No. 851,181. PATENTED APR. 23, 1907.

A. L. McMURTRY.

MAGAZINE SOCKET NUT WRENCH.

APPLICATION FILED DEC. 11, 1906.

FIG.1.

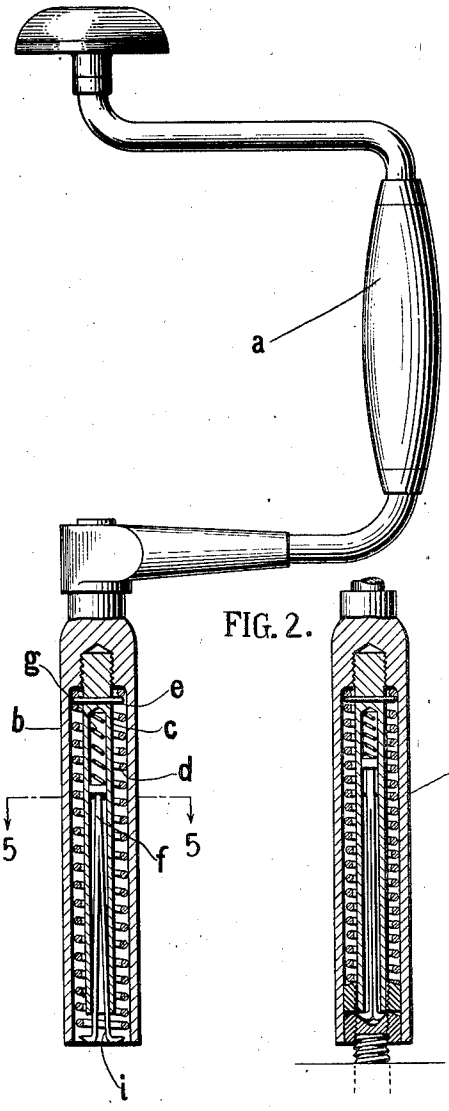


FIG. 2.

FIG.4.



FIG.5.

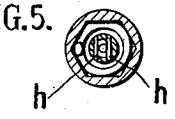
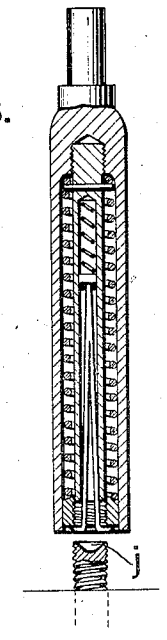


FIG.3.



Witnesses
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UNITED STATES PATENT OFFICE.

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MAGAZINE-SOCKET NUT-WRENCH.

No. 851,181. Specification of Letters Patent. Patented April 23, 1907.

Application filed December 11, 1906. Serial No. 347,388.

To all whom it may concern:

Be it known that I, ALDEN L. McMURTRY, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented a Magazine-Socket Nut-Wrench, of which the following is a specification.

This invention relates to a style of nut wrench invented by me wherein there is a magazine adapted to receive and hold, with their axes coincident, a plurality of nuts. The nuts may be accumulated in the magazine as they are removed one by one from bolts and may in like manner be applied by the wrench, one by one, to bolts.

The special features comprising the invention are hereinafter set forth in detail.

Figure 1 is a side elevation showing the wrench in longitudinal section, in the form of a bit applied to an ordinary brace; Figs. 2 and 3 are respectively longitudinal sections showing the magazine wrench under different conditions; Fig. 4, an end view: and Fig. 5, a transverse section on the line 5, 5, of Fig. 1.

This nut wrench may be operated by an ordinary brace *a*. The wrench proper comprises a hollow cylinder *b* open at one end. Centrally disposed in it is a tube *c*, the solid end of which is screwed into the closed end of the part *b*. Surrounding the tube *c* is a coiled spring *d* held at its inner end by a cross pin *e*. Movably located within the tube *c* is a headed stem *f* between the head of which and the bottom of the tube is a coiled spring *g*. The forward or outward movement of the stem is limited by its head abutting against two parallel pins *h*, *h* fixed in the tube and arranged one on each side of the stem. The outer part of the stem is equipped with, or is bifurcated so as to constitute, two outwardly expanding spring nut-retaining clips *i*. Each of these clips has a laterally extending hooked portion adapted to engage the nuts and the outer surfaces of which are curved or inclined as shown. With this style of wrench, the end of the bolt is required to have in it a curved recess or circular depression *j* with downwardly inclined side walls. To remove a nut from such a bolt, pressure of the wrench against the bolt causes, by reason of the recess in the end of the bolt, the nut-retaining clips to move toward each other, thereby removing their hook ends from the path of the nut. As seen in Fig. 4 the bore of the hollow cylinder or magazine *b* is of a cross section corresponding with that of the nuts. The pressure of the nut retaining clips against the end of the bolt also causes the stem *f* to enter deeper into the tube *c* and permit the open end of the cylinder to engage the side walls of the nut. By rotation of the cylinder, the nut is unscrewed from the bolt and, the clips being out of its path, it compresses the spring *d* as it moves into the magazine or cylinder, and when the nut is entirely removed from the bolt and the wrench is withdrawn from the latter, the expanding clips *i* engage the edges of the nut and hold it in the magazine. In this way, a plurality of nuts may be removed, one by one, from bolts and will be accumulated in the magazine around the tube *c*, the spring *d* tending constantly to press them out and the clips *i* retaining them. In applying the outer nut to a bolt, pressure of the clips against the recessed end of the bolt withdraws them from engagement with the nut and permits the latter to be rotated upon the thread of the bolt.

The details of construction may, no doubt, be varied without departing from the characteristic features of this wrench set forth in the claims.

I claim:

1. A magazine socket nut wrench comprising a straight hollow nut magazine adapted to receive a plurality of nuts and to retain them against rotation with their axes co-incident, a centrally disposed nut retaining means comprising nut clips adapted to expand radially to retain the nuts in the magazine and to be contracted to permit entrance of nuts to and their withdrawal from the magazine.

2. A magazine socket nut wrench comprising a straight hollow body constituting a nut magazine, a coiled spring therein whose reaction tends to eject nuts from the magazine, a centrally disposed tube, an elastically supported inwardly movable stem carrying nut retaining clips formed with outwardly extending nut clasping jaws.

3. A magazine socket nut wrench comprising a straight hollow body constituting a nut magazine, a coiled spring seated therein whose reaction tends to eject nuts from the magazine, a centrally disposed tube and elastically supported yielding stem mounted in the tube and carrying at its outer end an outwardly extending nut retaining jaw the end face of said jaw being curved or inclined for the purpose set forth.

In testimony whereof, I have hereunto subscribed my name.

ALDEN L. McMURTRY.

Witnesses:

L. F. BROWNING,

E. F. WICKS.