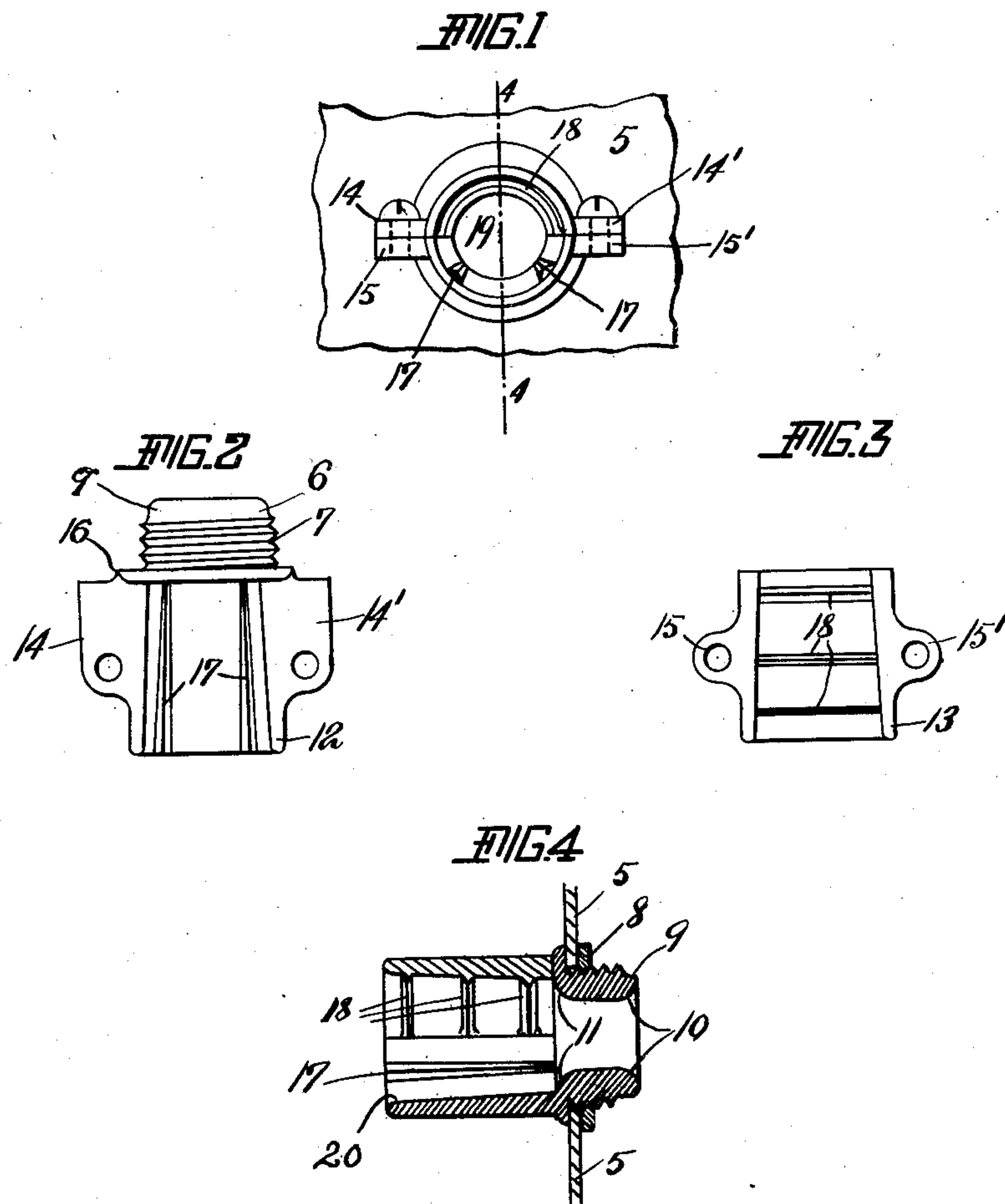


W. A. BONNELL.
INSULATING APPLIANCE.
APPLICATION FILED MAY 3, 1908.

929,543.

Patented July 27, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM ALEXANDER BONNELL, OF BROOKLYN, NEW YORK.

INSULATING APPLIANCE.

No. 929,543.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM A. BONNELL, citizen of the United States, residing in the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Insulating Appliances, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in insulating appliances, and is particularly adapted for use on outlet boxes.

More particularly, my invention comprises a coupling and nipple combined and adapted for use in connection with outlet boxes, for the purpose of securely binding a conduit or the like to the outlet box to prevent the same from shifting or slipping, and to insure against abrasion of the wires caused by vibration, etc.

To this end my invention comprises a two-part member adapted to be locked to the outlet box and having upper and lower jaws adapted to be fastened together and bind the conduit.

The idea of a two part coupling adapted to be locked to the outlet box and provided with upper and lower jaws is not new, and taken alone, forms no part of this invention, and is disclaimed.

Referring to the accompanying drawings, Figure 1 is an end view of my combination coupling and nipple, looking from the outside through the coupling into the box. Fig. 2 is a plan view of the coupling with the upper jaw removed. Fig. 3 is a plan view of the upper jaw, and Fig. 4 is a section on the line 4-4 of Fig. 1.

5 is the outlet box.

6 is the neck of the coupling provided with the threads 7 and adapted to be inserted into the outlet box 5 and fastened thereto by the nut 8. The interior and exterior surfaces of the neck of the coupling, it will be observed, are rounded off, like a nipple, so as to provide an offset, as shown at 9, and the rounded portion or nipple is shown at 10. The inside end of the neck on the interior of the coupling is also rounded in the form of a nipple as shown at 11. The main passage of the coupling is provided by the upper and lower jaws 13 and 12, respectively which jaws are preferably semi-cylindrical in cross section and are provided on each side with the projections 14-14' and 15-15'. The projections on the lower jaw 12 are prefer-

ably heavier than the projections on the upper jaw 13 and extend back to the enlarged intermediate section or shoulder 16 of the coupling. The interior of the lower jaw is preferably provided with longitudinal ridges 17 which are preferably tapered and may be larger in cross section at the mouth of the coupling than at the enlarged intermediate section, and the upper jaw 13 is preferably provided on the interior with transverse ridges 18 which may be graduated in size, beginning with the smaller ridge at the mouth of the coupling and increasing in size back to the enlarged intermediate section of the coupling. It has been found, that a tapered ridge has a decided advantage in gripping the conduit, and it has been found convenient to employ a combination of the longitudinal and transverse ridges in the jaws of the coupling.

The central passage 19 of the coupling is preferably tapered from the mouth of the coupling to the enlarged intermediate section, and the continuation of that passage provided by the neck of the coupling is also preferably tapered from the enlarged intermediate section toward the nipple or rounded portion 10, so that it will be seen that the smaller area in the passage provided by the coupling as a whole is at the base of the nipple or rounded portion 10, and that the jaws of the coupling will bind the conduit with greater tension at about the center of the coupling than at the mouth of the coupling. With this construction the liability for abrasion due to the handling of the wires within the outlet box is reduced to a minimum.

It has been found that in couplings heretofore constructed the spiral thread or groove of the interior of the jaws has been adapted to grip only one form of spirally armored conduit, whereas the present construction is adapted to grip and securely hold any form or construction of conduit, the size depending upon the size of coupling employed.

Further attention is called to the nipples 10 and 11 provided at the inner and outer ends of the neck of the coupling, a feature which insures positively against any wearing upon the insulation, the offset 9 also insuring against any rough edges which might be in a position to injure the insulation of the wires. In finishing these couplings, the inside edge 20 of the mouth of the coupling

is also finished smooth, and the whole preferably japanned so that there are no rough surfaces upon the entire coupling.

Various modifications may be made without departing from the spirit of the invention.

Having described the invention, what I claim as new and desire to secure by Letters Patent, is:

10 1. A combination coupling and bushing comprising a two part sleeve and a nipple, one part of said sleeve being connected to said nipple, one part of said sleeve being provided internally with longitudinal ridges,
15 and the other part of said sleeve being provided internally with transverse ridges.

2. A combination coupling and bushing comprising a two part sleeve and a nipple, one part of said sleeve being connected to said nipple, one part of said sleeve being provided with internal ridges at an angle to its axis, the other part of said two part sleeve being provided with internal ridges at an angle to the ridges on the first part of said two part sleeve, and means for connecting the parts of said sleeve. 20 25

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

WILLIAM ALEXANDER BONNELL.

Witnesses:

P. H. J. DALY,

THOMAS A. HILL.