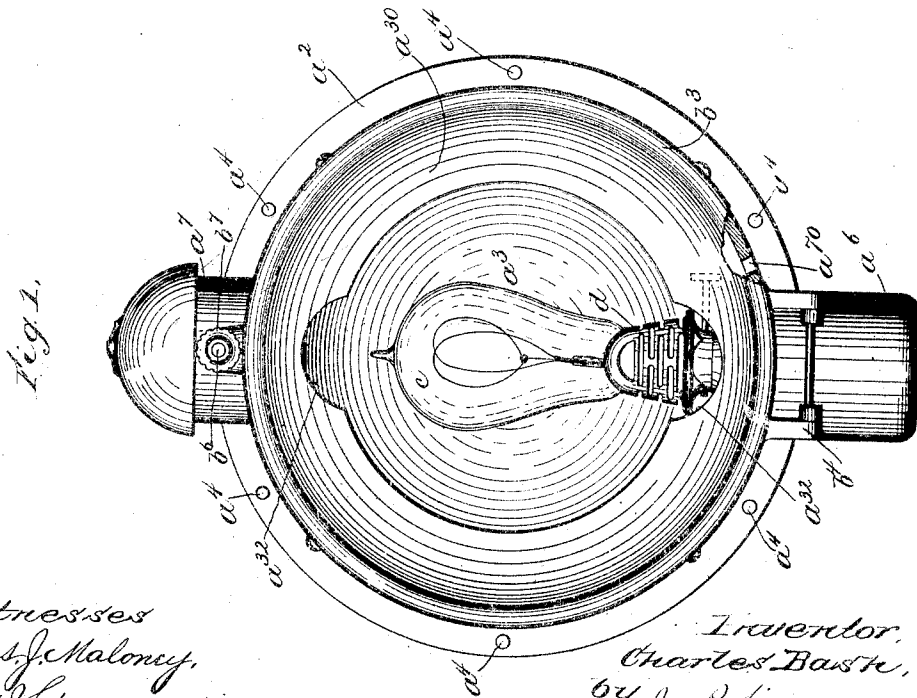
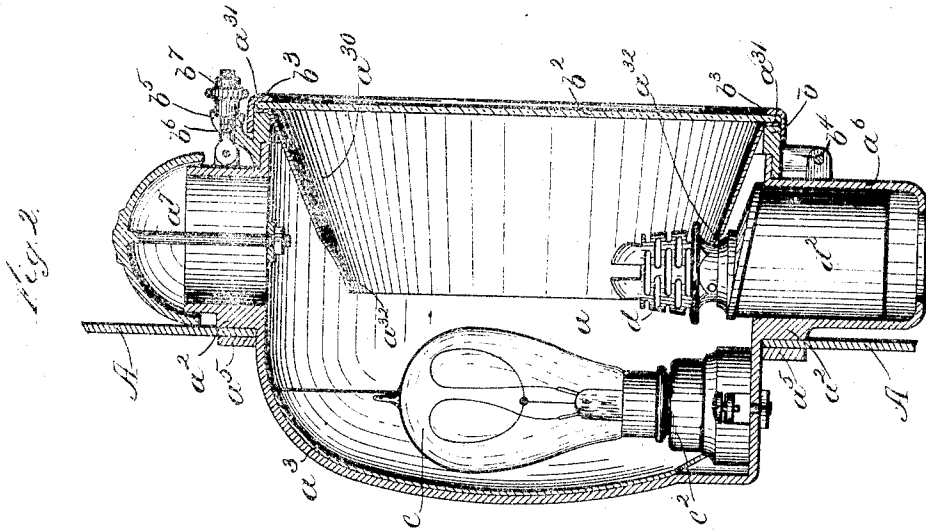


(No Model.)

C. BASH.
HEADLIGHT.

No. 586,584.

Patented July 20, 1897.



Witnesses
Jas. J. Maloney,
J. P. Livemore

Inventor,
Charles Bash,
by J. P. Livemore
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES BASH, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO FRANKLIN E. HUNTRESS OF SOMERVILLE, MASSACHUSETTS.

HEADLIGHT.

SPECIFICATION forming part of Letters Patent No. 586,584, dated July 20, 1897.

Application filed November 9, 1895. Serial No. 568,410. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BASH, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Headlights, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to a lantern or headlight and is embodied in a device of this kind containing a main lamp or burner for ordinary use and a supplemental lamp for use in case of failure of the main lamp for any reason, such a device being especially useful when the main lamp is supplied from without with its illuminating medium, as when an electric or gas lamp is used.

In the case of electric-railway cars or locomotives, for example, while it is desirable to use an electric lamp for the headlight it has been considered impracticable to do so, owing to the fact that the cessation of power, due to accident in the main circuit or a temporary displacement of the trolley or break in any of the car-circuits, is liable to disable the headlight.

The present invention aims to obviate this difficulty by providing, in combination with the main lamp arranged to form a suitable headlight, an emergency-lamp, which may be of any kind which contains in itself the necessary elements to provide light, a kerosene-lamp or candle such as is commonly employed in headlights or carriage-lamps being preferably used.

The invention further consists in novel features of construction and arrangement of the lantern or case which contains the lamps and of the reflectors employed, such construction being novel in itself, but especially adapted for use with the main lamp and emergency-lamp contemplated by this invention, which are both contained within the said case in operative position without materially increasing the size of the said case or complicating the construction thereof.

Figure 1 is a plan view of a headlight embodying the present invention, looking toward the front thereof; Fig. 2, a vertical cross-section of the same.

The headlight embodying the invention

consists in a casing *a*, closed at the sides and rear and provided in front with a cover or lid *b*, said casing being adapted to contain the main lamp *c*, herein shown as an incandescent electric lamp, and the emergency-lamp *d*, which may be and preferably is an ordinary kerosene illuminating-burner.

The lid *b* is transparent and preferably covers substantially the entire front of the casing and preferably is herein shown as an annulus, upon the front of which a disk *b*², of glass, is secured by a flanged ring *b*³. The main portion of the casing *a* is preferably cylindrical in shape and provided with a flange *a*², extending around the outer periphery of said casing, between the front and rear thereof, and adapted to be secured to the dasher *A* of a street-car when the headlight is to be used therewith.

The rear portion of the chamber *a* extends back beyond the said flange and is preferably concavo-convex, as shown, and provided on its inner wall with the concave reflector *a*³, as shown in Fig. 2. When the headlight is to be used with an electric street-car, for which it is especially designed, an opening is cut in the dasher thereof and the rear portion of the chamber *a* passed through said opening until the flange *a*² rests against the front surface of said dasher, after which said flange is secured thereto by means of bolts or rivets *a*⁴ passing through the said dasher and preferably also through a collar *a*⁵, fitting around the rear extension back of the dasher, thus affording a more secure fastening and presenting a more finished appearance.

The main lamp *c* is preferably contained in the rear portion of the casing, being shown herein as provided with the socket *c*², having the customary circuit-terminals adapted to be connected in the lighting-circuit of the car. In order to obtain a better lighting effect, the supplemental reflector *a*³⁰, extending around the walls of the front portion of the cylindrical chamber *a*, is employed, the surface of said reflector being conical and converging from the front of the lamp toward the rear, thus, in combination with the main reflector *a*³, concentrating the rays of light in front, so that the track in front of the car is lighted.

to the best possible advantage. The said supplemental reflector is attached to the cover *b* and may be provided for this purpose with a flange or offset *a*³¹, secured, as shown, to the annulus forming the cover *b* by means of the flange-ring *b*³, which secures the glass front *b*², the said offset *a*³¹ being between the glass front *b*² and the said annulus.

So much of the apparatus as has been above described forms an operative headlight adapted to be used under normal circumstances independently of the supplemental lamp *d*, which is combined therewith and intended for temporary use in case of emergency. The said supplemental lamp may be arranged and applied in any suitable way, but is preferably contained, as shown, in the front part of the casing *a*, a pocket *a*⁶ being provided and adapted to contain and support the fount *d*² of the lamp *d* when a kerosene-lamp is used for this purpose, it being obvious, however, that the said pocket might be equally well utilized to support a candle or other device for independent lighting. Above the said pocket *a*⁶ is a dome or chimney *a*⁷ to provide for the necessary ventilation when the emergency-lamp *d* is lighted, so as to insure proper combustion, air being admitted from below, as through openings *a*¹⁰. (Shown in Fig. 1.) When constructed in this way, the supplemental lamp does not interfere with the proper arrangement of the convergent reflector *a*³⁰, the latter having recesses *a*³² cut in the inner edge thereof, the lower one fitting around the neck of the lamp *d* and the upper affording an opening for the products of combustion, so that the surface of the reflector need not be smoked when the said lamp is lighted. This is accomplished by attaching the reflector *a*³⁰ to the cover *b*, as above described, so that that portion of the reflector which extends over the fount *d*² will not interfere with the removal of said fount from its supporting-pocket when the said cover *b* is opened. While this is not an essential feature of the invention, it adds greatly to the utility and compactness of the device, since if the reflector *a*³⁰ were permanently secured to the

walls of the chamber *a* it is obvious that a large opening would have to be provided in the lower surface of said reflector, thus injuring its efficiency, or more complicated means for getting at the supplemental lamp to keep the same in operative condition would have to be employed.

The cover or lid *b* may be secured to the front of the casing in any suitable or usual way, but, as herein shown, is provided at its lower end with a hinge *b*⁴, connected to the lower end thereof, and a fastening device at the upper end, consisting of a forked extension *b*⁵, between the prongs of which a pivoted arm *b*⁶ is swung down and secured by a thumb-screw *b*⁷, threaded on the end of said arm.

I claim—

1. The headlight comprising a cylindrical casing having a concavo-convex rear wall, a reflector on said rear wall, a lamp-socket contained in the rear portion of the said casing, a pocket or support in the lower front portion of the said casing for an emergency-lamp, a transparent lid or cover for the front portion of said casing; an annular reflector secured to the inner side of the said cover and converging from the periphery thereof toward the interior of the chamber, and recesses in said reflector over the said pocket, substantially as and for the purpose described.

2. A headlight comprising a casing *a*, a lamp-socket *c*² therein, a downwardly-extending pocket or recess *a*⁶ and the chimney or dome *a*⁷, a pivotally-supported transparent cover *b*, *b*², the converging reflector *a*³⁰ connected therewith and provided with recesses *a*³², and the supporting-flange *a*² extending transversely around the periphery of the casing at the rear of the pocket *a*⁶ and dome *a*⁷, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES BASH.

Witnesses:

H. J. LIVERMORE,
N. P. FORD.