

May 15, 1923.

1,454,858

W. E. PRICE

CONNECTION PLUG

Filed May 12, 1920

Fig. 1.

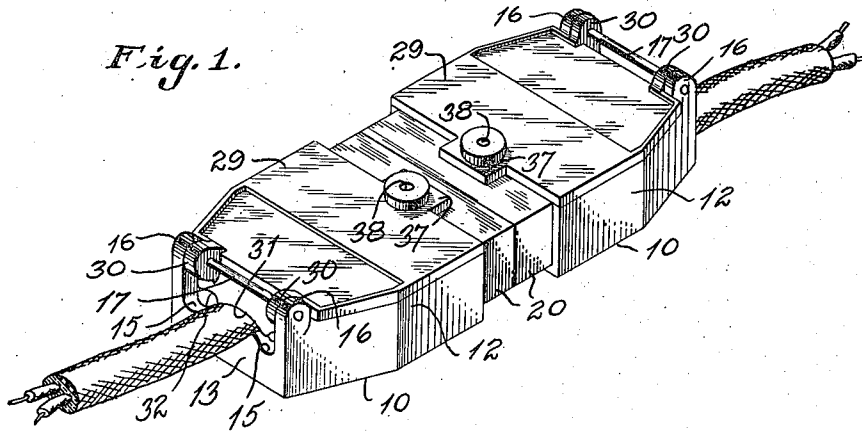


Fig. 2.

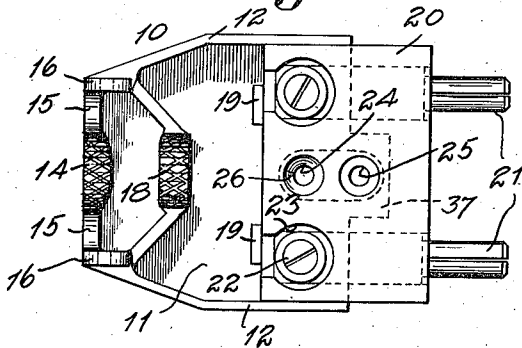


Fig. 3.

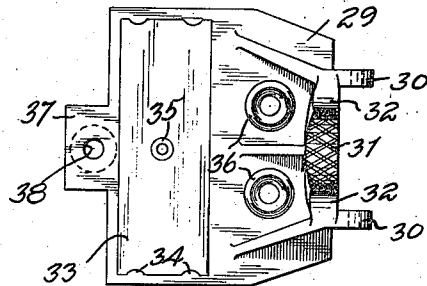


Fig. 4.

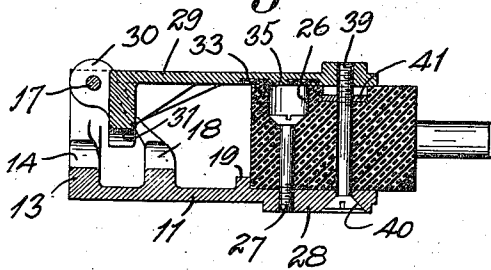
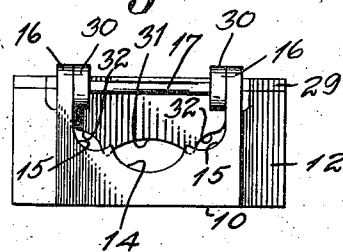


Fig. 5.



Inventor

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By *Arthur H. Marr* Attorney

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1,454,858

UNITED STATES PATENT OFFICE.

WILLIAM EDISON PRICE, OF NEW YORK, N. Y.

CONNECTION PLUG.

Application filed May 12, 1920. Serial No. 380,749.

To all whom it may concern:

Be it known that I, WILLIAM EDISON PRICE, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Connection Plugs, of which the following is a specification.

This invention relates to improvements in connection plugs and more particularly to that class of connection plug commonly known as stage plug.

The principal object of the present invention resides in the provision of a means for clamping the conductor cable at its point of entrance into the plug in such a manner as to relieve the binding screws and bear wire of undue strain.

Another object of the invention is to provide a connection plug having a hinged cover which may be swung to open position by the removal of a single screw thereby reducing the number of operations and amount of labor necessary to gain entrance to the device, to a minimum.

A further object of the invention resides in the provision of a casing wherein the insulating block may be readily removed to permit the same to be easily repaired or replaced in the event of injury or breakage.

A further and more specific object of the invention is to provide a device which may be permanently attached to a support in such a manner as to provide an out-let box.

With these and other objects in view the invention consists in the novel arrangement, construction and combination of parts which will be fully set forth in the following specification, claimed and illustrated in the accompanying drawings in which:—

Fig. 1, is a perspective view of a pair of connection plugs constructed in accordance with this invention and illustrating the same as they would appear when connected together.

Fig. 2, is a top plane view of one of the plugs showing the cover removed.

Fig. 3, is a plan view of the interior of the cover.

Fig. 4, is a longitudinal sectional view through the plug illustrating the cover in closed position and

Fig. 5 is a rear view of the plug illustrating in detail the cable clamping members.

Referring to the drawings in detail the

numeral 10 designates the main body of the device comprising a base or bottom 11 provided near one end with a reduced tapered extension and formed integrally with the base are the side walls 12. A rear wall 13 is formed at the reduced end of the tapered extension and formed centrally of said rear wall is a clamping jaw 14 which co-operates with the additional clamping jaws to be more fully hereinafter described when the device is used with an ordinary duplex cable.

Formed on the upper edge of the rear wall adjacent the jaw 14 are the smaller clamping jaws 15 and formed at the upper rear edge of the side walls 12 are ears 16 which are pierced to receive the pivot pin 17 of the device. A co-operating clamping jaw 18 is formed on the base or bottom 11 in direct alignment with the jaw 14 and is spaced inwardly for a short distance therefrom. A pair of stop lugs 19 are formed on the inner side of the bottom wall and act as limits to prevent inward movement of the insulating block to be more fully hereinafter described.

The insulating block above referred to is designated by the numeral 20 and has extending longitudinally thereinto, contact pins 21, the inner ends of which carry binding screws 22 which are contained within recesses 23 formed adjacent the rear edge of the block 20. This block is provided at its longitudinal axis with openings 24 and 25 and the opening 24 is provided with a counter-sink 26 to receive the head of a securing screw 27 by means of which the block is secured in place. The point of this screw is received in a boss 28 formed on the under side of the bottom 11 adjacent its forward edge.

The cover for the device is designated by the numeral 29 and is provided with pivot ears 30 at its rear end which fit between the ears 16 of the body 10 and are pierced to receive the pivot pin 17. A depending clamping jaw 31 is formed on the under side of the cover at its rear end and formed at opposite ends of the jaw 31 are the reduced clamping jaws 32 it being understood that the jaws 31 and 32 co-operate with the jaws 14 and 15 respectively. The cover is recessed adjacent its forward edge on its inner side to receive an insulating plate 33, the ends of which extend beneath upset portions 34 of the cover and an auxiliary securing means con-

sisting of a boss 35 is formed centrally of the recess in which the insulating plate 33 is fitted and as illustrated in Fig. 4, this boss is swedged upwardly so as to partially overlap the insulating plate and thereby hold the same against displacement.

A pair of bosses 36 are formed on the inner side of the cover 29 in such a manner that when it is so desired they may be drilled to receive attaching screws by means of which the device may be permanently secured to a support. The forward edge of the bottom 11 and the forward edge of the cover 29 each are formed with reduced extensions 37 which are pierced as at 38 to receive the cover securing screw 39 and it will be understood that the boss 28 on the bottom 11 is counter-sunk as at 40 to receive the head of the screw 39 while the opening 38 in the cover is internally threaded to receive the point of said screw. As illustrated in Fig. 4, the upper side of the block 20 is counter-sunk in axial alignment with the opening 25 to accommodate a suitable retaining washer 41 by means of which the screw 39 is prevented from falling from the openings 25 and 38 when the cover is loosened.

In operation it will be seen that the end of a cable is passed through the rear of the device between the jaws 14 and 31 and the ends of the cable secured beneath the binding screws 22. The cover is then closed and it will be seen that the cable will be firmly clamped so that no strain on the plug will be taken up by the jaws and not transmitted to the binding screws. Upon inspection of Fig. 4 it will be seen that when the cable is between the clamping jaws, any outward pull on the cable would tend to hold the cover on tighter, thus transmitting the undesirable pull on the binding screws to the cover member where it aids in maintaining the same closed. Also, when the cover is completely closed the depression in the cable member would in itself keep the cover closed as the jaw member 31 would have to be forced over the bent portion of the cable when the cover was raised. The clamping operation therefore becomes automatically effective with the

closing of the lid even though no screws are used to maintain the lid in closed position. In the event that the device is used with single strand cables it will be obvious that the same may be passed through the space between the jaws 15 and 32 and when the cover is closed the same clamping action is obtained. Obviously the plug may be readily changed for use on various cables by the loosening of the screw 39 so as to permit the cover to be swung open and thereby facilitating the rapid substitution of one cable for another.

While in the foregoing there has been shown and described my preferred embodiment of this invention, it is to be understood that certain minor changes in the details of construction, combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having carefully and fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. A connection plug comprising a casing and a cover in hinged relation and means upon said casing and cover for distorting a cable entering therebetween and means for retaining the cover in closed relation with the casing.

2. A connection plug comprising a casing, a cover hinged to one end of the casing, an insulating and contact carrying block closing the opposite end of the casing and clamping jaws carried by the casing and by the cover adjacent the hinge, for holding said cable in distorted clamped position.

3. A connection plug comprising a casing, a cover hinged to one end of the casing, an insulating and contact carrying block closing the opposite end of the casing, a pair of spaced cable clamps on the interior of the casing adjacent the hinge and a cooperating cable clamp carried by the cover adjacent its hinged end, said cooperating clamp lying in a plane intermediate the spaced cable clamps.

Signed at the city, county and State of New York, this 7th day of May, 1920.

WILLIAM EDISON PRICE.