June 24, 1930. O. C. RITZ WOLLER 1,766,205

LAMP

Original Filed July 13, 1925

Fig. 1

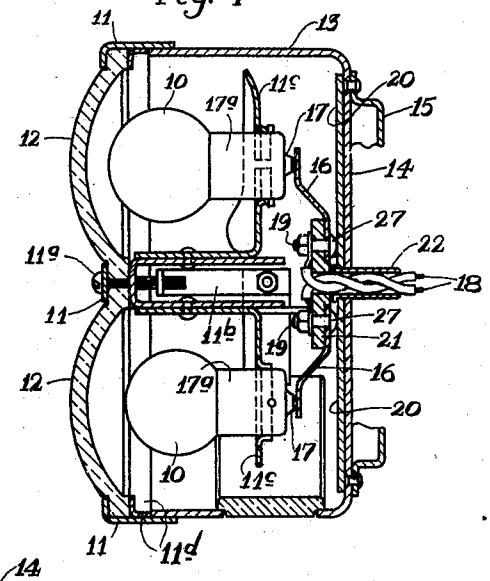


Fig. 3

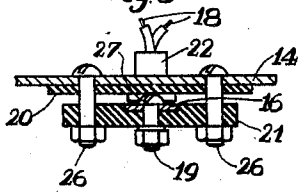


Fig. 4

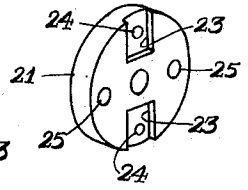
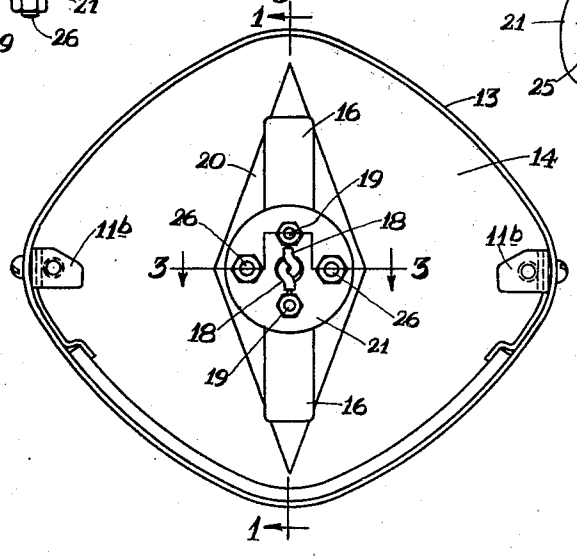


Fig. 2



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Patented June 24, 1930 1,766,205

UNITED STATES PATENT OFFICE

OLIVER C. RITZ WOLLER, OF CHICAGO, ILLINOIS

LAMP

Original application filed July 13, 1925, Serial No. 43,105. Divided and this application filed March 1, 1926. Serial No. 91,359.

This invention relates to lamps and particularly to the mounting of the electrical contact members in devices such as tail lights, stop lights, etc., for automobiles or the like.

This application is a division of my application Serial No. 43,105, filed July 13, 1925, which has resulted in Patent Number 1,682,948, dated September 4, 1928.

The principal objects of the present invention are—

To provide a construction by the use of which a light bulb or bulbs can be replaced easily and quickly without danger of breaking the bulb;

To mount an electrical contact member in such manner that it may serve efficiently to secure a lamp bulb removably in its supporting socket;

To provide a mounting wherein the contact member is held against accidental displacement with respect to its lamp engaging position;

To provide a construction and arrangement wherein the contact member and insulating elements of the device may be readily and easily replaced;

To efficiently and simply insulate the contact member from the casing on which it is mounted; and

To improve devices of this type in sundry details hereinafter pointed out.

The preferred means by which the several objects of the invention are accomplished, are illustrated in the accompanying drawing and hereinafter specifically described. What I believe to be new and desire to secure by Letters Patent is set forth in the appended claim.

Referring to the drawing—

Fig. 1 is a sectional elevation of a lamp embodying the invention, being substantially a section taken on line 1—1 of Fig. 2;

Fig. 2 is a face view of the contact member and associated insulating elements, illustrating the manner of mounting the same in the casing of the device;

Fig. 3 is an enlarged fragmentary sectional plan view taken as indicated by the line 3—3 of Fig. 2; and

Fig. 4 is an enlarged perspective view of one of the insulating elements.

In the illustrative embodiment, the invention is shown as applied to a combination tail and stop light for automobiles and the like, employing a plurality of electric light bulbs 10 suitably mounted within a two-part housing or casing comprising a member 11 provided at its front face with suitably colored glass lenses 12, and a member 13 to the rear wall 14 of which suitable supporting means 15 are connected for mounting the device on the chassis of an automobile or the like. In the construction shown the two casing members 11 and 13 are detachably secured together by means of screws 11^a passing through holes in the central bar of the member 11 and secured by threads in the brackets 11^b carried by the casing member 13. The bulbs 10 are mounted in position by means of brackets 11^c carried by a ring 11^d fitted within the casing member 11.

Suitably mounted on the inner face of the wall 14 of the illustrated device are a plurality of resilient electrical contact members 16 arranged and constructed to engage the contacts 17 of the bulbs 10 in a manner to conduct current thereto and to secure the said bulbs removably within their respective sockets. The contact members 16 may be connected to any suitable source of electrical energy by means of the wires 18 secured to the binding posts 19 of the respective contact members 16, the circuit through the bulbs 10 being completed by the metallic frame-work by which the bulbs are mounted in position, the contacts 17^a of the bulbs being in electrical engagement with such frame-work.

To properly insulate the contact members 16 and their respective circuits from the housing 11, the following illustrative construction and arrangement may be employed.

Adjacent to the inner face of the wall 14 is a sheet 20 of fiber or other suitable insulating material, in front of which there

is a block or disk 21 of suitable insulating material on the rear face of which the contact members 16 are mounted, the wires 18 being insulated from the housing member 13 by a fiber bushing 22 extending through suitable aligned openings in the wall 14 and the sheet 20.

To insure against accidental displacement of the contact members 16 with respect to their bulb engaging positions, the block 21 may be provided with suitably formed depressions or recesses 23 adapted to receive the adjacent ends of the contact members 16, and with apertures 24 positioned for proper alignment with apertures in the contact members to receive the binding posts 19 therethrough. The block 21 may be provided with suitably positioned apertures 25 adapted to receive bolts 26 for securing the said block and contact members rigidly on the wall of the casing member 13. When the contact members 16 are secured in the recesses 23 of the block 21 by the binding posts 19, they are held against oscillatory movement with respect to said block and are thereby retained in bulb engaging position.

The binding posts 19 are provided with heads 27 which are held securely clamped between the sheet 20 and block 21 by the bolts 26, thus holding the contact members against displacement with respect to the block 21 even though the securing nuts become loose on the binding posts, thereby providing additional means for maintaining the contact members against accidental displacement with respect to their bulb engaging positions, the nuts of the binding posts acting primarily as the means for securing the wires 18 to the posts.

It will be apparent, from the foregoing description, that the present invention provides a construction and arrangement wherein the contact member serves to secure a lamp bulb removably in its supporting socket and wherein the said member is held effectually against accidental displacement with respect to its lamp engaging position. The invention also provides improved means for insulating the contact member from the casing in which it is mounted, and contributes to the ease and simplicity with which replacements of the various elements may be made. By the use of my improved construction, the operation of changing a light bulb can be effected quickly and easily without danger of breakage. Inasmuch as the bulbs are supported by the casing member 11 constituting one unit, while the contact arms 16 are supported by the casing member 13 constituting another unit, access can be had to the bulbs for changing them very advantageously upon the removal of the screws 11^a and the separation of the two casing members. Upon replacement of the casing members, the contact arms are automatically brought to operative position with respect to the bulbs.

My invention is not to be limited to the detailed construction and arrangement shown and described, except as the claim is specifically so limited, it being understood that changes may well be made in the construction without departing from the principles of the invention.

I claim:

A lamp comprising in combination a metallic casing member having an opening through its rear wall portion, a sheet of insulating material on the front face of said rear wall portion and having an opening in registry with said first named opening, an insulating bushing extending through said openings and having a flange on its inner end engaging the front face of said sheet of insulating material, a block of insulating material engaging the front face of said bushing and having an opening therethrough in registry with the opening through the bushing, securing devices passing through said sheet of insulating material and said rear wall portion of the casing for holding said parts securely together and serving to hold said bushing in position, a contact arm extending from one side of said block within the casing, a bolt for securing said contact arm on said block and having its head located between said sheet of insulating material and said block, and means on the front end of said bolt for tightening the bolt in position and for securing thereto a lead-in wire extending inwardly through said bushing.

OLIVER C. RITZ WOLLER.