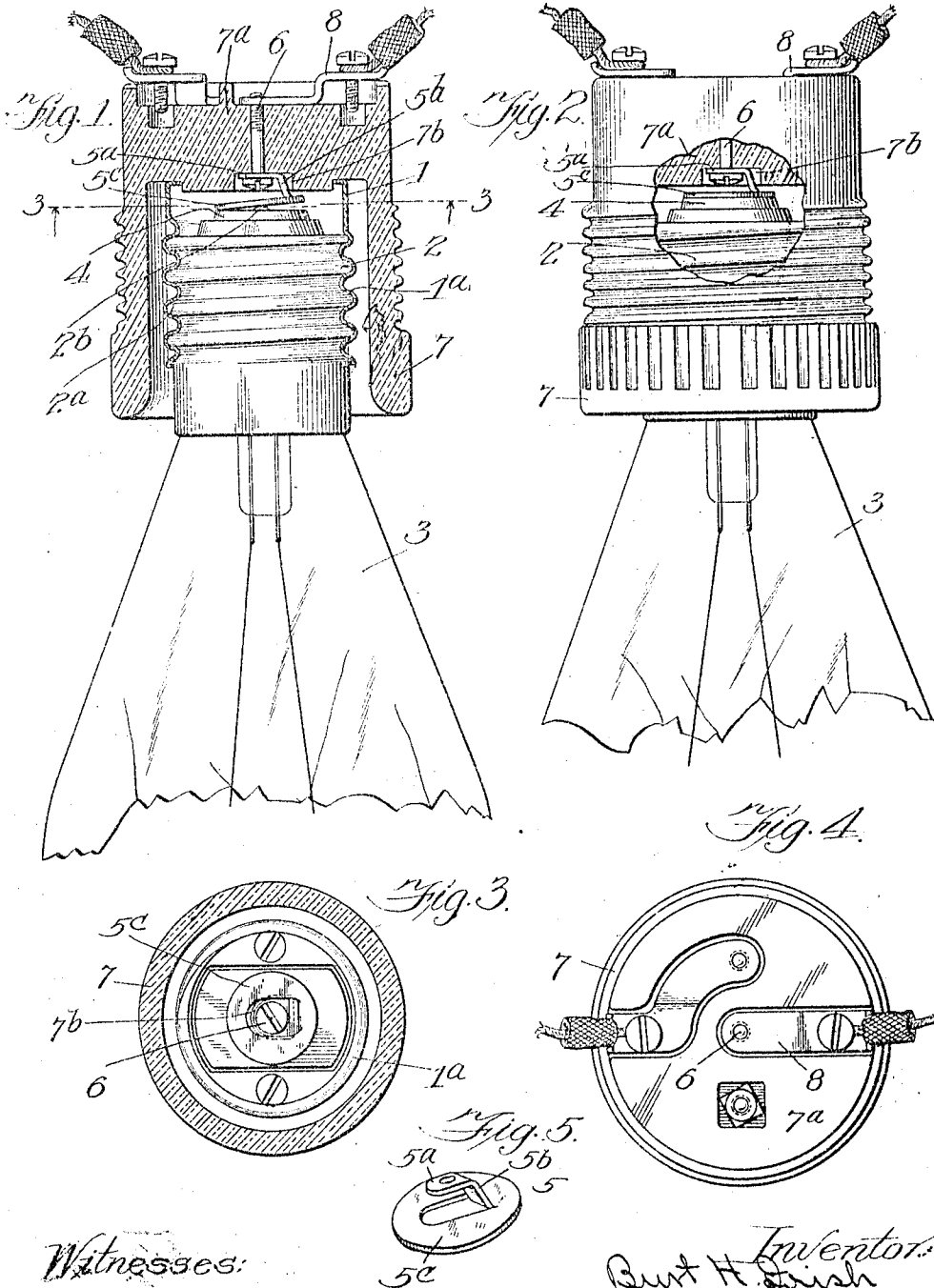


B. H. IRISH.
 INCANDESCENT LAMP SOCKET.
 APPLICATION FILED NOV. 3, 1910.

1,054,419.

Patented Feb. 25, 1913.



Witnesses:

R. J. Gathmann
Robert H. Burton

Inventor:
Burt H. Irish
 By *Chas. D. Burton*
 of *Burton & Burton*
 Attorneys:

UNITED STATES PATENT OFFICE.

BURT HILL IRISH, OF PERU, INDIANA, ASSIGNOR TO PERU ELECTRIC COMPANY, OF PERU, INDIANA, A CORPORATION OF INDIANA.

INCANDESCENT-LAMP SOCKET.

1,054,419.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed November 3, 1910. Serial No. 590,447.

To all whom it may concern:

Be it known that I, BURT H. IRISH, a citizen of the United States, residing at Peru, in the county of Miami and State of Indiana, have invented certain new and useful Improvements in Incandescent-Lamp Sockets, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide a yielding center contact for electric lamp sockets and like devices.

In the drawings—Figure 1 is an axial section of a socket provided with a center contact embodying this invention, and showing a lamp base entered therein to the point of initial contact. Fig. 2 is an elevation of a socket, certain parts being broken away to show a lamp screwed "home" to complete contact position. Fig. 3 is an interior plan view of the same. Fig. 4 is a plan view of the back side of the socket to show electrical connections. Fig. 5 is a perspective view of the contact element alone, for showing its annular nature.

The device which is the subject of this invention is intended for use in any type of lamp socket or holder, in which the lamp is secured by cooperating devices in the shell or lining of the socket and on the lamp base respectively. The most usual form is that shown in the drawings, having a coarse-threaded metallic lining 1, designed to receive a correspondingly threaded base 2 of a lamp indicated at 3. This metallic lining of the socket constitutes one pole of the electrical connection between the socket and the lamp, the other pole being furnished by some form of axially-mounted contact-pieces, 4 and 5, on the lamp and the base of the socket, respectively.

When the center contact is of rigid or non-yielding form, any vibration of the socket tends to loosen the lamp, causing rotation of the same and separation of the center contacts, resulting in heating and rapid deterioration of the parts. For this reason, the yielding or spring form of contact is desirable, since it furnishes a constant pressure between threads 1^a and 2^a, by which the lamp base engages the socket, thereby tending to prevent loosening of the lamp due to vibration. Such spring contacts commonly have been so formed and mounted that the area of contact was at the most undesirable

part of the lamp base,—that is, on the center 2^b, where the filament lead wire is soldered,—and either so that only a small area of contact could be reliably obtained, or so that the area of contact was variable according to the extent to which the yielding element was depressed by the insertion of the lamp base.

The present device is formed of a small disk 5, of sheet metal, which may be circular in shape, having a central portion, 5^a, cut away from the remainder on three sides, and offset therefrom so as to lie in a plane approximately parallel to it. The two parallel portions of the disk then remain connected by a tongue of metal 5^b, extending from the fourth or uncut side of the smaller portion 5^a. This offset portion is apertured to receive a screw 6, by which the entire disk is clamped into position in the porcelain or other insulating base 7^a of the socket 7, said screw constituting the electrical connection between the contact element 5 and the binding clip 8 on the outside of the base. This offset portion 5^a is oblong, so that when entered in a correspondingly shaped recess, 7^b, in the socket base, it is prevented from turning and loosening, as it might otherwise tend to do under the frictional drag caused in unscrewing the lamp for removal. The outer and larger portion, 5^c, of the disk then stands in position for contact with the lamp base 2, and being annular in form, it avoids contact with the central portion of the lamp base, where the filament lead wires are soldered, and where a projecting lump of solder, shown at 2^b, might otherwise prevent good contact.

Referring to Fig. 1, it will be understood that the device is initially set in the socket with its contacting portion 5^c slightly tilted with respect to the base of the lamp,—that is, not exactly at right angles to the axis of the socket, the direction of tilting being such that the end farthest removed from the connecting tongue 5^b will be the first to contact with the lamp base, as it is screwed into the socket, this being the more resilient end of the two. As the lamp is screwed farther into the socket, this end is depressed, and complete contact between the lamp and contacting surface is obtained against the yielding pressure resulting from such depression.

The form of the device is such as to fur-

nish a comparatively large area of contact which is in use at all times, owing to the fact that the line of connection between the parts 5^b and 5^c, about which the latter part rocks, is within the area of contact. Depression of either end serves to raise the opposite end into contacting position, the ultimate result being an equalizing of contact over the whole area as the lamp is screwed "home" to the position shown in Fig. 2. The tongue 5^b is preferably inclined with respect to the axis of the socket just enough to be able to yield slightly under the pressure of the lamp base, so that even after the contacting portion is brought to the position shown in Fig. 2, an additional securing pressure may be obtained by entering the lamp base a little farther into the socket.

I claim:—

1. A contact element for an incandescent lamp socket comprising a metallic contact disk having its central portion offset from the contact portion in a plane approximately parallel thereto, and a connection between the contact portion and the offset portion, the latter being adapted for securing the contact element to the base of the socket, and the connection having its junction with the contact portion within the area of contact of the same.

2. In combination with a lamp socket, a contact element comprising a metallic contact member, a fastening member offset from the plane of the contact member and approximately parallel thereto, and a connection between them, the fastening member being adapted for securing the contact element to the socket base, the socket having a recess at the center of its base formed to receive said fastening member and to prevent rotation of the same, and the connection be-

tween the contact member and the fastening member having its junction with the contact member within the area of contact of the same.

3. In combination with an incandescent lamp socket having a metallic lining which constitutes one electrical contact with a lamp base, a second contact element comprising a contact disk member, a fastening member adapted for securing the contact element to the socket base, and a connecting member between the two leading from a part of the contact member within its area of contact, the contact disk being initially set in a plane nearly perpendicular to the axis of the socket, but adapted to rock yieldingly about its line of connection with the connecting member under pressure of the lamp base.

4. In combination with an incandescent lamp socket having a metallic lining which constitutes one electrical contact with a lamp base, a second contact element comprising a centrally apertured disk member, a fastening member adapted for securing the contact element to the socket base, and a connecting element between the two leading from a part of the contact member within its area of contact, the contact disk being initially set in a plane nearly perpendicular to the axis of the socket, but adapted to rock yieldingly about its line of connection with the connecting member under pressure of the lamp base.

In testimony whereof, I have hereunto set my hand, in the presence of two witnesses, this 29th day of October, 1910.

BURT HILL IRISH.

Witnesses:

ADOLPH JOSEPH,
CHAS. G. BURTON.