

J. W. PHELPS.
 PLUG FOR ELECTRICAL CONDUCTORS.
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Fig. 1.

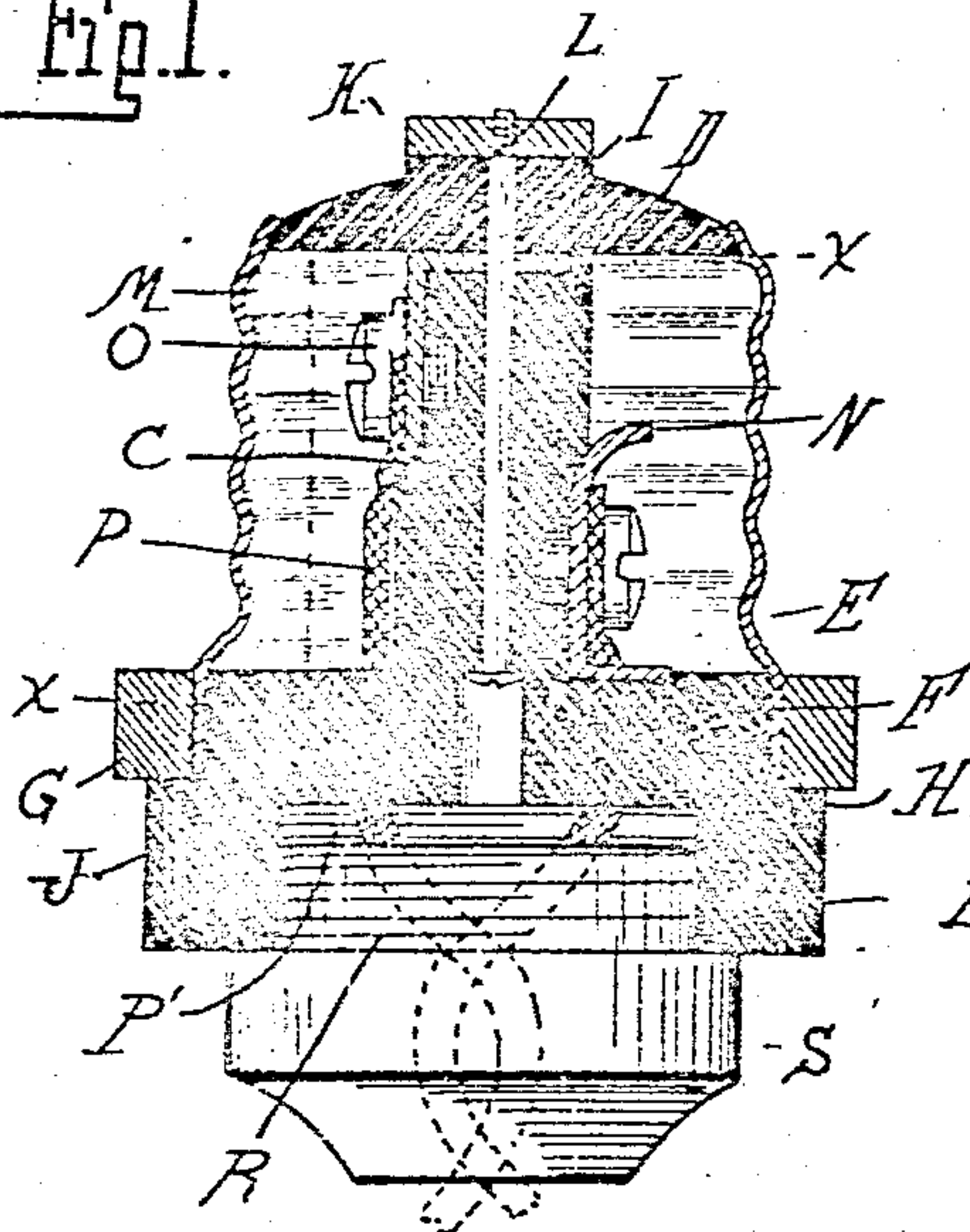


Fig. 3.

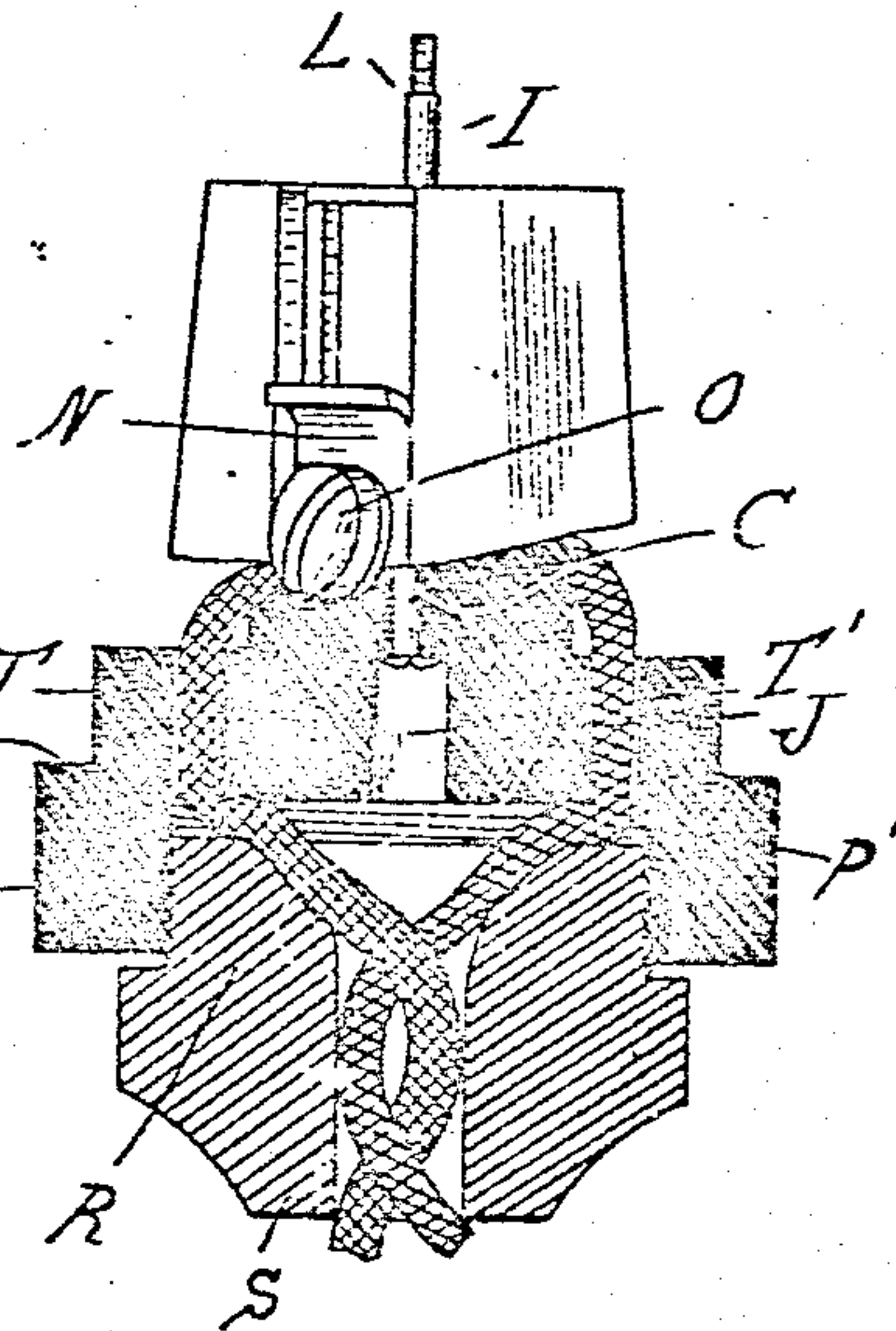
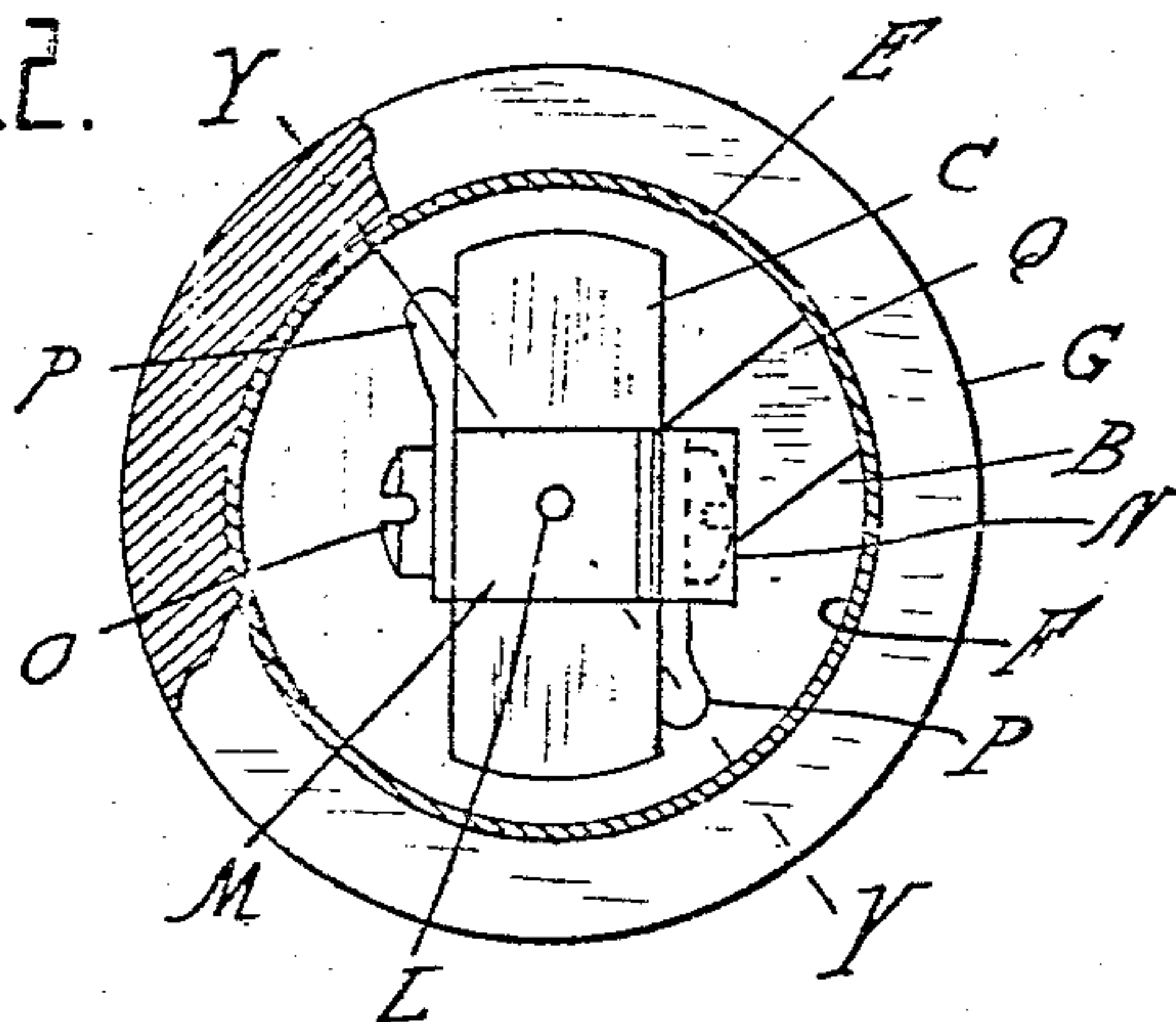


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES W. PHELPS, OF DETROIT, MICHIGAN.

PLUG FOR ELECTRICAL CONDUCTORS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES W. PHELPS, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Plugs for Electrical Conductors, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention relates to contact plugs for electrical conductors, such as used for extension cords for electric lights, etc.

It is an object of the invention to obtain a construction with which the conductors may
15 be easily and securely attached to the plug contacts, and are so located as to avoid the possibility of short circuit.

It is a further object to provide means for revolving the threaded contact while engaging or disengaging the same from the socket
20 without rotation of the plug or cord.

With these objects in view, the invention consists in a construction as hereinafter set forth.

25 In the drawings Figure 1 is an enlarged longitudinal section partly in elevation through the plug; Fig. 2 is a plan view with the cap member in section on line $x-x$, Fig. 1; Fig. 3 is a section on line $y-y$,
30 Fig. 2.

A is a member formed of insulating material, preferably vulcanized rubber, which is provided with a circular base portion B and an upwardly projecting flattened post
35 section C. Surrounding the post C is a cap section which comprises a circular insulator cap D and a threaded metallic contact E, the base portion of which fits about a circular portion F of the member A of smaller
40 diameter than the portion B.

G is a ring of insulating material, which is attached to the member E, and is seated against the shoulder H of the portion B.

The members D, E and G are secured in
45 position by a screw I, which engages a central bore in the member A, and passes through an aligned aperture in the member D. The head of the screw I engages a shoulder formed by a counterbore J, while
50 the outer end of the screw is threaded to receive a nut K, which forms a retainer for the member D. The screw I is shouldered at L for a bearing for the nut K, so that the latter may be tightened and still permit the
55 free rotation of the member D on the bolt I. Thus by turning the member G the threaded

contact E may be revolved to screw the same into the threaded socket, while the member A is held stationary.

The electrical connections for the plug are
60 formed by contacts M and N upon opposite sides of the flattened portion C of the member A and clamping screws O for securing the said contacts to the ends of the flexible
65 conductor. This conductor is the usual cord P, the separate strands of which pass through apertures in the member A into the spaces upon opposite sides of the portion C, and are there secured by the clamping screws
70 O to their respective contacts M and N. The contact M has a portion bent over the top of the member C and in electrical contact with the bolt I, which forms a connection to the nut K, and the latter forms the
75 central contact of the plug. The contact member N is arranged upon the opposite side of the portion C, and is provided with an outwardly extending portion Q, which at its outer end is turned downward across
80 the periphery of the portion, and is maintained in electrical connection with the threaded contact member E. Thus in every position of rotary adjustment of the contact
85 member E connection will be maintained with the contact N.

The under side of the portion B is recessed and threaded to engage a threaded
90 portion R of a member S formed of insulating material. This member is centrally apertured for the passage of the cord P there-through, but this aperture is out of alignment with the apertures T and T' through
95 which the strands of the cord pass to the contacts M and N. By reason of this construction, when the member S is screwed into its socket, it will form a clamp which will
100 securely grip the laterally-extending strand portions P' of the cord P, so that any stress applied to this cord will not be transmitted to the clamping screws O. This prevents
105 danger of pulling the cord away from the plug, or of breaking the electrical connection between the ends of the strands and the contact members.

In use, the plug can be easily attached to
110 the cord by disengaging the nut K and separating the members G, E and D from the member A. This will leave the flattened portion C and contacts M and N exposed, so that it will be an easy matter to attach
115 the terminal ends of the cord. At the same time, the clearance space surrounding the

contacts M and N is so large that there is no danger of short circuit by reason of the end of the conductor coming into contact with the metallic parts of the plug. After the connections are made, the members D, E and G are replaced and secured by the nut K. The plug may then be engaged with the socket by turning the member G, which will rotate the contact E in relation to the member A, and permit of engagement with the threaded socket without any twisting of the cord.

What I claim as my invention is:

1. An electrical contact plug comprising a body member having a recessed base, a member of insulating material having a threaded engagement with said recess and centrally apertured, contacts mounted upon opposite sides of said body member, and flexible conductors connected to said contacts passing through apertures in said body member into said recess and upon opposite sides thereof and then extending laterally through said central aperture whereby said insulating members constitute a clamp for said conductors.

2. An electrical contact plug comprising a body of insulating material having a transversely projecting integral flattened portion of reduced cross section, a metallic contact member surrounding said flattened portion and spaced therefrom, and means secured to opposite sides of said flattened portion and in the space inclosed by said metallic contact for attaching a flexible conductor thereto.

3. An electrical contact plug comprising a body of insulating material having a transversely projecting integral flattened portion of reduced cross section, a metallic contact member surrounding said flattened portion, spaced therefrom and removably swiveled upon said body, and means upon opposite sides of said flattened portion and in the space inclosed by said metallic contact for attaching the conductor to the flattened portion.

4. An electrical contact plug comprising a body of insulating material having a transversely projecting integral flattened portion, a threaded contact member surrounding said flattened portion, spaced therefrom and removably swiveled upon said body, and terminal connections upon opposite sides of said projection, one of said connections having a laterally extending portion projecting into engagement with the threaded contact.

5. An electrical contact plug comprising a body of insulating material having a transversely projecting integral flattened portion, a revoluble threaded contact member swiveled upon said body, a stationary contact member carried by said projection, and

terminal connections upon opposite sides of said projection, one of said connections having a laterally extending flange engaging the stationary contact member.

6. An electrical contact plug comprising a body of insulating material having an integral transversely projecting flattened portion, a revoluble threaded contact member, swiveled upon said body, an insulating cap for said member, a stationary contact projecting outwardly through said integral projection and cap and forming means for clamping the threaded contact to the body portion, and terminal connections secured to opposite sides of said flattened portion, one of said connections having a laterally extending portion positioned intermediate the end of the integral projection of the body and the cap and engaging said stationary contact.

7. An electrical contact plug comprising a body of insulating material having a transversely projecting integral flattened portion, a threaded contact member surrounding said flattened portion, spaced therefrom, and removably swiveled upon said body, and terminal connections upon opposite sides of said projection, one of said connections having a laterally extending portion projecting into engagement with the threaded contact, and the other of said terminal connections having a portion projecting into engagement with the threaded contact.

8. An electrical contact plug comprising a body of insulating material having a transversely projecting portion of reduced cross-section, a threaded contact member swiveled upon said body portion, an insulating cap fixedly secured to the end of said threaded contact member, and a stationary contact member passing through said body transversely projecting portion and cap and forming a means for securing the threaded contact to the body.

9. An electrical contact plug, comprising a body member having spaced apertures, contacts carried by said body member, a member of insulating material having a screw-threaded engagement with the body member and centrally apertured, said apertures being out of alinement with each of said spaced apertures, and flexible conductors connected to the contacts and passing through said spaced apertures, and then extending laterally and through said central aperture.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES W. PHELPS.

Witnesses:

NELLIE KINSELLA,
W. J. BELKNAP.