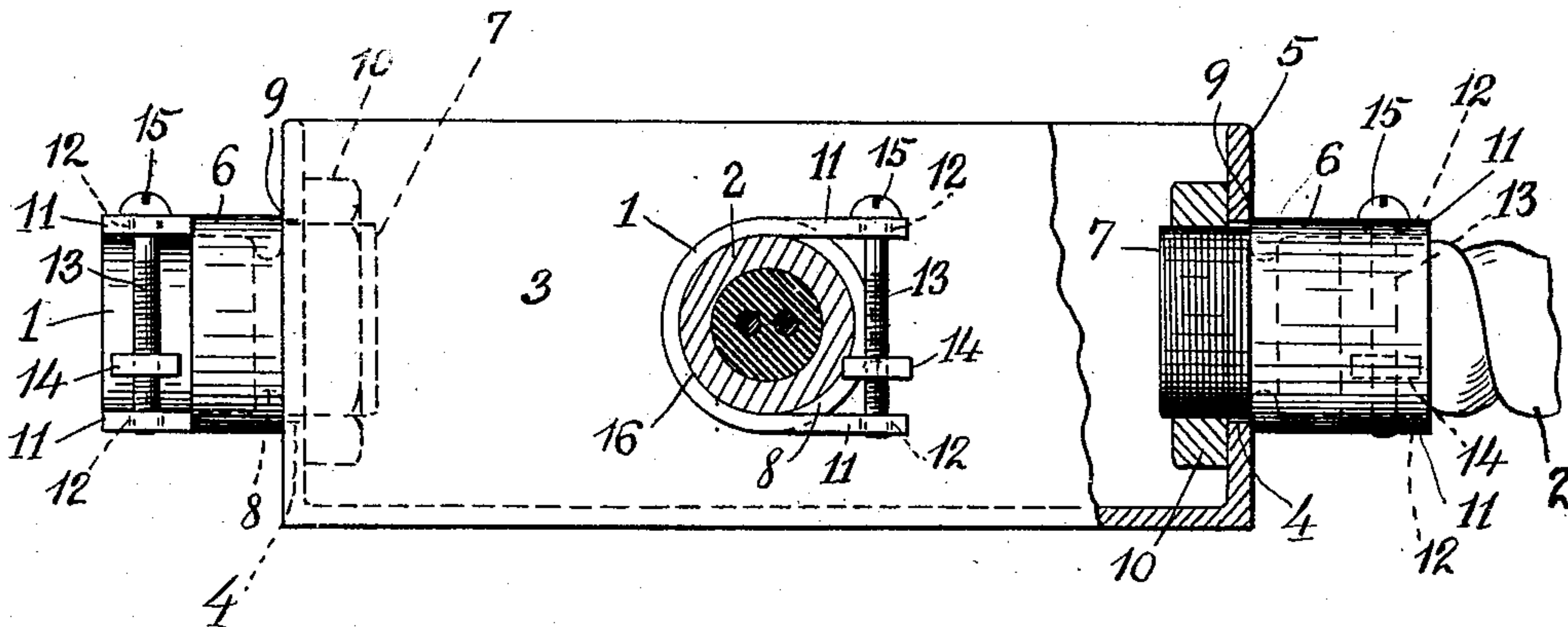
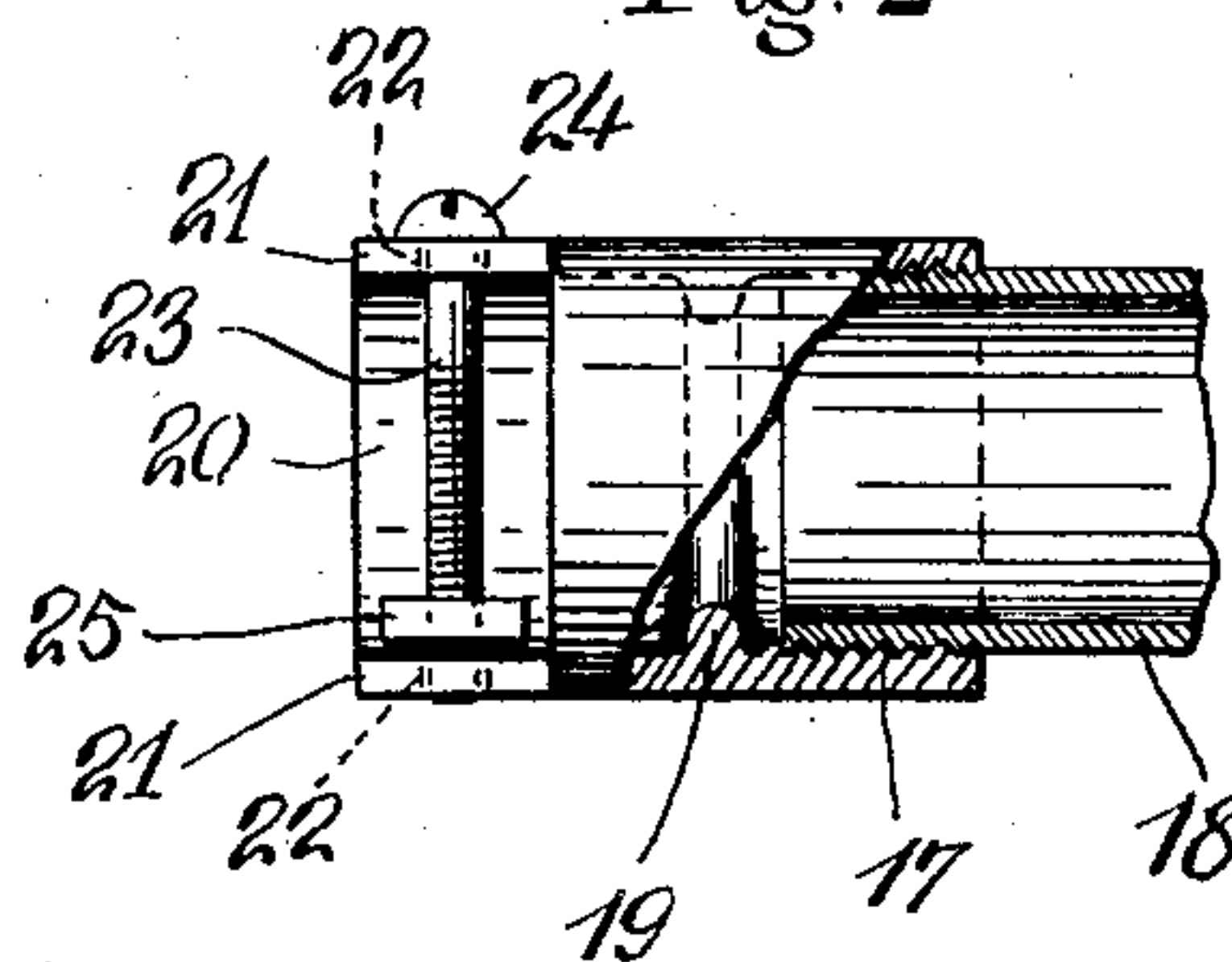


916,938.

Fig. 1



*Fig. 2*



Witnesses  
George A. Pafot.  
H. H. Mignery.

Robt. McKean Thomas Inventor

By *Li* Attorney

Attorney  
Alexander C. Bonafit



# UNITED STATES PATENT OFFICE.

ROBERT McKEAN THOMAS, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO THOMAS & BETTS COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## ELECTRICAL-BOX COUPLING.

No. 916,938.

Specification of Letters Patent.

Patented March 30, 1909.

Original application filed May 22, 1908, Serial No. 434,279. Divided and this application filed September 18, 1908. Serial No. 453,838.

*To all whom it may concern:*

Be it known that I, ROBERT McKEAN THOMAS, of Elizabeth, New Jersey, have invented certain Improvements in Electrical-Box Couplers, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings designating like parts.

This invention relates to electrical conduits, and is of special utility when used to couple together the abutting ends of the rigid or flexible metallic sheaths used to contain and protect from injury the electrical conductors constituting interior systems for electric lighting, and also to couple such sheaths to the outlet boxes or similar electrical conduit members of such systems, although I contemplate the use of my invention in any field to which it is adapted by the nature of my improvements.

By the term "sheath" I designate the protective armor whether the same has a separate identity or is formed as a unitary structure with the conductor, as in the case of the "armored conductors" well known in the art.

An important object of my invention is to provide a powerful device to engage the end of such a sheath, or any suitable portion of it, and retain it in adjusted position without the necessity for the expensive preliminary operation of threading the periphery of the sheath, or of threading apertures in the coupler itself to receive a threaded end of a sheath or to receive the binding screw which forms the retaining means, the nature of the coupling engagement in my improved device being such as to insure proper electrical connection between the several conduit members coupled.

Another object of my invention is to render available for use as such retaining and engaging member of the coupler a device commonly known as a "stove bolt", comprising a common headed screw and nut which can be made at very low expense, which is familiar in its mode of operation to the unskilled workman, and is reliable in operation wherever installed.

The various features of my invention will be illustrated and described fully in the accompanying drawings and specifications and pointed out in the claims.

In the drawings, Figure 1 is a view in side

elevation of a well known form of outlet box, and in connection therewith I have illustrated in various positions a box coupler in the construction of which my improvements have been embodied, parts being shown in section; Fig. 2 is a view in side elevation of a modified form of coupler to be more fully described hereinafter.

In the embodiment of my invention selected for illustration and description to enable ready and complete understanding of my improvements, I have shown a form of coupler commonly known as a "box connector", and the part designated by the reference numeral 1 is a metal strap or collar member, one of which is shown in side elevation at the right of Fig. 1, and another in end elevation at the center of Fig. 1, arranged to receive and surround partially a sheath 2, preferably near the end of the latter, the sheath in this instance consisting of a section of flexible metallic conduit formed of spirally wound strips, it being desired to couple this sheath to an outlet box 3 so that conductors can be led directly from the sheath into the box through an aperture 4 in the side wall 5 of the box.

In the instance illustrated the strap 1 is formed integrally with a body portion 6 having a reduced neck 7 to pass the wall aperture 4 and the reduced portion of the connector preferably terminates rearwardly in an interior rounded protective shoulder 8 to prevent abrasion of the conductors, and an exterior shoulder 9, to limit the entrance of the connector into the box, its neck preferably being threaded exteriorly to receive a retaining nut 10.

In accordance with my invention, in the preferred embodiment illustrated, I have left a gap in the strap 1 and extended the free ends or lugs 11 substantially parallel for a short distance, providing each end with an aperture 12, which may be a plain, unthreaded hole, and these holes serve to receive the binding or retaining device, comprising in the instance illustrated a common and well known form of "stove bolt" 13, with a nut 14, which lies between the lugs 11, while the head 15 of the bolt lies outside of one of the lugs and affords ready means for operation, the nut and head serving also to prevent accidental displacement of the bolt from the strap during shipment and prior to installation of the sheath. The engagement



of the nut with the sheath serves to prevent the bolt 8 from moving longitudinally, and therefore it cannot escape from the plain hole in the lug farthest from the head of the screw.

When constructed as above described, and after the sheath-end has been placed within the strap with its mouth as near the aperture 4 as convenient, preferably in contact with the rounded shoulder 8, and the bolt resting loosely across the gap, in the holes 12, the nut 14 being in the space between the periphery of the sheath and the lug farthest from the head 15, the latter may be engaged by a screw driver and turned to draw the nut 14 into engagement with the periphery of the sheath, wedging the nut between the sheath and the bolt, the strap serving at its portion 16 as a seat for the sheath, while the bolt resists the thrust of the nut, being held in place by the lugs 11.

The bite of the nut into the periphery of the sheath forms a very strong mechanical connection, and a proper electrical connection between the sheath, the nut, the bolt, the strap, and also with the electrical outlet box, through the shoulder 9.

Fig. 2 shows a modified form of coupling device having at one end a socket or interiorly threaded mouth 17 to receive the threaded end of a rigid armor tube 18, and preferably having a rounded inner shoulder or abutment 19, while at the other end the structure of the coupler includes a collar or strap 20, with lugs 21 having holes 22 in which plays a bolt 23 with head 24 and nut 25, these parts coöperating to bind together the coupler and a sheath such as that shown in Fig. 1, or any desired form of sheath which it may be desired to connect to the tube 18 by means of the coupler.

This application has been divided from my application for United States Letters Patent, Serial No. 434,279 filed May 22, 1908, in which will be found generic claims upon the invention claimed more specifically herein.

Having described my invention thus fully and suitable means for carrying the same into effect I wish it understood that I do not limit myself to any specific material, nor to the specific construction and arrangement of parts herein illustrated and described, nor in

general otherwise than as set forth in the claims read in connection with this specification.

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

1. An attachment of the class described; comprising an attaching portion to receive the end of a sheath; an actuating member provided with a binding member; and means to support said actuating member on both sides of said binding member with said binding member in position to be moved by said actuating member into binding engagement with said sheath, to couple together said sheath and attachment; said attaching portion being threaded to permit its connection with another electrical conduit member; substantially as described.

2. An attachment of the class described; comprising an attaching portion to receive the end of a sheath; an actuating member provided with a binding member; and means to support said actuating member on both sides of said binding member with said binding member in position to be moved by said actuating member into binding engagement with said sheath, to couple together said sheath and attachment; said attaching portion having a neck to traverse an aperture in a plate and means to secure said neck within said aperture; substantially as described.

3. An attachment of the class described; comprising an attaching portion to receive the end of a sheath; an actuating member provided with a binding member; and means to support said actuating member on both sides of said binding member with said binding member in position to be moved by said actuating member into binding engagement with said sheath, to couple together said sheath and attachment; said attaching portion having a threaded neck, an outer shoulder, and an inner protective shoulder; substantially as described.

Signed at New York in the county and State of New York this 30th day of July, 1908.

ROB. McKEAN THOMAS.

Witnesses:

ADNAH McMURTRIE,  
WM. H. McCORMICK.