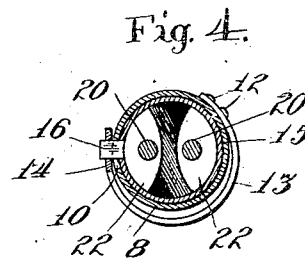
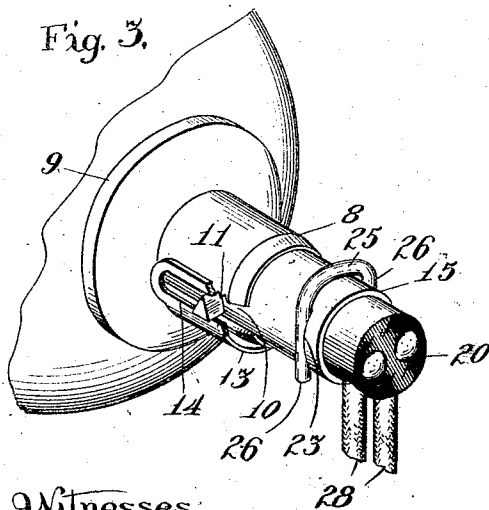
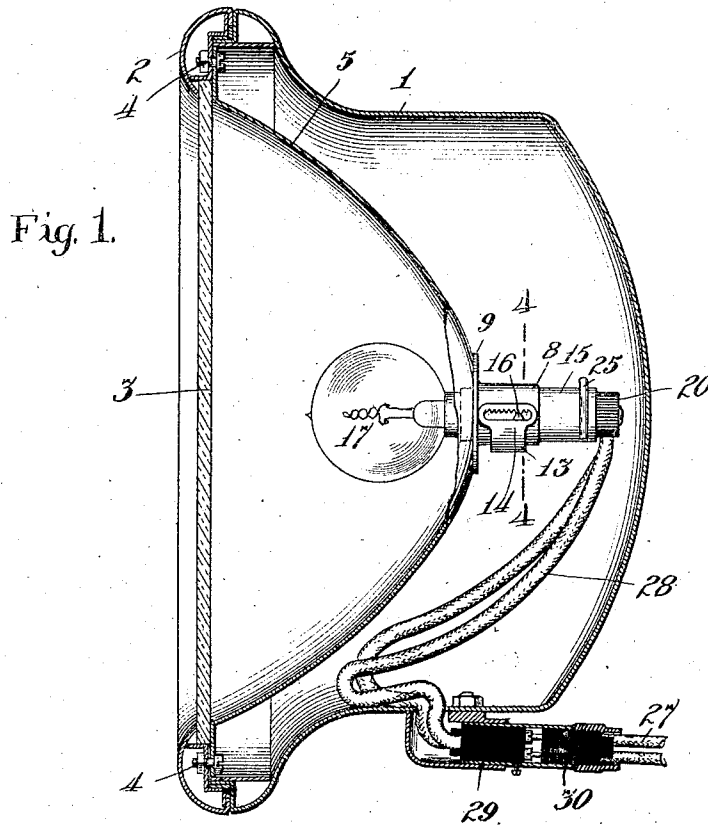


W. E. CHRISTIAN.
LAMP SOCKET.
APPLICATION FILED MAY 27, 1912.

1,054,746.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 1.



Witnesses
Milton Lenoir
Joyce M. Lutz

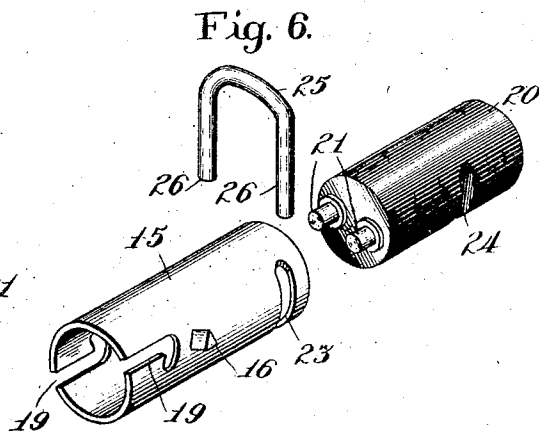
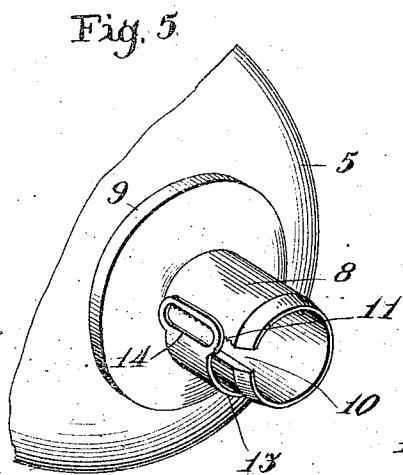
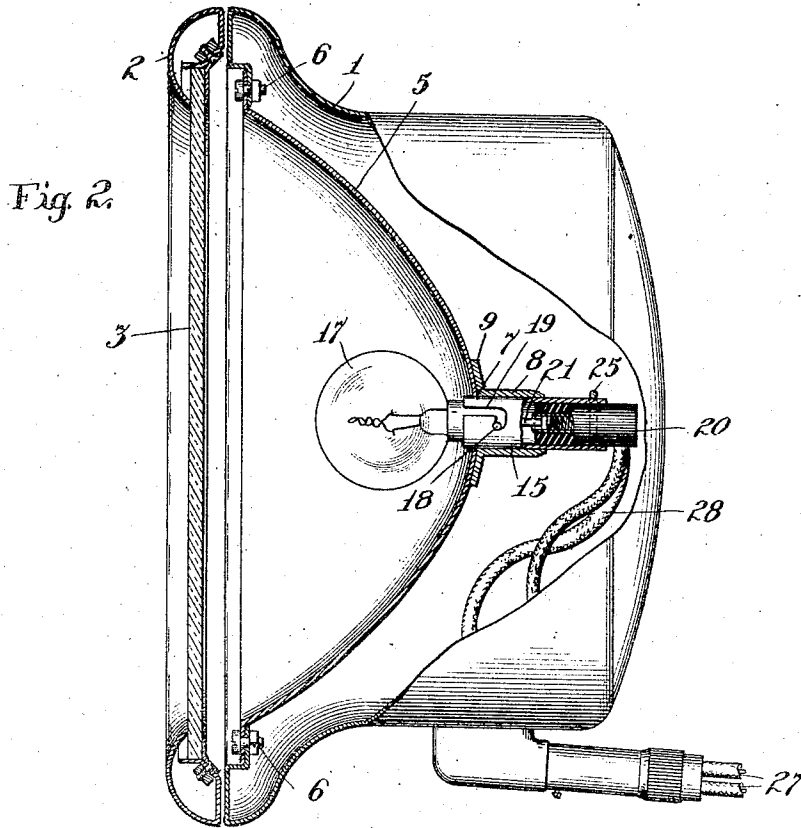
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UNITED STATES PATENT OFFICE.

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LAMP-SOCKET.

1,054,746.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed May 27, 1912. Serial No. 699,903.

To all whom it may concern:

Be it known that I, WALTER E. CHRISTIAN, a citizen of the United States, residing in the city of Kenosha, county of Kenosha, and State of Wisconsin, have invented certain new and useful Improvements in Lamp-Sockets, of which the following is a specification.

This invention relates to improvements in lamp sockets, and is more particularly adapted for use with an electrically lighted head light.

Among the salient objects of the invention are to provide a construction in which the light bulb may be readily adjusted into its true focal position, so as to obtain a parallel beam of light, or which may be shifted bodily out of focal position so as to give more or less divergence of the rays of light; to provide a construction in which various makes and sizes of light bulbs may be used and still adjusted into focal position by reason of the adjustable feature referred to; to provide a construction in which the lamp bulb proper is detachably locked to a bodily adjustable supporting member, which supporting member is automatically locked in any position of adjustment; to provide a construction which is adapted for various types of lamps, as for example, lamps in which the reflector is permanently secured to the lamp body and the lamps in which the reflector is part of the door structure; to provide a construction in which the adjustable supporting member can be operated either from the bulb in front or the terminal plug in the rear; to provide a construction which can be readily assembled or disassembled, and which is economically manufactured and is devoid of delicate or complicated parts; and in general to provide an improved construction of the character referred to.

The invention consists in the matters hereinafter described and more particularly pointed out in the appended claims.

In the drawings—Figure 1 is a vertical sectional view of a headlight equipped with my invention, in which the reflector forms

part of and moves with the door structure; 50 Fig. 2 is a similar sectional view of a headlight but showing the reflector as rigidly connected to the lamp body proper; Fig. 3 is a fragmentary perspective view on an enlarged scale, of the rear end of the reflector 55 equipped with my invention; Fig. 4 is a sectional view taken on lines 4—4 of Fig. 1; Fig. 5 is a view similar to Fig. 3, but with part of the mechanism removed; Fig. 6 is a detailed perspective view of the adjustable 60 shell, terminal plug and spring gripping member.

Referring to the drawings and more particularly to the construction shown in Fig. 1, 1 designates the body of the lamp, 2 the door 65 structure provided with a glass 3. To the door structure by means of the screws 4 is rigidly secured concave reflector 5. The construction shown in Fig. 2 is very similar except that the reflector 5 instead of being 70 secured to the door structure is rigidly fixed by means of screws 6 to the main body of the lamp. Otherwise the structure is the same.

Referring now to the feature of the present invention, the rear end of the reflector 5 in 75 each case is apertured as shown at 7. Registering with this aperture 7 is secured a sleeve-like member 8 provided at its front end with a segmental shaped flange 9, which is soldered or otherwise secured to the rear 80 end of the reflector. For a purpose hereinafter described the sleeve 8 is recessed or cut away as shown at 10. The upper edge of this recess is serrated or provided with a plurality of teeth 11. To the outer side of 85 this sleeve 8 is rigidly secured as shown at 12, a plate spring 13, the free end of which is provided with a slotted guide way 14 registering with the recess 10 of the supporting sleeve 8. Within the sleeve 8 is adjustably 90 seated a shell like socket member 15, at one side of which is secured a triangularly shaped lug 16, which projects through the recess 10 and fits into the slotted guide way 14. When in normal position the lug or 95 locking member 16 engages the teeth 11 and automatically locks the socket member 15 against longitudinal movement. As shown

in Fig. 4 the recess 10 is somewhat wider than the slot 14, so that the lug 16 has limited lateral movement in the recess 10, but not in the guide way 14. The arrangement is such that by slightly turning the socket member 15 against the action of the spring, the latter will be forced backwardly and the lug 16 carried out of engagement with the teeth 11. While the lug is so held out of engagement with the teeth it may be moved longitudinally in the slotted guide way 14 and the socket member obviously adjusted longitudinally within the limit of the slot. When the socket member 15 is adjusted to the proper position it is released and the spring immediately snaps the lug into locking engagement with the teeth.

The light bulb 17 is detachably secured in the front end of the socket 15 by means of bayonet joint connections. For this purpose the stem of the light bulb 17 is provided at either side with pins 18 which have locking engagement with bayonet slots 19, formed in the front end of the socket member 15. The rear end of the socket projects through the supporting sleeve 8 and is adapted to receive the connector or terminal plug 20. The front end of this plug 20 is provided with the usual spring pressed contact devices 21 engaging the contact plates 22 on the stem of the lamp bulb. The plug 20 is detachably locked within the socket or casing 15 in an improved manner, which however, forms no part of the present invention. Describing this locking mechanism the rear end of the socket member 15 is provided with a pair of oppositely disposed slots 23 and the plug 20 is similarly provided with a pair of oppositely disposed grooves 24 which are adapted to register with the slots 23. The parts are locked together by means of a U-shaped spring gripping member 25, the ends 26 of which enter the slots 23 and engage the grooves 24. These arms normally spring inwardly and securely hold the plug within the socket. The terminal plug is electrically connected to supply conductors 27 by means of terminal wires 28. Between the wires 28 and the conductors 27 are interposed insulated plugs 29 and 30 carrying the usual contact devices. These however, form no part of the invention and need not be further described in detail.

It is to be noted that in Fig. 1 the wires 28 are of sufficient length to permit the reflector to swing out when the door is open.

In adjusting the socket member 15 it is only necessary to manually turn either the bulb or the terminal plug until the lug 16 is forced out of engagement with the teeth 11, whereupon the socket member may be moved either forwardly or backwardly until the bulb is in proper focal position.

In the construction shown in Fig. 1 ready

access may not be had to the bulb because of the glass 3. Accordingly the former is adjusted into focal position by opening the door and operating from the connector plug at the rear of the reflector.

In the construction shown in Fig. 2 access may not be had to the terminal plug except by taking out the reflector and accordingly the socket member may be adjusted by merely opening the door and turning the bulb. It will thus be seen that my invention is readily adapted for use with either form of lamp.

In its broader aspects the invention is not limited to the details of construction shown except as specified in the claims.

I claim as my invention:

1. The combination with a lamp body, of a reflector therefor, an annular sleeve secured to the rear end of the reflector and having a longitudinally extending recess serrated at one side, a curved spring member secured to said sleeve and provided at its free end with a slotted guide way adapted to register with the recess, but of less width than the latter, a socket member extending through said sleeve and having a locking lug projecting through said recess into said guide way, a terminal plug connected to the rear end of the socket member and a lamp bulb connected to the front end thereof.

2. The combination with a lamp body, of a reflector therefor, an annular sleeve secured to the rear end of the reflector, a socket member extending through the sleeve, a member secured to the socket member and having detachable locking engagement with the sleeve, a spring for automatically holding said parts in locking engagement, a terminal member connected to one end of the socket and a lamp bulb connected to the other end.

3. The combination with a lamp body, of a reflector therefor, a socket member supported in the rear end of said reflector and adjusted relative to the latter, cooperating locking members supported by the reflector and socket member respectively, and adapted to detachably lock the socket member against longitudinal movement, spring gripping means for automatically locking the socket member in its adjustable position, a terminal member at the rear end of the socket and a lamp bulb connected to the other end.

4. The combination with a lamp body, of a reflector therefor, a socket member having longitudinal adjustment relative to the reflector, cooperating locking teeth carried by the socket member and reflector respectively, spring means for automatically locking said teeth in any position of adjustment and a lamp body connected to the front end of the socket member.

5. The combination with an annular supporting member, of socket member fitting therein and having longitudinal adjustment relative to said first member, cooperating locking means carried by the supporting and socket members respectively for locking the socket member in any position of adjustment, and spring means acting upon said cooperating locking means.

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Witnesses:

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