

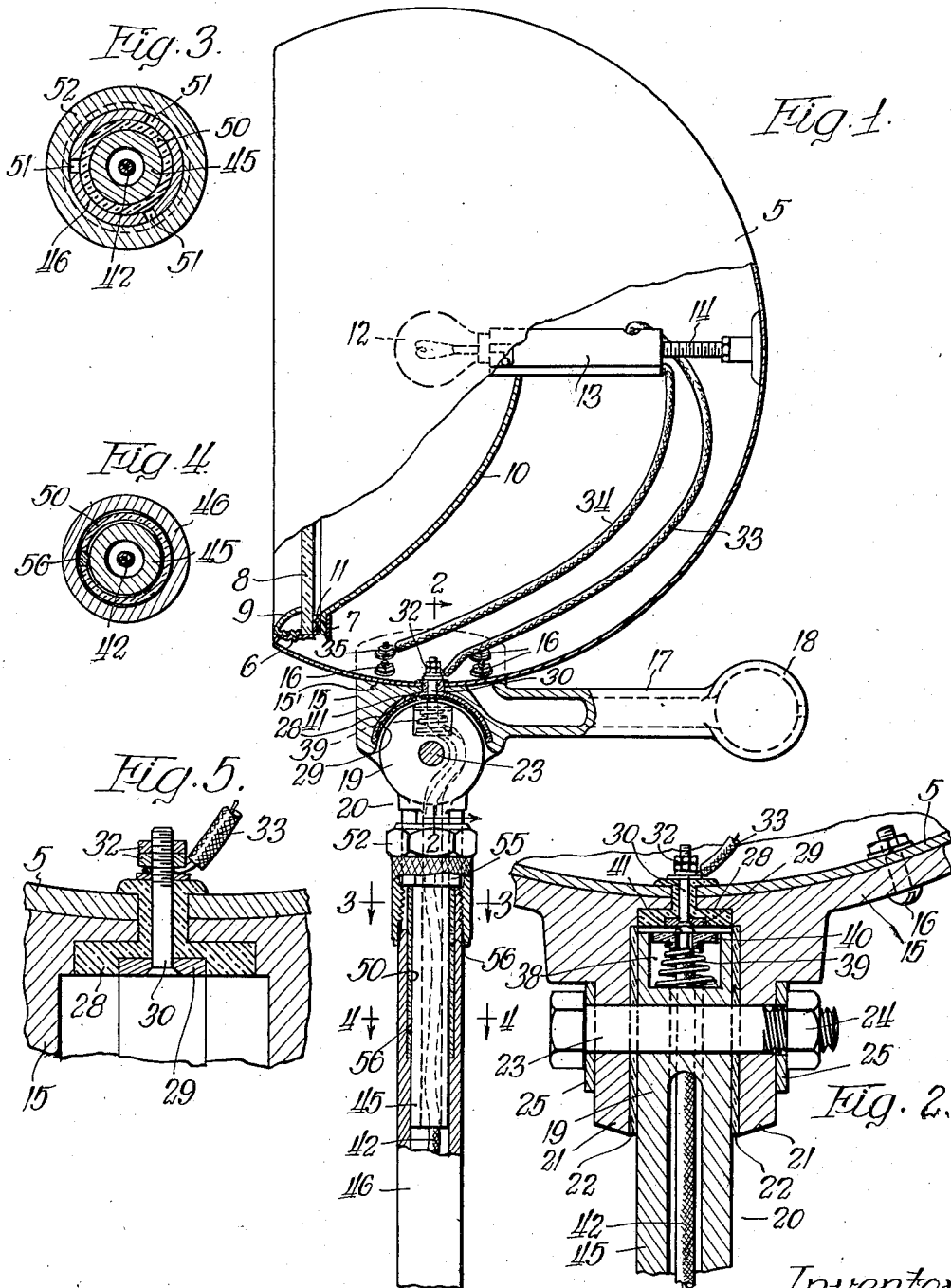
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SPOT LAMP

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SPOT LAMP

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6 Claims. (Cl. 240—61.12)

This invention relates to spot-lamps of the type which are mounted to be turned so that the light may be thrown in any desired direction.

The embodiment of the invention selected for illustration is particularly suited for use on motor vehicles and the like, but it is to be understood that the lamp of the present invention may be employed elsewhere as suitable or desired.

The object of the present invention is to provide a generally improved and simplified lamp that may be economically produced, and a structure of pleasing appearance embodying an improved mounting bracket, improved contact means for connecting the lamp bulb to the wire of the light circuit in all positions of the lamp, an improved mounting and insulating arrangement for such contact means, an improved grounding contact arrangement for grounding one side of the lamp bulb, and improved means for holding the lamp in the different positions into which it is turned.

The invention is illustrated in the accompanying drawing in which:

Figure 1 is a side elevational view of a lamp embodying the present invention, partially broken away and partially in section;

Figure 2 is a fragmentary detail section taken on the line 2—2 of Figure 1;

Figure 3 is a detail section taken on the line 3—3 of Figure 1;

Figure 4 is a detail section taken on the line 4—4 of Figure 1; and

Figure 5 is an enlarged fragmentary detail section showing the contact means for connecting the lamp bulb to the wire of the light circuit in all positions of the lamp, and the improved mounting and insulating arrangement therefor.

The lamp selected for illustration comprises a shell or casing 5 which may be formed of sheet metal or other suitable material. This casing 5 is of generally spherical contour, closed at the back and open at the front, for projection of the light rays therethrough.

The open front of the casing 5 is turned in at 6, and the inner end of this inturned portion 6 is turned radially at 7 to form an annular flange to which the margin of the lens 8 is clamped by a ring 9 which has threaded engagement with the inturned portion 6. The reflector 10 has a marginal flange 11 also clamped to the flange 7 by ring 9. The lamp bulb 12 is supported in the focus of the reflector 10 by a member 13, which member 13 passes through the center of the reflector and is adjustable axially by a

threaded stem 14 for focusing or adjusting the position of the bulb 12.

The member 15 is depressed at 15' to conform with the contour of casing 5 which is secured to member 15 by suitable securing means 16. The member 15 has an integral handle 17 which may be knobbed at its free end at 18, and a curved depression in which fits the cylindrical head 19 of the mounting bracket 20. The opposite sides of the cylindrical head 19 are flat, and the member 15 has flanges 21 depending along these sides and provided with flat inner surfaces, between which and the flat sides of the head 19, members 22 of suitable friction material are interposed. A bolt 23 extends through the flanges 21 and through the axis of head 19 and engages in a nut 24, suitable washers 25 being preferably provided between flanges 21 and the head of the bolt and nut 24. The bolt 23 pivots the lamp for turning movement in a vertical plane, and, with the friction members and washers, provides a smooth movement and for holding the lamp in any position into which it is turned about the axis of bolt 23.

The curved surface of the depression in member 15 for the cylindrical head 19 is faced with suitable insulating material 28, which may be molded in place, and a curved contact member 29 is mounted in the insulating facing material 28 by a screw 30 having its head countersunk in the contact member 29. The screw 30 and contact member 29 are insulated from lamp casing 5 and member 15, and the shank of the screw passes into casing 5 and has attached thereto, as by means of nuts 32, one wire 33 of the light circuit. The other wire 34 of the light circuit is connected to casing 5 at 35 for grounding, as will hereinafter appear.

The top of the head 19 has a socket 36 in which is disposed a conical coiled spring 39. The enlarged base of this spring seats against the bottom of the socket 36, and the smaller upper end of the spring is centered on and abuts an insulating plunger plate 40 which carries a contact 41. The contact 41 is insulated from the head 19 and other adjacent parts, and is pressed yieldingly into engagement with contact member 29. This contact 41 has wiping engagement with contact member 29 for maintaining connection between the wire 42 and the wire 33 of the light circuit in all positions of the lamp. Wire 42 is suitably connected to contact 41 and passes down through the tubular extension 45 of the bracket 20 and through the mounting

sleeve or post 46 and to the source of current for the bulb 12.

The tubular extension 45 of bracket 20 is rotatably mounted in the tubular mounting sleeve or post 46 so that by grasping handle 17 the lamp may be turned in a horizontal plane about the axis of tubular extension 45 to any desired position. To provide smooth movement in this direction and for holding the lamp in any position into which it is turned about the axis of tubular extension 45, a sleeve 50 of suitable friction material is preferably interposed between the tubular extension 45 and the upper end of post 46. In addition, the upper end of post 46 is slotted at a plurality of circumferentially spaced positions as shown at 51, and a nut member 52 is threaded upon the upper end of the post 46. The threaded engagement between nut member 52 and the upper end of post 46 is preferably tapered, as shown, so that by threading the nut member 52 down upon the post 46 the slotted upper end of the post may be contracted tightly about the tubular extension 45 and intervening friction sleeve 50 to provide the desired smooth movement and for holding the lamp in any position into which it is turned about the axis of tubular extension 45. The enlarged upper end 55 of bracket 22 rests upon the upper end of post 46.

In that the desired friction material for the sleeve 50 is usually an insulating material and would insulate tubular extension 45 from post 46, at least partially, I provide for obtaining the desired ground connection by means of contacts 56 secured in the friction sleeve 50 and engaging the inner surface of the post 46 on one side and the outer surface of the tubular extension 45 on the other side. These contacts 56 connect the bracket 20 to post 46, and the bracket 20 being connected through bolt 23 to member 15, which is connected through the lamp casing 5 to ground wire 34 at 35, grounds the wire 34 of the light circuit.

I do not intend to be limited to the precise details shown or described.

I claim:

1. In combination, a lamp casing, a member attached to said casing and having a curved depression, a handle on said member, an insulating element for the curved surface of said depression, a curved contact member mounted in said depression and insulated by said element, a bracket having a cylindrical head fitting in said depression, said member having flanges disposed at opposite sides of said head, a pivot member passing through said flanges and said head for pivoting the casing for turning movement on said head, and a contact carried by said head and yieldingly engageable with said curved contact member throughout the various positions into which said casing is turned with respect to said head.

2. In combination, a lamp casing, a member attached to said casing and having a curved depression, a handle on said member, an insulating element for the curved surface of said depression, a curved contact member mounted in said depression and insulated by said element, a bracket having a cylindrical head fitting in said depression, said member having flanges disposed at opposite sides of said head, a pivot member passing through said flanges and said head for pivoting the casing for turning movement on said head, a contact member carried by said head and yieldingly engageable with said curved contact

member throughout the various positions into which said casing is turned with respect to said head, and friction members between said flanges and the opposite sides of said head.

3. In combination, a lamp casing, a member attached to said casing and having a curved depression, a handle on said member, an insulating element for the curved surface of said depression, a curved contact member mounted in said depression and insulated by said element, a bracket having a cylindrical head fitting in said depression, said member having flanges disposed at opposite sides of said head, a pivot member passing through said flanges and said head for pivoting the casing for turning movement on said head, said head having a socket, an insulating plunger element, a spring disposed in said socket and confined between the bottom of the socket and said plunger element, and a contact carried by said plunger element and yieldingly engaging said curved contact member throughout the various positions into which said casing is turned with respect to said head.

4. In combination, a lamp casing, a member attached to said casing and having a curved depression, a handle on said member, an insulating element for the curved surface of said depression, a curved contact member mounted in said depression and insulated by said element, a bracket having a cylindrical head fitting in said depression, said member having flanges disposed at opposite sides of said head, a pivot member passing through said flanges and said head for pivoting the casing for turning movement on said head, a contact carried by said head and yieldingly engageable with said curved contact member throughout the various positions into which said casing is turned with respect to said head, a tubular post, said bracket having a tubular extension fitting telescopically in said post and rotatable therein, and a sleeve of friction material between said tubular extension and said post.

5. In combination, a lamp casing, a member attached to said casing and having a curved depression, a handle on said member, an insulating element for the curved surface of said depression, a curved contact member mounted in said depression and insulated by said element, a bracket having a cylindrical head fitting in said depression, said member having flanges disposed at opposite sides of said head, a pivot member passing through said flanges and said head for pivoting the casing for turning movement on said head, a contact carried by said head and yieldingly engageable with said curved contact member throughout the various positions into which said casing is turned with respect to said head, a tubular post having a slotted end, a tubular extension on said bracket and fitting telescopically in said post for rotation therein, and a nut member having threaded engagement with the slotted end of said post, said threaded engagement being tapered whereby threading of said nut member on said post contracts the slotted end of the post into gripping engagement with said tubular extension.

6. In combination, a lamp casing, a first bracket member attached to said casing and having a curved depression, a handle on said bracket member, a second bracket member having a cylindrical head fitting in said depression with its curved periphery cooperating with said curved depression, said first bracket member having flanges disposed at oppo-

site sides of said head, a pivot member passing through said flanges and said head for pivoting the casing for turning movement on said head, an insulating element for the curved surface of one of said first and second bracket members, a curved contact mounted on the bracket member provided with said insulating element and insulated by said element, and a contact carried by the other of said first and second bracket members and yieldably engageable with said curved contact element throughout the various positions into which said casing is turned with respect to said head.

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