

(No Model.)

E. WESTON.

INCANDESCENT LAMP HOLDER.

No. 316,088.

Patented Apr. 21, 1885.

Fig. 1.

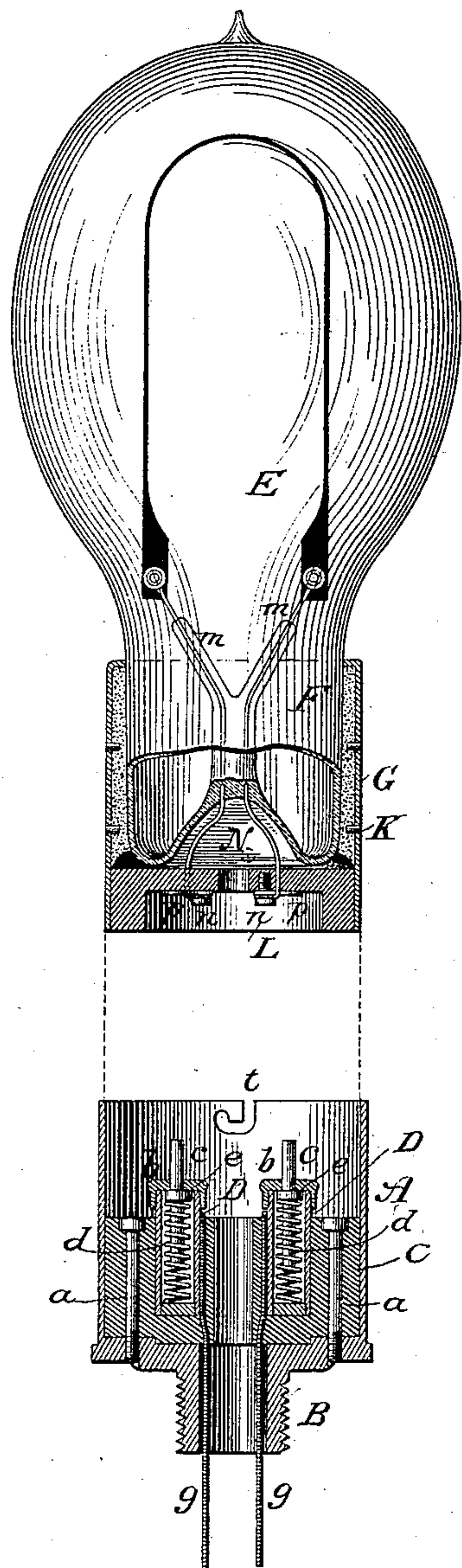


Fig. 2.

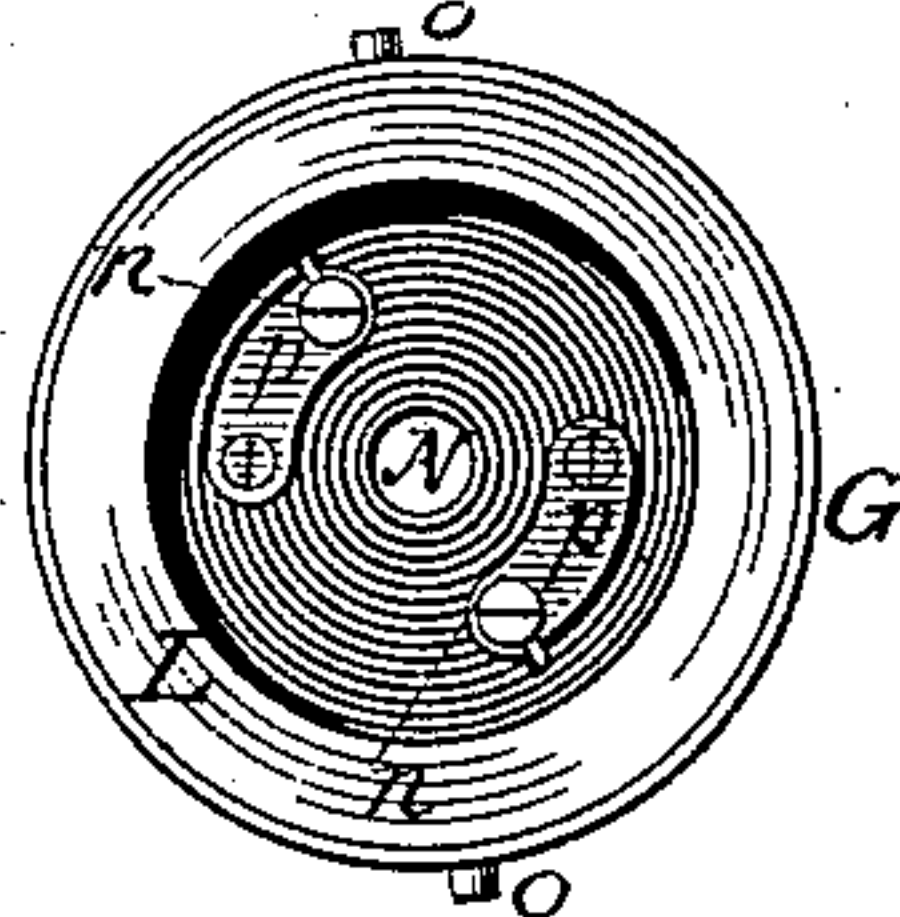
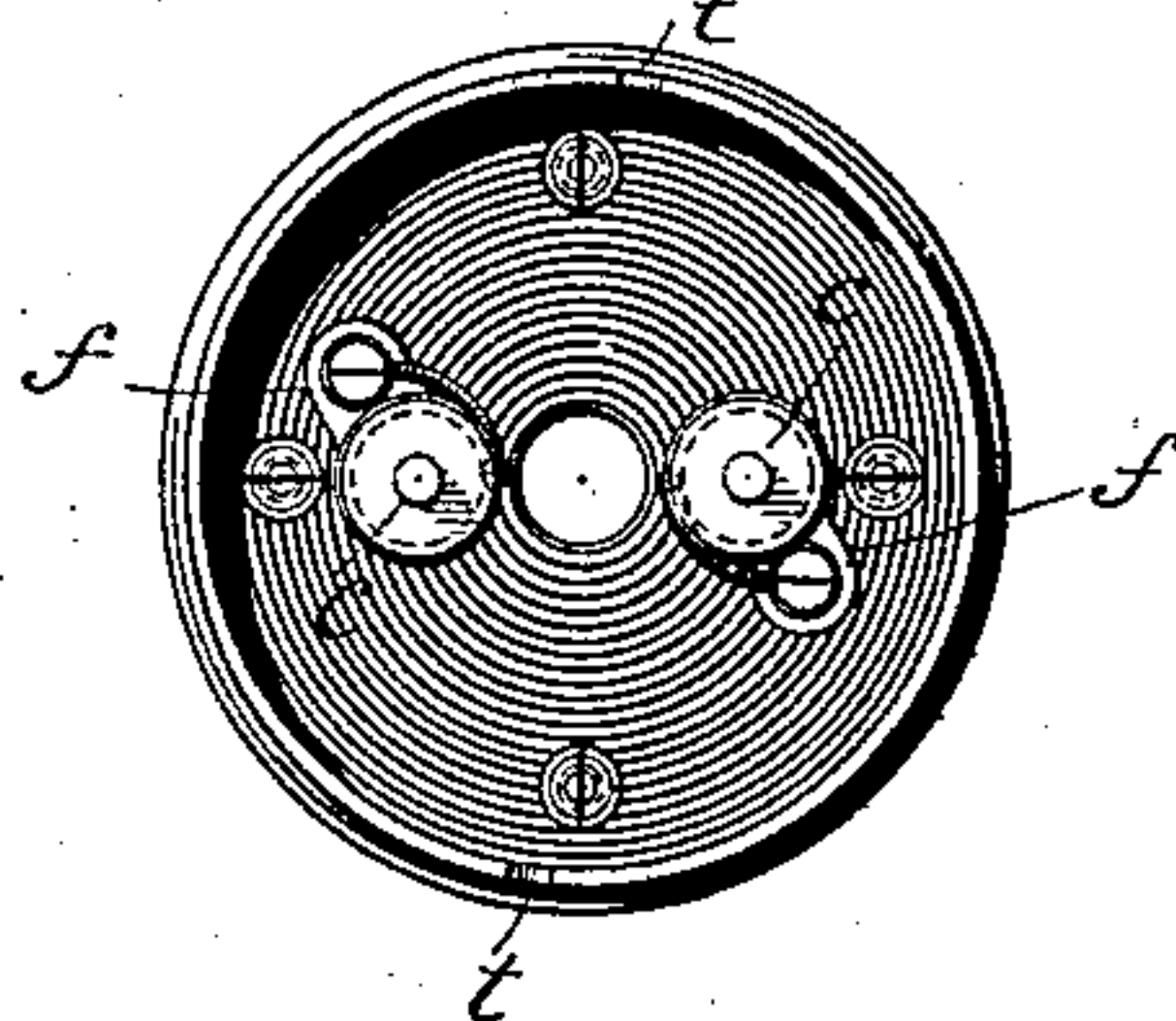


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## INCANDESCENT-LAMP HOLDER.

SPECIFICATION forming part of Letters Patent No. 316,088, dated April 21, 1885.

Application filed February 8, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Incandescent-Lamp Holders, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

The object of my invention is to produce a socket for incandescent lamps which will hold the lamp firmly and securely in place and insure a perfect electrical connection between the conductors in the socket and those of the lamp.

The various forms of socket or holder heretofore used, having been designed more particularly for lamps of very small size, do not answer all requirements when applied to large and heavy lamps, partly on account of the expense which the changes necessary for adapting them to the larger lamps involve, but mainly on account of the difficulty of maintaining both a good mechanical and electrical contact. These objections I have overcome by the form of socket and construction of lamp-base which I have invented, and which are illustrated in the accompanying drawings.

Figure 1 is a vertical central section of the socket or holder and the lamp-base, with the lamp in elevation. Fig. 2 is an end view of the base; Fig. 3, a plan view of the holder.

A is a brass shell or cylinder, from the end of which extends a threaded stem, B, or any other suitable device for attaching the cylinder firmly to a fixed support. In the bottom of the cylinder is inserted a block, C, of insulating material, which is secured by screws, *a*. In this block C are made two holes into which are fitted metal cylinders D D, with tightly-fitting or screw caps *b b*. Each cylinder D contains a pin, *c*, surrounded by a spiral spring, *d*, and provided with collars *e*. The springs *d* force the pins up through perforations in the caps *b b*, the collars *e*, against which the springs press, preventing the pins from being forced out of the cylinders. Lugs *f* extend from the cylinders D, and to these the conductors *g g*, that are run up through the stem B, are connected by screws. The lamp

for use with this holder consists of a globe or receiver, E, with a straight neck, F. In the globe the carbon conductor is mounted on conductors *m*, that are sealed in the base or neck in the usual manner.

To adapt the lamp for use with the holder, the neck F is inserted into a cylinder of brass, G. Plaster-of-paris is then poured into the space between the glass neck and the brass shell. Pins K may be set in the brass shell if so desired, for preventing the plaster packing from turning in the event of its becoming detached from the shell. The amount of plaster introduced should be just sufficient to fill the space between the lamp-neck and the brass shell, and should not be allowed to run over the end of the neck or the base or into the depression usually formed therein, as it is desirable to reserve this space for more easily making the connections. After the introduction of the plaster an insulating-plate, L, suitably perforated, is inserted in the shell G. Through two of the perforations the conducting-wires *m* are passed and connected by screws *n* to metal plates *p*, secured to the plate L. A central perforation, N, larger than the others, is made in plate L to facilitate its withdrawal, or for the insertion of an instrument to aid in passing the wires through the plate.

From the sides of the shell G extend two pins, *o*, as shown in Fig. 2, and in the shell or cylinder A are cut slots *t* for the pins to enter. In addition to an inward and sidewise turn these slots have preferably a short outward turn, *t'*, into which the pins *o* are forced by the spring-actuated contact-pins *c*, which have sufficient play for this purpose, thus insuring that the lamp shall not be accidentally loosened in the holder.

Other means may be employed for securing the lamp and base to the socket, but the ordinary bayonet-catch here shown is preferred from its simplicity.

The plates *p* are so placed and are of such shape that when the lamp is inserted in the cylindrical socket A the pins *c* will come in contact with them and remain so when the lamp is turned to bring the pins *o* into the horizontal portions of the slots *t*.

It is preferable to use a recessed plate, L, in order that the thicker part may come in



contact with the block C when the lamp and socket are brought together.

The construction and arrangement of parts herein described secures a firm connection, both mechanical and electrical, for the lamp.

Though more particularly designed for lamps of larger size than those ordinarily used, it can be used, generally, for small lamps, and insures a good electrical contact between the conductors of the lamp and those of the base in whatever position the lamps may be used.

Having now described my invention, what I claim is—

1. The combination, with an incandescent lamp and base, having contact-plates to which the conductors of the lamp are connected, of a socket, pins *c* in recesses therein, springs for forcing said pins toward the contact-plates, and conductors adapted to connect said pins with the circuit, substantially as set forth.

2. The combination, with an incandescent lamp, a base secured to its neck having a plate of insulating material, of a socket or holder, said base and socket being provided with terminals and spring-actuated contacts, and connected by a bayonet-joint consisting of a pin and a slot having an inward, a sidewise, and an outward turn, substantially as set forth.

3. The combination, with an incandescent lamp and base having contact-plates to which the conductors of the lamp are connected, of a socket having recesses therein, caps *b*, covering the recesses, pins *c*, having stops *e*, situated in the recesses and passing through the caps, springs for forcing the pins toward the contact-plates, and conductors for connecting said pins with the circuit, substantially as set forth.

4. The combination, with an incandescent lamp and base having contact-plates to which the conductors of the lamp are connected, of a socket consisting of a cylindrical shell, a

block of insulating material contained therein, closed metal cylinders connected with the line-wires fixed in the insulating-block, and spring-actuated pins contained in the cylinders and arranged to impinge upon the contact-plates of the base when the lamp is placed in the socket, as set forth.

5. The combination, with an incandescent lamp, a metal cylinder surrounding its neck, a packing of plaster-of-paris between the neck and the cylinder, and a recessed insulating-plate secured in the cylinder and having contact-plates to which the conductors of the lamp are joined, of a socket consisting of a cylindrical shell partly filled by an insulating material and containing spring-actuated contacts.

6. The combination, with a cylinder, a block of insulating material partly filling the same, and spring-actuated contact-pins contained in metal cylinders set in the insulating-block, of an incandescent lamp, a cylinder of metal surrounding the neck of the lamp, a packing of plaster-of-paris between the neck and the cylinder, and a recessed and perforated plate of insulating material secured in the cylinder and provided with contact-plates to which the conductors of the lamp are connected, substantially as described.

7. The combination of an incandescent lamp, a metal shell or cylinder surrounding its neck, and a packing of plaster-of-paris between the neck and the cylinder, the inner surface of the cylinder being provided with pins for retaining and preventing the loosening of the plaster, substantially as set forth.

In testimony whereof I have hereunto set my hand this 6th day of February, 1884.

EDWARD WESTON.

Witnesses:

HENRY A. BECKMEYER,  
JOHN C. YOUNG.