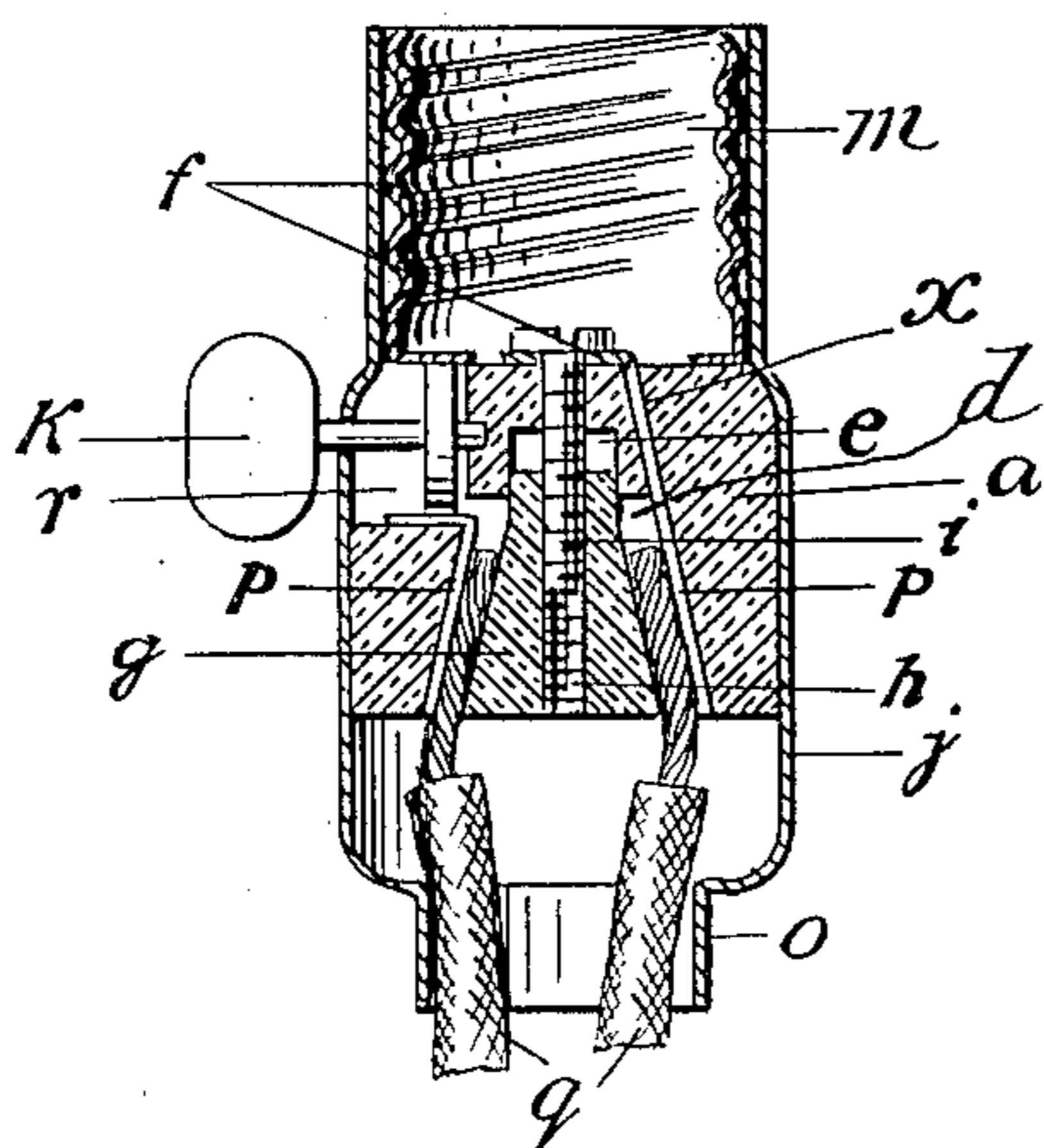


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ELECTRICAL CONNECTION.  
APPLICATION FILED APR. 17, 1907.

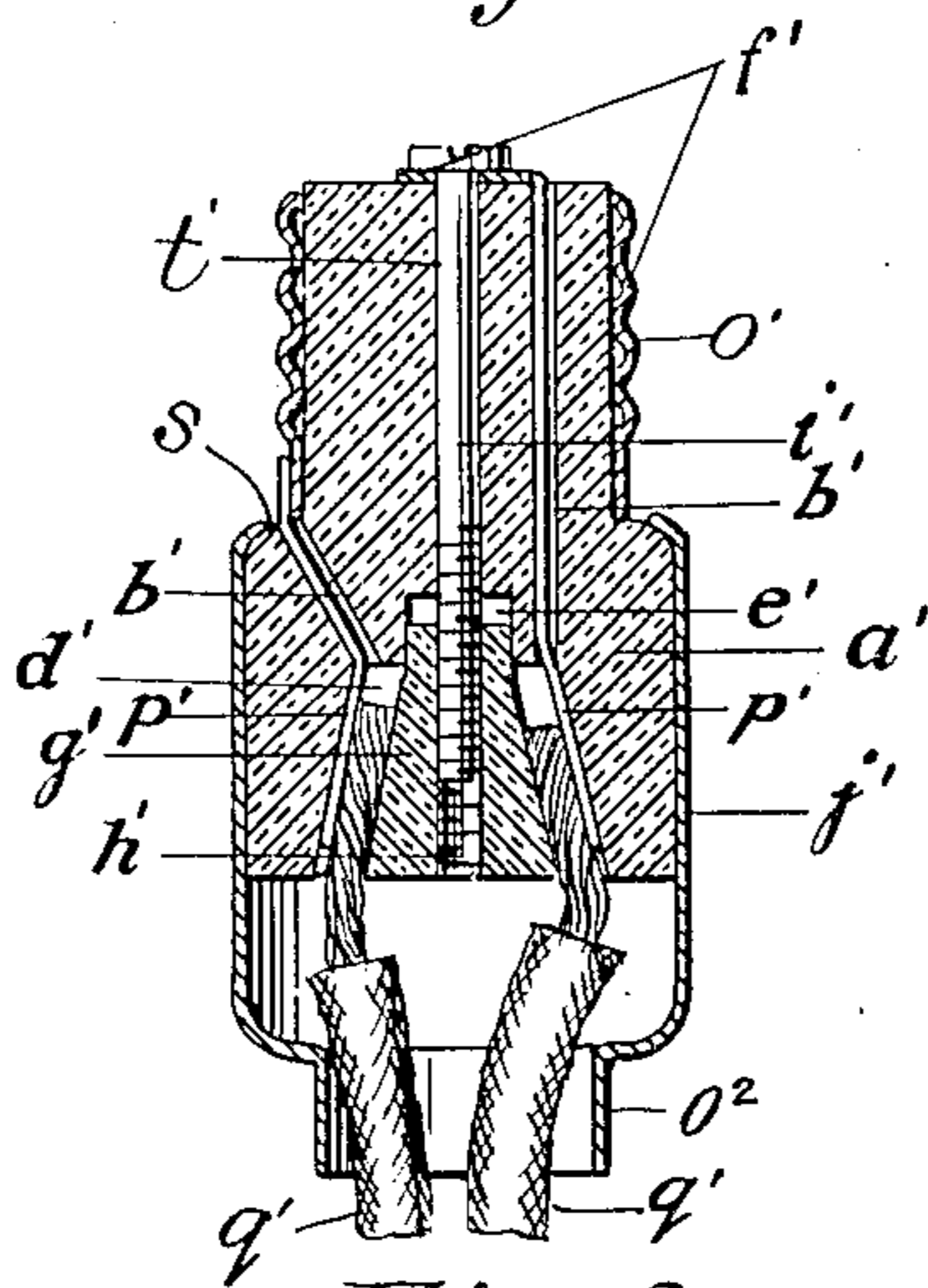
913,160.

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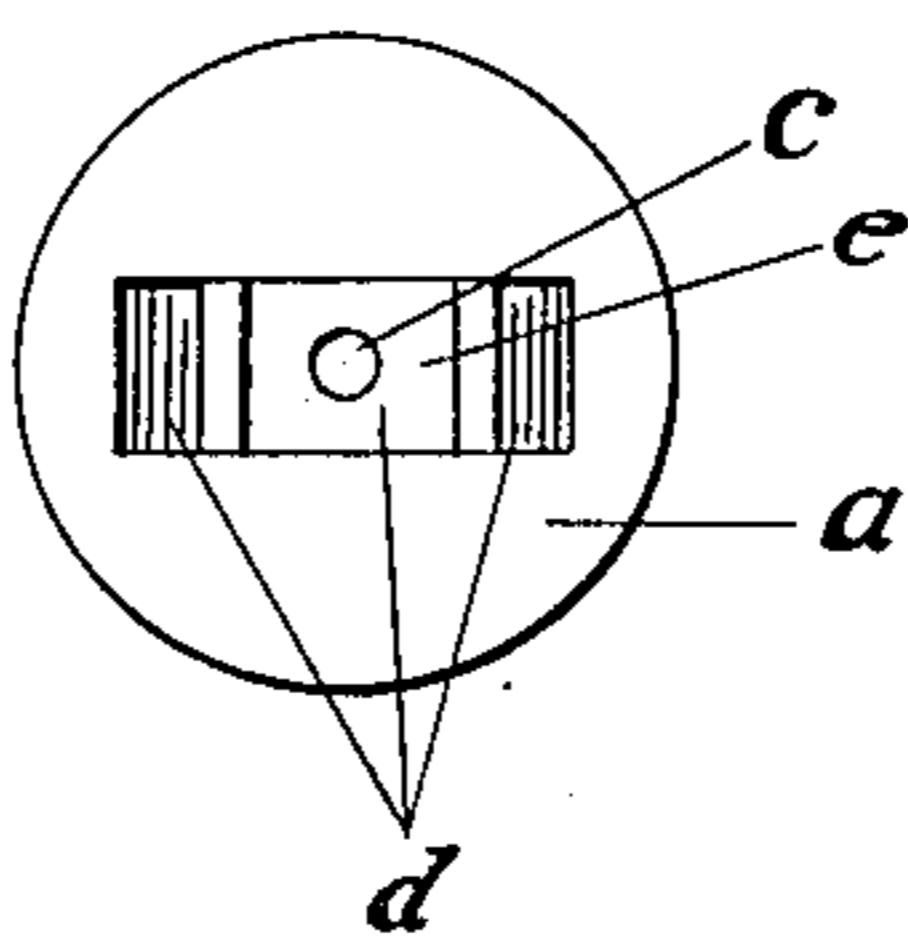
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE H. PRIDE, OF NEW YORK, N. Y.

## ELECTRICAL CONNECTION.

No. 913,160.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed April 17, 1907. Serial No. 368,796.

*To all whom it may concern:*

Be it known that I, GEORGE H. PRIDE, a citizen of the United States, residing in the city of New York, borough of Bronx, State of New York, have invented a certain new and useful Electrical Connection, of which the following is a specification.

This invention is an electrical connection adapted for a variety of purposes, such as for uniting the wires leading from a socket to a lamp or other translating device.

The object of the invention is to facilitate the operation of wiring the connection, to secure an extended and firm electrical contact between the inserted wires and the current conducting members of the connection, to obviate the liability of a short circuit, to simplify the construction, and to produce a device which can be manufactured economically.

The electrical connection of my invention embodies two members of insulating material, metallic contact strips in electrical connection with opposite terminals, said strips occupying a substantially fixed or permanent relation to one member, and means whereby the members may be wedged together in a manner to clamp inserted wires upon said contact strips, the relation of said strips to one of said members remaining undisturbed during the operations of inserting the wires, adjusting and clamping the members together, and bringing the wires into electrical contact with the aforesaid strips.

By reason of the substantially fixed or immovable relation of the contact strips to one member, the wires to be inserted in the connection can be readily placed in position, the other member adjusted, and the clamping means tightened so as to bind all the parts firmly together without either of the parts working out of position accidentally, whereby the possibility of a short circuit is avoided and the connection is adapted to be quickly wired.

A particularly important feature of the invention resides in the employment of two complementary insulating sections, preferably in the form of male and female members, so constructed that a wedging or clamping action may be secured between said members and yet provide a barrier

which effectively precludes any short circuiting in the connection. With this object in view, the said members are so shaped that when they are separated to the maximum extent, in the normal operation of the device, there still remains a thickness of insulating material between the passage ways for the wires, so that the wire intended for one of the passage-ways cannot possibly extend over into the other passage-way. In this manner, all possibility of short circuiting is practically precluded.

In the accompanying drawings, I have illustrated one practical embodiment of the invention, but the construction shown therein is to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a vertical longitudinal section through an electrical connection, embodying my invention in the form of an electrical socket. Fig. 2 is a vertical longitudinal section through another form of electrical connection embodying the invention. Fig. 3 is an end view of one of the members.

The essential features of an electrical connection embodying my invention, two forms of which are illustrated in Figs. 1 and 2, respectively, are the members, *a*, *g*, contact strips, *p*, *p*, fixed in the member, *a*, and a bolt adapted to draw the member, *g*, into wedging engagement with the member, *a*, whereby the member, *g*, operates to clamp the wires of a circuit in electrical contact with the strips, *p*, *p*.

The member, *a*, is composed of insulating material, the same comprising, preferably, a single piece of porcelain molded to the required shape. Said member, *a*, is provided with a recess, *d*, entering from one face thereof, tapering in form, except at its upper end, the upper end of said recess being substantially square in cross section as shown at, *e*. The complementary member, *g*, is tapering in form, as shown, except at its upper end, it being shaped to conform to the recess in the member, *a*. It is also composed of a single piece of insulating material, preferably porcelain, molded to the required shape and size. The smaller end of said member, *g*, is substantially square in cross section, whereby it fits snugly in the

recess, *e*, of the member, *a*, when the parts are assembled. With this construction, the recess in the member, *a*, serves to center the member, *g*, when assembling the parts, and, further, produces a snug fitting insulating joint between the passages for the wires. The wedge shaped member, *g*, is provided with an axial threaded opening, *h*, adapted to serve as a nut for the reception of the clamping screw, *i*. The member, *a*, is provided, furthermore, with a passage or longitudinal opening, *w*, in which opening is fitted one of the contact strips, *p*. This strip extends through the opening of the member and into the recess of said member, *a*. The strip is carried through the closed end of the said recess, and is bent so as to form a contact, *f*, or, if desired, said strip may be attached to a contact at the closed end of the member, *a*. The other contact strip, *p*, is positioned in the opposing side of the recess in member, *a*, and the end portion of said contact strip is bent within a chamber, *r*, provided in one side of member, *a*. The bent end of said contact strip, *p*, is exposed within the chamber, *r*, so that it may be engaged by a key, *K*. Said key coöperates with an internal threaded sleeve, *m*, the latter constituting the other terminal of the connection.

The conducting strips, *p*, *p*, are both fixed within the recess of the member, *a*, so as to be permanently positioned with relation thereto. Said strips, *p*, *p*, are at the respective sides of the recess, and are inclined, so as to have a diverging relation toward the larger end of the recess as shown in the drawings. The strips are opposite to the respective sides of the tapering member, *g*, and are thus disposed within the recess of the member, *a*, so as to coöperate with said tapering member, *g*, for the purpose of clamping the wires within the connection, and in electrical contact with the aforesaid strips.

The member, *a*, and the internal sleeve are inclosed within a metallic casing, *j*, said casing having a contracted mouth portion, *o*, into which is fitted the wires, *q*, *q*, to be clamped in the connection. Said casing, *j*, incloses the several parts, except the thumb piece of the switch or key, and it affords an ornamental finish to the entire connection.

The construction embodied in Fig. 1 comprises an internally threaded sleeve, *m*, adapted to be used in conjunction with a lamp socket or similar means.

The construction shown in Fig. 2 provides a plug which is adapted to be screwed into a lamp socket. The said device, illustrated in Fig. 2, is substantially the same in construction as that shown in Fig. 1, except that the key or switch is omitted. The member, *a'*, is made of insulating material, such as porcelain, and is provided with the taper-

ing recess, *d'*, and with passages, *b'*, *b'*. The member, *a'*, is smaller at one end than at the other so as to provide an external shoulder, *s*, and, the inner portion of the tapering recess, is substantially square in cross section, as shown. Said member, *a'*, is provided, also, with a longitudinal opening, *t'*, for the reception of the clamping screw or bolt, *i'*, and the member is equipped with an external metallic threaded sleeve, *o'*, forming one of the contacts of the connection.

One contact strip, *p'*, passes through one opening, *b'*, of the member, *a'*, one end of said strip extending into the recess in said member, *a'*, while the opposing end of the strip is bent so as to form the other contact, *f'*, of the connection. The other contact strip, *p'*, occupies the other passage, *b'*, of the member, *a'*, one end portion of said strip, *p'*, engaging electrically with the external metallic sleeve *o'*, forming one terminal. The strips, *p'*, are inclined at the respective inclined sides of the tapering recess in said member, *a'*, and said strips have the diverging relation toward the open side of the recess, as shown in Fig. 2.

The member, *g'*, is of tapering shape, and is provided with a threaded axial opening, *h'*, and with an inner portion substantially square or rectangular adapted to fit in the recess, *e'*, whereby said recess serves to center the member, *g'*, and to guide it within the socket of the member, *a'*, as well as to form an insulating joint or barrier intermediate the wire passages.

The larger portion of the member, *a'*, in Fig. 2 is inclosed by a metallic shell or casing, *j'*, one end of which is bent around the external shoulder, *s*, of said member. The other end of the casing or shell, *j*, is contracted to produce a mouth portion, *o'*, in which is arranged the wires, *q'*, *q'*, which are to be coupled by the clamping operation of the members to the aforesaid contact strips.

From the foregoing description taken in connection with the drawings it will be seen that the screw or bolt, *i*, or *i'*, may be turned backwardly for the purpose of releasing the tapering member, *g*, or *g'*, the latter being moved outwardly for a sufficient distance to permit the insertion of the wires, *q*, *q*, or *q'*, *q'*. The two wires are placed on opposite sides of the member, *g*, or *g'*, and inserted into respective sides of the tapering recess within the member, *a*, or *a'*, said wires being between the inclined faces of the member, *g*, or *g'*, and the contact strips, *p*, *p*, or *p'*, *p'*. The screw or bolt may now be turned so as to draw the members *g*, or *g'*, into the recess, and this operation clamps the end portions of the wires between the contact strips and the member, *g*, or *g'*, whereby said wires are securely clamped into good electrical contact with said strips. There is a con-

siderable area of the strips exposed for engagement with the wires, and as said wires are wedged firmly into engagement with said strips, the required electrical contact is 5 secured between the several parts. The wires are effectively separated from each other by the interposed tapering members, thus entirely obviating any possibility of a short circuit. The wires can be easily placed in 10 position and clamped firmly in engagement with the contact strips, thus facilitating the operation of wiring the connection.

Having thus fully described the invention, what I claim as new, and desire to secure by 15 Letters Patent is:

1. In an electrical connection, cooperating insulating members, means for clamping said members, and contact strips fitted to one member in a substantially fixed relation 20 thereto, said strips remaining in fixed positions during the application of wires to the connection and the operation of clamping the members for the purpose of binding the inserted wires in electrical contact with said 25 strips.

2. In an electrical connection, a member provided with a socket, a movable member adapted to enter said socket, a plurality of contact strips both fixed to one of said members and exposed in the aforesaid socket for engagement with wires adapted to be inserted therein, said movable member occupying a position intermediate said contact strips and substantially filling the socket, 35 whereby said movable member acts as a barrier in precluding both insertible wires from engagement with the plurality of contact strips, and adjusting means for operating the movable member.

3. In an electrical connection, a member provided with a tapering recess, a plurality of permanent contact strips each fixed to said member and disposed in said recess for engagement with wires adapted to be inserted therein, a tapering member, and means for tightening said tapering member in said recess, whereby said tapering member is adapted to clamp the insertible wires into engagement with said fixed contact 45 strips.

4. In an electrical connection, a recessed member, a plurality of contacts fixed in said member, a clamping member in cooperative relation to the contacts, and means 55 normally connected to one of said members for bringing the clamping member into cooperative relation to the aforesaid contacts while retaining the relation of said contacts to the socket member.

5. In an electrical connection, a member provided with circuit terminals, said member having, also, a recess, a plurality of contacts positioned in said member for engagement with wires adapted to be inserted 65 therein, said contacts being electrically con-

nected with said circuit terminals, a clamping member in cooperative relation to said contacts, and means for moving said clamping member into clamping relation to said contacts while retaining the relation of said 70 contacts to the inserted wires and to the recessed member.

6. In an electrical connection, a member provided with a tapering recess, a plurality of contacts positioned in said recess for engagement with wires adapted to be inserted therein, a tapering member operating between the contacts and the insertible wires, whereby each inserted wire is adapted to be clamped by the tapering member into 80 firm engagement with one of said contacts and said insertible wires are separated by said interposed tapering member, and adjusting means connected to the tapering member for moving it within the first named 85 member.

7. In an electrical connection, a member having a flaring recess, contacts fixed to said member and exposed in the recess thereof for engagement with insertible wires, 90 a tapering member entering the recess and interposed between the aforesaid contacts, and a bolt cooperating with the tapering member, whereby insertible wires may be clamped in electrical engagement with the 95 aforesaid contacts.

8. In an electrical connection, a member having a tapering recess, contacts fixed to said member and exposed within the recess thereof, a tapering member guided in the 100 aforesaid recess and interposed between the contacts, and means for adjusting the tapering member, whereby said member is adapted to clamp insertible wires into engagement with the contacts. 105

9. In an electrical connection, a recessed member provided with a plurality of openings in communication with the recess thereof, contacts extending through said openings and disposed normally in said recess adjacent to the opposite walls thereof, said contacts being fixed to said member, a clamping member separating said contacts, and means for adjusting the clamping member. 115

10. In an electrical connection, a member provided with a chamber and with a recess, contacts in said recess, one of said contacts extending into the chamber of said member, a key or switch in said chamber for cooperation with the aforesaid contact, a clamping member in cooperative relation to the contacts, and means for adjusting said clamping member. 120

11. In an electrical connection, a member provided with a recess and with terminals, contact strips each fixed in said recess of the member and having electrical connection with one of said terminals, a clamping member normally between the contact strips, 130

and means for adjusting the clamping member in the recess of the first named member.

12. In an electrical connection, a female insulating member having a tapering recess, a male insulating member having a tapering portion adapted to be seated in said recess at all times during the normal operation

of the device and contacts fixed in the tapering recess of the female member and normally separated by said male member.

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Witnesses:

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