

G. C. THOMAS, JR.  
 ADAPTER FOR CONNECTING DEVICES.  
 APPLICATION FILED NOV. 10, 1920.

1,364,529.

Patented Jan. 4, 1921.

*Fig. 1.*

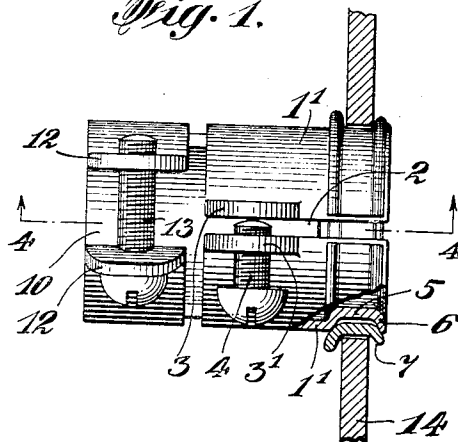


*Fig. 2.*

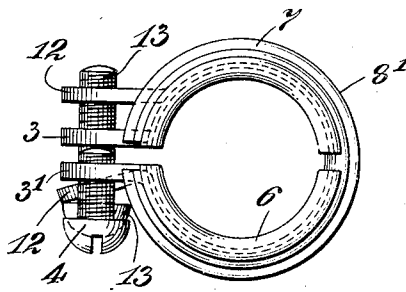


*Fig. 3.*

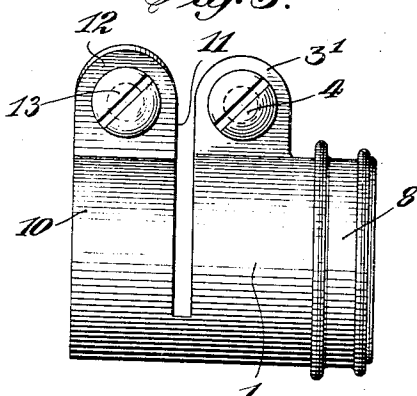


*Fig. 4.*

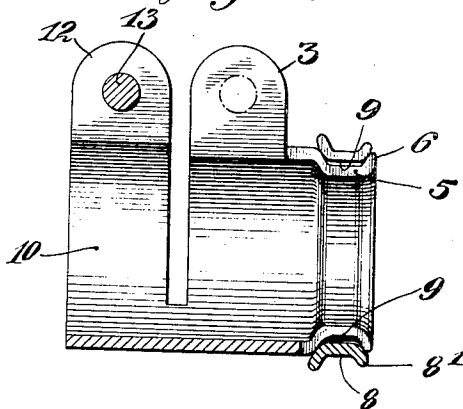


*Fig. 5.*

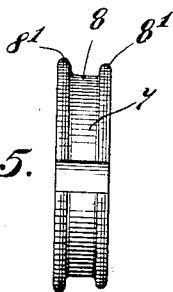
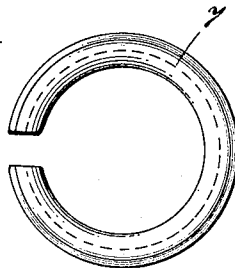


*Fig. 6.*



Inventor  
 George C. Thomas Jr.  
 By his Attorney  
*[Signature]*

# UNITED STATES PATENT OFFICE.

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## ADAPTER FOR CONNECTING DEVICES.

1,364,529.

Specification of Letters Patent.

Patented Jan. 4, 1921.

Application filed November 10, 1920. Serial No. 423,106.

*To all whom it may concern:*

Be it known that I, GEORGE C. THOMAS, Jr., a citizen of the United States, residing at Elizabeth, county of Union, and State of New Jersey, have invented certain new and useful Improvements in Adapters for Connecting Devices, of which the following is a specification.

My invention relates to devices for connecting electrical conduits, cables or the like to electric outlet boxes and the like. It relates more particularly to what I may term adapters for connecting devices and the combination of the same with such connecting devices. By the term "adapters" I mean appliances which may be used in connection with connectors to enable a connector of one size to be mounted within openings of other or different sizes in outlet boxes or the like.

There are at present a large variety of connectors on the market designed to fit conduit openings of different sizes in outlet boxes. The aim of my invention is to provide attachments or appliances for connectors, which may be made and applied to connectors in a very simple and cheap manner, whereby a single connector intended for use with one size of opening in an outlet box, may readily be used in connection with openings of a larger size. By the use of such a device, the variety of connectors which must be manufactured and kept in stock will be greatly reduced.

My present invention relates particularly to the well known expandible type of connecting device, in which the parts of a split shell, or the parts of a shell having a plurality of parts, may be forced apart after the shell has been inserted in an opening in an outlet box to force the same into binding engagement with the edges of the opening. With such a construction the extent to which a shell may be expanded is, of course, limited, so that in practice a given connector may not be used in connection with either of a pair of openings, one of which is considerably larger than the other.

In accordance with my invention, such connectors are supplied with expandible shells or rings which may be mounted in position on the connector. The connector is formed with a peripheral groove which is adapted to fit against the edge of the opening in an outlet box when the connector is

expanded. One of the expandible rings referred to is positioned on the connector, with an inwardly extending part or ridge on the ring fitting loosely in the groove on the connector. The ring is also provided with a grooved external surface. When it is desired to use a connector intended for a half inch opening in a wall, for example, in connection with a larger opening such as one of three-quarters inch diameter, an expandible band of suitable thickness is mounted in position as stated upon the connector. The connector with its surrounding band being positioned in the box wall opening, suitable means are applied for expanding the connector and the expandible ring surrounding the same, to cause the latter to bind firmly against the edges of the opening.

In order that my invention may be more clearly understood attention is hereby directed to the accompanying drawings forming part of this application and illustrating one embodiment of my invention. In the drawings Figure 1 represents a top plan view of a device embodying my invention, partly broken away and in section, the device being shown mounted within an opening in a wall, partly shown in section, Fig. 2 is an end elevation of the device, Fig. 3 is a side elevation of the same, Fig. 4 is a section taken on line 4-4 of Fig. 1, Fig. 5 is a top plan view of the expandible ring shown in Fig. 1, shown separately, and Fig. 6 is an end view of the same.

Referring to the drawings, the expandible shell 1 is formed of suitable metal and may comprise a split sleeve portion having two halves 1', 1', which are separated along the cut 2.

I have illustrated a suitable means whereby the parts 1' of the sleeve may be separated, to expand the connector, according to which upwardly extending lugs 3, 3', are provided at the edges of the cut 2. One of these lugs 3' is provided with a screw threaded opening in which is mounted a screw 4, the end of which is adapted to bear against the opposite lug 3 as an abutment. By turning the screw the parts of the sleeve may be separated in the manner referred to.

The sleeve 1 is provided with a peripheral inwardly extending groove or depressed portion 5 preferably formed adjacent the forward edge thereof, this groove having an upwardly extending lip 6 at its forward

edge. The groove may be formed by pressing the metal of which the sleeve is formed inwardly, or in any other suitable manner.

The expandible ring 7 may be a separate ring as shown of metal which is sufficiently resilient to enable the same to be expanded when pressure is applied to screw 4. This ring is provided with a groove 8 extending peripherally of the same on the outer side of the ring and an inwardly extending ridge or portion 9 on the inner face of the ring. The ring may conveniently be pressed inwardly so as to form the external groove and the inwardly extending portion in the same operation. The ring is adapted to fit loosely on the sleeve 1 with the inwardly bent portion 9 of the ring seated within the groove 5 of the sleeve. The ring may readily be positioned by forcing the same over the forward lip 6 of the sleeve and may be removed by forcing the same over the lip 6.

The shell 1 is preferably provided with suitable means for clamping the same to an electrical cable or conduit extended there-through. This clamping means may take the form of a clamping ring 10 formed integral with the sleeve portion 1', 1', of the connector and separated therefrom by a cut 11 extending part way around the periphery of the device. The free ends of the ring 10 are bent up to form lugs 12, 12 through which alined openings are provided, one of which is internally screw-threaded. A screw 13 is extended through the openings and may be drawn up to clamp a conduit or the like which passes through the connector.

When the device is to be used in connection with an opening in a wall 14 of an outlet box or the like, the device is inserted through the opening so that the groove 8 of the expandible ring will be in alinement with the edges of the opening. It should be understood that the opening is of a size greater than one in which the connector may readily be used if the expandible ring is not present. Upon tightening the screw 4 the parts of the connector will be separated and the ring 7 expanded therewith into firm contact with the edge of the open-

ing, the outwardly bent side portions 8', 8' of the ring engaging against the outer and the inner surfaces of the wall 14 adjacent to the opening.

It should be understood that my invention is not limited strictly to the details of construction particularly described, but is as broad as is indicated by the accompanying claims.

What I claim is:

1. In connecting devices, the combination of an expandible shell having a peripheral groove, an expandible ring mounted thereon with an inwardly bent portion seated in said groove and an external surface adapted to bind against the periphery of a conduit opening through which the device is inserted, and means for expanding said shell and ring.

2. In connecting devices, the combination of an expandible shell, an expandible ring mounted on the same, said ring and shell having interlocking devices for holding the ring, in its contracted condition, on the shell and said ring having a grooved outer surface, and means for expanding the shell and ring, to force the latter into binding engagement with the periphery of a conduit opening through which the device is inserted.

3. In connecting devices, the combination of a shell comprising a split sleeve portion and a clamping portion, the latter having screw means for clamping the same to an electric conduit or cable passed there-through, said sleeve portion having a peripheral groove, an expandible ring mounted about said sleeve portion with an inwardly bent ridge seated in said groove and an external surface adapted to bind against the periphery of a conduit opening through which the device is inserted, and means for expanding said shell and ring.

This specification signed and witnessed this 4th day of November, 1920.

GEORGE C. THOMAS, JR.

Witnesses:

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