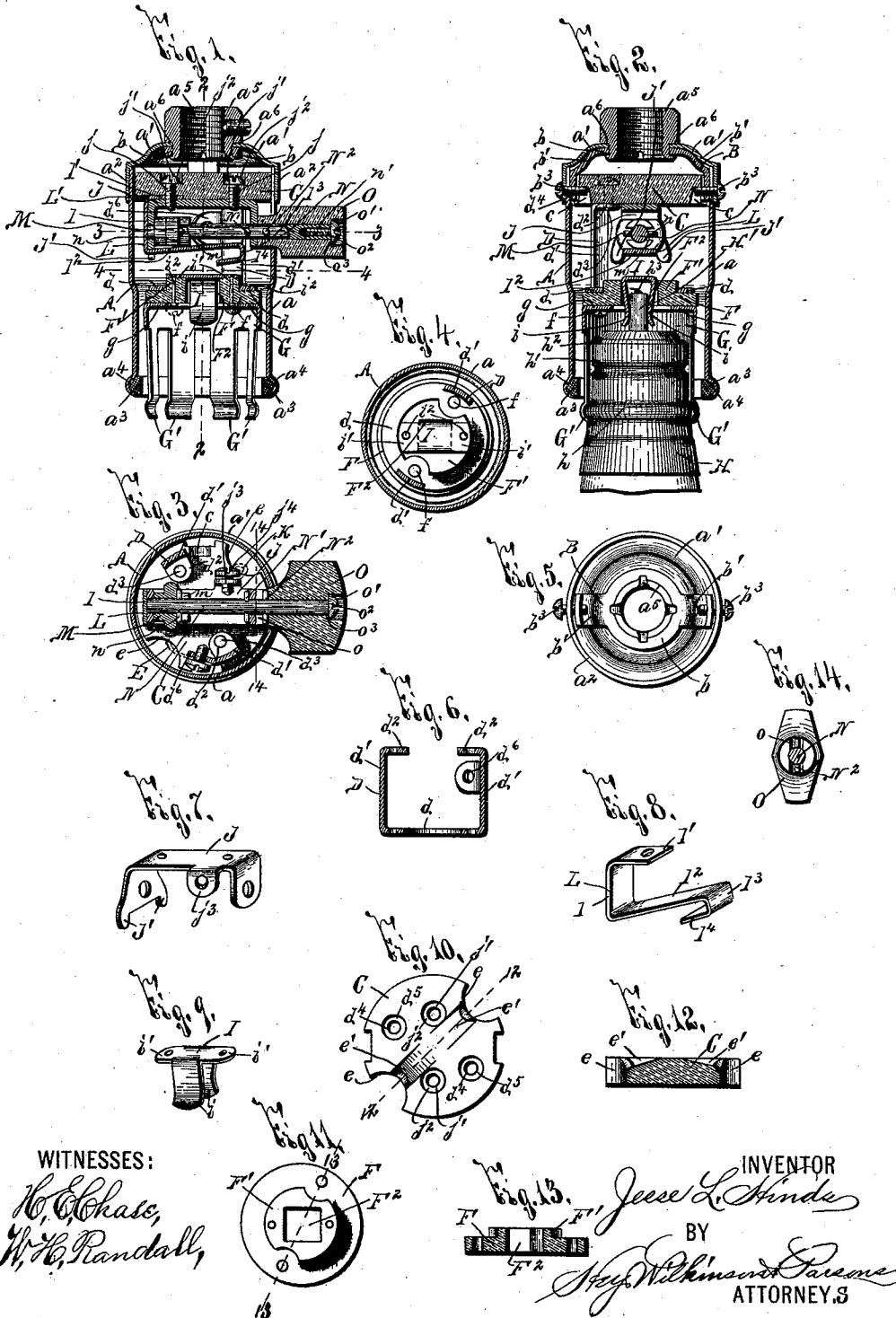


(No Model.)

J. L. HINDS.
LAMP SOCKET.

No. 466,289.

Patented Dec. 29, 1891.



UNITED STATES PATENT OFFICE.

JESSE L. HINDS, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE ELECTRIC ENGINEERING AND SUPPLY COMPANY, OF SAME PLACE.

LAMP-SOCKET.

SPECIFICATION forming part of Letters Patent No. 466,289, dated December 29, 1891.

Application filed July 23, 1891. Serial No. 400,499. (No model.)

To all whom it may concern:

Be it known that I, JESSE L. HINDS, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful
5 Improvements in Lamp-Sockets, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in incandescent-lamp sockets of the same general class as shown in my pending applications, Serial Nos. 400,498 and 400,500, filed conjointly herewith, and has for its object the production of a simple and effective device which
15 is durable, practical, and economical in manufacture.

To this end it consists, essentially, in an outer shell, an insulator base-plate supported at the upper extremity of the shell, a depending bracket secured to the bottom face of the insulator base-plate, a second insulator-plate
20 secured to the bracket for supporting a socket having spring-arms adapted to engage and support the lamp and make contact with one of its collars connected to one of the lamp-terminals, a spring having one extremity connected to the insulator-base and formed with a depending and substantially vertical arm, a lateral yielding arm, a depending lug at the
25 free extremity of the lateral arm, an inwardly-turned engaging end on said lug, a second socket-terminal supported on the second insulator-plate and adapted to make contact with the corresponding lamp-terminal, a cam for
30 forcing the engaging end of the spring-arm into contact with the terminal, and a spindle connected to said cam with a lost motion between the two.

The invention furthermore consists in the means for securing the hand-piece to the spindle and in the detail construction and arrangement of the parts, all as hereinafter more particularly described, and pointed out in the claims.

In describing my invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is a longitudinal vertical sectional
50 view. Fig. 2 is a similar sectional view taken

on line 2 2, Fig. 1, the upper extremity of the lamp being shown as operatively engaged by the socket. Figs. 3 and 4 are respectively horizontal sectional views taken on lines 3 3 and 4 4, Fig. 1. Fig. 5 is an inverted plan of the detached top wall of the socket. Fig. 6
55 is a longitudinal vertical sectional view of the bracket between the insulator base-plate and the second insulator-plate. Figs. 7 and 8 are respectively isometric perspectives of the U-shaped bracket secured to the base-plate for supporting the cam and the spring
60 secured to said bracket for opening the circuit. Fig. 9 is an isometric perspective of the lamp-terminal adapted to be engaged by the free end of the spring shown at Fig. 8. Figs. 10 and 11 are respectively top plan
65 views of the insulator base-plate and the second insulator-plate, and Figs. 12 and 13 are respectively transverse vertical sectional views taken on lines 12 12, Fig. 10, and 13
70 13, Fig. 11; and Fig. 14 is a transverse sectional view taken on line 14 14, Fig. 3.

The outer shell A consists of the sheet-metal peripheral or side wall *a*, the sheet-metal top wall *a'*, having a depending flange
75 *a''*, and the bottom ring *a'''*, supported in an annular groove *a''''* of the side wall *a* and formed of suitable insulating material, as vulcanized fiber.

a⁵ represents a sleeve or nipple secured to the top wall *a'* with its opposite extremities projecting on opposite sides thereof and formed with an annular horizontal shoulder
80 *a⁶*, adapted to rest on the top face of said wall *a'*. The inner wall of the nipple is screw-threaded for receiving a suitable support, not necessary to herein illustrate or describe, and surrounding its inner end, which is swaged thereupon, is the hub *b* of a brace B, having
85 oppositely-arranged arms *b'*, formed with depending extremities, disposed, as seen in Fig. 2, on the interior of the upper extremity of the side wall *a* and held in position by means of clamp-screws *b³*, which are passed through
90 openings in the depending flange of the top wall, the upper extremity of the side wall, and the projecting ends of the arms *b'*.

C represents the insulator-base formed in its peripheral wall, as shown in Fig. 2, with
100

recesses *c* adapted to receive the inner ends of the clamp-screws *b*³ for retaining said base-plate in position.

D, as best seen at Figs. 1, 2, 3, 4, and 6, is a depending bracket having a central hub *d* and oppositely-arranged arms *d'* *d'* provided with inwardly-turned feet *d*², adapted to be secured to the under side of the base-plate by clamps *d*³, having one end engaged with said feet and their heads with the depressed shoulder *d*⁴ of sockets *d*⁵ in the top face of said base-plate. Formed upon one of the arms *d'* is the lug *d*⁶, which supports one end of a wire E, adapted to be passed through a peripheral groove *e* in the base-plate C, a groove *e'* in its top face, and the central opening of the sleeve *a*⁵.

F represents the second insulator-plate, formed with an upwardly-projecting hub *F'*, adapted to be passed through the ring *d* and be secured in position by oppositely-arranged clamps *f*.

G represents a socket having an inwardly-turned flange or shoulder *g*, which rests against the under face of the insulator-plate F, and is secured thereto by the clamps *f*, which secure the insulator-plate to the bracket D. Depending from the lower extremity of the socket G are the yielding arms *G'*, adapted to engage a shoulder *h* on the lamp H, as shown at Fig. 2, and to also make contact with the outer ring *h'* of said lamp, connected at *h*² to one of the lamp-terminals. The inner socket-terminal I, Figs. 1, 2, 3, and 9, consists, preferably, of a metallic plate having depending engaging arms *i*, and lateral lugs *i'* *i'*, which are imposed upon the top face of the second insulator-plate F, and are secured thereto by clamps *i*². The depending arms *i* are passed through an opening *F*² in the insulator-plate, and, with the exception of their extreme ends, which are slightly outturned, are inclined toward each other, being adapted to engage a projecting spindle *II'* on the lamp H and make contact with the inner lamp-terminal, connected at *h*³ to said spindle.

J is a U-shaped bracket secured at its base to the insulator-plate by clamps *j*, having their shank engaged with the bracket and their head with the depressed shoulder *j'* of a socket *j*² in the top face of the base C.

*j*³ is an arm projecting laterally and downwardly from the base of the U-shaped bracket J and adapted to receive a retaining-screw *j*⁴ for the return-wire K, which passes through a peripheral groove *e* and slot *e'*, similar to the ones for guiding the wire E, and thence outwardly through the nipple *a*⁵.

L is a spring consisting of a substantially vertical arm *l*, the upper arm *l'*, and the lower yielding spring-arm *l*², having the depending lug *l*³, provided with the inwardly-extending engaging foot *l*⁴. The base of the arm *l*² is interposed between lugs *J'* on one of the arms of the bracket J, and is thereby prevented from lateral movement. The vertically-disposed arm *l* lies on the outside of said arm of

the bracket J, and the upper arm *l'* is mounted in a recess *L'* in the lower face of the insulator-base B, being interposed between said base and the bracket J, and preferably secured in position by one of the screws for securing said bracket to said base-plate.

M is a cam having oppositely-arranged teeth adapted to encounter the base of the spring-arm *l*² and force its engaging face *l*⁴ into contact with the terminal I for opening and closing the electric circuit. The spindle N for rocking the cam is supported at its opposite extremities in the opposite arms of the bracket J, and is provided with the lug or pin *n*, mounted in a slot *m* in the inner face of the cam M, said pin being of less diameter than the width of the slot, in order that the spindle and cam may be connected together with a lost motion.

N' is a shoulder projecting from the spindle and adapted to engage the inner wall of one of the arms of the bracket J for preventing outward movement of the spindle, and N² is a similar pin adapted to engage a recess *o* in the inner end of the hand-piece O, mounted on said spindle. This hand-piece O is preferably formed from porcelain, as the same is a perfect non-conductor of electricity, presents a neat and finished appearance, and is not at all liable to become either burned or charred.

As previously stated in my application of even date herewith, it has been extremely difficult to practically secure a porcelain hand-piece to a spindle, and in said application I have shown one means and in the present one another for so securing the porcelain hand-piece.

o' is a socket in the outer face of the handle, and *o*² a screw having its head mounted upon the depressed shoulder *o*³ of said socket and its shank engaged with a screw-threaded socket *n'* in the spindle N. It will thus be noted that as the screw is turned down to its normal position its head is below the outer face of the hand-piece and cannot possibly be engaged by the hand in operating the switch, and that the pin N² on the spindle, which engages the recess *o* in the hand-piece O, prevents the said hand-piece from rotation on the spindle and causes the spindle to be revolved in either direction.

The operation of my invention will be readily perceived from the foregoing description and upon reference to the drawings, and it will be noted that the outer shell A, bracket D, socket G, terminal I, bracket J, and spring L are all formed of sheet metal and the insulator-plates C and F and the hand-piece O of porcelain.

In my aforesaid applications, Serial Nos. 400,498 and 400,500, I have shown the same construction of spring L herein described, but not specifically claimed, and I have also shown in said applications a somewhat similar construction of cam-rotating spindle and hand-piece, and in the aforesaid application, Serial No. 400,498, I have illustrated and claimed

the same construction of bracket D and second insulating-plate F; but it will be understood that I do not herein claim, except in combination, these parts specifically claimed in the aforesaid applications.

These parts may be cheaply produced and assembled, and when in operative position are strong, durable, and effective.

It is evident that the detail parts of my lamp-socket may be somewhat varied from those shown and described. Hence I do not limit myself to such precise detail construction.

I claim—

1. In combination, an insulator base-plate, a bracket consisting of a ring and oppositely-arranged arms secured to the base-plate, a second insulator-plate supported on the ring of the bracket, a lamp-engaging socket secured to the second insulator-plate, and movable lamp-engaging arms G' on said socket, substantially as and for the purpose described.

2. In combination, an insulator base-plate, a bracket consisting of a ring and oppositely-arranged arms secured to the base-plate, a second insulator-plate supported on the ring of the bracket and formed with a central opening, a terminal I, having depending arms *i* extending through the central opening of the second insulator-plate, a laterally-extending arm *i'*, secured to the top face of said second

insulator-plate, and a lamp-engaging socket secured to the second insulator-plate, substantially as and for the purpose described.

3. In combination, an insulator base-plate, a bracket having one extremity secured to the base, a second insulator-plate secured to the other extremity of the bracket and formed with an opening therethrough, a lamp-engaging socket having one extremity secured to the second insulator-plate, a terminal I, consisting of a plate having projecting arms *i* extending through the opening in the second insulator-plate, a laterally-extending arm *i'*, secured upon the top face of the second insulator-plate, a spring having one end secured to the insulator base-plate, a laterally-extending arm *l*² on the spring, an arm *l*³ on the spring extending outwardly from the arm *l*², and a cam for engaging the arm *l*² and forcing the arm *l*³ into contact with the terminal I, substantially as and for the purpose specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 19th day of June, 1891.

JESSE L. HINDS.

Witnesses:

CLARK H. NORTON,
L. M. BAXTER.