A. TEN BOSCH.

WALL PLUG.

APPLICATION FILED OCT. 25, 1920.

1,387,814.

Patented Aug. 16, 1921.

2 SHEETS—SHEET 1.

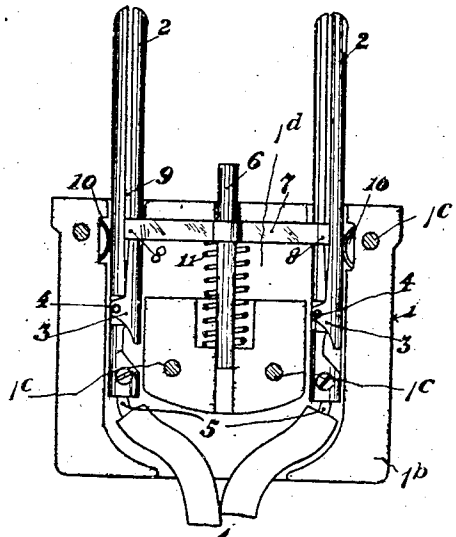


Fig. 1.

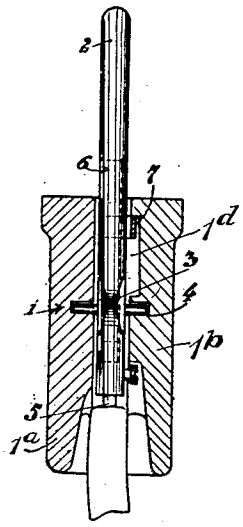


Fig. 2.

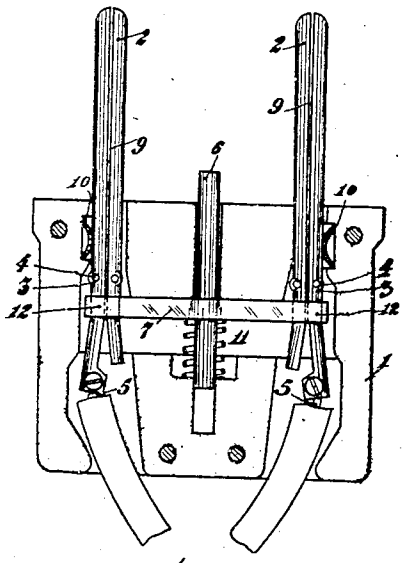


Fig. 3.

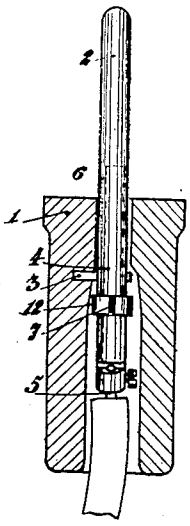


Fig. 4.

Inventor

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2 SHEETS—SHEET 2.

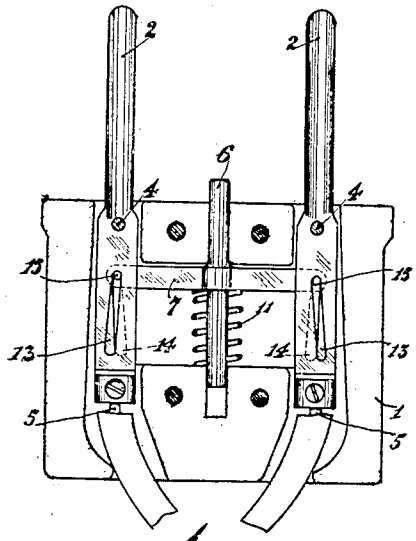


Fig. 5.

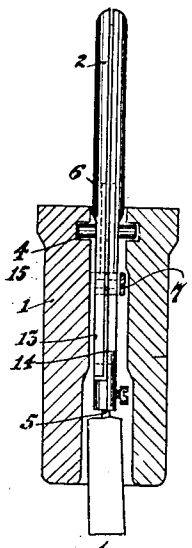


Fig. 6.

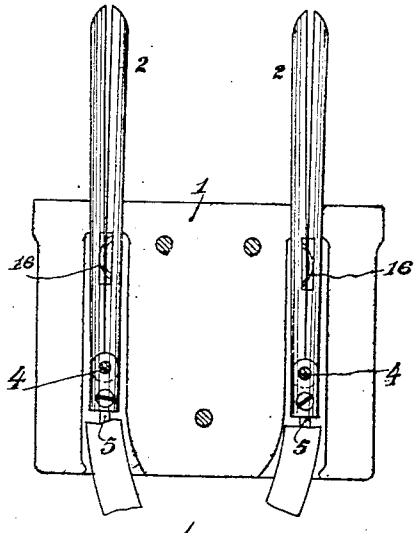


Fig. 7.

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UNITED STATES PATENT OFFICE.

ABRAHAM TEN BOSCH, OF THE HAGUE, NETHERLANDS.

WALL-PLUG.

1,387,814. Specification of Letters Patent. Patented Aug. 16, 1921.

Application filed October 25, 1920. Serial No. 419,480.

To all whom it may concern:

Be it known that I, ABRAHAM TEN BOSCH, subject of the Queen of the Netherlands, residing at The Hague, Netherlands, have invented certain new and useful Improvements in Wall-Plugs, (for which I have filed an application in Holland on July 23, 1919,) of which the following is a specification.

This invention relates to improvements in wall plugs for use in conducting electric currents and more particularly to wall plugs including split pins.

Prior to the present invention split pin plugs have been generally used in which the split in the pin was formed by saw cut but with the known construction, the bending of the sections of the pin on the opposite sides of the saw cut eventually cause the metal of the pin to crystallize at the points of bending, and as a result the metal lost its resiliency and often broke at the point of bending.

To overcome this defect in the generally used plug the pins have been made of two separate halves which by means of a socket are fixed together at the foot. With this construction there is less liability of breakage of the pins but there is the disadvantage that, when the pins are adjusted for a special contact socket difficulties arise in arranging the contact pins by bending them from each other in order that they may fit a different socket.

The primary object of the present invention is to furnish an improved plug which will overcome the disadvantages inherent in the devices heretofore used.

Another object of the present invention is to furnish an improved plug in which the sections of each pin will be automatically forced apart to provide an efficient contact between the pin and the wall of the socket into which it is adapted to be inserted.

Another object is to furnish an improved plug of simple and expensive construction, which will efficiently operate during a long period of time and which is not likely to get out of order.

With the foregoing objects outlined, and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawings and more particularly pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a longitudinal sectional view of one form of the plug forming the subject-matter of the invention.

Fig. 2 is a transverse sectional view of the same.

Fig. 3 is a view similar to Fig. 1 but showing a modification.

Fig. 4 is a view similar to Fig. 2 of the modification.

Fig. 5 is a longitudinal sectional view of another form of the invention.

Fig. 6 is a transverse sectional view of the plug shown in Fig. 5.

Fig. 7 is a longitudinal sectional view of still another form of the invention.

In the embodiment of the invention illustrated in Figs. 1 and 2, 1 designates a holder or casing formed of a suitable insulating material which as shown is made of two halves or sections 1^a and 1^b that are connected together by suitable fastening means such as pins 1^c. The abutting faces of the sections of the holder are recessed in order to form an internal chamber 1^d. Mounted in the chamber 1^d are the inner ends of split pins 2 and it will be noted that one half of each of the pins is provided with ears or lugs 3 which are connected to a pivot pin 4 that joins the two sections of the pin and has its ends mounted in recesses in the two halves of the casing 1. An electric conduit 5 is connected to the inner end of one section of each pin 2.

A push rod 6 has a portion normally projecting beyond one end of the casing 1, and this push rod is provided with a fixed cross head 7 having wedges 8 at its ends which slide in the spaces 9 between the sections of the pins 2, so that inward movement of the pin 6 will cause the wedges to force the outer ends of the sections of each pin 2 apart. Springs 10 are arranged in the chamber 1^d between the walls thereof and the outer surfaces of certain sections of the pins 2, and these springs act in opposition to the wedges 8 and tend to normally force the outer ends of the sections of each pin toward one another. A coil spring 11 is arranged in the chamber 1^d between a shoulder in said chamber and the cross-head 7 and this spring tends to force the wedges 8 toward the outer ends of the pins 2.

In the embodiment of the invention shown in Figs. 3 and 4, the construction is sub-

stantially the same with the exception that two pivot pins 4 are employed for each pin 2, and that the cross-head 7 instead of terminating in wedges is provided at its ends with rings 12 which engage the diverging inner ends of the sections of the pins 2. With this construction when the plunger 6 is moved inwardly the collars will force the inner ends of the sections of each pin toward one another and this will cause the outer ends of the sections to move apart.

In the form of the invention shown in Figs. 5 and 6 the sections of each pin are provided with diverging slots 13 and 14 which are engaged by pins 15 arranged at the ends of the cross head 7. With this construction inward movement of the plunger 6 will cause the pins 15 to slide in the diverging slots 13 and 14 and this will cause the inner ends of the sections of each pin to move toward one another while the outer ends of said sections move apart.

In the construction shown in Figs. 1 to 6, the plunger 6 is designed to be engaged by the wall of the socket in which the pins are inserted so that the insertion of the pins 2 into a wall socket will cause the pin 6 to abut against the wall of the socket and force the plunger 6 inwardly to cause the sections of the pins to move apart and provide an efficient contact with the walls of the socket.

In the embodiment of the invention shown in Fig. 7 the sections of each pin are normally forced apart by spring 16 and when the pins are inserted in a socket member, the wall of the socket will tend to force the outer ends of the section of each pin toward one another and compress the spring 16. After the pins have been placed in the sockets, the spring 16 will function to force the outer ends of the sections of the pins apart and thus make a good contact with the sockets. To facilitate inserting the pins 2 in the sockets, the outer ends of the pins are preferably pointed or tapered as shown in Fig. 7.

What I claim and desire to secure by Letters-Patent is:—

1. A wall plug including a holder, a pin mounted in said holder and having a portion projecting from the inner end of the same, said pin consisting of a plurality of sections and one section being movable relatively to the other, and means coöperating with said pin to move the movable section away from the other section of the pin and including a portion adapted to be automatically actuated when the pin is inserted in a socket.

2. A wall plug including a plurality of split pins, each pin consisting of a plurality of sections and one section of each pin being movable relatively to the other section, and means for causing the outer ends of the pin sections to be moved apart when the pins are inserted in a contact socket, said means including a member adapted to be automatically actuated when the pins are inserted in a contact socket.

3. A wall plug including a holder, a plurality of pins mounted in said holder and each consisting of a plurality of sections, one section of each pin being movable relatively to the other section of the pin, a cross-head coöperating with said pins to move the movable sections of the pins away from the other sections of said pins, and a sliding pin engageable with said cross-head and adapted to actuate the same when the first mentioned pins are inserted in a contact socket and the cross-head pin engages said contact socket.

In testimony whereof I affix my signature.

ABRAHAM TEN BOSCH.