Sept. 9, 1930. W. J. MAHAN 1,775,352

CONDUIT BUSHING

Filed March 23, 1927

Fig. 1.

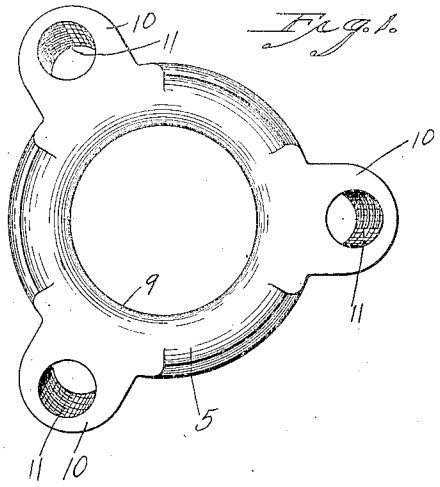


Fig. 2.

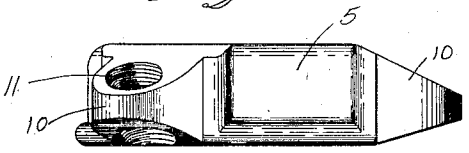


Fig. 4.

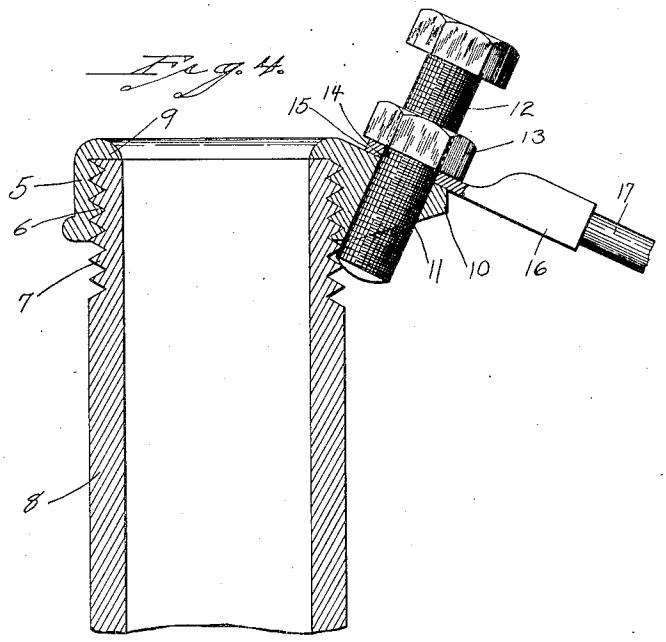


Fig. 3.

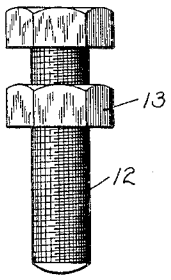


Fig. 5.

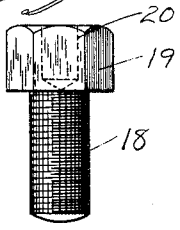
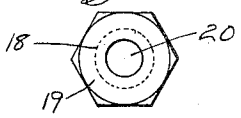


Fig. 6.



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UNITED STATES PATENT OFFICE

WILLIAM J. MAHAN, OF NEW HAVEN, CONNECTICUT

CONDUIT BUSHING

Application filed March 23, 1927. Serial No. 177,795.

This invention relates to an improvement in that class of electric conduit-fittings commonly known as "conduit-bushings."

The object of this invention is to produce a conduit-bushing constructed with particular reference to providing simple and reliable means for locking it in place upon the conduit and, at the same time, providing a superior electrical ground-connection for the same.

My invention further consists in a conduit-bushing characterized by its provision with a threaded passage inclined inward toward the axis thereof and a combined locking-and-grounding screw located in the said passage and adapted to pass therethrough into oblique engagement with the periphery of the conduit when the bushing is in place thereon.

My invention further consists in a conduit-bushing characterized as above and having certain details of construction and combinations of parts as will be hereinafter described and particularly recited in the claims.

In the accompanying drawings:

Fig. 1 is a top or plan view of a conduit-bushing constructed in accordance with my invention, with the combined locking-and-grounding screw omitted;

Fig. 2 is a view thereof in side elevation;

Fig. 3 is a detached view in side elevation of the combined locking-and-grounding screw, together with its clamping-nut;

Fig. 4 is a transverse sectional view of the conduit-bushing as installed upon a conduit, together with its locking-and-grounding screw and related parts;

Fig. 5 is a detached view in side elevation of another form which the combined locking-and-grounding screw may assume; and

Fig. 6 is a top or plan view thereof.

In carrying out my invention as herein shown, the conduit-bushing proper comprises a ring-portion 5 provided with internal threads 6 for engagement with the threads 7 at the outer end of a conduit 8 and with an inwardly-overhanging annular flange 9 adapted to seat against the outer end of the conduit, as shown in Fig. 4. This flange 9 is rounded in cross-section, as shown, so as to provide a smooth and non-abrading terminal surface at the outer end of the conduit through which the wires (not shown) extend in the usual manner.

At equidistant points about its periphery, the ring 5 is provided with three outwardly-extending tapered lugs 10, each of which is formed with a corresponding threaded passage 11 inclined inward toward the axis of the bushing and adapted to receive a combined locking-and-grounding screw 12, which latter mounts a clamping-nut 13, as shown in Figs. 3 and 4.

In the use of my improved conduit-bushing, it is screwed upon the outer end of a conduit, as shown in Fig. 4, so that one of its lugs 10 will point in the desired direction, after which the perforation 14, at the flattened outer end 15 of a terminal 16 located at the outer end of a ground-wire 17, is placed over the appropriate lug 10 in such position that its perforation 14 is in line with the inclined threaded passage 11 thereof. The screw 12 is now passed through the perforation 14 of the said terminal and screwed into the passage 11 until its end is brought to a firm oblique bearing against the periphery of the conduit 8, with the result that the conduit-bushing is firmly secured against rotation with respect thereto.

When the screw 12 has been firmly seated against the conduit as described, the clamping-nut 13, which is carried by the screw, is turned down until its under-face engages the outer face of the end 15 of the terminal 16, so as to bring the same into close electrical union with the bushing, and hence with the conduit 8.

Other methods of installing my improved conduit-bushing upon a conduit, other than the method just above described, may, obviously, be employed.

By my invention, therefore, the bushing is not only locked in place upon the conduit, but a thorough electrical connection is provided between the conduit and ground-wire 17, owing to the fact that the screw 12 "bites" into the periphery of the former and provides a direct electrical path from the same to the ground-wire 17, independent of the electrical

path through the bushing itself, which latter is not always dependable.

Instead of employing a clamping-nut such as 13 to connect the ground-wire 17 to the conduit, I may employ the form of locking-and-grounding screw shown in Figs. 5 and 6. This screw 18 is formed with the usual polygonal head 19, which latter is provided with an axial socket 20 into which the end of the ground-wire 17 may be soldered in the usual manner.

I claim:

1. An article of manufacture comprising an annular member provided with an internally threaded conduit engaging opening, and provided further in the annular portion with an additional internally threaded opening whose axis obliquely intersects the axis of the first named opening and lies in substantially the same plane and a threaded member in the said perforation adapted to engage the periphery of the conduit to cant the internal threads of the annular member into engagement with the conduit-threads.

2. As a new article of manufacture, a conduit-bushing consisting of an internally-threaded annular ring adapted to be screwed upon the externally-threaded end of a conduit and formed with an obliquely-disposed inwardly-inclined threaded screw-receiving passage opening through its outer face; and a combined locking-and-grounding screw installed in the said passage and obliquely engageable with the periphery of the said conduit so as to forcibly cant the said bushing with respect to the conduit to jam its threads into close contact with the threads thereof.

3. As a new article of manufacture, a conduit-bushing consisting of an internally-threaded annular ring adapted to be screwed upon the exteriorly-threaded end of a conduit and formed with an obliquely-disposed inwardly-inclined threaded screw-receiving passage opening through its outer face; an inwardly-overhanging flange formed upon the said ring and engageable with the outer end of a conduit; and a combined locking-and-grounding screw installed in the said passage and obliquely engageable with the periphery of the said conduit so as to forcibly cant the said bushing with respect to the conduit to jam its threads into close contact with the threads thereof.

4. As a new article of manufacture, a conduit-bushing consisting of an internally-threaded annular ring adapted to be screwed upon the externally-threaded end of a conduit and having a portion of its outer face inclined and pierced by an inwardly-inclined threaded screw-receiving passage; and a combined locking-and-grounding screw installed in the said passage and obliquely engageable with the periphery of the said conduit so as to forcibly cant the said bushing with respect to the conduit to jam its threads into close contact with the threads thereof.

5. As a new article of manufacture, a conduit-bushing consisting of an internally-threaded annular ring adapted to be screwed upon the exteriorly-threaded end of a conduit; a lug projecting radially outward from the said ring and formed with an inwardly-inclined threaded screw-receiving passage opening through its outer face; and a combined locking-and-grounding screw installed in the said passage and obliquely engageable with the periphery of the said conduit so as to forcibly cant the said bushing with respect to the conduit to jam its threads into close contact with the threads thereof.

6. As a new article of manufacture, a conduit-bushing consisting of an internally-threaded annular ring adapted to be screwed upon the interiorly-threaded end of a conduit; a lug projecting radially outward from the said ring and having an inclined outer face pierced by an inwardly-inclined threaded screw-receiving passage; and a combined locking-and-grounding screw installed in the said passage and obliquely engageable with the periphery of the said conduit so as to forcibly cant the said bushing with respect to the conduit to jam its threads into close contact with the threads thereof.

In testimony whereof, I have signed this specification.

W. J. MAHAN.