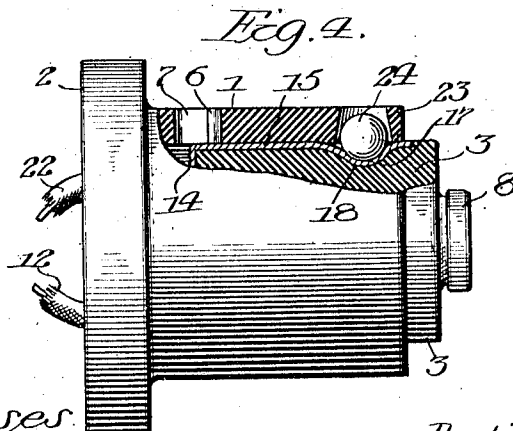
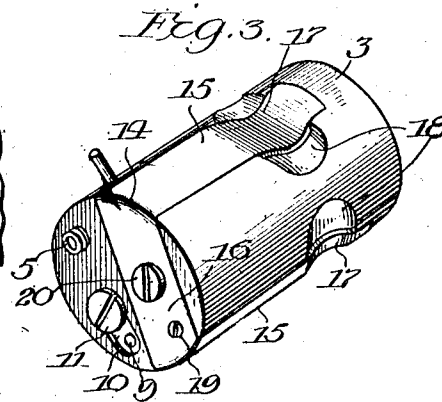
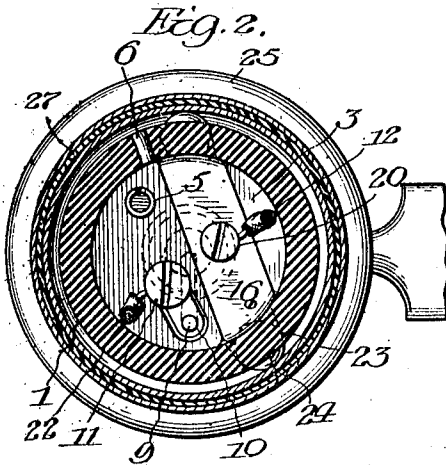
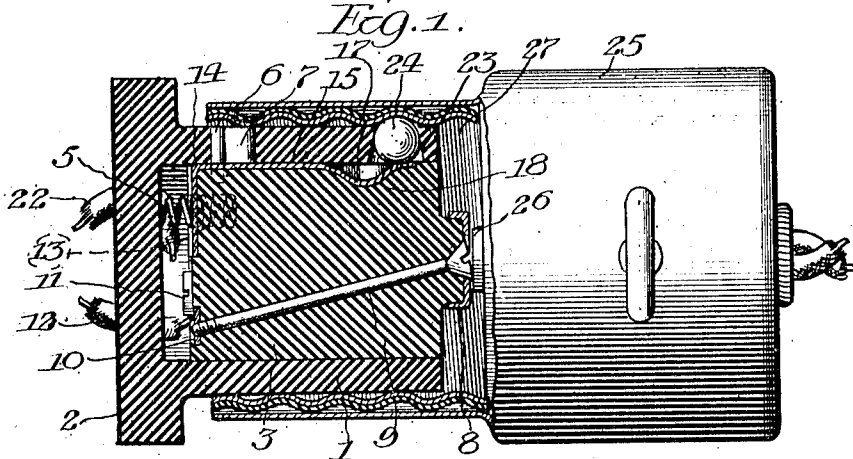


D. D. GORDON.
CONNECTING DEVICE.
APPLICATION FILED SEPT. 14, 1911.

1,041,066.

Patented Oct. 15, 1912.



Witnesses
Orr. W. Merrill
Hazel Jones

Inventor
David Dagobert Gordon
by Max W. Zabel
Atty

UNITED STATES PATENT OFFICE.

DAVID D. GORDON, OF CHICAGO, ILLINOIS.

CONNECTING DEVICE.

1,041,066.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed September 14, 1911. Serial No. 649,278.

To all whom it may concern:

Be it known that I, DAVID D. GORDON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Connecting Devices, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to connecting devices and in one of its forms is of particular utility in connection with plugs such for instance as may be used in connection with ordinary sockets of the incandescent lamp type.

My invention contemplates a connecting device of this character which has two conducting elements which are adapted for association with two cooperating conducting elements, the arrangement being such in one form of the invention that when one conducting element is being associated with its corresponding conducting element, the second conducting element is automatically forced into conducting position with its cooperating conducting element. When used in connection with a plug, the arrangement is such that when the plug is being inserted into a socket, the act of insertion automatically engages conducting elements which would otherwise not come into contact as the plug is smaller than the socket to which it is applied.

My invention is capable of a variety of applications and by specifically describing it herein as applied to a specific kind of plug, I do not wish it understood that I am so limiting my invention. This specification is to be understood as setting forth one form which my invention may take.

I will describe a plug constructed in accordance with my invention in connection with the accompanying drawing, in which:

Figure 1 is a sectional view of a plug constructed in accordance with my invention; Fig. 2 is a sectional view on lines *a-a* of Fig. 1; Fig. 3 is a perspective view of a part of the plug mechanism, and; Fig. 4 is a sectional view similar to Fig. 1 with the plug shown in its normal condition when removed from the socket.

My improved plug comprises an outer insulating portion consisting of the shell 1 and base portion 2 which in the form shown herein are preferably integral. A plunger

3 is mounted in the shell 1 and is normally held in its extended position as shown in Fig. 4 through the agency of a spring 5. A screw 6 put in place after the plunger 3 has been inserted limits by its being confined within the slot 7 the in and out motion of the plunger 3. The plunger carries the central contact 8 which is metallically associated by means of the screw 9 with a conducting portion 10 carrying a screw 11 for purposes of attachment to the lead in wire 12. The plunger has a slot 13 within which the spring 5 projects. The plunger 3 also carries a second conducting element 14 bent what might be said to be substantially U shaped in that it consists of the two legs 15 and the yoke portion 16. The legs 15 are dished as shown at 17 and here fit into grooves 18, 18 provided for this dished portion in the plunger 3. A screw 19 holds the conducting portion 14 in place and a screw 20 is provided with which the lead in wire 22 is adapted for association. The shell 1 has two tapering holes therethrough 23, 23 in which balls 24, 24 are carried and are prevented from falling out of the shell by the inclined holes 23. These balls 24 are conducting and roll against the legs 15, 15 of the conducting element 14.

When the plug is in its normal position of Fig. 4, the balls are carried in the dished portion 17 of these legs 15, the spring 5 having pressed the plunger out to its farthest extension. The plug is adapted for association with a socket 25 having the center contact 26 and the side screw threaded contact 27 as is customary with the ordinary form of socket. The contact 26 is adapted for association with the contact 8 of the plug and the balls 24 are adapted when pressed outwardly to engage the screw threaded contact 27 to connect said contact with the U shaped element 14. Thus the lead in wires 12 and 22 are connected through the plug to associate themselves respectively with the contact 26 and the contact 27.

In the general operation of the plug, the plug being in the normal condition of Fig. 4, the plug is inserted in the circuit 25 until the contact 8 engages the contact 26, whereafter the plug is pressed farther into the socket, thus pushing the plunger inwardly against the spring 5 and forcing the balls 24 out against the contact portion 27 of the socket, these balls being thus pushed outwardly by the inclined surfaces 17 of the

legs 15. These balls are thus pressed outwardly into the screw threaded portion of the socket and a slight twist of the plug in a clockwise direction, through say about ten degrees, will serve to tighten the plug in place.

It will thus be seen from this construction that no rotation of any material moment is necessary to fix the plug in place and thus the cord which unites with the plug will not become unraveled. Furthermore the action of making connection is speedy and unaccompanied by the ordinary loss of time and screwing the ordinary screw threaded portion into the screw threaded socket.

While I have herein shown and specifically described one form which my invention may take, I do not wish to limit myself to this specific form as the invention is capable of many different modifications and applications, but

Having thus described and shown one form of carrying out my invention, what I claim as new and desire to secure by Letters Patent is:

1. A plug having a base portion, and a plunger, a contact element carried by said plunger, movable spherical contacts carried by the base, and means whereby the plunger controls the outward movement of said spherical contacts.

2. A plug having a base portion and a plunger, a contact element carried by said plunger, movable spherical contacts carried by the base, and spring controlled means whereby the plunger controls the outward movement of said spherical contacts.

3. A plug having a base portion and a plunger, a contact element carried by said

plunger, movable spherical contacts carried by the base, and means whereby the plunger controls the outward movement of said spherical contacts, said means including an inclined conducting element.

4. A plug having a base portion and a plunger, a contact element carried by said plunger, movable spherical contacts carried by the base, and spring controlled means whereby the plunger controls the outward movement of said spherical contacts, said means including an inclined conducting element.

5. A plug having a base portion and a plunger, a contact element carried by said plunger, movable spherical contacts carried by the base, means whereby the plunger controls the outward movement of said spherical contacts, said means including an inclined conducting element, and means provided in said base to hold said spherical contacts in place.

6. A plug having a base portion and a plunger, a contact element carried by said plunger, movable spherical contacts carried by the base, spring controlled means whereby the plunger controls the outward movement of said spherical contacts, said means including an inclined conducting element, and means provided in said base to hold said spherical contacts in place.

In witness whereof, I hereunto subscribe my name this 7th day of September, A. D., 1911.

DAVID D. GORDON.

Witnesses:

A. S. DENNISON,
HAZEL JONES.