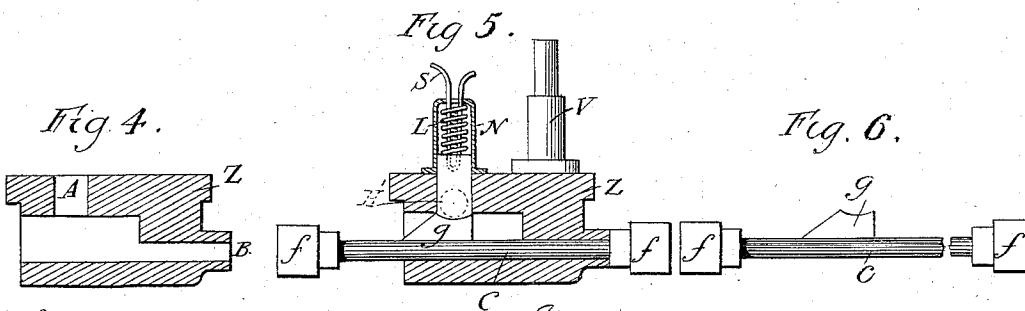
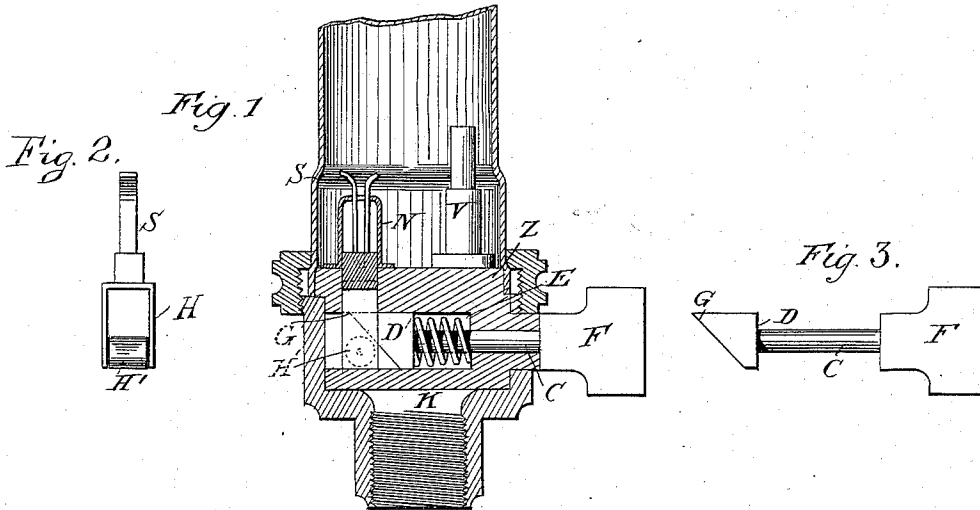


(No Model.)

J. McFARLANE & W. B. EDGAR.
FITTING FOR INCANDESCENT ELECTRIC LAMPS.

No. 565,862.

Patented Aug. 11, 1896.



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UNITED STATES PATENT OFFICE.

JAMES MCFARLANE, OF GLASGOW, AND WILLIAM BURGESS EDGAR, OF
PARTICK, SCOTLAND.

FITTING FOR INCANDESCENT ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 565,862, dated August 11, 1896.

Application filed June 27, 1894. Serial No. 515,858. (No model.) Patented in England April 12, 1892, No. 7,016; in France March 3, 1893, No. 228,351; in Belgium March 4, 1893, No. 103,745, and in Germany March 10, 1893, No. 76,434.

To all whom it may concern:

Be it known that we, JAMES MCFARLANE, of Glasgow, and WILLIAM BURGESS EDGAR, of Partick, in the county of Lanark, Scotland, have invented certain new and useful Improvements in Incandescent-Lamp Fittings, (for which we have obtained Letters Patent in England, No. 7,016, dated April 12, 1892; in France, No. 228,351, dated March 3, 1893; in Belgium, No. 103,745, dated March 4, 1893, and in Germany, No. 76,434, dated March 10, 1893,) of which the following is a specification.

Our present invention relates to the same general type of incandescent-lamp fittings as that disclosed in our application filed March 31, 1893, Serial No. 468,426; and our present invention provides for imparting the necessary movement to the piston-like contact by means of a wedge carried by an axially-moving key arranged at an angle to the contact, and which imparts a positive movement to the contact. This novel feature may be embodied in a number of arrangements, of which we illustrate two, namely, one preferred arrangement by which the wedging-face of the key is reversed by an ordinary turn of the key, so as to bring said wedging-face alternately on opposite sides of the engaging part of the contact, and thus impart a positive movement thereto, alternately in opposite directions, and incidentally dispensing with a propelling-spring on the contact, and imparting the necessary axial movement required of the key automatically, and, secondly, an arrangement in which the key is moved axially by hand in one direction to bring a wedging-face against the contact for projecting it positively and in the opposite direction to remove the wedging-face and permit the contact to be withdrawn by a spring with which it is provided.

Our invention will be fully understood upon reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a common form of incandescent-lamp socket to which the preferred form of our invention is shown applied. Fig. 2 is a detail view of the

moving contact constructed at its lower end so as to be adapted for use in this form of the invention. Fig. 3 represents the controlling-key of this arrangement. Figs. 4, 5, and 6 represent a modification embodying some of the features of our invention, Fig. 4 being a sectional view of the mounting, Fig. 5 a sectional view of the parts assembled, and Fig. 6 being a detached view of the key.

In the drawings, Z represents the insulating-base, carrying fixed contact V and movable contact S, which may be in the form of a piston working in a housing N, all of said parts being of any suitable well-known construction. For purposes of our present invention the contact S preferably carries at its lower end a stirrup H, of which the tread H' is preferably formed by an antifriction-roller, as shown.

In Figs. 1, 2, and 3, F represents the key, which is mounted to move axially in a direction transverse to the projection of the contact-piston S and carries a wedge D, which may be forced against the tread H' of the contact S. The key F is rotatable, so that its wedge D may be forced against the upper side of tread H' or against the lower side thereof. If rotated to the latter relation to the tread, the contact S is positively projected by pressure of the wedge, but if brought into the first-named position then the contact is just as positively withdrawn. By means of spring K, confined on key-spindle C between wedge D and shoulder E, the wedge is normally under pressure against tread H', and the contact and key are each thereby locked in one or other of their two positions, until some little turning force is applied to the key, when the key will be reversed. By reason of the form of the wedge and its relation to the bearing-tread of the contact, the former will be automatically forced back in opposition to its spring by turning, and without moving the contact, until the edge G of the wedge passes the horizontal diameter of the friction-roller, whereupon the wedge will snap into its new position and shoot the contact, thus accomplishing by positive movement from the key the

great desideratum in electrical circuit-breakers. Moreover, the friction-roller mounted transverse to the key operates to special advantage in this combination of parts, inas-
 5 much as it turns in the proper direction to reduce friction during the entire half-revolution of the key. Furthermore, it will be observed that the key may be turned in either direction, and whatever the position
 10 of parts it will shift them to the opposite position.

On referring to Figs. 4, 5, and 6 it will be seen that the modification there shown employs a similar insulating-base Z, having
 15 openings A and B for reception of the contact S, (constructed precisely as above described,) and the spindle C of the key *ff*, movable axially by hand in opposite directions to positively project contact S by the
 20 wedge *g*, which engages beneath friction-roller H' and rides it up into the concave top of said wedge, or to remove the wedge from beneath the contact and permit the latter's withdrawal by a spring L.

In both these arrangements the contact is positively moved in one direction, preferably for projecting against the cooperating terminal, by means of a wedge on an axially-moving
 25 key, arranged transversely to the movement of the contact. In the preferred form the movement is positively effected in both directions by means of an oppositely-acting reversible wedge carried by the key, which has
 30 movement transversely to that of the contact.

Having thus described our invention, the

following is what we claim as new therein and desire to secure by Letters Patent:

1. In combination with the movable contact having a tread arranged for engagement
 40 on opposite sides, and the oppositely-acting wedge engaging alternately with opposite sides of the tread and mounted upon an axially-moving key arranged transversely to the movement of the contact substantially in
 45 the manner set forth.

2. In combination with the movable contact having the tread constructed for engagement in opposite directions and the wedge
 50 reversible for engagement on opposite sides of the tread, mounted on an axially-movable key arranged transversely to the contact and having a projecting spring for keeping it in engagement with the tread, as explained.

3. The combination of the piston-like contact having the stirrup H and tread H', the
 55 key F having a spindle C rotatably and axially movable in suitable bearings, the wedge G on the end of said spindle and rotatable therewith for engaging opposite sides of the tread, and the spring K on the spindle C for holding the wedge in engagement with said tread all substantially as and for the purposes set forth.

In testimony whereof we have signed our
 65 names to this specification in the presence of two witnesses.

JAMES MCFARLANE.

WILLIAM BURGESS EDGAR.

Witnesses:

JOHN LIDDLE,

ARTHUR HARTLEY YUILE.