H. P. BALL.

CONNECTING PLUG.

APPLICATION FILED JAN. 6, 1915.

1,194,122.

Patented Aug. 8, 1916

Fig. 1.

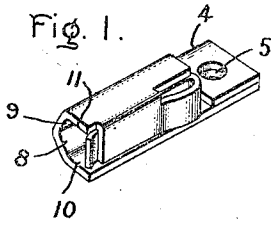


Fig. 2.

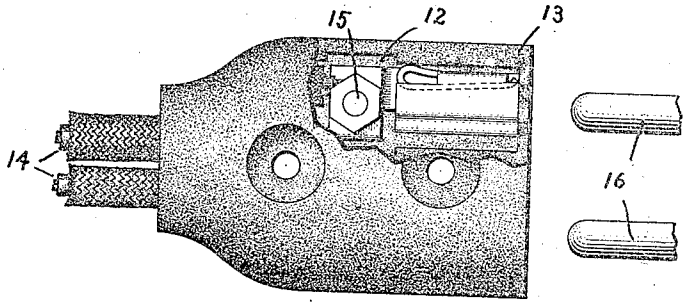


Fig. 3.

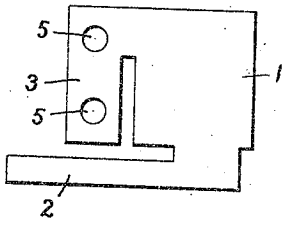


Fig. 4.

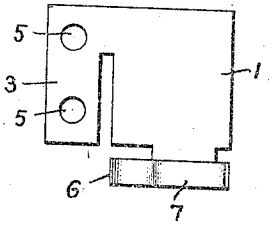


Fig. 5.

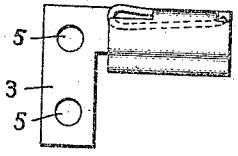
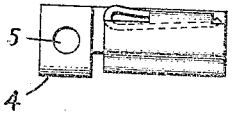


Fig. 6.



Witnesses:

J. Ellis Glen

Anthony Mark.

Inventor:

Henry Price Ball,

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His Attorney.

UNITED STATES PATENT OFFICE.

HENRY PRICE BALL, OF NEW YORK, N. Y., ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

CONNECTING-PLUG.

1,194,122. Specification of Letters Patent. Patented Aug. 8, 1916.

Application filed January 6, 1915. Serial No. 748.

To all whom it may concern:

Be it known that I, HENRY PRICE BALL, a citizen of the United States, residing in the borough of Manhattan, State of New York, have invented certain new and useful Improvements in Connecting-Plugs, of which the following is a specification.

My invention has reference to connecting plugs for electric conductors and the method of making the same, and has for its object the provision of a rugged, simple and efficient device of this character.

My invention relates more particularly to connecting plugs for connecting and disconnecting electric heating devices and the like with supply circuits. Plugs of the type to which my invention relates are usually handled by inexperienced operators, and they must, therefore, be able to withstand the careless handling which in practice they usually receive.

My invention provides a plug which is simple and efficient, and which is, at the same time, adapted to withstand severe usage.

For a fuller understanding of my invention, reference may be had to the accompanying drawing, which shows one embodiment thereof, and in which—

Figure 1 is a perspective view of a socket made in accordance with my invention; Fig. 2 is a plan view, partially broken away, of a connecting plug comprising the socket shown in Fig. 1, and terminal pins adapted to engage the socket; Fig. 3 is a plan view of a metal blank of suitable form to be shaped into a socket; Fig. 4 is similar to Fig. 3, but showing the spring finger bent back upon itself; Fig. 5 shows a socket formed from the blank; and Fig. 6 shows the device completed with the shank bent back upon itself.

Referring, now, to the drawings, and first to Figs. 3 and 4, 1 is a blank, preferably of sheet metal and of such form that when properly shaped it forms the socket comprised in my invention. The blank is formed with an elongated finger 2 and with a shank 3, which is preferably of sufficient length so that it can be bent back upon itself at 4 (see Fig. 6) to strengthen the portion to which the binding posts and the ends of the conductors are connected. The shank is provided with two openings 5—5 which register with each other when the shank is bent upon itself. A shank so formed is old in the art, and I claim no novelty therefor.

In shaping the blank into a socket, I first bend the spring finger 2 back upon itself at 6 to form a contact finger 7. I then shape the blank into a socket which is provided with two faces 8 and 9 opposite the contact spring and which are angularly disposed with reference to each other, so that when the terminal pin is received within the socket, the contact finger will press the same against the two sides 8 and 9 so as to form a good contact between the socket and pin. Preferably the socket is pentagonal in form, the two remaining sides 10 and 11 adjacent that side of the socket carrying the contact spring being parallel and their distance apart preferably being approximately the same as the diameter of the terminal pin which is to be received within the socket. It will be apparent that when the socket is made open at two adjacent edges, in the manner indicated, the socket as a whole will be more or less yielding so as to accommodate the pin terminal and maintain contact between the pin and the two sides 10 and 11. The sockets are received in recesses 12 in the insulating members 13 in the usual manner. The ends of the conductors 14 are secured to the inner ends of the sockets by binding posts 15.

It will be apparent that the socket comprised within my invention, which is formed of a single piece of metal, is easily and cheaply made, and that it engages the terminal pin 16 at a plurality of contact points, and thus forms a good electrical connection therewith.

In accordance with the provisions of the patent statutes, I have described the principle of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof; but I desire to have it understood that the apparatus shown is only illustrative and that the invention can be carried out by other means.

What I claim as new and desire to secure by Letters Patent of the United States, is:—

1. The method of making a socket for a connecting plug, which consists in forming a blank with an elongated spring finger, bending the finger back upon itself to form a spring contact, and then bending the blank to form a socket inclosing the spring finger.

2. The method of making a metal socket for a connecting plug, which consists in forming a metal blank with an elongated spring finger, bending the finger back upon itself to form a spring finger, and then bending the blank transversely of the bend in the spring finger and thereby forming a socket having a spring finger within the same and extending longitudinally thereof.

3. The method of making a socket for a connecting plug, which consists in preparing a blank with an elongated spring finger, bending the finger back upon itself to form a contact spring, and then forming the blank into a socket with the portions of the socket opposite the spring forming an angle.

4. A socket for a connecting plug formed with a contact finger bent back upon itself within the socket and having faces opposite the spring forming an angle whereby the spring contact is adapted to press the terminal pin which is received within the socket against at least two interior faces of the socket opposite the contact spring.

5. A socket for a connecting plug formed of a single piece of metal and provided with a spring contact finger bent back upon itself within the socket.

6. A socket for a connecting plug formed of a single piece of metal provided with a contact finger bent back upon itself within the socket and extending longitudinally thereof, the socket being provided opposite the spring with faces angularly placed with reference to each other.

7. A pentagonal socket for a connecting plug formed with a contact finger on one of the sides bent back upon itself.

In witness whereof, I have hereunto set my hand this 31st day of December, 1914.

HENRY PRICE BALL.

Witnesses:
E. M. WHELAN,
I. S. MENZIES.