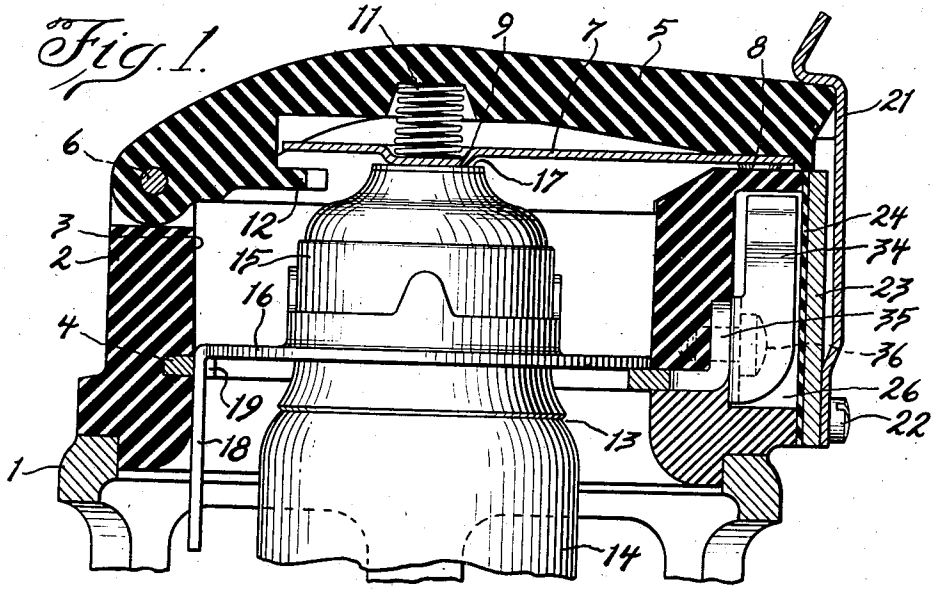
March 25, 1941. B. STECHBART 2,236,357

INCANDESCENT ELECTRIC LAMP SOCKET

Filed Aug. 15, 1939 2 Sheets-Sheet 1

Fig. 1.



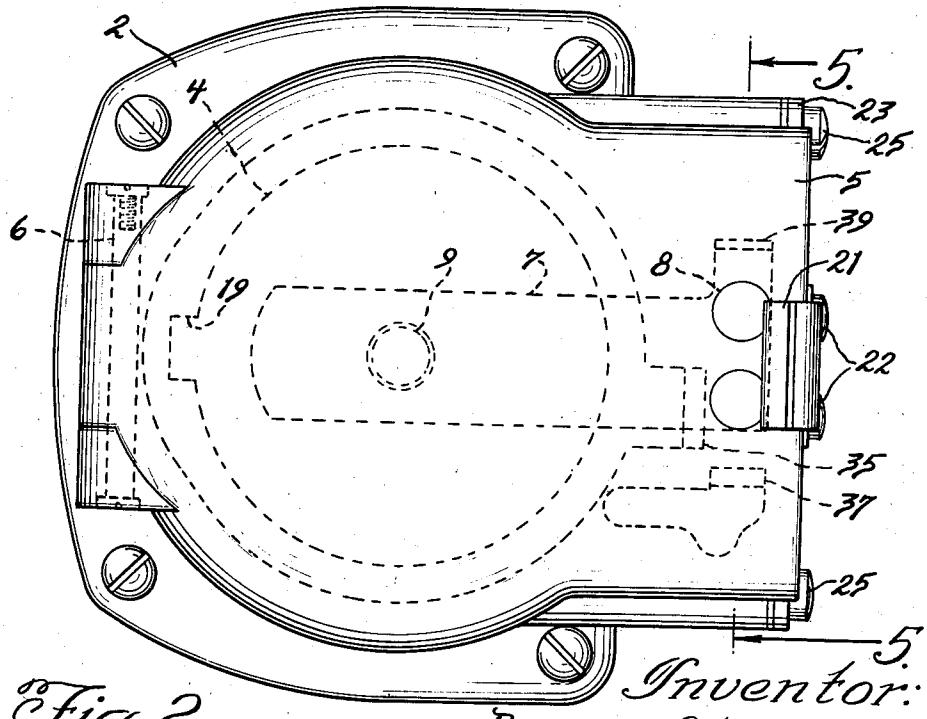


Fig. 2.

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INCANDESCENT ELECTRIC LAMP SOCKET

Filed Aug. 15, 1939 2 Sheets-Sheet 2

Fig. 3.

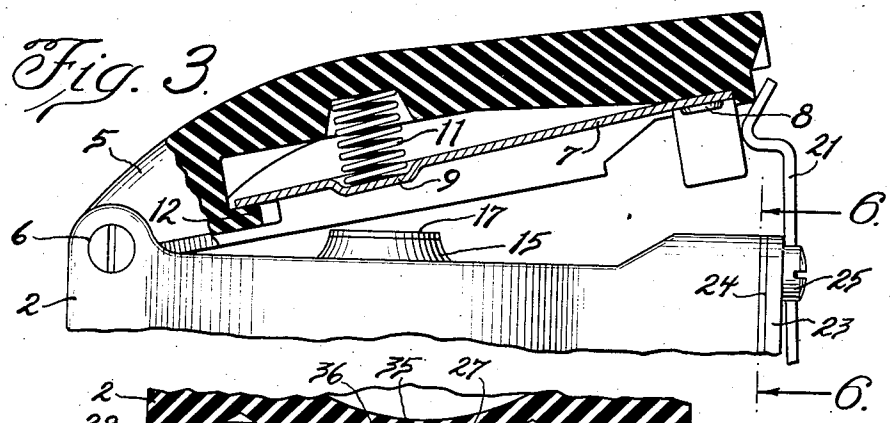


Fig. 4.

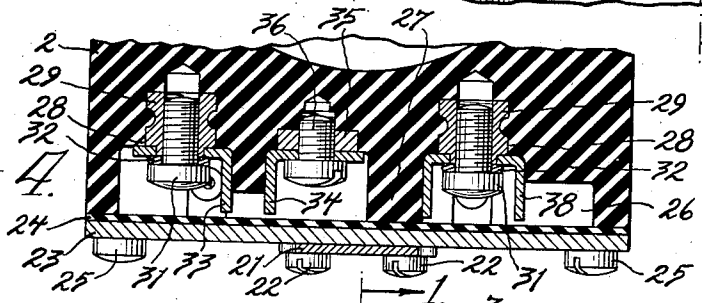


Fig. 5.

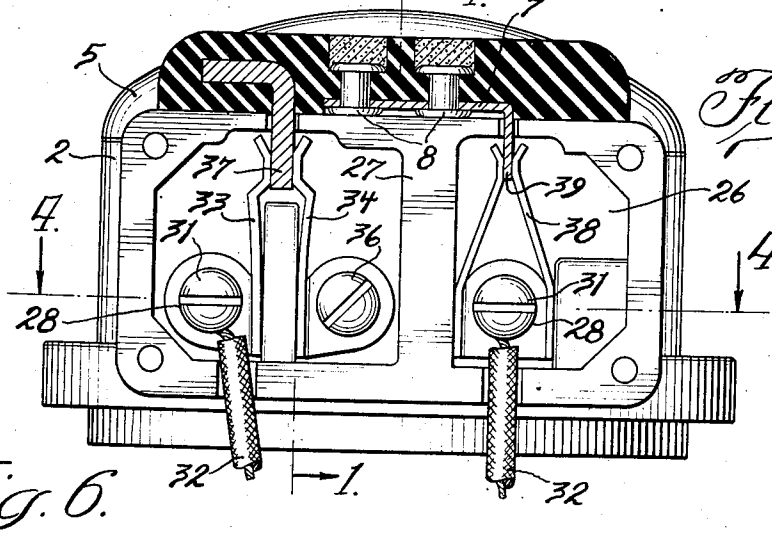
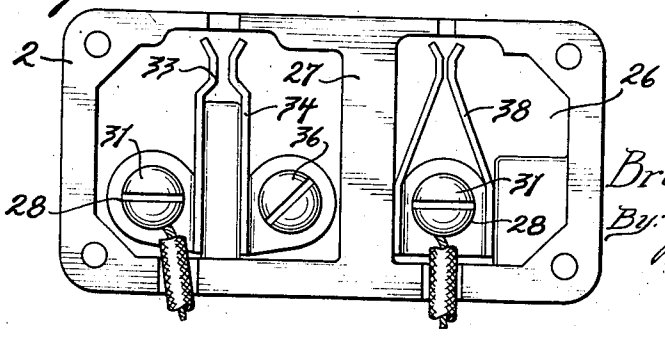


Fig. 6.



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UNITED STATES PATENT OFFICE

2,236,357

INCANDESCENT ELECTRIC LAMP SOCKET

Bruno Stechbart, Chicago, Ill., assignor to The Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Application August 15, 1939, Serial No. 290,264

6 Claims. (Cl. 173—346)

My invention relates to an incandescent electric lamp socket of the type disclosed and claimed in U. S. Patent No. 1,675,554, granted July 3, 1928, on application of Albert S. Howell, for improvement in Incandescent electric lamp socket, lamp, and adapter therefor, and has for a major object to provide an improved socket of such type which provides for increased convenience and safety in the installation and removal of a lamp, the socket of my invention being particularly adapted for the mounting of a lamp in inverted position in a lamp house of a picture projecting machine.

With this object in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said object and certain other objects, hereinafter appearing, are effected all as fully described with reference to the accompanying drawings, and more particularly pointed out in the appended claims.

Figure 1 is a substantially axial plane sectional view on the line 1—1 of Figure 5 of a lamp socket embodying my invention and having an incandescent electric lamp mounted therein;

Figure 2 is a top plan view of the same;

Figure 3 is a side elevation taken in elevation similar to Figure 1, with parts broken away and shown in section and showing parts in different positions than those in which they are shown in Figure 1;

Figure 4 is a partial section substantially on the line 4—4 of Figure 5;

Figure 5 is a sectional view substantially on the line 5—5 of Figure 2; and

Figure 6 is a view taken in elevation similar to Figure 5 with parts removed.

Referring to the drawings, 1 designates a vertically disposed inner enclosure of a lamp house such as is disclosed in my co-pending U. S. patent application, Serial No. 284,890, filed July 17, 1939, for improvement in Ventilated lamp house. Secured at the upper end of the enclosure 1 is a main lamp socket part or body 2 of suitably molded insulating material provided with a vertical bore 3 therethrough and arranged centrally of the lamp house enclosure. See particularly Figure 1. Molded in the body 2 and disposed coaxial with the bore 3 is an annular metal member 4 which projects inwardly from the surface of the bore 3 and forms an upwardly facing annular contact.

A second socket part 5 of suitable molded insulating material, in the nature of a cover for the top of the body 2, is pivotally mounted, as designated at 6, on a horizontal axis at one side of the bore 3 whereby the socket part 5 is mounted on the body for pivotal movement with respect thereto corresponding with the axis of the annular contact member 4. A resilient metal contact member 7 is secured at one end on the under face of the socket part 5 by means of rivets 8, and extends from the rivets toward the pivot mounting 6 across the axis of the annular contact member 4. The member 7 is provided with a downward extrusion 9 forming an end contact arranged centrally of the annular contact member 4 when the socket part 5 is in closed position as shown in Figure 1, and a coiled compression spring 11 is arranged between the socket part 5 and the member 7 at the extrusion 9 and yieldably urges the member 7 downwardly, downward movement of the member 7 being limited by a lug 12 underlying the free end of the member 7.

As so constructed, the socket is adapted to have an incandescent electric lamp 13 installed therein and removed therefrom by passage of the body 14 of the lamp through the bore 3 and that of the annular contact member 4, the base 15 of the lamp being provided with an annular contact 16 axially engageable downwardly on the annular contact member 4 and with an end contact 17 engageable with the end contact 9 when the socket part 5 is in closed position as shown in Figure 1, thus holding the lamp in position with the annular contact member 4 engaging the annular contact 16. The lamp contact 16 is provided with a lug 18 for engagement in a slot 19 in the annular member 4 to angularly position the lamp in the socket.

During installation and removal of the lamp the socket part 5 is of course positioned out of closed position upwardly from the partially open position shown in Figure 3, and the socket part 5 is releasably secured in closed position engaging the socket contacts with the corresponding contacts of the lamp base by means of a spring latch 21 releasably engageable over the top of the socket part 5. See Figures 1 and 3. The latch 21 is secured with the socket body 2 by means of screws 22 securing the latch on a cover plate 23 which, with a plate of insulating material 24, is secured on the side of the socket body 2 by screws 25. See Figures 1 and 4.

The socket body 2 is provided with a circuit terminal enclosure 26 which is closed by the insulating plate 24 and the cover plate 23 and which is provided with a vertical partition 27. This terminal enclosure is disposed at the side of the

bore 3 opposite that on which the pivot 6 of the socket part 5 is disposed. See Figures 4, 5 and 6.

Circuit terminals 28, comprising nuts 29 embedded in the socket body and terminal screws 31 screwthreaded therein are arranged within the terminal enclosure 26 on opposite sides of the partition 27 for the securing of circuit wires 32 thereto. A resilient upwardly extending circuit contact 33 is secured on one of the circuit terminals 28, and a resilient upwardly extending opposing circuit contact 34 is secured on an extension 35 of the annular contact member 4 by a screw 36. These circuit contacts are arranged within the terminal enclosure 26 on one side of the partition 27, and a circuit contact 37 is secured on the socket part 5 to contact between the circuit contacts 33 and 34 when the socket part 5 is in closed or lamp holding position to connect the annular contact member 4 with the corresponding terminal 28.

A resilient upwardly extending double circuit contact 38 is secured on the other of the circuit terminals 28, and a circuit contact 39 is formed integrally with the end contact member 7 to contact the circuit contact 38 when the socket part 5 is in closed position to connect the member 7 with the corresponding terminal 28.

Thus, circuit connections with the socket terminals are made when the socket part 5 is in lamp holding or closed position. However, when the socket part 5 is moved upwardly out of its lamp holding position the circuit contacts 37 and 39 disengage from the corresponding circuit contacts and thus break the circuit to both of the socket contacts with resultant safety in the installation and removal of a lamp, it being observed that the arrangement is both simple and compact.

While I have thus described my invention, I do not wish to be limited to the precise details described as changes may be readily made without departing from the spirit of my invention, but having thus described my invention I claim as new and desire to secure by Letters Patent the following:

1. An incandescent electric lamp socket comprising a bored socket part of insulating material provided with an annular conductive contact adapted to have a lamp installed therein by passage of the body of the lamp therethrough and said contact being axially engageable with a corresponding contact of the lamp base, a second socket part of insulating material pivotally mounted with respect to said first mentioned socket part for movement corresponding with the axis of said annular contact and provided with a conductive end contact movable therewith into and out of position engaging a corresponding contact of the lamp base and holding the lamp with said annular contact engaged with the corresponding contact of the lamp base, latch means releasably securing said second socket part in said position, said first mentioned socket part being provided with a circuit terminal enclosure and a circuit breaker for one of said socket contacts comprising a circuit breaker element carried by said first mentioned socket part and disposed in said terminal enclosure and a second circuit breaker element carried by said second socket part and adapted to project into said terminal enclosure for engagement with said first mentioned circuit breaker element.

2. An incandescent electric lamp socket comprising a bored socket part of insulating material provided with an annular conductive contact adapted to have a lamp installed therein by passage of the body of the lamp therethrough and said contact being axially engageable with a corresponding contact of the lamp base, a second socket part of insulating material pivotally mounted on said first mentioned socket part for movement corresponding with the axis of said annular contact and provided with a conductive end contact movable therewith into and out of position engaging a corresponding contact of the lamp base and holding the lamp with said annular contact engaged with the corresponding contact of the lamp base, latch means releasably securing said second socket part in said position, said first mentioned socket part being provided with a circuit terminal enclosure, and two sets of circuit breakers one set for each of said socket contacts and each set of circuit breakers comprising a circuit breaker element carried by said first mentioned socket part and disposed in said terminal enclosure and another circuit breaker element carried by said second socket part and adapted to project into said terminal enclosure for engagement with said first mentioned circuit breaker element.

3. An incandescent electric lamp socket comprising a bored socket part provided with an annular conductive contact adapted to have a lamp installed therein by passage of the body of the lamp therethrough and said contact being axially engageable with a corresponding contact of the lamp base, a conductive end contact mounted for pivotal movement with respect to said socket part on an axis normal to the axis of and at one side of the bore of said socket part for movement into and out of position engaging a corresponding contact of the lamp base and holding the lamp with said annular contact engaged with the corresponding contact of the lamp base, means releasably securing said end contact in said position, and a circuit breaker for one of said socket contacts comprising a circuit breaker element carried by said first mentioned socket part at the opposite side of said bore and a second circuit breaker element carried by said second socket part in cooperative relation with said first mentioned circuit breaker element.

4. An incandescent electric lamp socket comprising a bored socket part of insulating material provided with an annular contact adapted to have a lamp installed therein by passage of the body of the lamp therethrough and said contact being axially engageable with a corresponding contact of the lamp base, a second socket part of insulating material mounted for pivotal movement on said first mentioned socket part on an axis normal to the axis of and at one side of the bore of said first mentioned socket part and provided with a conductive end contact movable therewith into and out of position engaging a corresponding contact of the lamp base and holding the lamp with said annular contact engaged with the corresponding contact of the lamp base, means releasably securing said second socket part in said position, and two sets of circuit breakers one set for each of said socket contacts and each set comprising a circuit breaker element carried by said first mentioned socket part at the opposite side of said bore and a second circuit breaker element carried by said second socket part in cooperative relation with said first mentioned circuit breaker element.

5. An incandescent electric lamp socket comprising a bored socket part of insulating material provided with an annular conductive contact adapted to have a lamp installed therein by pas-

sage of the body of the lamp therethrough and said contact being axially engageable with a corresponding contact of the lamp base, a second socket part of insulating material mounted for pivotal movement on said first mentioned socket part on an axis normal to the axis of and at one side of the bore of said first mentioned socket part and provided with a conductive end contact movable therewith into and out of position engaging a corresponding contact of the lamp base and holding the lamp with said annular contact engaged with the corresponding contact of the lamp base, means releasably securing said second socket part in said position, said first mentioned socket part being provided with a circuit terminal enclosure at the opposite side of said bore, and a circuit breaker for one of said socket contacts comprising a circuit breaker element carried by said first mentioned socket part and disposed in said terminal enclosure and a second circuit breaker element carried by said second socket part and adapted to project into said terminal enclosure for engagement with said first mentioned circuit breaker element.

6. An incandescent electric lamp socket comprising a bored socket part of insulating material provided with an annular conductive contact adapted to have a lamp installed therein by passage of the body of the lamp therethrough and said contact being axially engageable with a corresponding contact of the lamp base, a second socket part of insulating material mounted for pivotal movement on said first mentioned socket part on an axis normal to the axis of and at one side of the bore of said first mentioned socket part and provided with a conductive end contact movable therewith into and out of position engaging a corresponding contact of the lamp base and holding the lamp with said annular contact engaged with the corresponding contact of the lamp base, means releasably securing said second socket part in said position, said first mentioned socket part being provided with a circuit terminal enclosure at the opposite side of said bore, and two sets of circuit breakers one set for each of said socket parts and each set of circuit breakers comprising a circuit contact carried by said first mentioned socket part and disposed in said terminal enclosure and another circuit contact carried by said second socket part and adapted to project into said terminal enclosure for engagement with said first mentioned circuit contact, and the circuit breaker for said annular contact also comprising a third circuit contact carried by said first mentioned socket part and disposed within said terminal enclosure and engaged by the corresponding contact on said second socket part.

BRUNO STECHBART.