C. L. BETTS.

TUBULAR LANTERN.

APPLICATION FILED MAY 5, 1911.

1,067,967. **Patented July 22, 1913.**

2 SHEETS—SHEET 1.

Fig. 1.

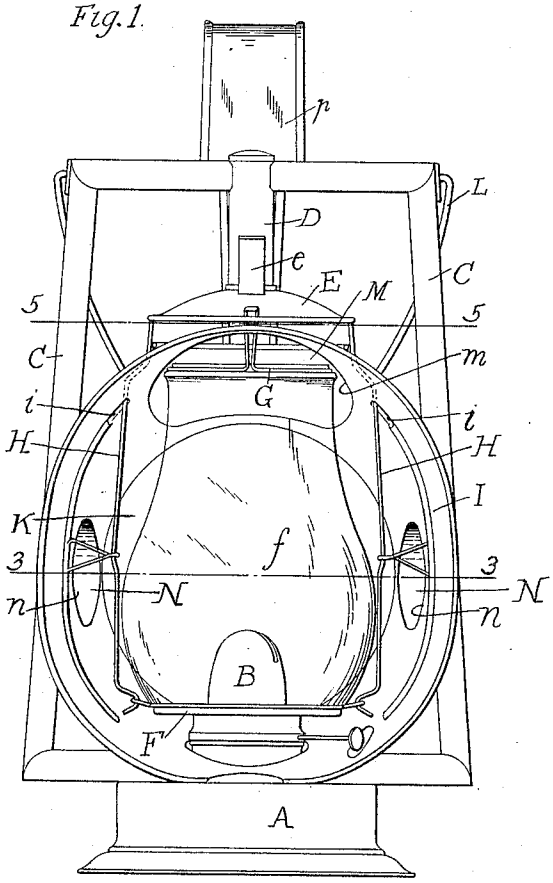


Fig. 2.

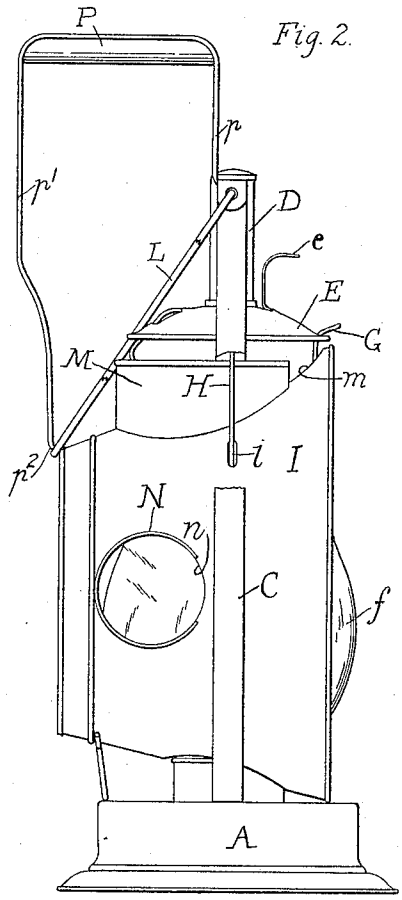
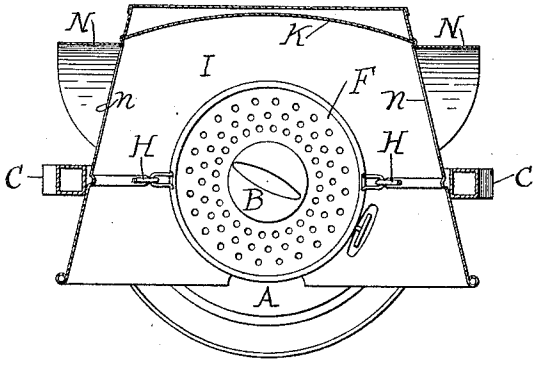


Fig. 3.



Witnesses.

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2 SHEETS—SHEET 2.

Fig. 4.

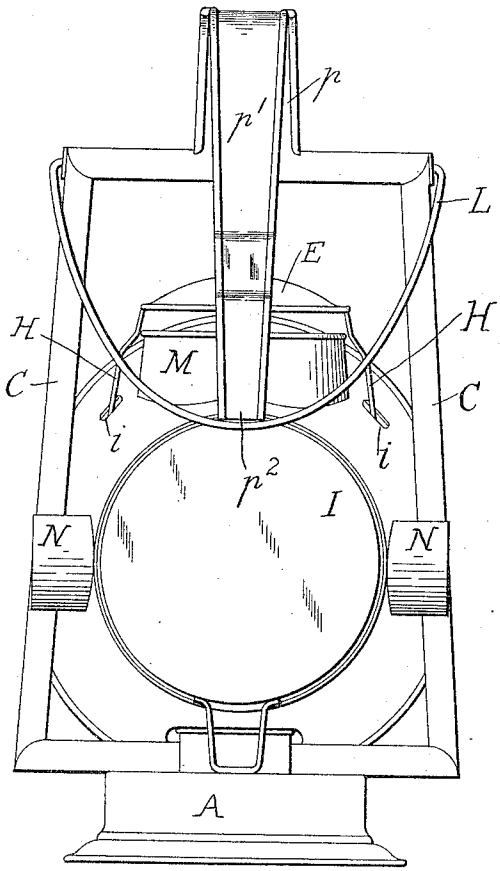


Fig. 5.

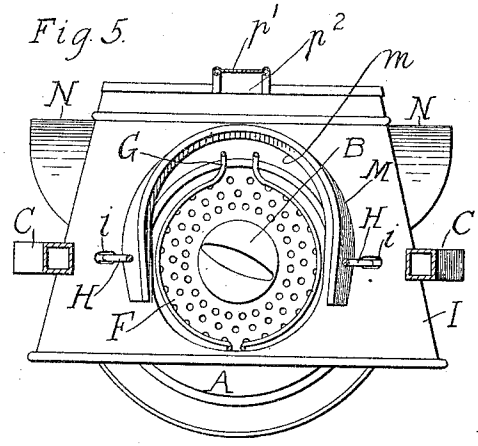
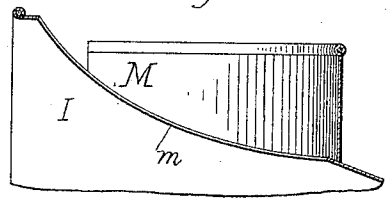


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

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TUBULAR LANTERN.

1,067,967. Specification of Letters Patent. Patented July 22, 1913.

Application filed May 5, 1911. Serial No. 625,168.

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 Tubular Lanterns, of which the following is a specification.

This invention relates to that class of tubular lanterns which are provided between the tubes with a deep reflector or reflecting hood in which the burner and globe are arranged and which directs the light forwardly, which class of lanterns is usually designated as inspectors' or track walkers' lanterns and employed for inspecting the track and the running gears of railway cars. In these lanterns, as heretofore constructed, the globe extends above the hood and this is undesirable in many cases because the light emitted from the upper part of the globe interferes with the vision of the person carrying the lantern and is visible from behind where it may be mistaken for a white signal light.

The object of this invention is to overcome this difficulty by preventing the emission of light rearwardly from the upper part of the globe, and also to protect the upper part of the globe against contact with objects which might cause breakage of the globe when the lantern is moved about and brought near such objects, as for instance, in inspecting the trucks and other portions of railway cars.

In the accompanying drawings, consisting of two sheets: Figure 1 is a front elevation of a lantern provided with these improvements. Fig. 2 is a side elevation with a portion of the nearest side tube broken away. Fig. 3 is a horizontal section on line 3—3, Fig. 1. Fig. 4 is a rear elevation of the lantern. Fig. 5 is a horizontal section on line 5—5, Fig. 1. Fig. 6 is a fragmentary longitudinal vertical section, on an enlarged scale, through the upper portion of the hood.

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

The accompanying drawings represent the improvement applied to a tubular lantern of the so-called hot blast type but the improvement is also applicable to lanterns of the cold blast type.

A represents the base of the lantern containing the oil pot, B the burner, C C the side tubes, D the central tube, E the bell or canopy which is vertically movable on the central tube and provided with a thumb-piece *e*, F the globe plate on which the globe *f* rests, G the annular spring catch which is secured to the bell and engages the upper end of the globe, H the side or lift wires or rods which connect the bell with the globe plate, I the reflecting hood which is arranged between the side tubes and is secured thereto, *i* the slots in the hood through which the upper portions of the lift wires extend, K the rear reflector secured in the rear portion of the hood, and L the bail. All of these parts may be constructed and arranged in any suitable manner.

The upper part of the hood is provided with an opening *m* which accommodates the upper portion of the globe and which is sufficiently large to permit the globe to be raised for uncovering the burner. This opening extends from a point near the upper front edge of the hood rearwardly and its rear portion is provided with a crescent-shaped shield M which is secured to the hood and projects upwardly therefrom, approximately to the level of the top edge of the globe, so as to shield the upper portion of the latter in a rearward direction, while leaving the upper portion of the globe exposed in a forward direction. This shield intercepts the light which otherwise would be emitted rearwardly from the upper portion of the globe and reflects this portion of the light forwardly, thereby preventing this portion of the light from interfering with the vision of the person using the lamp and increasing the illumination in a forward direction, the globe being protected in a forward direction by the front portion of the hood which projects forwardly beyond the side tubes.

n represents openings formed in the sides of the hood for emitting light sidewise and N represents shields which are arranged on the outer side of the hood in rear of these openings and project laterally from the hood to a sufficient distance to prevent the light emitted through these openings from reaching the eyes of the person carrying the lantern, while leaving the front portions of these side openings unobstructed, so that

light is emitted laterally and forwardly through these openings, but not rearwardly. The light emitted laterally through these openings renders the lantern visible from behind so that the engineer on an engine approaching the track walker from behind will notice the light and be enabled to caution the track walker by a whistle or other signal, while the track walker is protected against direct light issuing from these side openings, which would interfere with his vision.

The lantern is preferably provided with a rigid handle comprising a horizontal grip or hand bar P, an upright front portion p extending from the front end of this bar down to the top portion of the tubular lantern frame, and an upright rear portion p' extending from the rear end of the bar down to the rear end of the hood with which the rear portion of the handle connects preferably by an offset or shoulder p^2. The horizontal grip bar of the handle causes the lantern to be carried with the oil pot in a horizontal position and the lantern to hang vertically from the hand. This prevents the flame from smoking or cracking the globe, which is liable to happen when the lantern is carried in an oblique position. The elevated location of the grip bar above the tubular frame enables the user to carry the lantern conveniently at the most favorable height above the ground for efficient work and also prevents the heat from burning the fingers.

The offset or shoulder p^2 is desirable for holding the bail in position when not required for use, as represented in Fig. 2.

I claim as my invention:

1. The combination with a tubular lantern, of a reflecting hood having a forwardly flaring wall which extends forwardly beyond the side tubes and within which the globe is arranged, and having the upper portion of said wall provided with an opening through which the upper portion of the globe extends, and with an upwardly projecting shield which is arranged on said wall around the rear portion of said opening adjacent to the globe and covers the rear portion of the globe which extends above said wall, substantially as set forth.

2. The combination with a tubular lantern, of a reflecting hood having a forwardly flaring wall which extends forwardly beyond the side tubes and within which the globe is arranged, and having the upper portion of said wall provided with an opening through which the upper portion of the globe extends, and with a crescent-shaped shield which is arranged on said wall and projects upwardly therefrom and surrounds the rear and side portions of the globe which extend above said wall, substantially as set forth.

Witness my hand in the presence of two subscribing witnesses.

CHARLES L. BETTS.

Witnesses:
FRED H. TWOMBLY,
HOWARD L. FLETCHER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."