J. J. RUTLEDGE.

OUTLET BOX.

APPLICATION FILED APR. 10, 1919.

1,383,487. Patented July 5, 1921.

Fig. 1.

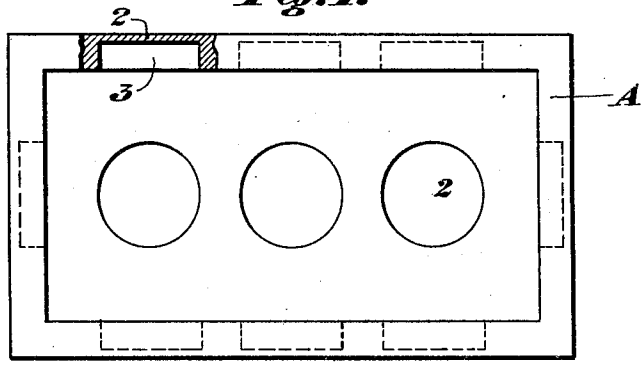


Fig. 2.

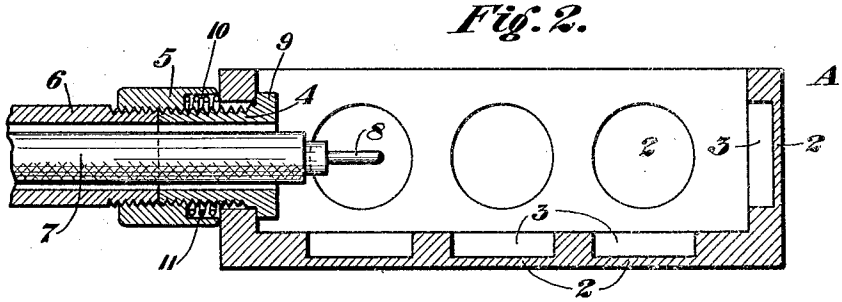


Fig. 3.

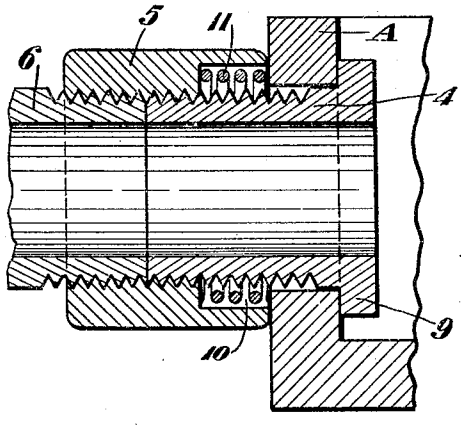
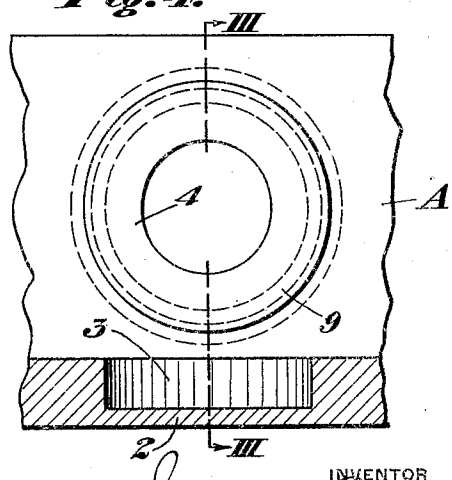


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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OUTLET-BOX.

1,383,487. Specification of Letters Patent. Patented July 5, 1921.

Application filed April 10, 1919. Serial No. 288,921.

To all whom it may concern:

Be it known that I, JAMES J. RUTLEDGE, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Outlet-Boxes, of which the following is a specification.

My invention consists of an improvement in outlet boxes of the class commonly used for the purpose of making electrical distribution by means of conductors leading into and out from the box, in any desired direction.

The objects in view are to provide a box of this character having ample facility for making the connections in any direction, utilizing the usual "knock-out" apertures which are normally closed by a comparatively thin piece of metal forming a flush continuation of the outside of the box, and opened only where it is desired to make one or more connections. The invention also refers to an improved means for connecting the conductor conduits to the wall of the box in an efficient, reliable and serviceable manner.

In the drawings illustrating one preferred embodiment of the invention,

Figure 1 is a plan view partly broken away of the box without any connections;

Fig. 2 is a central longitudinal sectional view through the box, showing a conductor and its conduit connected through one of the knock-out openings at one end;

Fig. 3 is a similar enlarged sectional detail view indicated by the section line III, III of Fig. 4; and

Fig. 4 is a partial sectional interior view in elevation, showing the inner portion of the connecting nipple.

The box A, which is usually rectangular in shape, as shown, is preferably made of either cast or pressed metal, of any suitable dimensions, and is provided as to its sides, ends and bottom, or either, with a number of comparatively thin integral closures 2 at the outer wall portion, outwardly beyond a blank opening 3, circular in form and of a diameter adapted to receive the connecting flanged nipple 4, after the wall 2 has been severed, as will be readily understood.

Nipple 4, which is provided around its inner terminal portion with a retaining flange 9, also preferably circular in shape, is exteriorly threaded and extends through the opening 3 to the outside of the box and abuts against the end of a similarly threaded conduit 6, whereby to provide a continuous interior opening for the insulation 7 of the conductor wire 8, which is introduced to the interior of the box, as in Fig. 2.

Nipple 4 and conduit 6, of the usual pipe form, are connected together by a threaded union or coupling 5, the inner end of which is preferably screwed up tight against the outer wall face of box A. The inner portion of coupling 5 is annularly recessed, as at 10, providing clearance for the insertion of a coiled spring 11, as clearly shown in Figs. 2 and 3. The purpose of such spring is to act, under compression, to prevent loosening by reverse rotation of the coupling 5 in the manner of a nut lock, so that when the coupling is screwed up tight and the spring 11 is tightly compressed, the several parts will be fixedly held in position.

The number of connections made in this manner may be varied, as desired, utilizing as many of the openings 3 as are required, the remaining openings being left in their original condition with the outer wall 2 intact, so that the exterior of the box will present continuous, plane surfaces. Additional connections may be made at any time in the same manner as above described.

The advantages of the invention will be readily understood and appreciated by those familiar with the art, and it provides a simple convenient means for making electrical connections and distribution without the necessity of providing a number of special standard designs for the various joint distributions commonly necessary in electrical installations and distribution.

It will be understood that the box may be made in various sizes and capacities, and that the number and arrangements of the openings 3 may be varied to suit the intended conditions of use. Thus, for instance, any suitable standard coupling may be substituted for the union 5 as an elbow or T if it is desired to deflect the conductor conduit beyond the box in any desired direction. Also, that the invention may be changed or varied in design or construction or in other

details by the skilled mechanic, but that all such changes are within the scope of the following claims.

What I claim is:—

1. The combination with an outlet box having a wall provided with continuously flat outer and inner faces and a circular opening therethrough, of an integral one piece hollow coupling connection extending through the circular opening provided with an inner laterally extending flange engaging the inner flat face of the box around its opening and an outer threaded portion extending through and beyond the opening, a conduit in alinement with said coupling abutting thereagainst and having an inner threaded connecting terminal, an interiorly threaded sleeve coupling engaging the threads of the flanged coupling and of the conduit respectively, and having an inner annular shouldered recess extending backwardly from one end providing a comparatively thin contacting end portion for tight engagement against the outer face of the box, and a spiral locking spring inserted in said recess bearing by one end against the shoulder of the recess and by the other end against the flat face of the outer wall of the box and compressed to its maximum limit when the sleeve coupling is screwed up tight against the box and with the flange of the coupling connection in corresponding tight engagement with the inner face of the box.

2. In a device of the class described, an integral one piece hollow coupling connection adapted to extend through a circular wall opening provided with a laterally extending flange and an outer threaded portion, a conduit in alinement with said coupling abutting thereagainst and having a threaded connecting terminal, an interiorly threaded sleeve coupling engaging the threads of the flanged coupling and of the conduit respectively and having an inner annular shouldered recess extending backwardly from one end providing a comparatively thin contacting end portion for tight engagement against a bearing face, and a spiral locking spring inserted in said recess bearing by one end against the shoulder of the recess and adapted to be compressed when the coupling is screwed up tight against the outer bearing face of a wall and to tighten the flange of the coupling against the other side thereof.

In testimony whereof I hereunto affix my signature.

JAMES J. RUTLEDGE.