No. 617,464. Patented Jan. 10, 1899.

W. E. HOLMES.

LAMP SOCKET FOR STREET SERVICE.

(Application filed Mar. 14, 1898.)

(No Model.)

Fig. 1

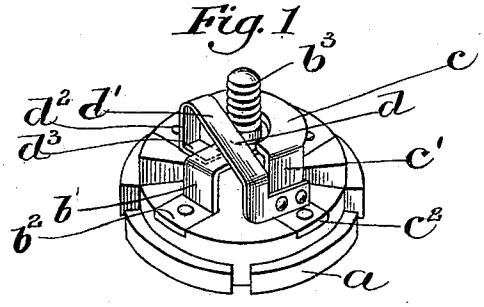


Fig. 2

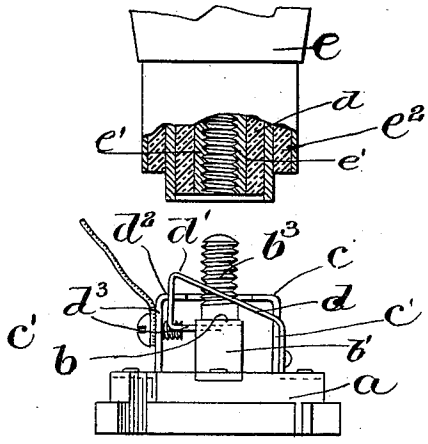


Fig. 3

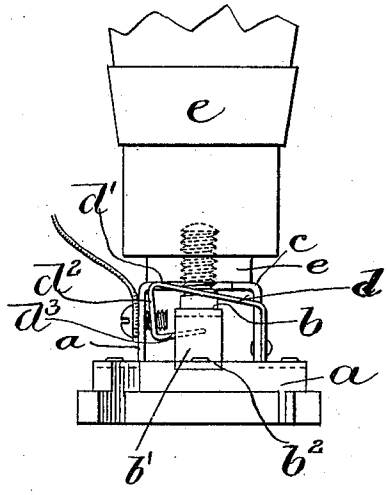
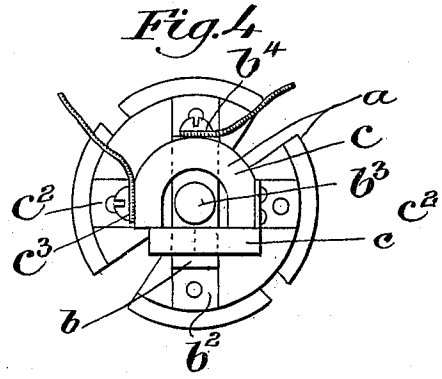


Fig. 4



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UNITED STATES PATENT OFFICE.

WELLES E. HOLMES, OF NEWTON, MASSACHUSETTS.

LAMP-SOCKET FOR STREET-SERVICE.

SPECIFICATION forming part of Letters Patent No. 617,464, dated January 10, 1899.

Application filed March 14, 1898. Serial No. 673,742. (No model.)

To all whom it may concern:

Be it known that I, WELLES E. HOLMES, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Lamp-Sockets for Street-Service, of which the following is a specification.

This invention has relation to devices for opening and closing electric circuits, and relates more particularly to lamp-sockets for street-service, by means of which the circuit through the line is automatically closed while the lamp is removed and until another is inserted, upon which the circuit through the lamp-filament is immediately closed. Heretofore in sockets of this character a spring has been employed to automatically close the circuit through the line upon the removal of a lamp; but the construction of the switch was such that the spring carried the full current when the lamp was in place, and consequently became annealed by reason of the heat and lost its resiliency, whereby its usefulness was destroyed. This impairment or destruction of the usefulness of the spring has proved to be a great source of trouble and annoyance, because where the lamps were in series the removal of a lamp broke the circuit by reason of the inability of the spring to close it through the main line.

The object of this invention, therefore, is to provide a switch of the character described wherein the spring or main-line circuit-closer will carry substantially no current when a lamp is in place, so that it will not be annealed and lose its power to close the circuit when the lamp is removed.

To this end the invention consists of a switch such as illustrated upon the drawings and now to be described in detail and finally pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part hereof, and to the letters of reference marked thereon, the same reference characters designating the same or similar parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 represents a perspective view of the switch. Fig. 2 represents a front elevation of the same when the lamp is removed. Fig. 3 represents a similar view with the lamp in place. Fig. 4 represents a plan view of the switch with the lamp removed.

Referring to the drawings, which illustrate one embodiment of the invention, a indicates the base, which is formed of porcelain or other non-conducting material, and upon it is secured the metallic contact or cross-bar b, which has end uprights b' and base-flanges b^2. A screw b^3 rises from the center of the cross-bar to enter a socket in the lamp, there being a binding-screw b^4, which connects one terminal of the main-line wire to one of the end standards of the cross-bar.

A bridge or contact c, semicircular in plan view, so as to escape the screw b^3, is arranged above the cross-bar and is provided with end standards c' c', with base-flanges c^2 c^2, secured to the base a. A binding-screw c^3 connects the other terminal of the main-line circuit with the bridge.

The automatic circuit-closer consists of a spring d, having its end offset and secured to one of the end standards of the bridge. The spring projects upwardly beyond the top of the bridge, as at d', and is then bent downwardly, as at d^2, and then inwardly, as at d^3, so as to extend under the cross-bar b. The end d^3 is normally in contact with the under surface of the cross-bar, and the circuit is closed between the cross-bar and the bridge; but when the spring is depressed the end d^3 leaves the cross-bar and the circuit is broken.

The lamp, which is indicated at e, has the internally-threaded socket e' and the ring e^2 insulated therefrom, to both of which the filament is connected.

When the lamp is screwed in place, the ring e^2 engages the spring and depresses it, finally coming in contact with the bridge, so as to close the circuit through the lamp-filament. At this time the main portion of the current passes directly through the bridge to the ring e^2, and consequently the spring carries practically no current, so that it is not exposed to heat.

The screw which enters the threaded socket e' forms a rigid and positive connection between the lamp and the lamp-socket, so that the parts cannot be accidentally detached and so that the contact of the parts in circuit is perfect.

The parts are preferably formed of phos-

phor-bronze, so that the spring, not being heated while the lamp is in place, is not annealed and is always operable when the lamp is removed to automatically close the circuit through the bridge and cross-bar.

Having thus explained the nature of my invention and described a way of constructing and using the same, although without having attempted to set forth all the forms in which it may be embodied or all the modes of its use, I declare that what I claim is—

1. A lamp-socket having means for rigidly and positively engaging a lamp, said socket also having an elastic or resilient circuit-closer operable to close the circuit through the socket when the lamp is removed, said circuit-closer being automatically cut out of circuit when the lamp is in the socket.

2. A lamp-socket having two insulated contacts with which the lamp may be positively and rigidly engaged, and an automatic circuit-closer adapted to close the circuit between the two contacts when the lamp is removed, said circuit-closer being out of the circuit when the lamp is engaged with the contacts.

3. A lamp-socket having two insulated contacts with which the lamp may be positively and rigidly engaged, and a spring-actuated circuit-closer adapted to automatically close the circuit between the two contacts when the lamp is removed, said circuit-closer being out of the circuit when the lamp is engaged with the contacts.

4. A lamp-socket having two rigid contacts of which one is screw-threaded for rigid engagement with a lamp, and a spring circuit-closer connected to one contact and adapted to engage the other contact when not held away therefrom by the lamp, said circuit-closer being out of circuit when disengaged from the last-mentioned contact by the lamp.

5. A lamp-socket having a cross-bar with a screw projecting therefrom, a bridge above said cross-bar, and a spring circuit-closer connected to one of said parts and adapted to normally engage the other part.

6. A lamp-socket having a cross-bar with a screw projecting therefrom, a bridge above said cross-bar, and a spring connected to the bridge and having an end normally engaging the under side of the cross-bar, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

WELLES E. HOLMES.

Witnesses:
A. D. HARRISON,
P. W. PEZZETTI.