J. M. AUSTEN & B. J. LEE.

ELECTRIC LIGHT.

APPLICATION FILED NOV. 4, 1915.

1,194,929. Patented Aug. 15, 1916.

Fig. 1.

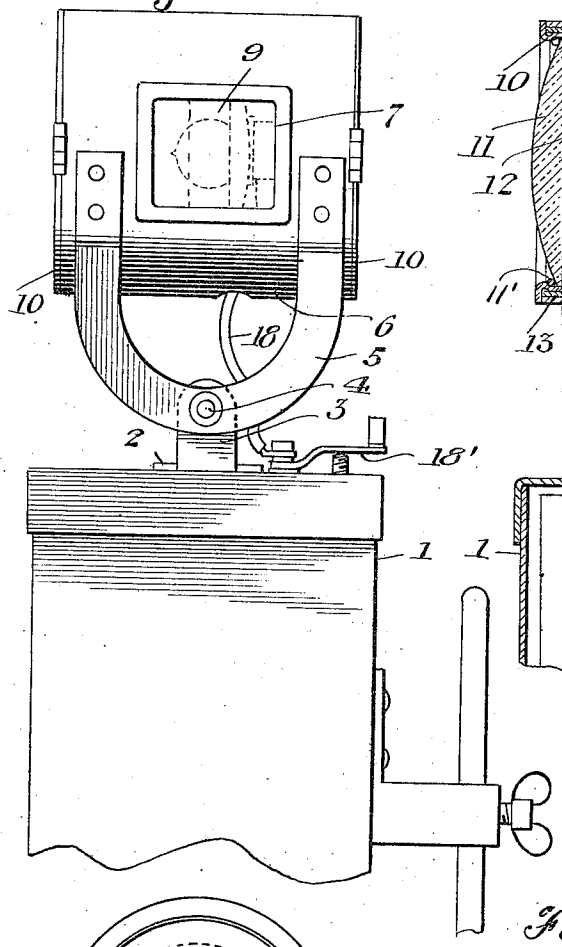
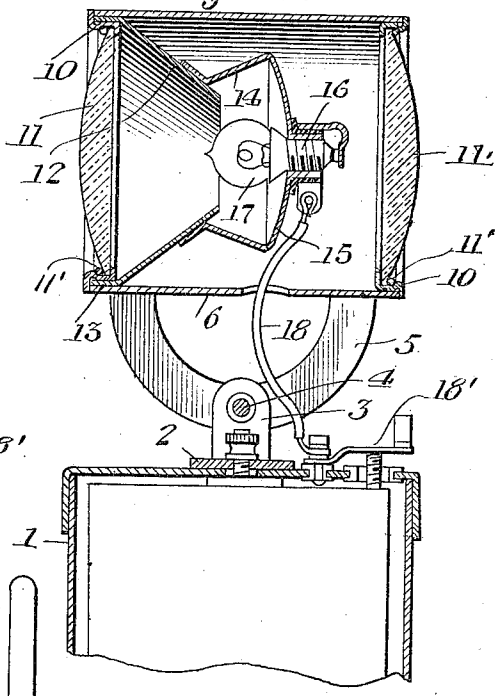


Fig. 2.



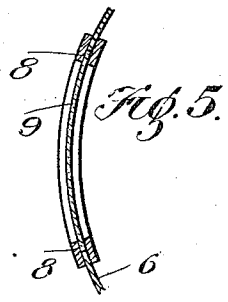
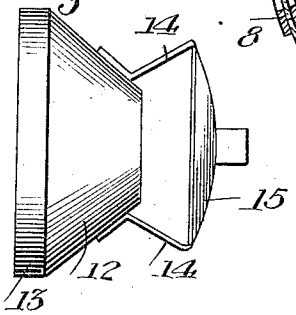


Fig. 5.

Fig. 3.



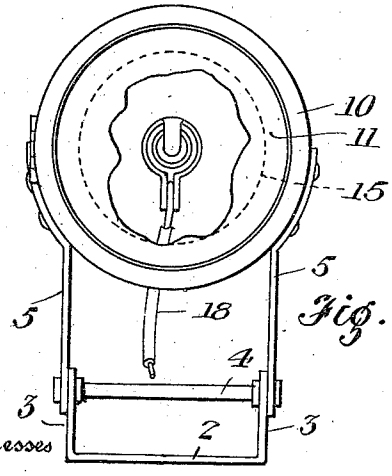


Fig. 4.

Witnesses

F. Windridge

Edwin Evans

Inventors

John M. Austen

B. J. Lee

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JOHN M. AUSTEN AND BILLIE J. LEE, OF SACRAMENTO, CALIFORNIA.

ELECTRIC LIGHT.

1,194,929. Specification of Letters Patent. Patented Aug. 15, 1916.

Application filed November 4, 1915. Serial No. 59,657.

To all whom it may concern:

Be it known that we, JOHN M. AUSTEN and BILLIE J. LEE, citizens of the United States, residing at Sacramento, in the county of Sacramento and State of California, have invented new and useful Improvements in Electric Lights, of which the following is a specification.

This invention relates to lamps for vehicles and has particular application to an electric lamp.

The primary object of this invention is to provide a lamp having a single lighting medium and so constructed as to cause the rays emanating therefrom to be projected in three different directions, namely, the front, rear and side of the lamp.

Another object of this invention is to provide a lamp that may be attached to a dry cell battery casing, the casing being secured to any sort of a vehicle.

Another object of the invention is to provide a device of this character which is durable and efficient and which is so constructed as to facilitate the cleaning of the same and the manufacturing thereof at a minimum cost.

With the above and other objects in view, the invention consists in the features of construction, combination, and arrangement of parts hereinafter described and claimed, reference being had to the accompanying drawings, in which:

Figure 1 is a side elevation of the device showing it attached to any suitable part of a vehicle. Fig. 2 is the vertical section of Fig. 1. Fig. 3 is a detailed view of the reflectors showing the same detached from the casing of the lamp. Fig. 4 is a rear end elevation of Fig. 1. Fig. 5 is a sectional view through the side glass.

Referring to the drawings in detail, 1 designates a casing of a dry battery to which is secured to the top thereof by means of the binding post of the battery, a plate 2 which has the opposite extremities thereof bent upwardly at right angles to provide spaced parallel ears 3. Extending transversely of the ears 3 are terminals of a shaft 4 upon which are pivotally mounted brackets 5—5. The brackets 5—5 are substantially U-shaped and are pivotally mounted upon the shaft 4 at a point intermediate the horizontal portion thereof. These brackets 5—5 extend upwardly in spaced parallel relation and have the upper extremities thereof rigidly connected to the improved form of lamp casing 6. The casing 6 is formed of any suitable material such as metal or the like and is preferably cylindrical, one side wall of the casing being provided with a rectangular opening 7, the walls of said opening being formed with slots 8 to receive a plate of glass 9 or any transparent material. Although we have shown the glass permanently secured within the slots we wish it to be understood that suitable means may be provided for permitting the glass to be removed in case the same is broken and replaced and locked within the slots against accidental displacement thereof.

Mounted within the opposite ends of the casing 6 are annular rings 10, each of which is formed with an annular flange on the outer face thereof and which receive the usual magnifying lenses 11—11. Mounted within each of the annular rings are clamping rings 11′ which are adapted to engage the outer walls of each of the lenses to securely retain the same within the casing. One of the rings 10 is provided with a plain or white lens which constitutes the front end while the rear door thereof is provided with a red lens, it being understood that the casing is disposed in parallel relation to the vehicle to cause the red lens to be disposed toward the rear of the vehicle while the plain lens is to be disposed in the opposite direction.

Mounted within the casing 6 is the improved form of reflector which comprises a frusto-conical member 12 while the larger end of the frustum is provided with an annular flange 13 which is of such a diameter as to snugly fit the inner casing and securely retains the reflector in its proper position, it being understood that the reflector is disposed within the casing so as to cause the smaller end thereof to extend toward the rear end of the casing. Mounted upon the outer wall of the frustum 12 adjacent the smaller end thereof are series of rearwardly extending brackets 14 which are arranged in spaced relation to each other and which rigidly support a disk reflector 15. It will be seen from this construction that we have provided a pair of reflectors namely, the conical and disk reflectors which are integrally formed so as to permit the insertion and removal of the same from the casing for cleaning or other purposes. This reflector 15 is disposed in spaced relation to the smaller end of the

frustum and is preferably of concave curvature for purposes hereinafter described. This disk 15 is provided with an opening arranged concentrically thereof and in which is rigidly mounted a lamp socket 16, the open end of the socket being disposed to the forward side of the disk and the rear end of the socket extends rearwardly to the opposite side of the disk and abuts a yieldable contact 18ª. The inner wall of the socket 16 is threaded to receive an incandescent light 17. The light being provided with the usual electrical conductors 18, one of which extends through one of the binding posts of the battery while the remaining cord or conductor is connected to a single throw switch 18′ of any suitable construction.

From the foregoing construction it will be seen that when the lamp is assembled as shown in Fig. 1, the light will be so disposed as to cause the light rays to pass through the opening formed in the side of the casing and also to the opposite ends of the casing. This is due to the fact that the bulb is disposed opposite the opening 7 and also to the fact that the disk reflector is arranged in spaced relation to the smaller end of the frusto-conical member. It will be noted that the disk reflector is of smaller diameter than the diameter of the casing and is concaved causing the light rays to be reflected to the rear end of the casing and through the red lens, the front side of the disk reflecting the rays to the outer wall of the conical reflector whereby the same is reflected rearwardly as just described. Thus it will be seen that when the lamp is applied to a vehicle the light will be reflected to the front and rear of the lamp and also to the side with the use of one lighting medium. The U-shaped brackets being pivotally mounted upon the shaft 4 to permit the lamp to be adjusted to any desired angle.

Although we have shown and described our invention as applied to the dry battery casing, we wish it to be understood that the lamp may be attached to any suitable support or may be used singly as a unitary structure.

It is thought from the foregoing taken in connection with the accompanying drawings, that the construction and operation of our device may be readily apparent to those skilled in the art without further description and that slight changes in the size, shape, proportion, and minor details of construction may be made without departing from the spirit or scope of the appended claims.

What is claimed is:—

1. A lamp comprising a casing, a lens supported thereby, a frusto-conical reflector having its larger end portion inclosing the edge portion of said lens, a concave convex reflector secured to but spaced from the smaller end of said first reflector and formed centrally with a threaded sleeve, a yieldable contact supported by but insulated from the sleeve and a bulb threaded into the sleeve with its central electrode abutting said contact.

2. A lamp comprising a casing, a lens supported thereby, a frusto-conical reflector having its larger end portion inclosing the edge portion of said lens, a concave convex reflector secured to but spaced from the smaller end of said first reflector, said concave convex reflector being of a greater diameter than the smaller end of said first reflector and formed centrally with a threaded sleeve, a yieldable contact supported by but insulated from the sleeve, a bulb threaded into the sleeve with its central electrode abutting said contact and a side glass mounted in the side of said casing.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN M. AUSTEN.
BILLIE J. LEE.

Witnesses:
B. F. MULLER,
J. B. SCAGGS.

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