Dec. 20, 1960 E. T. RILEY ET AL 2,964,980

WRENCH FOR TIGHTENING JAMB NUTS IN JUNCTION BOXES

Filed May 2, 1958

FIG. 1

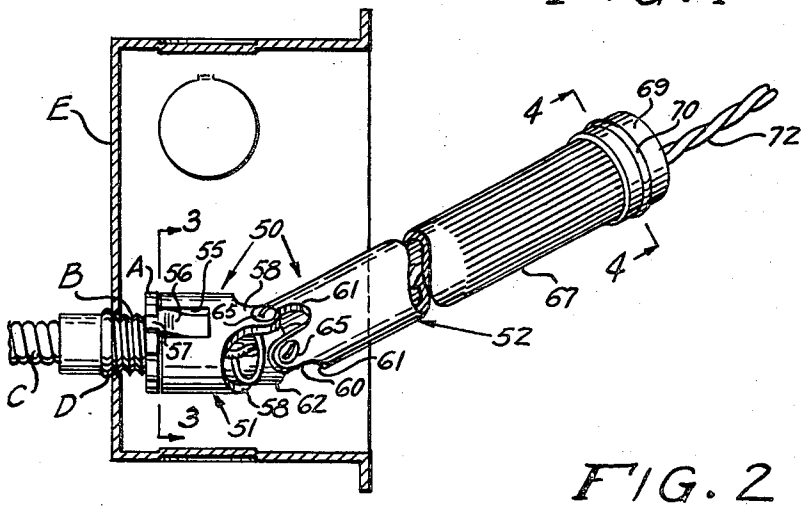


FIG. 2

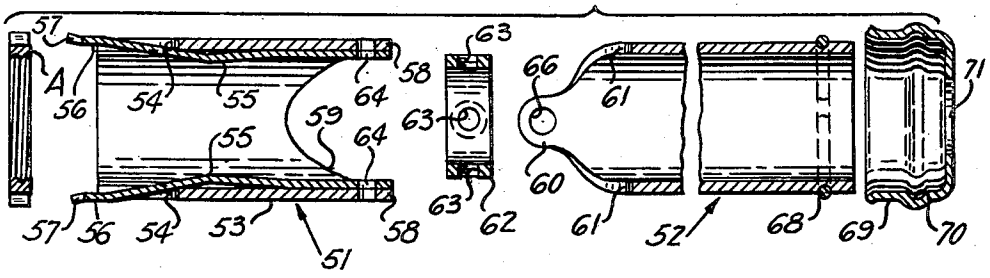
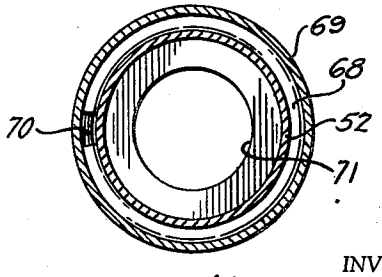


FIG. 4



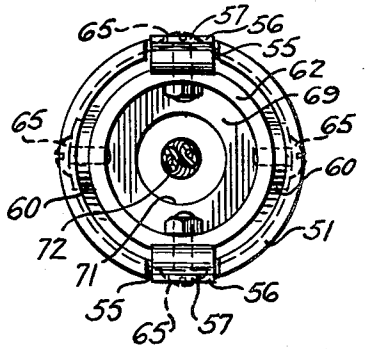


FIG. 3

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WRENCH FOR TIGHTENING JAMB NUTS IN JUNCTION BOXES

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1 Claim. (Cl. 81—90)

The present invention relates to implements such as wrenches and has as its principal object the provision of a device for the more ready applying and removing of jamb nuts on the inner ends of conduits projecting into electrical junction boxes.

This invention is an improvement on our co-pending application Serial No. 665,688, filed June 14, 1957, now abandoned.

An important object of the present invention over my co-pending application is to provide a wrenchlike device which is capable of yielding to a greater degree laterally of its head structure, than that of the structure represented in the copending patent application.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings:

Figure 1 is a fragmentary side elevational view, showing a junction box in vertical section, with a conduit entering the same and the improved wrench engaging the jamb nut thereon.

Figure 2 is an exploded longitudinal sectional view through the jamb nut, wrench head, universal ring, handle and cap, with the handle shown fragmentarily.

Figure 3 is a front end elevational view of the head of the wrench.

Figure 4 is a cross-section taken on line 4—4 of Figure 1.

Referring to the drawings wherein like numerals designate like parts, it can be seen that numeral 50 generally refers to the improved wrench, this wrench being of sectional construction and made up of a head 51 and a handle 52.

This wrench is to be used in conjunction with conventional structure, represented by notched jamb nut A capable of being fed on the threaded fitting B of an electrical conductor conduit C, this fitting having a flange D for engaging the outside of a wall of the usual junction box E, while the jamb nut A is to be fed inwardly against the inside of the same wall, on the fitting B to firmly clamp the said fitting and conduit in place in connection with the box E.

As clearly shown, especially in Figure 2, the head 51 consists of a tubular shell 53, having at least a pair of notches 54 in the forward end thereof.

Numerals 55, 55 denote a pair of elongated spring fingers, which are disposed longitudinally within the head 51 and have their forward ends defining tips 56, which flex into the notches 54 and extend beyond the forward end of the head 51, as in the manner substantially shown in Figure 2.

These tips are bent slightly outward as at 57, their forward terminals to permit easing of the tips 56 over the jamb nut A and within the notches thereof, when the wrench is being applied, either for the removal or application of the jamb nut A.

It will now be observed that the rear end of the head 51 has a pair of rearwardly disposed lugs 58, 58 and

where these lugs 58, 58 merge with the head 51, the head is alcoved inwardly as at 59, to make clearance for lugs 60, 60 on the opposed end of the handle 52, and where the lugs 60, 60 of the handle 52 merge with the body of the handle, alcoves 61, 61 are formed. The alcoves 61, 61 of the handle 52 are to permit reception of the lugs 58, 58 of the head 51, while the alcoves 59, 59 of the head 51 are for the purpose of receiving the lugs 60, 60, this to the end that the handle 52 can be actuated from an angle of ninety degrees with respect to the longitudinal axis of the head 51, in such instances where work structure may permit such angular disposition of the handle 52.

As can be seen, there is a universal ring 62 having four threaded openings 63 therein, at ninety degree intervals.

The lugs 58, 58 and the inner ends of the spring fingers 55, 55 are formed with openings 64 for receiving screws or bolts 65, which serve to pivot the ring 62, to the head 51, and likewise, the lugs 60, 60 of the handle 52 are formed with openings 66 through which like bolts or screws are disposed and into corresponding openings 63 of the ring 62, as shown in Figure 1. Thus the head structure 51 and the handle structure 52 are universally connected together and with the alcoves 59, 61, a considerable (approximately ninety degrees) disposition of the handle 52 with respect to the head 51 can be accomplished, in working in tight quarters.

The handle 52 may be formed with longitudinal grooves or knurled as as 67 to facilitate a good grip of the hand on the handle.

The butt end portion of the handle 52 has circumferential groove for receiving a split spring ring 68, over which a cap 69 having a groove 70 therein can be snapped. This cap has an opening 71 and the handle 52 is hollow, so that a conductor cord 72 can be trained through this wrench from the conduit C.

Let it be understood however, that the cord 72 may be otherwise trained, for instance through the head 51 and the handle 52 made solid, with a polygonal shaped recess in the butt end to receive a drive connection for the wrench.

It can be seen, that with the jamb nut A on the threaded fitting B, the spring fingers 55 can be engaged over the nut and in the notches thereof, after which, especially in tight quarters, the handle 52 can be swung at an angle with respect to the head and rotated so as to impart rotary motion to the head 51.

It is to of course be understood that this wrench may be used for many other purposes aside from the jamb nuts of electrical junction boxes.

While the foregoing descirption sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention what is claimed as new is:

A wrench comprising a head structure, a handle structure and a universal connection between the two structures, said universal connection comprising a ring, the opposed ends of the structures being provided with lugs, pivotal connections between the lugs and the ring, said head structure and handle structure each being formed with alcoves between the lugs to permit approximately ninety degrees angularity use of the handle with respect to the head, said head structure being provided with spring fingers for engaging a recessed nut, said head structure and handle structure being hollow so that a conductor cord can be threaded therethrough, a removable cap for one end of the handle having an open-

ing therein through which said conductor cord can extend, said handle having a circumferential groove therein adjacent the end thereof for receiving a split spring ring and said cap having a groove therein to receive said ring when said cap is snapped into position over the end of said handle.

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