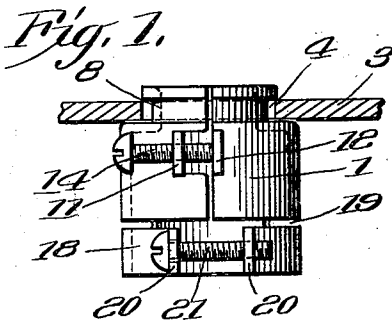
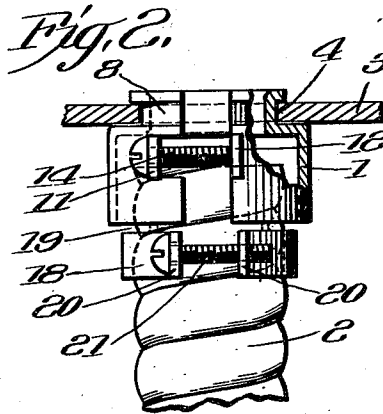
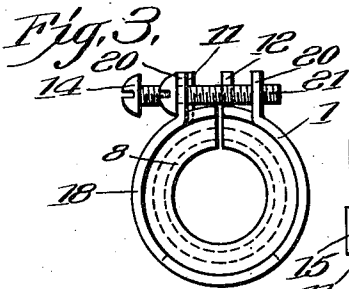
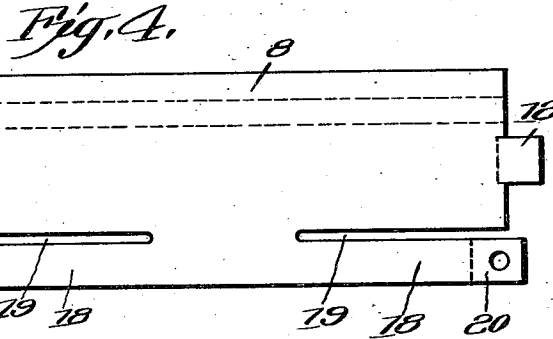
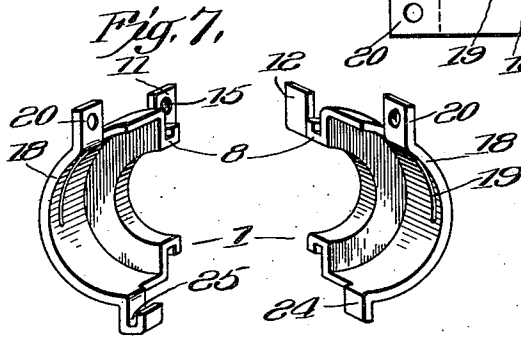
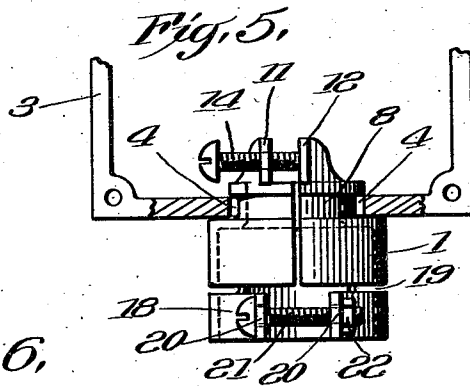
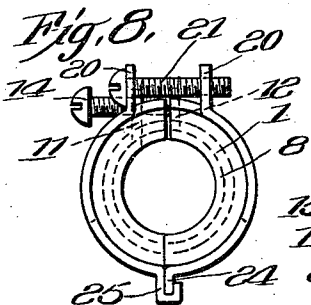
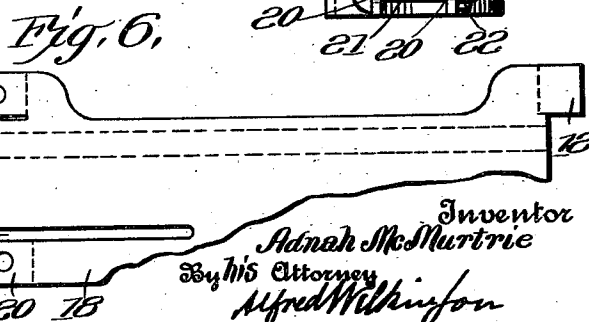


A. McMURTRIE.
 CONNECTOR FOR ELECTRICAL CONDUITS.
 APPLICATION FILED JULY 3, 1914.

1,243,748.

Patented Oct. 23, 1917.



Witnesses:
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UNITED STATES PATENT OFFICE.

ADNAH McMURTRIE, OF NEW YORK, N. Y.

CONNECTOR FOR ELECTRICAL CONDUITS.

1,243,748.

Specification of Letters Patent. Patented Oct. 23, 1917.

Application filed July 3, 1914. Serial No. 848,706.

To all whom it may concern:

Be it known that I, ADNAH McMURTRIE, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented new and useful Improvements in Connectors for Electrical Conduits, of which the following is a specification.

My invention relates to connectors for connecting conductors or electric conduits to outlet boxes or to any form of outlet or junction element and consists in a new form of connector in which a new principle is utilized for attaching the same securely to the outlet element.

My device may be made of steel, brass or other suitable metal in substantially cylindrical form, split down at least one side and provided near one end with a contracted neck to be inserted in one of the apertures of the outlet box. Suitable means such as a single screw fitted to ears are provided for the expanding of the neck so that the connector may be clamped in position to be secured very firmly to the box. At the other end means are provided for securing the connector to the end of the conduit, a desirable and simple means for so doing is a single screw fitted to two ears whereby that end of the connector may be contracted firmly to grip the conduit.

By this construction I have produced a connector which is simple, convenient and economical to manufacture and install and particularly adapted to its intended use. It may be made light and yet strong, and is preferably made of one piece and of sheet metal, though I do not intend to so limit it.

My invention is illustrated in the drawing herewith in which the reference numerals of this description indicate the corresponding parts in all the figures. Figures 1 and 2 are elevations showing my device set in position, respectively before and after the screws are tightened. Fig. 3 is a plan taken from the larger end. Fig. 4 is the flat blank as stamped from sheet metal before being reduced at one end and coiled to produce the complete connector. Fig. 5 is an elevation of a modified structure and Fig. 6 is the blank therefor. Fig. 7 shows an isometric view of my invention embodied in a two piece device showing the parts separated and Fig. 8 is a plan of same when assembled.

In the figures 1 indicates the connector, 2 the conduit and 3 the outlet box or outlet

element provided with apertures 4, with which the conduits communicate, and where they are firmly secured by means of the connector. The essential features thereof are the shell coiled over in substantially cylindrical form so as to afford a split along one side, permitting it to be expanded at one end, for engagement with the outlet-box all around the aperture and contracted at the other end to grip the conduit.

For that result the shell is reduced to form at the outer or outlet-box end, a neck 8 of a convenient size to be inserted in the aperture 4 of the box wall and the neck is preferably grooved to fit said wall. Adjacent said neck are the "expanding" ears 11 and 12, one of them, as 11, may be set back from the edge of the split to give space for the expanding screw 14. One of said ears is tapped with a screw-hole 15 for said screw, which abuts against the other ear to expand the connector for firm connection to the outlet-box as will be seen by a comparison of Figs. 1 and 2.

At the other end the connector is preferably formed with a strap 18 separated to a large extent by slots 19 from the body of the shell and having its ends terminating in the gripping ears 20 to which is fitted the gripping-screw 21, whereby the strap is contracted to grip the end of the conduit. A nut 22 may be used as shown in Fig. 5. This means for connection with the end of the conduit is simple and desirable but I do not propose to limit myself thereto for other connecting means may be substituted therefor.

The aforesaid description applies to all the figures but comparing Figs. 1 to 4 to Figs. 5 to 8 it will be seen that in the former figures the neck and neck-groove are at the very end so that the expanding-screw and expanding-ears are outside the outlet-box while in the latter figures the said expanding parts are at the very end so as to extend within the box. I am inclined to prefer the latter form, as more convenient, for manipulation under many circumstances.

I believe a connector formed of one piece is more desirable but my invention may be embodied in a two piece device as shown in Figs. 7 and 8. Here one piece is provided with a tongue 24 to fit a cooperating groove 25 on the other, whereby the two parts are conveniently assembled for adjustment and securing in position by means of the two

screws. Of course more screws may be used in this and the other forms but two only are necessary.

My invention obviates the use of lock-nuts and affords a device which may be installed in the minimum time. It also results in an economical article which may be made strong and effective, but of the lightest weight possible. Thus flat, thin sheet metal formed in few operations by ordinary die-work may be substituted for drawn metal and heavier cast though as aforesaid I do not limit myself to sheet metal.

One great advantage of my peculiar connector is that the electrical connection both with the outlet box and the conduit is good and permanent.

I have referred herein to a "conduit" and have indicated in Fig. 2 the spirally wound flexible armor or fibrous envelop of a conductor and I desire it understood that under the term "conduit" I mean to include any pipe, sheath or conductor that it may be desirable to connect to another part in any location. I have also specified "outlet" box and by that I mean to include any form of outlet or junction element or other part to which it is desirable to connect electrical conductors or conduits or other tubes for guiding electric lines to be attached to fixtures or translating devices or for other purposes.

As changes may be made in the form of my device without departing from the spirit thereof, it is intended that everything in this description and drawing shall be taken in an illustrative and not a limiting sense, as I do not desire to limit the following claims but to have them taken generically.

Having described my invention I claim,
1. As a new article of manufacture a connector of the character described having an expansible attaching portion integrally formed therewith, positively acting means to expand said portion and independent means for attaching the connector to a tubular member.

2. As a new article of manufacture a connector of the character described comprising a substantially tubular shell having an expansible attaching portion integral therewith, means for expanding the attaching portion to engage with the part to which the conduit is to be connected, independently acting means adjacent the other end to engage the conduit.

3. A connector for connecting electric conduits, electric cables and the like to outlet elements and the like comprising a substantially cylindrical resilient shell longitudinally split and having one end reduced to be inserted in an aperture in the outlet element, said end being grooved to fit the wall of said element around the aperture, means to expand said end firmly to engage with said wall and positioned exteriorly thereof and

means to compress the opposite end of the shell to grip the conduit.

4. A connector for connecting electric conduits and the like to outlet, or junction, boxes and the like, comprising a sheet metal blank of resilient metal formed into substantial cylindrical form with the longitudinal edges adjacent, and one end circumferentially grooved to be inserted in an aperture of the box and to fit the box wall around said aperture, expanding ears formed opposite each other adjacent said end, one on each of said longitudinal edges, an expanding screw fitted to a hole in one of said ears and having its tip abutting against the opposite ear, a strap adjacent the opposite end and partially detached from the body of the connector, the ends of said strap being outwardly bent to form contracting ears on opposite sides of said longitudinal edges and a screw fitted to holes in said contracting ears to draw them together.

5. A connector for connecting electric conduits and the like to outlet, or junction, boxes and the like, comprising a sheet metal blank of resilient metal formed into substantial cylindrical form with the longitudinal edges adjacent and having one end reduced and circumferentially grooved to be inserted in an aperture of the box and to fit the box wall around said aperture, corresponding expanding ears formed opposite each other adjacent said end, one on each of said longitudinal edges, an expanding screw fitted to a threaded hole in one of said ears and having its tip abutting against the opposite ear, a strap adjacent the opposite end and partially detached by circumferential slots from the body of the connector, the ends of said strap being outwardly bent to form contracting ears on opposite sides of said longitudinal edges and a screw fitted to holes in said contracting ears to draw them together, the outer of said holes being threaded and the inner, adjacent the head, permitting the screw to pass freely.

6. A device of the character described comprising a tubular member having one of its sides open, a pair of opposed ears one extending from each edge of the open side of said member, and a screw that is threaded through one of said ears and having its end bearing upon the other.

7. A device of the character described comprising a tubular member having one of its sides open, a pair of opposed ears one extending from each edge of the open side of said member, a screw that is threaded through one of said ears and having its end bearing upon the other, the member being provided with an external circumferential groove and an internal circumferential shoulder, and means for securing the end of a conduit within the tubular member and against said shoulder.

8. A device of the character described comprising a tubular member having an open side, a pair of opposed ears one extending from each edge of said open side, a screw that is threaded through one of said ears and having its end bearing upon the other, a second pair of opposed ears one extending from each edge of the aforesaid open side of the tubular member and spaced longitudinally therealong from the aforesaid pair of ears, one of the last mentioned ears having an opening, a screw that passes through said opening and is threaded into the other ear and having a head which engages the ear that is provided with an opening, the tubular member having an external circumferential groove and an internal circumferential shoulder as and for the purpose specified.

9. A device of the character described comprising a tubular member having an open side, a pair of opposed ears one extending from each edge of said open side, a

screw that is threaded through one of said ears and having its end bearing upon the other, a second pair of opposed ears one extending from each edge of the aforesaid open side and spaced longitudinally along the tubular member from the aforesaid pair of ears, the sides of the tubular member being cut away between said pairs of ears, one of the last mentioned ears having an opening, a screw that passes through said opening and is threaded into the other ear and having a head which engages the first ear, the tubular member having an external circumferential groove and an internal circumferential shoulder as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADNAH McMURTRIE.

Witnesses:

A. F. SASSEEN,
J. R. MILLWARD.