

No. 871,223.

PATENTED NOV. 19, 1907.

C. P. JOHNSON.
HEADLIGHT FOR LOCOMOTIVES.
APPLICATION FILED FEB. 16, 1907.

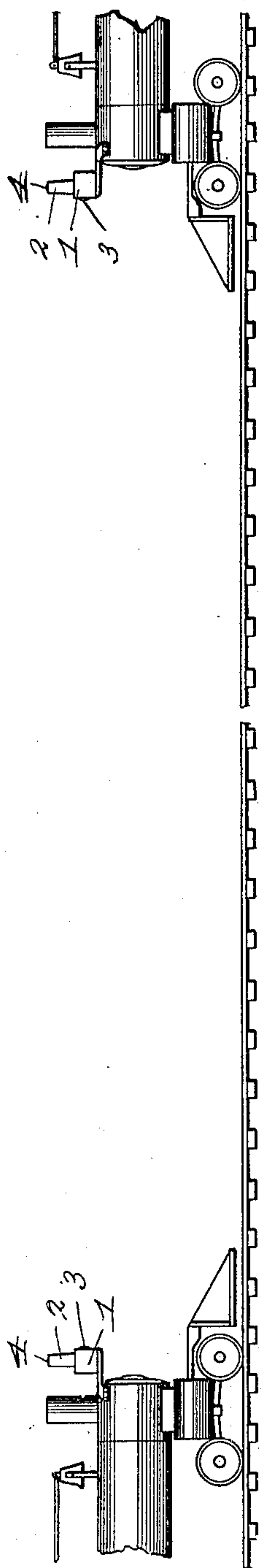


Fig. 1.

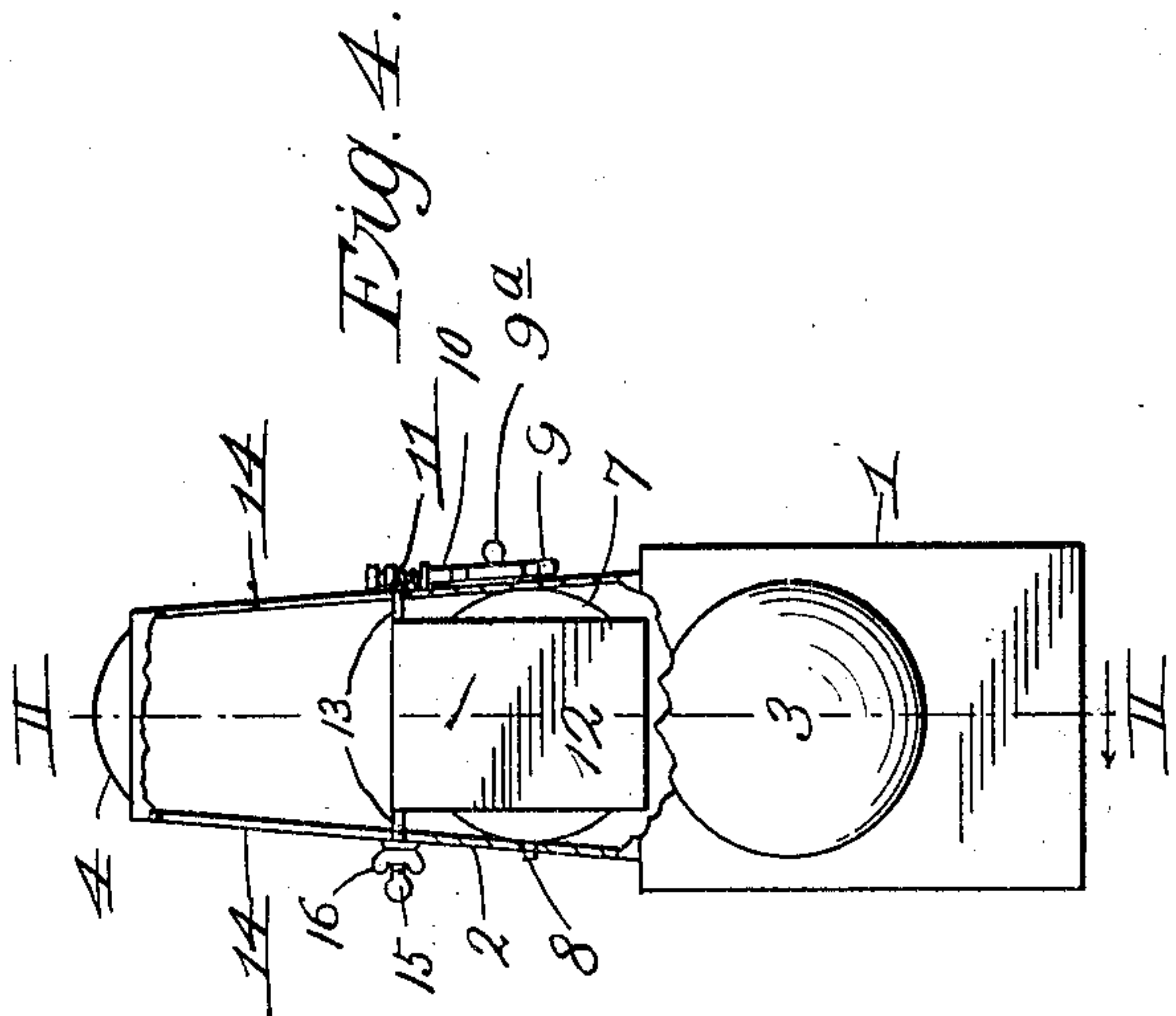


Fig. 4.

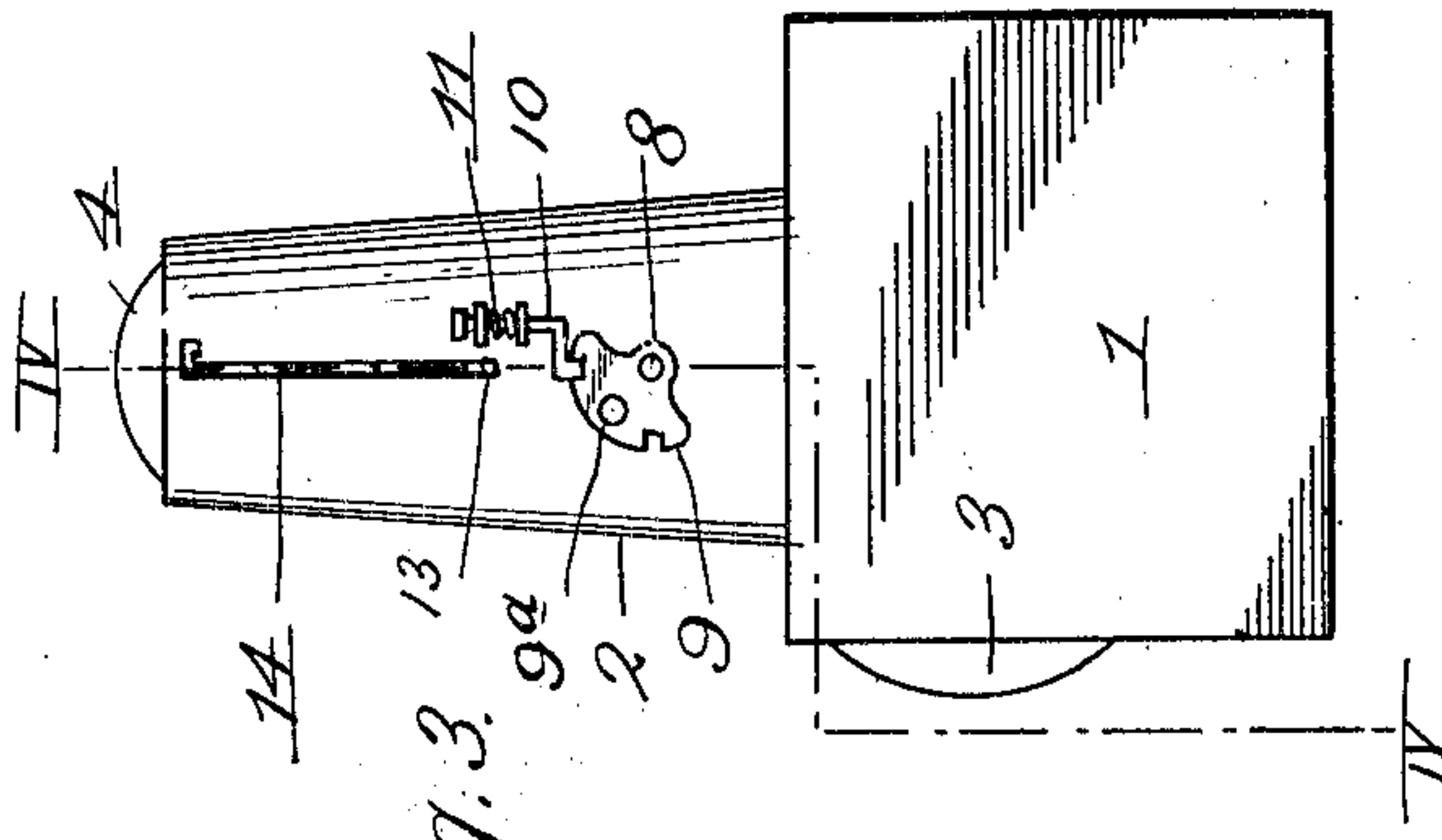


Fig. 3.

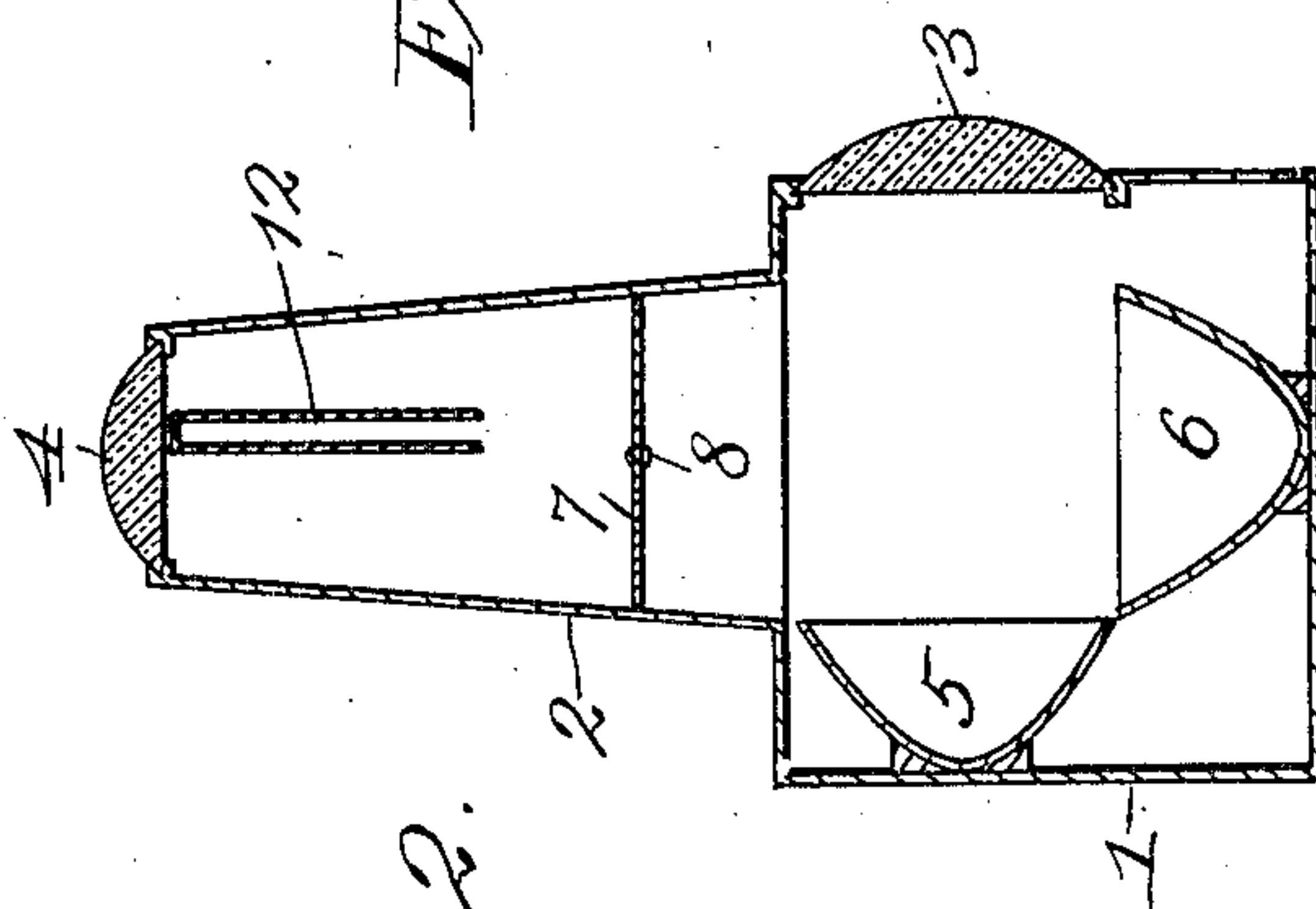


Fig. 2.

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UNITED STATES PATENT OFFICE.

CHARLES P. JOHNSON, OF EUREKA, KANSAS.

HEADLIGHT FOR LOCOMOTIVES.

No. 871,223.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed February 16, 1907. Serial No. 357,645.

To all whom it may concern:

Be it known that I, CHARLES P. JOHNSON, a citizen of the United States, residing at Eureka, in the county of Greenwood and State of Kansas, have invented certain new and useful Improvements in Headlights for Locomotives, of which the following is a specification.

My invention relates to headlights for locomotives, and consists of means for casting light ahead of the locomotive to illuminate the road, and means for casting a danger signal light upward so that the position of a train when rounding a curve at night may be readily determined.

The invention also embodies means for coloring the signal light so that the direction in which trains are passing may be readily ascertained, by having the light on trains traveling in one direction show clear and those on trains going in the opposite direction show red, or such other color as may be determined upon.

My object is to avoid the sacrifice of life and property caused by collisions at night on curves and crossings where, owing to obstructions, light from the ordinary headlight is hidden from view until too late to prevent collision. By casting a strong light upward it may be seen at a considerable distance and the location of trains when traveling in the same or opposite directions may be determined in ample time to avoid either "head on" or "rear end" collisions.

Referring now to the accompanying drawing which illustrates the invention, Figure 1 represents a broken side elevation of two locomotives provided with my improved headlight. Fig. 2 is a central vertical section of a headlight on line II—II of Fig. 4. Fig. 3 is a side elevation of the headlight. Fig. 4 is a front elevation partly in section on line IV—IV of Fig. 3.

In carrying out the invention I employ a case 1 having a conical extension 2, which extends upwardly a sufficient height to prevent the light emanating therefrom interfering with the engineer's view of the track ahead.

3 and 4 designate lenses in the front wall of the case and the top of extension 2, respectively.

5 and 6 designate reflectors in the case arranged in line with lenses 3 and 4, respectively, so as to throw the rays of light from a lamp (not shown) outwardly and upwardly.

7 designates a transparency preferably colored red, and provided at its opposite sides with stub-shafts 8, mounted in extension 2. Said transparency is arranged between the lamp and lens 4 so that when it stands across the hood and occupies the operative position shown in Fig. 2, the rays of light will shine therethrough and be colored thereby; but when it is turned to a vertical position so as to stand on edge toward the lamp or upright within the extension, the rays of light will shine past it without being colored. Said transparency is held in operative and inoperative positions by a notched quadrant 9, fixed to one of shafts 8, and a detent 10 slidably secured to the extension 2, and adapted to engage the notches in the quadrant, with which it is reliably held in engagement by an expansion spring 11. Quadrant 9 is provided with a knob 9^a so that it may be readily turned when it is desired to change the position of the transparency.

12 designates a hood for covering the transparency when the latter is turned up edgewise to an inoperative position, as shown in Fig. 4, to prevent the rays by any possibility from being colored by said transparency.

13 designates a transverse shaft secured to the upper portion of the hood and slidably arranged in a pair of vertical slots 14 in opposite sides of extension 2.

The hood is supported in its lowermost position by shaft 13 engaging the lower ends of the slots, and supported in its uppermost position by shaft 13 engaging the rearwardly and downwardly turned upper ends of said slots, hence it will be reliably supported in either position.

One end of shaft 13 has a knob 15 for convenience in manipulating the hood, which latter is held from vibrating, while the locomotive is traveling, by a thumb-nut 16 engaging shaft 13 and adapted to bind against the adjacent side of extension 2.

From the above description it is apparent that I have produced a headlight which is simple in construction and well adapted for the purposes intended.

Having thus described my invention, what I claim is:

1. In a device of the character described, a case having a lens in its front wall and an extension terminating a suitable distance above said lens, a transparency in said extension

and adapted to stand across or to be turned on edge therein, and a hood for covering said transparency when the latter stands on edge.

2. In a device of the character described, a
5 case having a lens in its front wall and an extension terminating a suitable distance above said lens, a transparency in said extension and adapted to stand across or to be turned on edge therein, and a vertically
10 movable hood for covering said transparency when the latter stands on edge.

3. In a device of the character described, a case having a lens in its front wall and an upright extension terminating a suitable
15 distance above said lens, an adjustable colored transparency mounted on stub-shafts in said extension, and means for locking said transparency in its operative and inopera-

tive positions, respectively across the extension or on edge therein.

4. In a device of the character described, the combination of a case having an upward extension, lenses in the front wall of the case and the upper end of the extension, reflectors in the case arranged in line with the lenses, a
25 colored adjustable transparency in the extension, and a vertically adjustable hood within the extension for covering the transparency when the latter is turned on edge.

In testimony whereof I affix my signature, 30
in the presence of two witnesses.

CHARLES P. JOHNSON.

Witnesses:

EMMA L. SMITH,
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