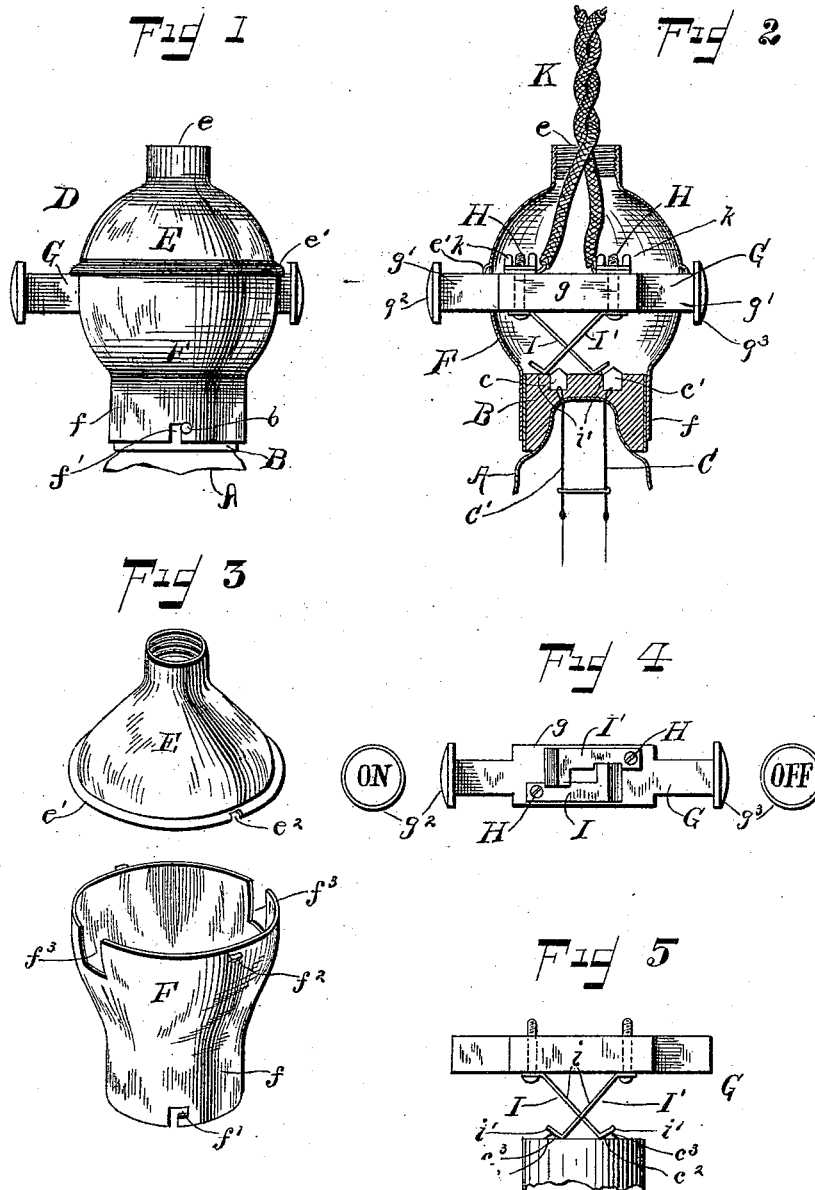


(No Model.)

C. H. LAWTON.  
SOCKET FOR INCANDESCENT LAMPS.

No. 419,617.

Patented Jan. 14, 1890.



WITNESSES  
F. L. Curand  
W. S. Fluke.

INVENTOR  
C. H. Lawton  
per J. S. Zerbe.  
Attorney  
734 L. Deane, Assn.

# UNITED STATES PATENT OFFICE.

CHARLES H. LAWTON, OF NEW YORK, N. Y., ASSIGNOR TO I. S. ELKINS  
AND J. S. ZERBE, BOTH OF SAME PLACE.

## SOCKET FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 419,617, dated January 14, 1890.

Application filed February 28, 1889. Serial No. 301,481. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. LAWTON, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Key-Sockets for Electric Lamps, which improvement is fully set forth in the following specification and accompanying drawings.

The invention relates to improvements in sockets for electric lamps, the object being to construct a cheap, simple, and efficient switch-socket of the kind in which the current can be closed or broken quickly and easily by one hand only; and it consists in the construction and novel combination of parts hereinafter described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

Figure 1 of the accompanying drawings represents a side view of a socket embodying the invention. Fig. 2 represents a central vertical section thereof. Fig. 3 represents a perspective view of the socket-shell with its sections separated. Fig. 4 represents a reversed plan view of the switch-bar. Fig. 5 represents a detail view of the switch-bar with its spring-arms in contact with the lamp-terminals.

Referring to the drawings by letter, A designates the end of an electric-lamp globe surrounded by the insulating cap B, preferably cylindrical, and provided with the interior wires C C', which extend through the base of the said cap and end at the terminal blocks c c', respectively, the tops of which are not covered by the cap, but preferably extend outward therefrom, with their outward-projecting portions beveled on each side to form the respective faces c<sup>2</sup> c<sup>3</sup>, as shown in Figs. 2 and 5. The insulating-cap B is provided at a proper point on its side with the stud b, for a purpose hereinafter explained.

D is the socket-shell, composed of the upper and lower sections EF, respectively. The upper section E is about hemispherical, and is provided with the central outstanding hollow neck e, which, if desired, may be threaded internally to engage a threaded hollow stud of a suitable support. The said section has preferably around its edge a convex bead e', and at suitable points in said edge the lock-

ing-notches e<sup>2</sup> e<sup>3</sup>, as shown. The lower section F has a body also, about hemispherical, from which depends a cylindrical neck f, that fits upon the insulating-cap of the lamp, the stud b of said cap engaging in the usual well-known manner in a bayonet-slot f', extending from the edge of the neck f. The upper edge of the lower section fits under the bead e' of the upper section, and the locking-notches e<sup>2</sup> of the latter engage the rectangular catches f<sup>2</sup> on the lower section to hold the sections together.

f<sup>3</sup> f<sup>3</sup> are opposite rectangular notches of suitable size in the upper edge of the lower section.

G is the switch-bar having a central rectangular enlarged portion g, the similar arms g' g' on each side thereof, and the heads or buttons g<sup>2</sup> g<sup>3</sup>, respectively, on the ends of said arms. The said arms rest in the notches f<sup>3</sup>, and are sufficiently long to permit the switch-bar to be slid to and fro in said notches, the central enlarged portion g preventing said bar from being withdrawn from the socket when the sections are connected, as described.

The head g<sup>2</sup> is preferably marked "On" and the head g<sup>3</sup> "Off," as shown in Fig. 4. However, any other suitable method of identifying them may be used.

H H are similar screws, which engage upward in threaded openings in the enlarged portion g of the switch-bar at a suitable distance apart, and I I' are inclined spring contact-arms secured to the switch-bar by said screws, respectively, and are thus in direct connection with the circuit-wires. The said contact-arms have their inner ends bent outward again at the switch-bar and perforated for the passage of said screws. Their shanks i incline in opposite directions, crossing each other without coming in contact, and their lower ends i' are bent angularly upward and outward. The said ends are at such a distance apart that when the current is established through the lamp the said ends respectively rest upon the facing inclined surfaces c<sup>3</sup> c<sup>2</sup> of the terminal blocks c c', respectively. If when in this position the button g<sup>3</sup> is pushed inward, the end i' of the spring-arm I separates from the terminal block c',

and the end  $i'$  of the arm  $I'$  rides over the block  $c$  to the outer side thereof. The circuit is then broken. When the button  $g^3$  is pushed inward, the spring-arm  $I$  rides to the inner side of the block  $c$ , and the arm  $I$  comes in contact with the terminal-block  $c'$ , again establishing the circuit.

$K$   $K$  are the electric wires, looped at their ends around or otherwise properly connected to or with the threaded ends of the screws  $H$ , projecting out of the switch-bar and bound in place by the thumb-nuts  $k$ , which engage said ends.

It is obvious from the above that the circuit through the lamp can be quickly and easily broken by one hand, that the lamp can be quickly detached from the socket, and that the sections  $E$   $F$  can be quickly separated, permitting the removal of the switch-bar. The socket being divided and the switch standing below the upper section thereof, the circuit-wires  $K$  can be much more easily attached by the screws  $H$  to the switch-bar and with less danger of stretching than with sockets of ordinary construction, as the screws have merely to be passed through the openings on said bar and the loops at the ends of said wires and engaged to the nuts  $k$  above, which nuts may be held by the fingers. All the switching mechanism within the socket, except the terminals or contact-points  $c$   $c'$ , are attached to the switch-bar. Thus the structure of this device is made strong, cheap, and most effective, and the device is capable of the easiest adaptation to use.

Having described my invention, I claim—

1. The combination, with the electric-lamp globe, the insulating-cap on the neck of said globe, and terminal blocks embedded in the base of said cap and uncovered at their inner sides, of the divided socket-shell, the switch-bar sliding in said socket, and arms secured to and standing from said bar at such distances apart (said arms being connected directly to the circuit-wires) that the said bar can be slid in one direction to bring the arms in contact with the corresponding terminal blocks and in the opposite direction to break the circuit, as specified.

2. The combination, with the electric-lamp globe, the insulating-cap, and the terminal blocks  $c$   $c'$ , provided with the inclined uncovered faces  $c^2$   $c^3$ , of the sliding switch-bar and the inclined spring-arms  $I$   $I'$ , attached to said bar and having bent-up free ends  $i'$  to

make contact with the facing inclined surfaces of the blocks  $c$   $c'$ , respectively, substantially as specified.

3. The combination, with the socket-shell composed of the upper and lower sections  $E$   $F$ , respectively, of the switch-bar resting in the notches  $f^3$  of the lower section, provided with the enlarged inner portion  $g$ , the arms  $g'$ , and the opposite heads  $g^2$   $g^3$ , and the inclined spring-arms  $I$   $I'$ , secured to the switch-bar in position to make and break circuit with the terminal blocks, substantially as specified.

4. The combination of the electric-lamp globe, the insulating-cap on the neck thereof provided with a stud  $b'$ , the terminal blocks  $c$   $c'$ , having the inclined faces  $c^2$   $c^3$ , the lower shell-section  $F$ , provided with the neck  $f$ , bayonet-slot  $f'$  to engage the stud  $b$ , catches  $f^2$ , and notches  $f^3$ , the upper shell-section  $E$ , provided with the neck  $e$  and locking-notches  $e^2$ , the switch-bar  $G$ , having the central enlarged portion  $g$ , arms  $g'$ , and buttons or heads  $g^2$   $g^3$ , the inclined spring-arms  $I$   $I'$ , having the bent free ends  $i'$  and the electric wires  $K$ , looped around the screws  $H$ , that secure the arms  $I$   $I'$  to the switch-bar, and bound on said screws by the nuts  $k$ , substantially as specified.

5. A switch for electric lamps, composed of a longitudinally-movable switch-bar carrying switch-contacts co-operating with corresponding contacts on the lamp and attached directly to or suspended from the wires of an electric circuit.

6. A switch for electric lamps, composed of a switch-bar attached to or suspended from the wires, said bar having attached thereto all the switching mechanism of the lamp-socket, in combination with the lamp-terminals and the lamp, substantially as herein set forth.

7. A separable lamp-socket, in combination with a longitudinally-movable switch-bar attached directly to the circuit-wires and removable from the socket, said bar containing all the switching mechanism of the socket, with the lamp-terminals and the lamp, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand, this 27th day of February, 1889, in the presence of two witnesses.

CHARLES H. LAWTON.

Witnesses:

I. S. ELKINS,  
J. S. ZERBE.