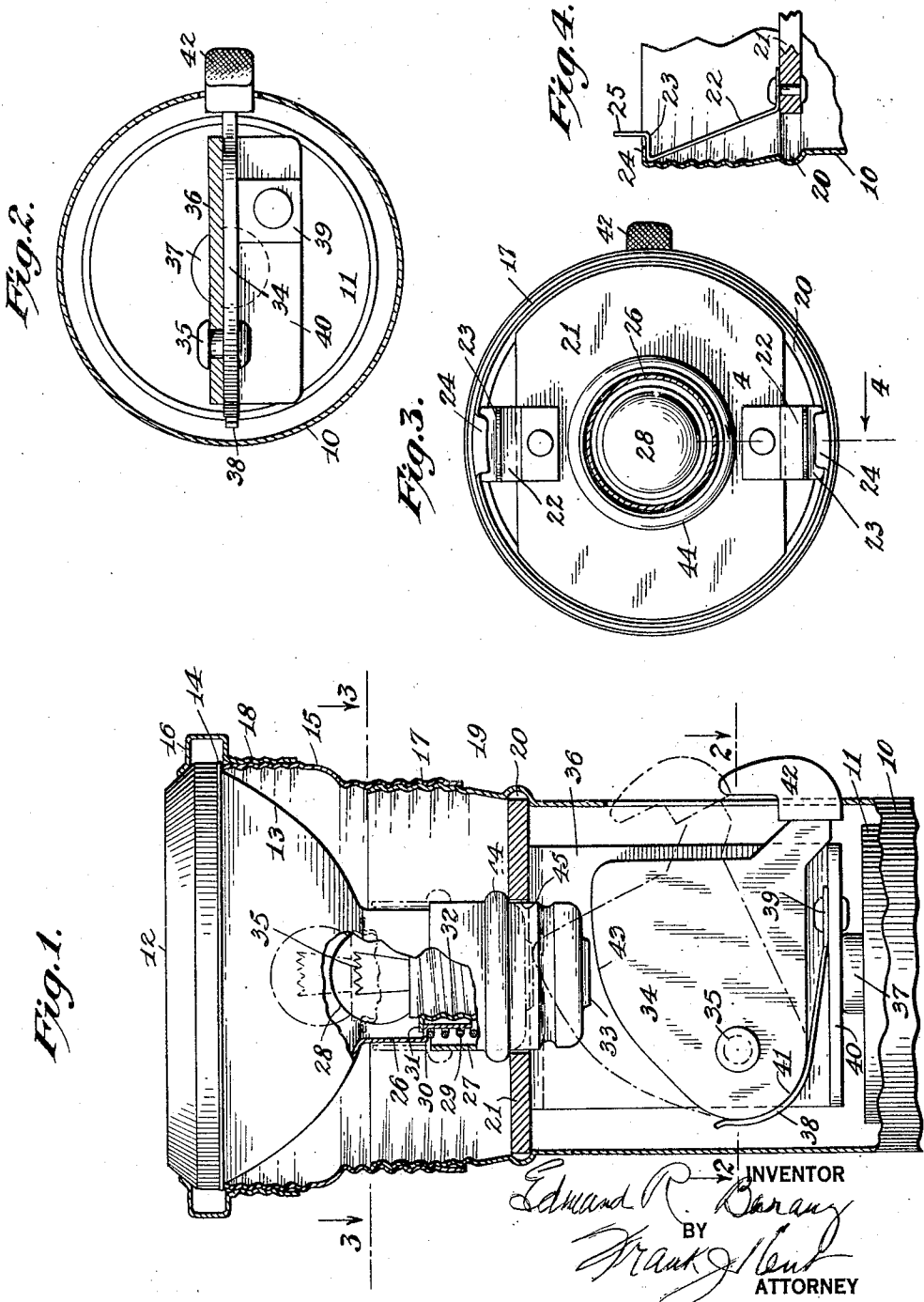


Nov. 23, 1926.

1,608,195

E. R. BARANY
PORTABLE ELECTRIC FLASH LAMP

Filed Jan. 31, 1925



INVENTOR
Edmund R. Barany
BY
Frank H. Bent
ATTORNEY

UNITED STATES PATENT OFFICE.

EDMUND R. BARANY, OF BROOKLYN, NEW YORK, ASSIGNOR TO FRENCH BATTERY COMPANY, OF MADISON, WISCONSIN, A CORPORATION OF WISCONSIN.

PORTABLE ELECTRICAL FLASH LAMP.

Application filed January 31, 1925. Serial No. 5,942.

This invention relates broadly to devices for focusing the lamp elements of portable electrical flash lamps.

A general object of the invention is to provide in a lamp construction of the general type referred to, switch means and focusing means operable by a common actuating member.

Another object of the invention is to provide a switch device which will have combined therewith a focusing construction by which the lamp element may be adjusted into focused position by further movement of the switch actuating member.

The invention includes a cam-faced movable switch element adapted to be brought into engagement with a contact in the lamp base and to be additionally moved, following the making of the contact, to utilize the cam surface for bodily moving the lamp element to adjust its relative position with relation to the reflector and thereby produce the desired focusing adjustment.

Other features of the invention will be hereinafter referred to.

In the drawings, in which a preferred form of the invention has been selected for illustration,

Figure 1 is a view in longitudinal section of a portion of an electrical hand lamp equipped with switching and focusing means embodying the invention.

Figure 2 is a view in transverse section taken on the line 2—2 of Figure 1.

Figure 3 is a view similar to Figure 2 taken on the line 3—3 of Figure 1.

Figure 4 is a sectional detail view taken on the line 4—4 of Figure 3.

Referring to the drawings for a more detailed description of the invention, in Figure 1 an electrical hand lamp is shown which includes a receptacle for a battery cell 11 and equipped at its forward end with a lens 12 mounted at the forward edge of a reflector 13. The reflector 13 is provided with a radially outward extending flange 14 at its outer end which, together with the edge of the lamp, is clamped between the edge of a ring-shaped member 15 and a bezel or annular clamping member 16, both the members 15 and 16 have screw-threaded connections 17 and 18 with their respective supports.

The forward end of the tubular casing member 10 expands to a slight extent at 19

just before the screw-threaded section 17 is reached and at the lower end of the expanded section an annular groove 20 is formed on the inner surface of the wall of the casing 10 to provide a seat for a septum or partition 21 formed of any suitable insulating material such as fiber board. The septum or partition 21 is held in place by means of a pair of bracket or strut members 22 which are riveted at their lower ends to the partition member 21 and are formed with shoulders 23 near their upper ends which are adapted to engage beneath inwardly turned lugs or flanges 24 formed at the upper extremity of the casing 10. In order to release the partition 21 from its position in the seat 20 the upwardly projecting ends 25 of the strut members 22 may be pressed toward each other to thereby disengage the shoulders 23 from the locking lugs 24 whereupon the septum may be bodily lifted from its position in the end of the casing.

The central portion of the reflector 13 is provided with a rearwardly extending tubular portion 26 along which a suitable supporting member 27 for the lamp element 28 is mounted for adjustment longitudinally of the tubular extension 26. It will be seen that the lamp supporting member 27 has a telescopic relation to the tubular extension 26 on the reflector 13 and in order to normally hold the lamp supporting member 27 in its rearward position a spring member 29 is mounted between a shoulder 30 on the tubular extension 26 and the inner surface of the base portion of the supporting member 27. In order to restrict the rearward movement of the lamp at a limiting position, an outwardly extending flange 31 engages the shoulder 30 which serves as a stop member therefor.

The lower end of the lamp supporting member 27 is provided with a boss or projection 33 which is in electrical communication with one of the lamp contacts so that engagement of a switch member 34 with the boss or contact 33 establishes electrical communication between the lamp filament 35 and the battery cell 11. The switch member 34 is pivoted at 35 on a metallic bracket member 36 which extends between the insulating septum 21 and the pole piece 37 of the battery cell 11 making contact with the pole piece as is clearly shown in Figure 1 of the drawing. In a normal or full-line posi-

tion of the switch member shown in Figure 1 of the drawings, the switch member is out of contact with the contact 33 on the lamp supporting member 27 and the switch is normally held in this circuit breaking position by the action of a spring member 38 attached at one end as at 39 to a laterally extending flange 40 formed on the lower edge of the bracket member 36. The spring 38 has a bowed formation to fit a correspondingly curved extremity 41 formed on the switch member 34.

In the operation of the device the switch member 34 is swung about its pivotal point 35 through the movement of a thumb piece 42 formed of suitable insulating material, upwardly as viewed in Figure 1 of the drawings to the dotted line position shown therein. The upward swinging movement of the switch member 34 produces contact between the upper edge 43 of the switch 34 and the contact 33 of the lamp supporting member 27. The effect of this is to close a circuit through the lamp from the outer jacket or pole member of the battery cell 11, the metallic casing 10, the metallic reflector element 13, one of the contacts of the lamp 28, and thence from the other lamp contact to the lamp supporting member 27, the switch element 34, and thence through the bracket 36 to the other contact 37 of the battery cell 11.

In order to provide for the adjustment or movement of the lamp 28 in its housing 26 to bring about a focusing adjustment of the lamp with relation to the reflector 13, the contact-making edge of the switch member 34 is provided with a cam-shaped formation as is indicated in Figure 1 of the drawing. By reason of this arrangement and construction of the switch member 34 continued movement of the thumb piece 42 after circuit closing contact of the switch member 34 with the contact 33 has been made results in the adjustment or movement of the lamp member 28 upwardly in its seat until the desired focusing of the lamp has been obtained. The dotted-line positions in Figure 1 of the drawing show the extreme upward movement of the lamp and the corresponding position of the switch member which can be produced through the common switch and focus adjusting member 42. It

will be noted that in the restricted movement of the parts shown in full lines in Figure 1 of the drawing, the lamp supporting member 27 rests against the insulating septum 21 through the engagement of a ridge 44 on the supporting member with the edge of the septum contiguous to the opening through which the lamp supporting member projects in its lowered position.

What is claimed is:—

1. In an electrical hand lamp, a tubular casing, a reflector mounted in one end of the casing, a rearwardly extending tubular extension on the reflector, a lamp mounted for adjustment longitudinally of the extension, spring means for holding the lamp normally at its rearmost position of adjustment in the extension, a partition member formed of insulating material and having an aperture therein to receive and support the lamp mounting in its rearmost position, a metal bracket member carried by the partition in position to engage the center terminal of the battery cell, a switch element pivotally mounted on the bracket member and having a cam surface adapted to be brought into engagement with a contact in the lamp base to close a circuit through the lamp, and said switch being adapted to be moved to cause the cam surface to adjust the position of the lamp in the extension to thereby adjust the focus thereof.

2. In an electrical hand lamp, a tubular casing, a concave reflector mounted in one end of the casing, a rearwardly tubular extension centrally of the reflector, a lamp reciprocable within the reflector and the tubular extension thereof, a partition within the casing through which the contact end of the lamp extends, a bracket member connected to the partition, a battery cell in the casing having a contact, a switch carried by the bracket and adapted to make or break electrical connection between the battery contact and the lamp contact and also to move the lamp in one direction, and a spring tending to move the lamp in the opposite direction.

3. The combination set forth in claim 2, in which the partition is removably held within the casing by means of a spring-latch.

In testimony whereof I affix my signature.
EDMUND R. BARANY.