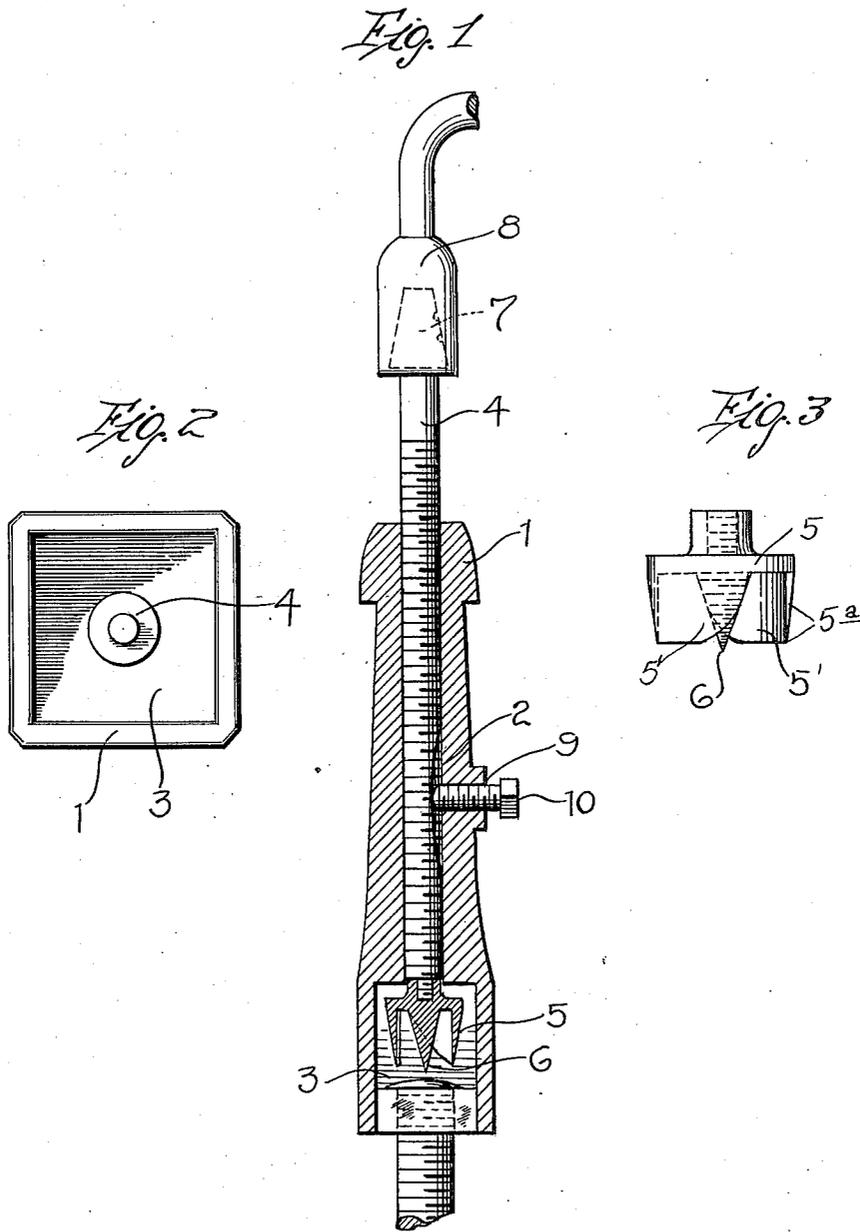


J. P. CARNES.
 NUT REMOVING TOOL.
 APPLICATION FILED MAR. 3, 1913.

1,093,252.

Patented Apr. 14, 1914.



Inventor

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UNITED STATES PATENT OFFICE.

JOHN P. CARNES, OF COLD SPRING, TEXAS.

NUT-REMOVING TOOL.

1,093,252.

Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed March 3, 1913. Serial No. 751,852.

To all whom it may concern:

Be it known that I, JOHN P. CARNES, a citizen of the United States, residing at Cold Spring, in the county of San Jacinto and State of Texas, have invented certain new and useful Improvements in Nut-Removing Tools, of which the following is a specification, reference being had to the accompanying drawings.

This invention comprehends certain new and useful improvements in devices or tools for use in removing nuts from bolts and is particularly designed for use where the bolt has been upset or beaded around the outer side of the nut, necessitating the cutting off of the metal at the extremity of the bolt before the nut can be removed.

The invention has for its primary object a simple, durable and efficient construction of device of this character, in which the parts are so arranged that the device may be applied to the bolt with the nut thereon, and by turning the device in one direction, the extremity of the bolt will be cut so as to leave the nut clear, whereupon a subsequent reverse movement of the device after a prescribed manipulation thereof, will remove the nut from the bolt.

The invention has for a further object an improved tool of this type, the parts of which may be easily manufactured and readily assembled and which will not be liable to get out of order. And the invention also aims to generally improve devices of this class so as to render them more useful and commercially desirable.

With these and other objects in view, as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which—

Figure 1, is a longitudinal section of my device with parts in side elevation and other parts broken away. Fig. 2, is an end view of the tubular portion of the device, and Fig. 3, is a detail view of the bolt cutting bit.

Corresponding and like parts are referred to in the following description and desig-

nated in the accompanying drawing by like reference characters.

My improved bolt cutting and nut removing tool includes a tubular body portion 1 which is formed with a threaded bore 2 and terminates at one end in a nut receiving socket 3. In connection with the body portion 1, the device includes a threaded spindle 4 which is designed to be threaded into and through the bore 2 and which is adapted to have secured to one end of it, the bolt cutting bit 5 which is formed with a centering spur or point 6, provided on its periphery with suitable cutting threads. The bit 5 is removably connected to the spindle 4 and may be secured thereto by a set screw or by any other means. The bit is formed with opposite cutting blades 5' which are upwardly and rearwardly inclined, so that the forward cutting edges 5^a may enter the end of the bolt and cut an annular groove therein, so as to remove the outer edge of the bolt. One end of the spindle 4 is squared or otherwise non-circular, as indicated at 7, whereby it is designed for reception in the socket of a brace 8.

The body portion 1 is formed intermediate of its ends with a side aperture 9, said aperture being threaded to receive a set screw 10.

In the practical use of my improved bolt cutting and nut removing tool, the spindle 4 is first threaded through the bore 2 of the body portion 1, so that its end will protrude from the socket 3, and the bit 5 is then secured to the spindle, after which, the spindle is backed off so that the bit will recede into the socket 3, the latter being of a length greater than the nut it is intended to remove. The brace 8 is then applied to the end 7 of the spindle 4 and is secured thereto in any desired way and the body portion 1 is slipped over the nut, whereby the device is supported thereon with the bit 5 in proper operative relation to the beaded or upset end of the bolt. The brace 8 is then turned, and consequently, owing to the threaded connection or engagement of the spindle 4 with the body portion 1, the spindle will be advanced on the work and the centering point of the bit 5 will be forced into the end of the bolt while the cutting blades cut the metal from the extremity of the bolt, leaving the nut clear. Then, the set screw 10 is tightened up and caused to impinge tightly against the

spindle 4, whereby the spindle and body portion are rigidly connected together and the brace 8 is then given a reverse movement which will manifestly cause the nut to be removed from the bolt.

Preferably, the spindle 4 is provided with a pointer or some indicating mark which, when it comes into alinement with some part of the body portion 1, say the aperture 9 in which the set screw 10 works, will indicate that the spindle has been turned far enough independently of the body portion 1 to cut away the metal at the extremity of the bolt from the outer face of the nut, whereupon the set screw 10 is tightened.

While the accompanying drawing illustrates what I believe to be the preferred embodiment of my invention, it is to be understood that the invention is not limited thereto, but that various changes may be made in the construction, arrangement and proportions of the parts without departing from the scope of the invention, as defined in the appended claims.

What I claim is:—

1. A device of the character described, including a body portion formed with a threaded bore and a nut receiving socket at one end of said bore, said body portion being also formed with a side opening aperture, a set screw working in said aperture, a threaded spindle adapted to work in the

threaded bore of the body portion, and a cutting bit rotatable in the socket of the body portion and carried by said threaded spindle.

2. A device of the character described, including a body portion provided with a threaded longitudinal bore and a nut receiving socket at one end of said bore, a spindle in threaded engagement with said bore, a cutting bit carried by one end of said spindle and rotatable in said socket, and means for clamping the body portion to the spindle.

3. A device of the character described, including a body portion formed with a longitudinally extending threaded bore and a socket at one end of said bore, a threaded spindle adapted to work in the bore, a cutting bit connected to one end of said spindle and rotatable in said socket, the body portion being formed intermediate of its ends with a side opening aperture communicating with the bore, and a set screw working in said aperture and adapted to impinge against the spindle to secure the latter to the body portion, one end of said spindle being formed for engagement by a brace.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN P. CARNES.

Witnesses:

J. H. CLARK,

J. H. WILLIAMSON.