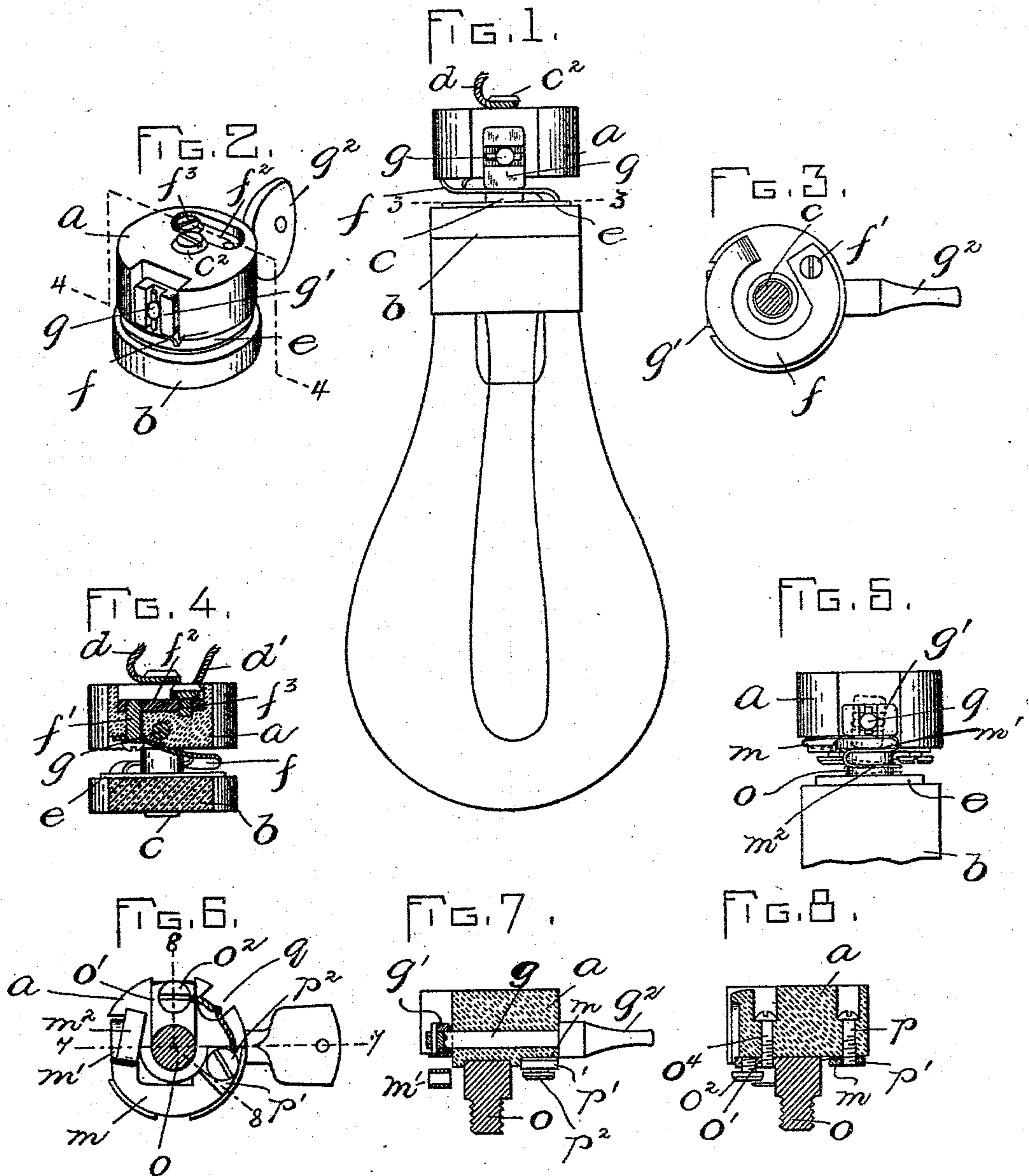


(No Model.)

R. C. NOURSE.
INCANDESCENT LAMP SOCKET.

No. 515,606.

Patented Feb. 27, 1894.



WITNESSES:
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UNITED STATES PATENT OFFICE.

RUFUS C. NOURSE, OF SOUTH FRAMINGHAM, MASSACHUSETTS.

INCANDESCENT-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 515,606, dated February 27, 1894.

Application filed May 31, 1893. Serial No. 476,057. (No model.)

To all whom it may concern:

Be it known that I, RUFUS C. NOURSE, of South Framingham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Incandescent-Lamp Sockets, of which the following is a specification.

This invention has for its object to provide an incandescent lamp socket of simple and durable construction, adapted to be kept in operative condition so far as the contact-pieces which make and break the circuit are concerned, and it consists in the improved construction which I will now proceed to describe and claim.

Of the accompanying drawings, forming part of this specification: Figure 1 represents a longitudinal section of a lamp socket embodying my invention, and a side elevation of an incandescent lamp applied thereto. Fig. 2 represents a perspective view of the socket. Fig. 3 represents a section on line 3—3, Fig. 1, looking upwardly. Fig. 4 represents a section on line 4—4, Fig. 2. Fig. 5 represents a side view of a modification. Fig. 6 represents a section on line 6—6, Fig. 5. Fig. 7 represents a section on line 7—7, Fig. 6. Fig. 8 represents a section on line 8—8, Fig. 6.

The same letters of reference indicate the same parts in all the figures.

My improved lamp socket is composed of a head or piece *a*, preferably of circular or disk form, and of insulating material, preferably of porcelain. The head *a* is electrically connected with the lamp by a metallic shank *c*, passing through the head and projecting from one side thereof, the projecting portion passing through the usual base *b* affixed to the neck of the lamp. The outer end of the shank *c* has a screw-threaded socket to receive a binding-screw *c*², by which the conducting wire *d* is connected with the shank.

e represents a metallic contact-plate, preferably of annular form, affixed to the upper or inner surface of the lamp base *b*, said plate being electrically connected with one of the terminals of the lamp filament in any suitable way, so that a connection is established between one of the terminals and the plate *e*, the other terminal being in electrical connection

with the shank *c*. I do not consider it necessary to illustrate the connection in detail, as such matters are already well understood.

f represents a contact spring, one end of which is affixed to the head *a* by a screw *f*¹, the other end of said spring being free. The spring *f* is laterally curved, as shown in Fig. 3, so that it has a considerable length, and at the same time conforms to the shape of the head *a* and is located entirely within the curved margin thereof. The spring normally assumes the position shown in Fig. 2 by its own resilience, so that its free end is normally out of contact with the plate *e*. The spring *f* is insulated by the material of the head *a* from the shank *c*, and is electrically connected by means of the attaching screw *f*¹ with a plate *f*², which is inserted in a recess in the upper surface of the head *a*. Said plate has a screw-threaded socket at one end, receiving a binding-screw *f*³, which secures the other conducting wire *d*¹ to the plate *f*², said wire being in electrical contact with the said plate, so that the plate *f*², screw *f*¹ and contact spring *f* are in constant electrical connection with the wire *d*¹.

g represents a key-rod, which is journaled to rotate in the head *a*, and is provided at one end with a cam *g*¹, and at the other end with a handle or thumb-piece *g*². The cam is located in a recess in one side of the block *a*, and its form and arrangement are such that, when turned to the position shown in Fig. 2, it does not act on the spring *f*, and allows the spring to separate from the plate *e*. When the cam *g*¹ is turned to the position shown in Fig. 1, it depresses said spring, and forces its free end into contact with the plate *e*. The cam *g*¹ is of substantially rectangular form, and is arranged to bear on the spring at a point somewhat removed from its free end, so that, when the cam is being turned from one position to the other, the engagement of its corners with the spring depresses the latter to a greater extent than when the cam reaches the position shown in full lines in Fig. 1, and the result is to give the free end of the spring, which is bent downwardly, as shown, a wiping or rubbing contact with the plate *e*, which is sufficient to keep the meeting surfaces of the spring *f* and

plate *e* bright and clean and therefore in good operative condition. It will be seen that, when the spring *f* is in contact with the plate *e*, the circuit is completed from the wire *d* through the lamp filament and to the wire *d'*.

In the construction shown in Figs. 5 to 8, the contact spring *m* is formed with a double bend where it extends under the cam *g'*, thus giving it an ogee curve *m'* at this point. The advantage of this construction is that the stiffness of the spring is increased, and an extended flat surface *m²* is obtained for contact with the plate *e*, so that a better electrical connection is made. The shank *o*, which connects with the lamp base *b*, does not extend through the porcelain piece *a*, but simply fits against the inner face of said piece, and has a flat lateral arm *o'*, which is let into said face and carries a binding screw *o²*, by which a wire *o³* is attached. The shank is secured to the piece *a* by a screw *o⁴*, countersunk in the outer side thereof and fastened in the arm *o'* to one side of the center of the piece *a*. The contact spring is fastened to the piece *a*, in like manner, by a screw *p*, countersunk in the outside of said piece, and extending through the spring and also through a block or plate *p'*, placed on the spring and carrying a binding screw *p²* by which to attach a wire *p³*. The conducting wires *o³* and *p³* being in this case both attached on the inner side of the piece *a*, the latter is formed with a channel *q* to permit their passage to the inner side. The key-post *g* extends centrally through the piece *a*, which, besides forming a bearing in which it may turn, also completely insulates it from the other parts (see Fig. 7).

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination in an incandescent lamp, of the head *a*, and base *b*, both of insulating material, a metallic shank connecting said head and base, a contact plate affixed to the base, a contact spring affixed at one end to the head, and the rotary key-rod in the head and provided at one end with a cam formed to depress the said spring into contact with the contact-plate when in one po-

sition, and to permit the spring to separate from said plate when in another position.

2. The combination in an incandescent lamp, of the head *a* and base *b*, both of insulating material, a metallic shank connecting said head and base, a contact plate affixed to the base, a curved contact spring affixed at one end to the head and provided with a downwardly-bent free end, and the rotary key-rod rotatable in the head and provided at one end with a cam formed to depress said spring into contact with the contact plate when the cam is in one position and to permit the spring to separate from said plate when the cam is in another position, the cam being arranged to bear on the spring at a point between its attached and free ends and to cause a rubbing or wiping contact of the bent free end of the spring with the fixed contact plate, as set forth.

3. An incandescent lamp and socket, comprising the head *a* and base *b* of insulating material, the metallic shank *c* connecting said head and base and presenting a contact end at one side of the base, said shank having means for connection with one of the conducting wires, the contact plate *e* affixed to the base *b* and insulated thereby from the shank *c*, the laterally-curved contact spring *f* affixed at one end to the head *a* and insulated by the latter from the shank *c*, the plate *f²* affixed to the head *a* and electrically connected with the contact spring, said plate being insulated from the shank and provided with means for connection with the other wire, and the key-rod journaled in the head *a* and provided with a cam arranged to bear on the contact spring and formed to alternately depress and release said spring when the key-rod is rotated, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of May, A. D. 1893.

RUFUS C. NOURSE.

Witnesses:

A. D. HARRISON,
ARTHUR W. CROSSLEY.