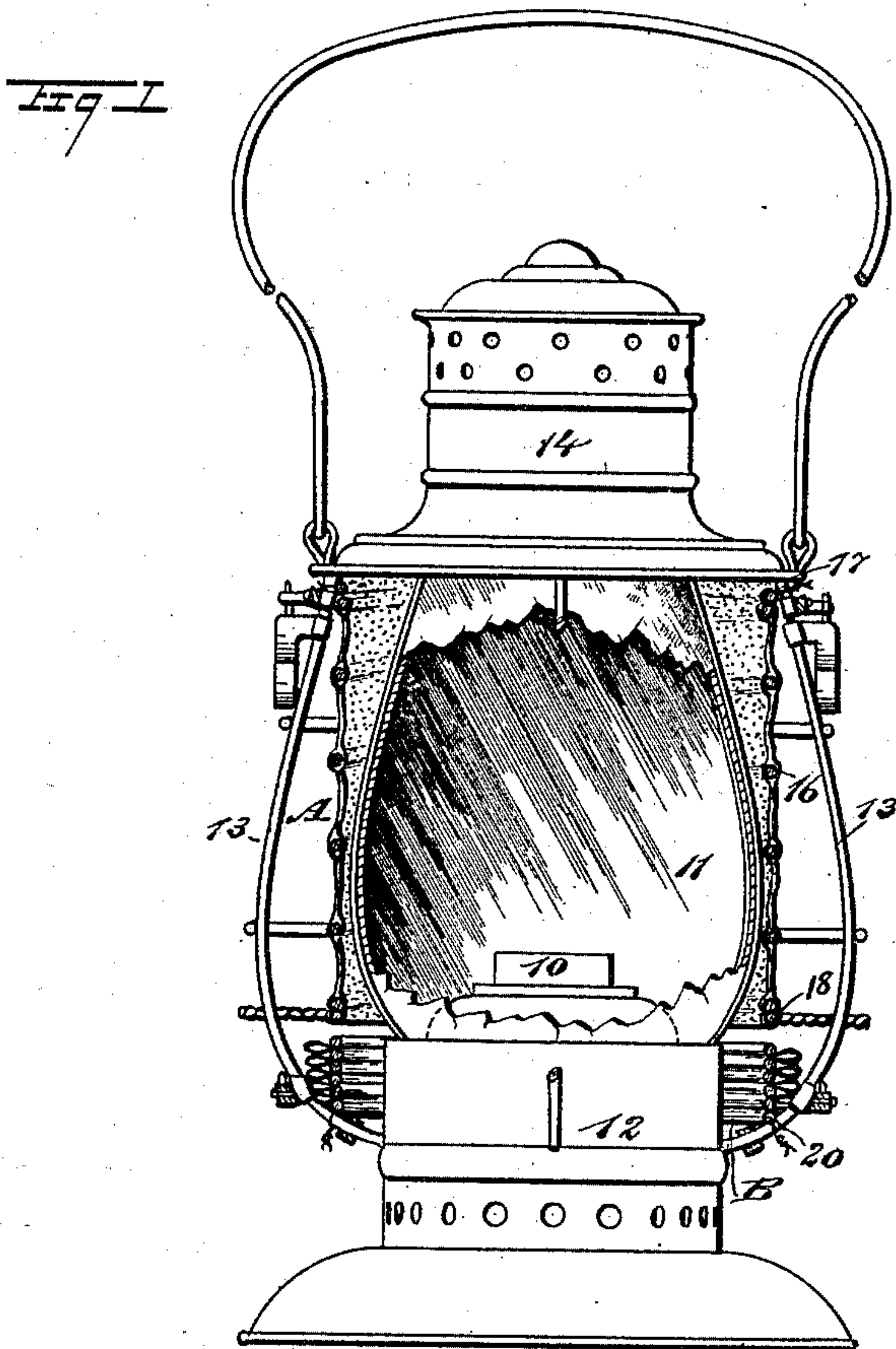


(No Model.)

W. J. FELLHEMER.  
SIGNAL LANTERN.

No. 489,798.

Patented Jan. 10, 1893.



WITNESSES:

H. Walker  
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W. J. Fellheimer  
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# UNITED STATES PATENT OFFICE.

WILLEY J. FELLHEMER, OF NEW YORK, N. Y., ASSIGNOR TO AUGUST FELLHEIMER, OF SAME PLACE.

## SIGNAL-LANTERN.

SPECIFICATION forming part of Letters Patent No. 489,798, dated January 10, 1893.

Application filed December 5, 1891. Serial No. 414,112. (No model.)

*To all whom it may concern:*

Be it known that I, WILLEY J. FELLHEMER, of New York city, in the county and State of New York, have invented a new and useful  
5 Improvement in Signal-Lanterns, of which the following is a full, clear, and exact description.

My invention relates to an improvement in signal lanterns, especially to that class of lanterns employed in connection with railroads  
10 and upon ship-board.

The object of the invention is to construct in a simple, durable and economic manner a lantern which will normally show a white  
15 light, and to provide the lantern with screens surrounding the globe or chimney of the lantern and made of a flexible material, transparent, translucent or semi-translucent, and colored as the code of signals may require,  
20 and further to provide a means whereby the screens may be independently manipulated, conveniently and economically carrying them in line with the rays of light, and thereby displaying a light tinted in accordance with the  
25 color of the screen presented to it.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

30 Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

35 Figure 1 is a section taken through the body of the lantern vertically on the line 1—1 of Fig. 2, and Fig. 2 is a side elevation viewed at right angles to the section shown in Fig. 1; Fig. 3 is a detail view of a guide ring adapted  
40 for attachment to the screen, also illustrating a portion of the spring controlling the screen and connected therewith; and Fig. 4 is a detail view of one of the levers by which the screen is manipulated.

45 The lantern, as usual, comprises a wick tube 10, a globe or cylinder 11, a base 12, a guard 13 and a cap 14. In connection with the globe or chimney 11 two screens A and B, are employed. One of these screens is located at  
50 the top of the lantern, at or near the upper

end of the globe, and the other is located at the lower portion of the lantern adjacent to the base, as illustrated in Figs. 1 and 2.

The screens, when two are employed, are preferably colored one red and the other green. 55 The screens are made from any flexible material, transparent, translucent, or semi-translucent, such as, for instance, india-rubber, silk, or the equivalent thereof, as the screens are intended to be vertically expansible and  
60 contractible.

The screens are cylindric in cross section and open at top and bottom, and they have attached thereto a spiral spring 16. Ordinarily each screen is constructed, as shown  
65 in Fig. 1, of two layers of material, and between the layers the spring 16, is located. The upper end of the upper screen A, is preferably attached to a ring 17, which ring is secured in any suitable or approved manner to  
70 the guard 13 of the lantern, immediately below the cap thereof, the upper end of the spring 16 being attached to this ring. The lower end of the spring in the upper screen is secured also to a ring, designated as 18 and  
75 shown in detail in Fig. 3. This ring at opposite sides is provided with outwardly extending trunnions 19, adapted for a purpose to be hereinafter set forth.

The lower screen B, is provided with a ring 80 20, at its lower end, the said ring being secured in any approved manner to the lower portion of the guard; and the upper ring 21 of this lower screen is provided with oppositely located trunnions 22, corresponding to  
85 the trunnions 19 of the upper screen. Normally the lower screen is folded upon itself so as to encircle the upper portion of the base, as shown in Figs. 1 and 2, and the upper screen is folded upon itself so as to lie closely  
90 beneath the cap.

It is necessary that some device should be employed to maintain the screens in their normal position, as the tendency of the springs contained therein is to force the screens to  
95 surround the globe or chimney; and it is further preferred that the devices employed should be capable of being expeditiously and conveniently manipulated with but one hand. To that end spring keepers 23, are provided 100



for the upper screen, located at opposite sides thereof, two such keepers being employed. The keepers are rigidly attached to a convenient member of the guard 13, and said keepers 23 ordinarily consist of a spring wire of suitable stoutness, rigidly secured at its upper end and bent to form a central socket section *a* and a foot *a'*. The socket sections *a* of the keepers receive the trunnions 19, attached to the lower portion of the upper screen, said trunnions being forced past the foot sections *a'* of said keepers. Both keepers are operated simultaneously to release the trunnions 19 of the upper screen through the medium of a lever 24, the said lever being preferably semi-circular or bow shape, and provided with a handle at the center of its bow and at each end with a hook 25. The lever is fulcrumed upon the guard, or upon any other convenient support, a short distance from its hook-shaped ends, and the hook extremities of the lever have a link connection 26, with the upper portion of the keepers 23. Thus when the upper screen is in its normal or contracted position, it is held in that position, as heretofore stated, by means of its trunnions entering the socket sections of the keepers 23. The moment that the red light, for instance, is to be displayed, the party carrying the lantern simply presses down upon the handle of the lever 24, as indicated by the arrow in Fig. 2, whereupon the foot sections of both keepers 23, are carried laterally and upwardly to such an extent as to release the trunnions of the upper screen, and the spring in such screen immediately acts to force it downward around the globe or chimney, as shown in Figs. 1 and 2. Similar keepers 27, are provided for the lower screen B. These keepers, however, are located the reverse of the upper keepers 23; that is to say, the foot sections are at the upper ends of the keepers instead of at the lower ends. Otherwise the keepers are constructed in like manner as the keepers 23, each embodying a foot section and a socket section, the socket sections receiving the trunnions 22 of the lower screen when the latter is in its contracted position, as illustrated in Fig. 2. These lower keepers are manipulated through the medium of a lever 28, essentially of the same construction as the upper lever 24. The hooks, however, at the ends of the lower lever are bent downward instead of upward, and links 29, are employed to connect the hook members of the lever with the upper ends of the keepers.

When both screens are in their normal or contracted position, and it is desired, for instance, to display a green light, the lever of the lower screen is simply pressed upward, as

indicated by the arrow in Fig. 2, whereupon the keepers 27, are forced out of engagement with the trunnions 22 of the lower screen, and its spring acts to instantly carry the screen upward to surround the globe or chimney, thus displaying the green light.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent,—

1. The combination with a lantern, of a contractible and spring actuated screen provided with opposite lateral projections, of keepers secured to the lantern and adapted to engage the projections of the screen, a semicircular lever pivoted to the lantern and links connecting the lever with the keepers, substantially as herein shown and described.

2. The combination with a lantern, of two contractible spring actuated screens, one secured at its upper end to the upper portion of the lantern and the other secured at its lower end to the lower portion of the lantern, spring keepers secured to the lantern and adapted to engage the screens to hold them contracted, and means for disengaging the keepers from the screens, substantially as described.

3. The combination, with a lantern, of screens located one at the upper and the other at the lower portion of the globe and surrounding the same, the upper screen being secured at its upper end and the lower screen at its lower end, springs controlling the upward movement of one screen and the downward movement of the other, the said screens being constructed of an expansible and contractible translucent or transparent material, levers fulcrumed upon the frame of the lantern, spring keepers controlled by the levers, and offsets produced upon the free ends of the screens and adapted to be engaged by the keepers, as and for the purpose specified.

4. The combination with the lantern, of two contractible and spring actuated screens, one secured at its upper end to the upper portion of the lantern and the other at its lower end to the lower portion of the lantern, each screen being provided with a ring having lateral projections, keepers carried by the lantern and adapted to engage the projections of the screens to hold them contracted, pivoted semi-circular levers, and links connecting the levers to the keepers, substantially as herein shown and described.

WILLEY J. FELLHEMER.

Witnesses:

LEWIS CULACK,  
RODOLF REINHART.