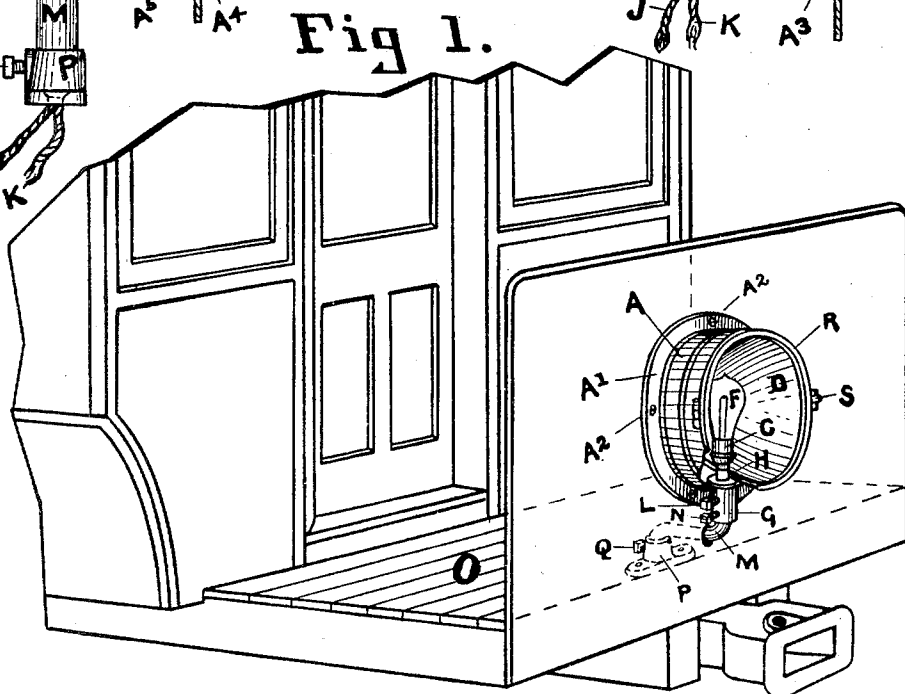
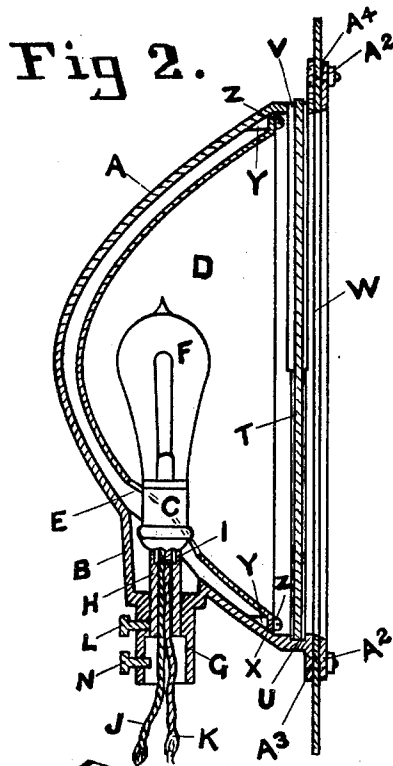
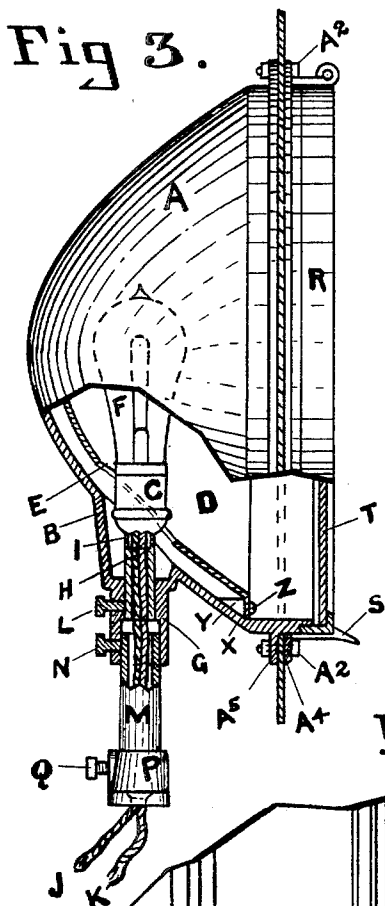


(No Model.)

J. KIRBY, Jr.
DASH ELECTRIC HEADLIGHT.

No. 586,774.

Patented July 20, 1897.



Attest:

E. B. Lehman
W. G. Mitchell

Inventor.

John Kirby, Jr.

UNITED STATES PATENT OFFICE.

JOHN KIRBY, JR., OF DAYTON, OHIO, ASSIGNOR TO THE UNITED STATES HEADLIGHT COMPANY, OF UTICA, NEW YORK.

DASH ELECTRIC HEADLIGHT.

SPECIFICATION forming part of Letters Patent No. 586,774, dated July 20, 1897.

Application filed January 8, 1897. Serial No. 618,439. (No model.)

To all whom it may concern:

Be it known that I, JOHN KIRBY, Jr., a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Dash Electric Headlights; and I do hereby declare that the following is a full, clear, and exact description of the invention.

My invention relates to improvements in dash electric headlights such as are adapted to be secured to the dashboards of street or other railway cars, and which headlights usually consist of a parabolic reflector contained within a case adapted to be attached by means of screws or bolts or otherwise to the said dashboards, in some instances on the outside and in others on the inside, and in still other instances they are secured either to the inside or the outside, or both, and project through an opening cut in the dashboard, partly in front of and partly behind the same.

The object of my invention is to combine with such a headlight convenient and efficient means for adjusting the lamp-socket, whereby it may readily be adjusted so as to locate the lamp properly in relation to the focus of the reflector, whereby lamps varying in size may be used, and thus avoid the necessity of using a particular size lamp in order to obtain proper results from the reflector.

Another object of my invention is to provide an improved electric headlight having the open end of its case secured to the rear side of the dashboard, thereby avoiding all projection of the headlight proper beyond the face of the dashboard.

A further object of my invention is to provide a conduit through which the current-conveying wires pass from the platform of the car to the headlight or lamp; also, to so arrange the same as to provide for its attachment to and removal from the headlight without the necessity of dismounting the headlight from the dashboard and to otherwise so construct and arrange the various parts as to improve upon the construction and appearance of such headlights in the manner more fully described in the following specification, pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of one end of a street-car provided with a headlight secured on the outside of the dashboard; Fig. 2, a vertical sectional view of a headlight secured on the inside of the dashboard; and Fig. 3, a side elevation, partly in section, of a headlight mounted in the dashboard and projecting partly in front of and partly behind the same.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

A represents the case, which may be of any of the well-known forms applicable to the purpose to which my invention relates, and it may be of sheet or cast metal, or of other material, and of one or more pieces, as preferred.

B is a housing secured to or made integral with the case, and its function is to form an enlargement of the case to accommodate the lamp-socket C when the case is of such size and form as to require such provision—as, for example, the construction shown in Figs. 2 and 3.

D is a parabolic reflector, having an opening E, through which the socket C and lamp F are inserted, and which opening is located with proper relation to the focal point of the reflector to best concentrate the rays of light from the lamp and reflect them ahead.

G represents a hollow sleeve which in Figs. 2 and 3 is shown depending from and integral with the housing B. It may, however, be attached to the case, as shown in Fig. 1, or it may be formed integral with the case. The bore of this sleeve is provided with a centrally-bored socket-holder H, preferably made of hard rubber and screw-threaded at I to receive the lamp-socket C. Current-conveying wires J K pass through the socket-holder H to the lamp-socket C for connection therewith in the usual manner.

It is to be understood that the socket-holder H is movable within the hollow sleeve G and that the lamp and its socket can be raised or lowered as may be necessary to locate the lamp in proper position within the reflector, and that when so located the socket-holder can be rigidly secured in such position by means of a set-screw L, operative through the

wall of the hollow sleeve G, the lower end of which is provided with an enlarged bore to receive a piece of gas or other pipe M, held in place by a set-screw N. This pipe extends from the headlight downwardly to the floor O of the platform, where its lower end enters a conduit-socket P, preferably screwed to the floor and provided with a set-screw Q, by which means the pipe or conduit is secured to the conduit-socket. The current-conveying wires J K pass upwardly through the floor of the platform and through pipe M, which forms a conduit for and protects them from damage by the elements and otherwise and which when the wires are disconnected can be removed without disturbing the headlight.

Where the headlight is secured to the outside of the dashboard, as shown in Fig. 1, the conduit may be bent and passed through an opening in the dashboard and extended to the floor of the platform at the rear side of the dashboard, as shown by dotted lines.

The front of the headlight-case is open and the back closed in the usual manner, and in Figs. 1 and 3 the front is shown provided with a flanged ring R, hinged to the case, which is provided with a suitable fastening S, the function of the said ring being to carry a glass T, which closes the opening and through which the rays of light are transmitted. In Fig. 2, however, the glass is carried in a groove U, formed in the case below its center horizontal line. A slot V is formed in the upper half of the case, through which slot the glass is inserted, an opening W being cut through the dashboard for the passage of light. The reflector is provided with an annular flange X, by which it is secured within the case through the medium of a series of lugs Y (attached to the case) and screws Z.

Various means may be employed for securing the case to the dashboard, depending somewhat on the construction of the case and the position in which it is mounted. In Fig. 1 I have shown it attached by means of an annular flange A' and a suitable number of screws or bolts A². In Fig. 2 it is illustrated as being attached to the inside of the dashboard by means of an annular flange A³, and as in this instance it is necessary to cut a hole in the dashboard I have shown a ring A⁴ on the outside for the dual purpose of strengthening the dashboard and forming a finish around the edge of the opening therein, the bolts A² serving to secure the case and the ring to the same; and in Fig. 3 the case is shown provided with an annular flange A⁵, the manner of attachment being similar to that shown in Fig. 2.

Prior to my present invention headlights of the class herein described have been made with lamp-socket holders rigidly secured within the case, which construction necessitates the use of lamps of uniform size and proportion to insure proper focusing relation with the reflector, and as incandescent lamps are constantly being improved and changed

in size and proportion it is very desirable that such headlights be provided with lamp-socket holders which will permit of adjustment to compensate for the variation in lamps, which requirement the device herein described fulfills in a simple, practical and efficient manner.

Having thus described my invention, I claim—

1. As an improvement in dash electric headlights, the combination with the dashboard of a railway-car, of a headlight having a case provided with a parabolic reflector secured therein and having a lamp-opening in its side in line with the focal point thereof, said case being provided with a housing forming a part thereof and located opposite the said opening in the reflector, a hollow sleeve depending from and communicating with the interior of said housing and containing a socket-holder movable therein on a line with the focal point of the reflector and parallel with a line drawn across the face thereof, and through which socket-holder current-conveying wires pass to, for connection with a lamp-socket held by said holder, a fastening device for securing the said holder within said hollow sleeve whereby the lamp held in said socket may be adjusted to its proper relation with the focal point of the reflector and securely held in such position and means for attaching the headlight to the dashboard of the car, substantially as set forth.

2. As an improvement in dash electric headlights, the combination with the dashboard of a railway-car, of a headlight having a case provided with a parabolic reflector secured therein and having a lamp-opening in its side in line with the focal point thereof, a hollow sleeve opening into the case opposite the said opening in the reflector and containing a socket-holder movable therein on a line with the focal point of the reflector and parallel with a line drawn across the face thereof, and through which socket-holder current-conveying wires lead to, for connection with a lamp-socket held by the said holder, a fastening device for securing the said holder within said hollow sleeve, whereby the lamp held in said socket may be adjusted to its proper relation with the focal point of the reflector and securely held in such position, and means for attaching the headlight to the said dashboard, substantially as set forth.

3. As an improvement in dash electric headlights, the combination with the dashboard of a railway-car, of a headlight having a case provided with a parabolic reflector secured therein and having a lamp-opening in its side in line with the focal point thereof; a hollow sleeve opening into the case opposite the said opening in the reflector and containing a socket-holder movable therein on a line with the focal point of the reflector and parallel with a line drawn across the face thereof; and through which socket-holder current-conveying wires lead to, for connection with a lamp-socket held by the said holder and registering

with said opening in the reflector, a fastening device for securing the said holder within said hollow sleeve, whereby the lamp held in said socket may be adjusted to its proper relation
 5 with the focal point of the reflector and securely held in such position, a conduit connecting the headlight-case with the floor of the car-platform and through which conduit the current-conveying wires lead from under-
 10 neath the car to the lamp-socket, and means for attaching the headlight to the said dashboard, substantially as set forth.

4. As an improvement in dash electric head-
 lights, the combination with the dashboard
 15 of a railway-car, of a headlight-case provided with means for attachment to said dashboard, a parabolic reflector secured within said case and having an opening in its side in line with the focal point of the reflector, a hollow sleeve
 20 attached to the headlight-case, a lamp-socket holder mounted therein and carrying a lamp-socket to which an incandescent electric lamp is attached, current-conveying wires leading from underneath the car to said lamp, an in-
 25 dependent conduit extending substantially from said sleeve, to which its upper end is secured, to the floor of the car-platform and through which conduit the said wires pass, an independent conduit-socket adapted to be
 30 fixed to the car structure and to support the lower end of said conduit, and a fastening device by which said conduit is secured thereto, substantially as set forth.

5. As an improvement in dash electric head-
 lights, the combination with the dashboard
 35 of a railway-car, of a headlight-case provided with means for attachment to said dashboard, a parabolic reflector secured within said case and having an opening in its side in line with
 40 the focal point of the reflector, a hollow sleeve attached to the headlight-case, a lamp-socket holder adjustably mounted therein and carrying a lamp-socket to which an incandescent
 45 electric lamp is attached, means for securing the said lamp-socket holder within the said hollow sleeve, current-conveying wires leading from underneath the car to said lamp, an independent conduit extending substantially
 50 from said sleeve to which its upper end is secured, to the floor of the car-platform and through which conduit the said wires pass, an independent conduit-socket adapted to be
 55 fixed to the car structure and to support the lower end of said conduit, and a fastening device by which said conduit is secured thereto, substantially as set forth.

6. As an improvement in dash electric head-
 lights, a headlight-case provided with a hous-
 60 ing or pocket adapted to receive a lamp-socket holder, a reflector provided with an opening for the passage of a lamp-socket, a lamp-socket holder, a lamp-socket and an incan-
 65 descent electric lamp mounted within the said case and removable therewith, in combina-
 70 tion with the dashboard of a railway-car having a hole or opening cut through the same, a ring secured to the said dashboard on the

outside thereof opposite the said hole or open-
 ing therein, means for securing the open end
 75 of the said headlight-case to the rear side of the said dashboard in register with the said hole or opening therein, a transparent cover
 located forward of the open end of the said reflector and arranged to permit of access to
 80 the interior thereof from the front side of the said dashboard, current-conveying wires
 leading from underneath the car to said lamp-socket, a conduit extending substantially
 85 from the headlight-case to the floor of the car-platform and through which conduit the
 said wires pass, fastenings for securing the upper and lower ends of said conduit in po-
 sition, whereby the conduit can be removed without removing the headlight-case from
 its support, substantially as and for the pur-
 pose set forth.

7. As an improvement in dash electric head-
 lights, a headlight-case provided with a hous-
 ing or pocket adapted to receive a lamp-socket
 90 holder, a reflector provided with an opening for the passage of a lamp-socket, a lamp-socket holder, a lamp-socket and an incan-
 descent electric lamp mounted within the said case and removable therewith, in combina-
 95 tion with the dashboard of a railway-car having a hole or opening cut through the same, a ring secured to the said dashboard on the
 outside thereof opposite the said hole or open-
 ing therein, means for securing the open end
 100 of the said headlight-case to the rear side of the said dashboard in register with the said hole or opening therein, a transparent cover
 located forward of the open end of the said re-
 flector and arranged to permit of access to the
 105 interior thereof from the front side of the said dashboard, current-conveying wires leading
 from underneath the car to said lamp, a con-
 110 duit extending substantially from the headlight-case to the floor of the car-platform and through which conduit said wires pass, a con-
 duit-socket adapted to be secured to the car structure at the lower end of said conduit,
 fastenings for securing the upper end of said conduit to said case and its lower end to said
 115 socket, whereby the conduit can be removed without removing the headlight from its sup-
 port, substantially as set forth.

8. The combination with the end platform
 of a railway-car, of a dashboard attached to
 and extending upwardly from said platform,
 120 a headlight-case carried by said dashboard and inclosing a parabolic reflector having an
 opening in its side in line with the focal point thereof, a lamp-socket holder mounted with-
 in the case and carrying a lamp-socket reg-
 125 istering with said opening in the reflector and to which an incandescent electric lamp is at-
 tached, current-conveying wires leading from underneath the car to said lamp, a conduit
 extending from the headlight-case to the floor
 130 of the car-platform, sockets into which the ends of the said conduit fit loosely, fastenings
 for securing the conduit in said sockets, the upper and lower ends of said conduit in po-

sition, whereby the conduit can be removed without removing the headlight-case from its mounting, and means for attaching the said case to said dashboard, substantially as set forth.

- 5
10
15
9. The combination with the end platform of a railway-car, of a dashboard attached to and extending upwardly from said platform, a headlight-case carried by said dashboard and inclosing a parabolic reflector having an opening in its side in line with the focal point thereof, a lamp-socket holder mounted within the case and carrying a lamp-socket registering with said opening in the reflector and to which an incandescent electric lamp is attached, current-conveying wires leading from underneath the car to said lamp, a conduit extending from the headlight-case to the floor

of the car-platform and through which conduits said wires pass, a conduit-holder attached to or formed integral with the case and into which holder the upper end of said conduit fits loosely, a conduit-socket adapted to be secured to the car structure and into which socket the lower end of said conduit fits loosely, fastenings for securing the upper end of said conduit in said holder and its lower end in said socket, whereby the conduit can be removed without removing the headlight from its support, and means for attaching the headlight to the dashboard, substantially as set forth.

JOHN KIRBY, JR.

Witnesses:

C. U. RAYMOND,
H. D. HENDRICK.