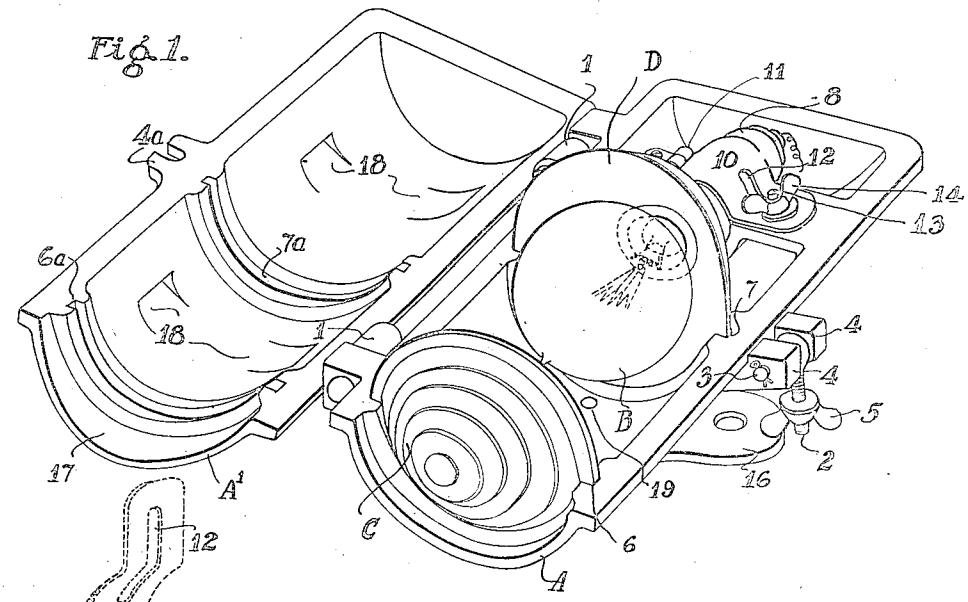
C. B. GOODWIN AND W. T. THURMOND.

ELECTRIC HEADLIGHT.

APPLICATION FILED OCT. 14, 1921.

1,435,002. Patented Nov. 7, 1922.

Fig. 1.



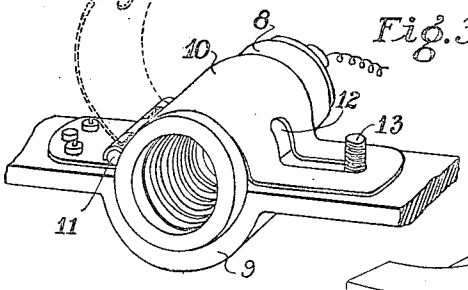
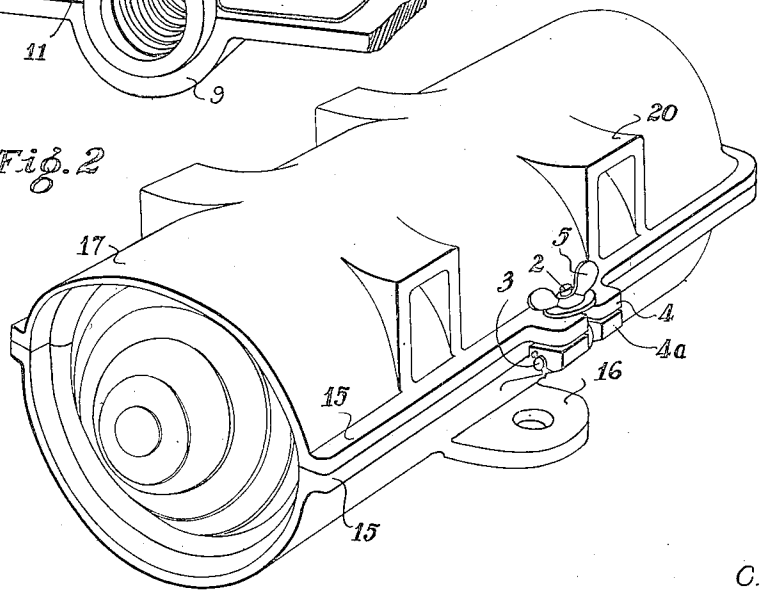


Fig. 3.

Fig. 2



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UNITED STATES PATENT OFFICE.

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ELECTRIC HEADLIGHT.

Application filed October 14, 1921. Serial No. 507,763.

To all whom it may concern:

Be it known that we, CHARLES B. GOODWIN and WILLIAM T. THURMOND, citizens of the United States, residing in the city of Huntington, county of Cabell, and State of West Virginia, have invented a certain new and useful Improvement in Electric Headlights, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to electric headlights, and has for its main object to provide a serviceable and inexpensive headlight of such construction that the lens, reflector and lamp can be removed quickly and without the necessity of first removing a number of small screws or other retaining devices that are difficult to handle or manipulate.

Another object is to provide an electric headlight which is equipped with a divided casing that is constructed in such a manner that when it is open or the sections of same separated, the lens, reflector and lamp will be exposed to view and can be easily removed. Other objects and desirable features of our invention will be hereinafter pointed out.

To this end we have devised an electric headlight that is provided with a casing composed of a plurality of sections separated or divided by joints which extend longitudinally of the casing and provided on their inner sides with ribs, grooves or the like that hold the lens and the reflector in a position at right angles to the longitudinal axis of the casing. One element of the casing is provided with a support for the socket that holds the incandescent lamp of the headlight, and a movable or adjustable element co-operates with said support to retain said socket in operative position.

Figure 1 of the drawings is a perspective view of an electric headlight constructed in accordance with our invention, showing the two sections of the casing separated.

Figure 2 is a perspective view of said headlight, showing the sections of the casing closed; and

Figure 3 is a detail view of the means that we prefer to use for retaining the lamp socket in operative position.

Referring to the drawings which illustrate the preferred form of our invention, A and A′ designate two semi-cylindrical-shaped members that co-operate with each other to form a cylindrical casing that houses an electric incandenscent lamp B, a lens C and a reflector D. The joints between the members A and A′ are located preferably at the horizontal center of the casing so that the member A will form the lower half of the casing and the member A′ the top half. Said members can be connected together in any suitable way that will permit them to be separated easily so as to expose the lens, lamp and reflector, but we prefer to connect said members together by hinges 1 so as to enable the top half or section A′ of the casing to be swung into the position shown in Figure 1 when it is desired to inspect or remove the elements of the headlight that are arranged inside of the casing. Normally, the top member A′ is held clamped tightly against the bottom member A by means of a fastening device which may consist of a screw 2 pivotally connected by a pintle pin 3 to a pair of laterally projecting lugs 4 on the bottom member A and provided with a wing nut 5 that is adapted to bear against a bifurcated jaw or pair of laterally-projecting lugs 4^a on the top section A′ of the casing, said screw being adapted to be swung on its pivot into and out of engagement with the lugs 4^a on the top section of the casing.

The lens and the reflector are loosely mounted in transversely-disposed grooves 6 and 7, respectively, in the bottom section A of the casing, and the top section is provided with co-operating grooves 6^a and 7^a that receive said lens and reflector when the top section of the casing is moved into its closed position. The lamp B is mounted in a lamp socket 8 that is seated in a semi-circular-shaped support 9 that extends transversely of the bottom member A of the casing adjacent the rear end of same, said lamp socket being retained in position preferably by a clamping member 10 pivotally connected by a hinge 11 to the transversely-disposed lamp socket support and provided at its free end with an elongated slot 12 for receiving an upwardly-projecting, screw-threaded stud 13 on which a wing nut 14 is adapted to be mounted after the clamp 10 has been swung downwardly into engagement with the socket, as shown in full lines

in Figure 3. When it is desired to adjust or remove the lamp socket, the nut 14 is removed and the clamp 10 is swung upwardly into the position shown in broken lines in Figure 3.

The members or sections of the casing can be formed from any suitable material, but when the headlight is designed for use on an electric storage battery mine locomotive, we prefer to cast said members and provide the meeting edges of same with laterally-projecting flanges 15, so that the top member of the casing will have a firm bearing on the bottom member, the lugs 4 and 4^a and the ribs that form the grooves which receive the lens and the reflector being integrally connected to the members of which they form a part.

In the form of our invention herein illustrated the bottom member A of the casing is provided with integral, laterally-projecting lugs 16 through which fastening devices are passed to connect the headlight to the structure on which it is mounted. The lens C is preferably set inwardly some distance from the extreme front end of the casing, and the top member A′ of the casing is provided with a forwardly-projecting hood 17 that tends to protect the lens. Ventilating openings 18 are formed in the top of the casing and the bottom part of the casing is provided with an air inlet opening 19 so as to cause air to circulate through the casing. If desired, the top member A′ may be provided on its outer side with integral hoods or shields 20 for preventing dirt from blowing into the casing through the ventilating openings 18 therein.

With a headlight of the construction above described it is a very simple matter to inspect or remove the lens, reflector and lamp, owing to the fact that the casing is divided longitudinally into a number of sections that can be easily separated, so as to expose the lens, reflector and lamp, the lens and reflector being loosely mounted in one section of the casing and the lamp socket being retained in position by a hinged clamp secured by a wing nut. While our improved headlight is not limited to use with an electric storage battery mine locomotive, it is particularly adapted for such use, on account of its rugged construction and the ease with which the lens, lamp and reflector can be inspected or removed, it being unnecessary to remove or manipulate a number of small screws or other retaining devices to gain access to the interior of the casing or to remove the lens and reflector. In addition to the desirable features above pointed out, our improved headlight is inexpensive to manufacture, as the casing is so designed that co-operating integral portions on the sections of same hold and clamp the lens and reflector in operative position.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. An electric headlight, comprising an electric lamp, a lens, a reflector, and a longitudinally-divided casing composed of a plurality of members, each of which is provided on its inner side with devices that are adapted to engage said lens and reflector and assist in retaining them in operative position.

2. A headlight provided with a casing composed of two longitudinally-divided sections, means for detachably connecting said sections together, and a lens and a reflector loosely mounted in one section of the casing and adapted to be engaged and clamped in position by the other section of the casing.

3. A headlight provided with a casing composed of a plurality of sections that are separated from each other by joints that extend longitudinally of the casing, one of said sections being movable, a lens and a reflector loosely mounted in one section of the casing and adapted to be engaged and clamped in position by the movable section of the casing, a lamp socket inside of the casing, and a clamping device for retaining said lamp socket in position.

4. A headlight provided with a longitudinally-divided casing composed of a stationary bottom part and a movable top part, means for securing said top part in its closed position, a lens and a reflector loosely arranged in transversely-disposed grooves in said bottom and top parts, a lamp socket support in said bottom part, and a movable clamping device that co-operates with said support.

5. A headlight provided with a cylindrical-shaped casing composed of two horizontally-divided sections hinged together, a lens and a reflector positioned between said sections and held in position by integral devices on same, a lamp socket support on one of said sections, a hinged clamp co-operating with said support, and a securing means for said clamp.

6. A headlight provided with a cylindrical-shaped casing composed of two horizontally-divided sections, a lens and a reflector mounted loosely in the bottom section of the casing, a lamp socket removably mounted in the bottom section of the casing, and a hinged securing device connected to one section of the casing and adapted to be swung into engagement with the other section when the casing is closed.

7. A headlight provided with a cylindrical-shaped casing composed of two horizontally-divided sections provided at their meeting edges with flanges, a hinged connection between said sections that permits one section to be swung into a position to expose the interior of the casing, means for

securing said sections together, a lens and a reflector arranged inside of said casing in co-operating grooves in the sections of same, a lamp socket in the casing, and a clamp for holding said lamp socket in position.

8. An electric headlight provided with a casing composed of two semi-cylindrical-shaped cast members connected together and provided on their inner sides with integral ribs that form grooves which extend circumferentially around the interior of the casing, a lens and a reflector removably mounted in said grooves, a semi-circular-shaped lamp socket support on one section of the casing, a hinged clamp that co-operates with said support, and a retaining device for said clamp.

9. A headlight provided with a casing composed of two semi-cylindrical-shaped cast members provided at their meeting edges with laterally-projecting flanges, hinges that secure said members together at one side of the casing, a hinged retaining device arranged at the other side of the casing for detachably connecting said members together, a lens, a reflector and an electric lamp arranged inside of the casing, integral portions on the inner side of said members that retain said lens and reflector in position, a movable clamp for securing the socket which carries the lamp, ventilating openings in said casing, and hoods on the exterior of the casing arranged in proximity to said ventilating openings.

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