

W. C. TREGONING.
ATTACHMENT PLUG FOR ELECTRIC WIRES.
APPLICATION FILED OCT. 10, 1914.

1,238,460.

Patented Aug. 28, 1917.

Fig. 13

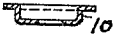


Fig. 14

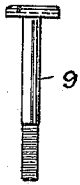


Fig. 1

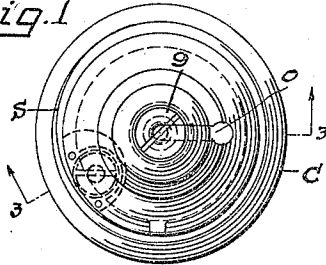


Fig. 15

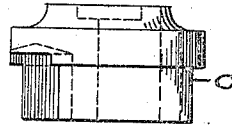


Fig. 2

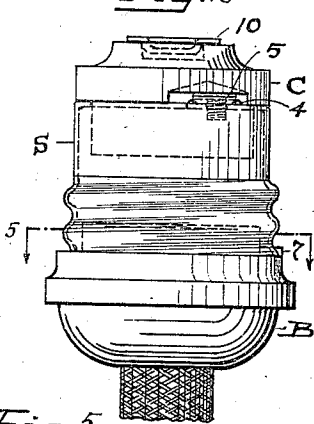


Fig. 3

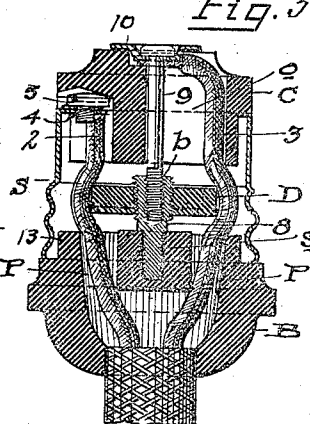


Fig. 4

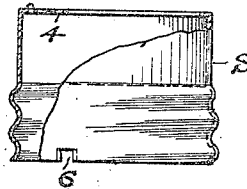


Fig. 5

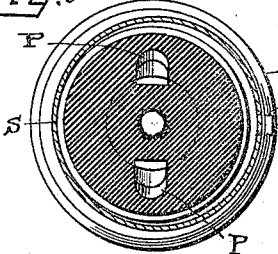


Fig. 8

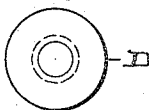


Fig. 9



Fig. 6

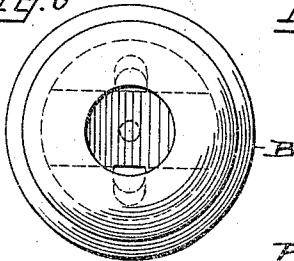


Fig. 10

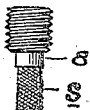


Fig. 11



Fig. 12

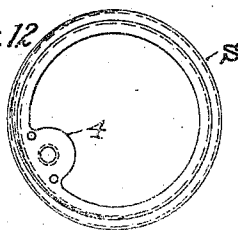
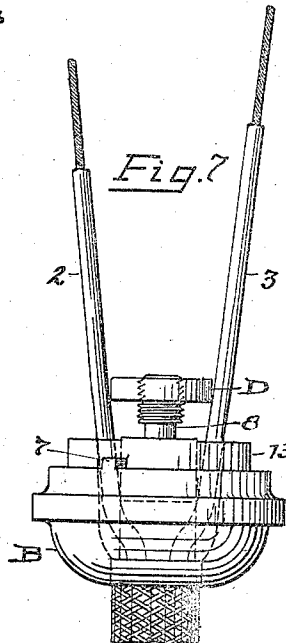


Fig. 7



Witnesses.

M. Schwan.
J. H. H.

Inventor.

William C. Tregoning

Fisher & Moser

Attys

UNITED STATES PATENT OFFICE.

WILLIAM C. TREGONING, OF CLEVELAND, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A
CORPORATION OF ILLINOIS.

ATTACHMENT-PLUG FOR ELECTRIC WIRES.

1,238,460.

Specification of Letters Patent.

Patented Aug. 28, 1917.

Application filed October 10, 1914. Serial No. 866,059.

To all whom it may concern:

Be it known that I, WILLIAM C. TREGONING, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Attachment-Plugs for Electric Wires, of which the following is a specification.

This invention has reference to attachment plugs for electric wires, all substantially as shown and described and particularly pointed out in the claims. One object of the invention is to provide a plug having means to relieve the terminals for the electric wires of pull and strain, said means being mounted on the base of the plug and located within the interior of the plug in a concealed and protected position behind the screw-shell. The plug comprises separable parts united by a single screw and locking of the wires is a preliminary step to assembly of the plug parts. The screw shell is also provided with only a single turn or two of screw thread located at the base of the plug to permit quick attachment and detachment of the plug. Other features of novelty reside in the plug as will hereafter appear.

In the accompanying drawings, Figure 1 is an end view of the plug; Fig. 2 is a side elevation; and Fig. 3 is a sectional view centrally of the plug. Fig. 4 is a detail view of the screw shell, partly sectioned. Fig. 5 is a cross section on line 5-5, Fig. 2. Fig. 6 is a bottom view of the base member. Fig. 7 is a side elevation of the base member and the wires therein preparatory to being fastened by the locking disk. Figs. 8 and 9 show plan and sectional views, respectively of the locking disk in detail, and Figs. 10 and 11 show a side elevation and bottom view, respectively of the screw stud alone. Fig. 12 is a plan view of the screw shell. Figs. 13 and 14, show the end contact and screw in detail. Fig. 15 is a side view of the cap member.

The invention as thus shown resides more particularly in the combination of parts whereby the terminal connections for the wires 2 and 3 in the plug will be relieved of any accidental or other strain or, in other words, the strain on said wires is all taken care of by novel and special means located

inside said plugs and independently of the binding screw or end fastenings for the said wires and which would always be in danger of pulling out and breaking the circuit if no such extra precaution were provided.

The present construction of plug therefore comprises a base member or thumb piece B, of a non-conducting or insulating material, such as hard rubber, fiber, porcelain or its equivalent for screwing the plug into a socket, an insulating support or cap or top C, and a binding or clamping disk D of the same or kindred material. The screw shell S is of a suitable conducting metal, such as brass, copper or the like and besides being threaded at its lower or inner end to make engagement in a plug socket has an inturned lip 4 at its top to attach or affix the conducting wire 2 by means of a binding screw 5. The cap C is recessed at its side to provide a space for the said wire screw and terminal, Fig. 3, and the said screw shell also has a notch 6 in its bottom edge adapted to register with and seat over a lug 7 on the base, thereby always bringing the screw shell into right working relations in respect to the base and locking the shell against independent rotation in respect thereto.

The said cap and screw shell are secured upon the base B by means of the specially constructed stud 8 and the clamping or binding screw 9, and said stud is a permanent part in the center of the said base and in the present construction is shown as having a roughened stem 8 which is cast in the said body so that it becomes like an integral portion thereof and prevents removal and turning of the stud. However, any suitable manner of securing the said stud in the base may be adopted.

The said stud has a head or enlarged upper portion provided with a screw threaded bore or socket b for the clamping screw 9 and an external thread for screw-threaded engagement of the disk D thereon. A conducting washer or contact 10 is seated centrally in the top of cap C and the screw 9 extends through said washer and cap and has a head seated on the washer; said screw is adapted to engage in the socket b of stud 8 to tighten and unite all the parts firmly together. The wire 3 extends through the same opening o in the cap which accommo-

dates screw 9 and the end of the wire is secured in place beneath washer 10 when the screw is tightened.

The disk D is an independent rotatable locking part designed to be tightened down on the wires 2 and 3 at the point where they emerge from the two off-center passages or openings P through the base B and to pinch or bind the said wires by bending them at a more or less abrupt angle against or upon the corners or edges of the said openings in said base. In this manner the wires will be effectually gripped and cannot be pulled out of the plug nor the plug as a whole stripped from said wires. The cable containing the wires is accommodated in the lower end of base B by a central opening, and in making the connections with the plug the cable is first stripped to separate the wires which are then inserted through openings P substantially as shown in Fig. 7. Disk D is then screwed down until the wires are crimped and locked in place. The screw shell is then seated centrally upon the base over the reduced or shouldered end 13 thereof and wire 2 is secured to the screw shell by binding screw 5. Cap C is then slipped into the upper end of the shell with wire 3 projecting through the top. The final step of uniting the parts consists of fastening the wire beneath the washer 10 around screw 9 and screwing said screw into stud 8 until complete locking is effected. Lug 7 on the base prevents the screw shell from turning independently and lip 4 on the screw shell prevents said shell from turning independently so that when the plug is screwed into a socket no separability of the parts will take place.

Respecting the disk D as compared with the openings P through base B for the wires, it will be seen that the disk is of sufficient diameter to overlap the said openings so that when it is screwed down as tightly as needed the wires are pinched at a short locking angle.

What I claim is:

1. An attachment plug comprising a threaded shell, an insulating thumb piece for screwing the plug into a socket, an insulating support, a center contact supported thereby, and conductor gripping means located within said threaded shell between said insulating support and thumb piece, and adjustable with respect to said thumb piece independently of said support whereby the conductors may be secured to the thumb piece before the said insulating support and thumb piece are assembled.

2. An attachment plug comprising a base member having openings for electric wires, a screw shell removably mounted on said base member, a cap for said shell, a central contact and screw for uniting said cap and the screw shell and base member, and a

wire-gripping member rotatably mounted between said base member and cap.

3. An attachment plug for electric wires comprising a base member, a screw shell, a cap, a central screw for uniting the aforesaid parts, and a screw disk rotatably mounted upon the inner end of said base member to clamp the electric wires thereupon.

4. An attachment plug for electric wires, comprising a base member having openings for the wires and provided with a screw threaded portion at its inner end, a screw disk engaged with said screw threaded portion to clamp the wires, and a screw shell and cap having terminal connections for the wires and surrounding and inclosing said disk.

5. An attachment plug comprising a base member having openings for electric wires, a wire-gripping device mounted upon the inner end of said base member in overlapping relations with said openings, a screw shell and cap, terminal connections for the electric wires, and means to secure said screw shell and cap removably upon said base member said wire gripping device being adjustable with respect to said base member independently of said cap whereby the wire may be secured to said base member before the said cap and base member are assembled with respect to each other.

6. An attachment plug for electric wires having a base provided with through openings for the wires, a screw-threaded stud fixed in said base midway between said openings and an insulating disk rotatably mounted on said stud to grip the wires between the edges of said openings and said disk.

7. An attachment plug comprising an insulated base having openings for electric wires, a projecting part at the inner end of said base having an internal screw-threaded socket and an external screw thread, a conducting shell, a cap having an end contact, a clamping screw engaged in said socket and with said cap and a wire-fastening member engaged with said projecting part in overlapping relations with said base and its openings to grip the wires.

8. An attachment plug for electric wires comprising a non-conducting base and a top member and a current-conducting screw shell between the said parts, means clamping said several parts together comprising a screw extending through said top member, a socket stud fixed in the base, and a fastening disk for the electric wires rotatable about said screw to lock said wires against said base member.

9. An attachment plug for electric wires comprising separate insulating top and bottom members and a conducting shell between the said members, a screw stud fixed

centrally at the inner end of said bottom member, a binding screw extending through said members and threaded in said stud, and an end contact part secured by said
5 binding screw centrally at the top of said cap and cord gripping means threaded on said stud.

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

WILLIAM C. TREGONING.

Witnesses:

R. B. MOSER,
E. M. FISHER.