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J. C. DEARING

3,232,148

TOOL FOR HOLDING NUT FASTENERS

Filed June 3, 1963

FIG. 1

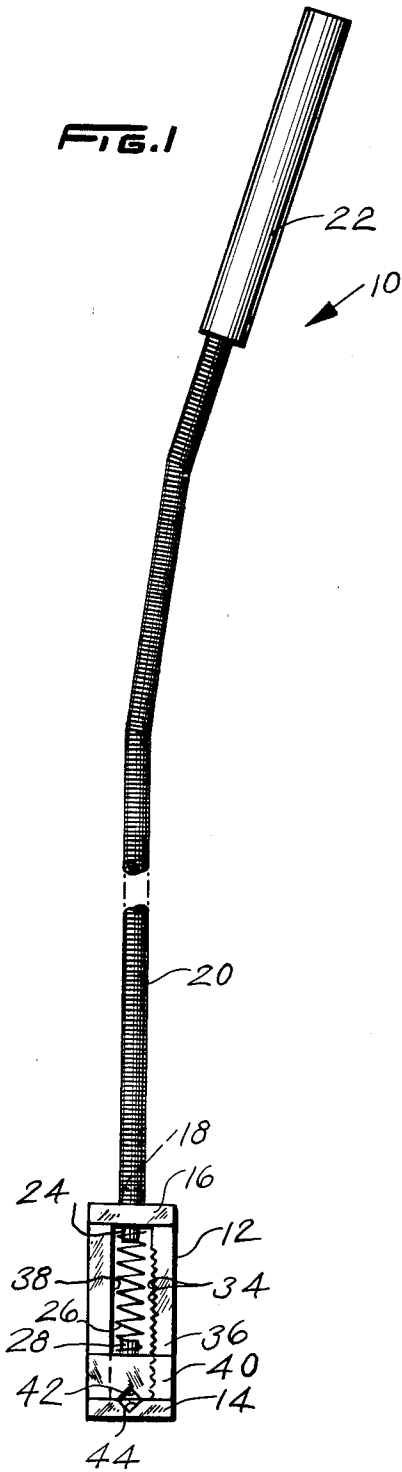


FIG. 2

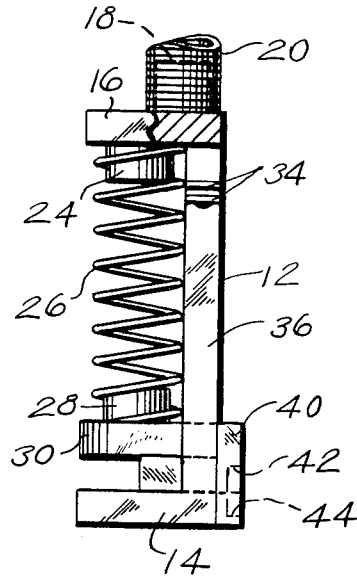
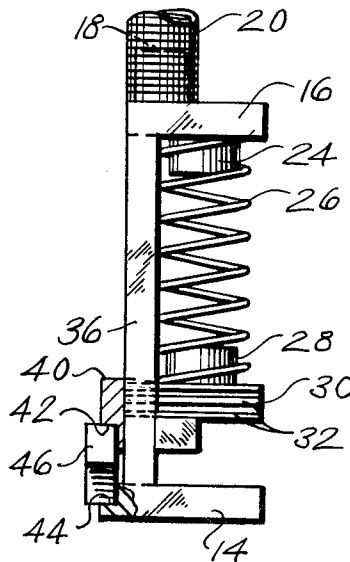


FIG. 3



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TOOL FOR HOLDING NUT FASTENERS

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1 Claim. (Cl. 81-13)

This invention relates to hand tools and more particularly to a hand tool which will aid mechanics and the like in applying nut fasteners or bolts.

It is a primary object of the present invention to provide a tool for holding nut fasteners which will have a flexible handle in order to hold a nut secure in hard to reach areas where the mechanic or worker cannot get his hand into the spot to hold the nut fastener while he starts the bolt.

Another object of the present invention is to provide a tool for holding nut fasteners which will have a flexible handle that will be flexible to the point where it will stay in the placed position until the worker desires to change it by manual manipulation.

A further object of the present invention is to provide a tool for holding nut fasteners which will hold a nut fasteners in its frame and prevent it from turning while the bolt is being threadingly received by the nut fastener, and the device will save a maximum amount of time while the mechanic exerts a minimum amount of effort, and it will be useful to mechanics, machinists, electricians, and many other tradesmen.

Other objects of the present invention are to provide a tool for holding nut fasteners bearing the above objects in mind which is of simple construction, has a minimum number of parts, is inexpensive to manufacture and efficient in operation and use.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

FIGURE 1 is a front view of the present invention shown in elevation;

FIG. 2 is an enlarged fragmentary side view of FIG. 1; and

FIG. 3 is an elevational view showing the opposite side of FIG. 1 with the device in operative use.

Referring to the drawing, the tool 10 made in accordance with the present invention is shown to include a rectangular framework having a base plate 14, top plate 16, and interconnecting longitudinal side plates 15 and 36 which define a rectangular central opening 38. A nipple 18 is fixedly secured to the front of end wall 16 toward the rear of the device, and a flexible pipe 20 is fixedly secured over nipple 18 and is provided with a handle grip 22 for manipulating and guiding the device. A circular nipple 24 is fixedly secured below end wall 16 and receives the upper end of a coil spring 26. The lower end of coil spring 26 is received by circular nipple 28 which is fixedly secured to the upper surface of plate 30. Plate 36 is provided with a series of teeth 34 on inner wall 36a which forms one side of opening 38. The teeth extend transversely thereacross, and are engaged by teeth 32 of a slidable plate 30 loosely fitted in the opening. An extension 40 extends through opening 38 of frame 12 from plate 30 and is provided with a V-shaped notch 42 which is in alignment with a V-shaped notch 44 in base 14 and provides receptive means for the corners of a nut fastener 46.

In operation, nut fastener 46 is placed with its corners in the V-shaped notches 42 of extension 40 of plate 30 and within the V-shaped notch 44 of base 14 and the coil spring 26 yieldingly urges downward upon plate 30, thus

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retaining nut fastener 46 within notches 42 and 44 simultaneously. The operator then grasps the handle grip 22 and bends the flexible pipe 20 to any desired angle to reach into the hard to reach area of a machine or other device and places the frame 12 in such a position as to align nut fastener 46 with a stud or bolt to be threaded into nut fastener 46. Nut fastener 46 remains stationary within the notches 42 and 44 respectively and when the bolt is threaded into nut fastener 46 any tendency for plate 30 to move upwardly by the torsion placed upon nut fastener 46 is prevented by teeth 32 of plate 30 matingly engaging teeth 34 within opening 38 of frame 12 and thus nut fastener 46 remains in secured position within tool 10 until the operator desires to withdraw the device from nut fastener 46.

It will thus be recognized that torsion force is placed upon nut fastener 46 by a bolt being threaded into it and this will not cause nut fastener 46 to cam open plate 30 from base 14 of tool 10 due to the angular displacement of plate 30 with respect to opening 38 which causes teeth 32 of plate 30 to matingly engage teeth 34 of frame 12, thus preventing plate 30 from rising against the spring tension of coil spring 26.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What I claim as new and desire to protect by Letters Patent of the United States is:

In a tool for holding nut fasteners, the combination of a framework of rectangular configuration, comprised of a base plate, top plate, longitudinal interconnecting side plates defining a rectangular central opening, an upwardly extending nipple affixed to said top plate, the terminal end of said nipple having a handle defining means for positioning said framework into relatively inaccessible places, one of said side plates having on one side which forms a side of said opening a series of transversely extending teeth, a sliding plate carried within said opening, means substantially confining the sliding plate to longitudinal movement in said opening, said sliding plate having on one end a series of corresponding teeth engageable selectively with said teeth of said sliding plate, said side plate having a width slightly less than the width across said opening to define a loose fit therebetween, a compression coil spring affixed to and carried between said top plate and said sliding plate normally urging said sliding plate toward said base plate, said sliding plate having an inverted V-shaped notch on its underside and said base plate having a corresponding V-shaped notch on its upper side, said V-shaped notches being aligned and providing holding means for a nut placed therebetween.

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