

S. TAKÁCS.
WRENCH.

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1,042,053.

Patented Oct. 22, 1912.

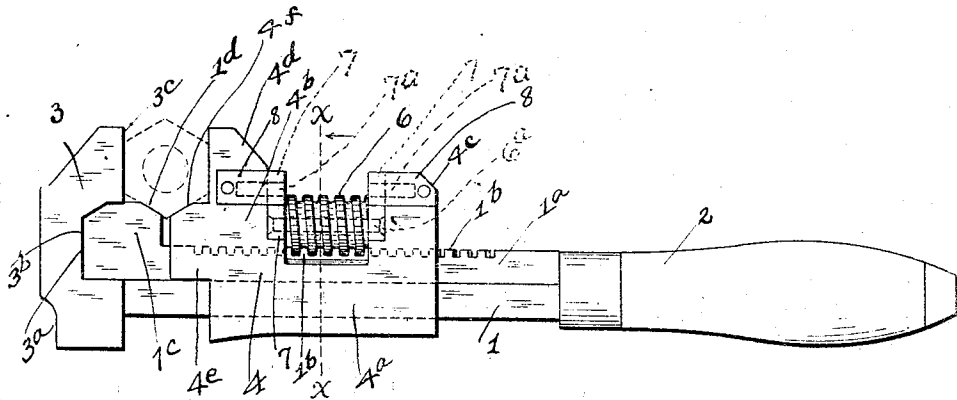


Fig. 1.

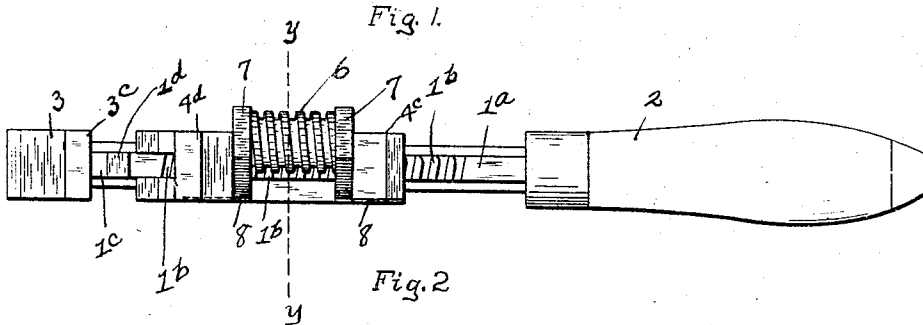


Fig. 2.

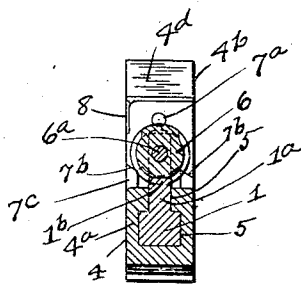
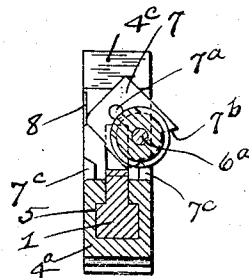


Fig. 3.



UNITED STATES PATENT OFFICE.

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WRENCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, STEVE TAKÁCS, a subject of Hungary, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to the improvement of wrenches of that class in which fixed and sliding jaws are employed, and the objects of my invention are to provide an improved construction of wrench of this class in which means are provided for producing a feed engagement of the sliding jaw body with the main bar of the wrench and by which the engaging and feeding member of the movable jaw body may be readily disengaged from the main bar of the wrench and the movable jaw body permitted to slide without interference upon said wrench bar; to so construct my device as to admit of the feeding member of the sliding jaw being automatically held out of or in engagement with the teeth of the wrench bar; to so construct the jaw members of my improved wrench so as to facilitate the engaging of a hexagonal or squared body, thus providing for the engagement of nuts of different forms and to otherwise produce a simple, inexpensive and reliable form of wrench. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved wrench, Fig. 2 is a view at right angles to that shown in Fig. 1, showing the feed device disengaged from the teeth of the wrench bar, Fig. 3 is a transverse section on line *x-x* of Fig. 1, and Fig. 4 is a similar section on line *y-y* of Fig. 2.

Similar numerals refer to similar parts throughout the several views.

In carrying out my invention, I employ a straight wrench body 1 which is substantially of T-form in cross section and which has its inwardly projecting and reduced member 1^a formed with parallel teeth 1^b. At one end, the bar 1 carries a suitable handle extension 2 and at its opposite end is formed with a fixed transverse jaw or head 3 which is of greater thickness than the body of the bar 1. The outer end portion of the member 1^a of the bar 1 is somewhat increased in width as indicated at 1^c; this wider head portion 1^c extending centrally into a socket 3^a of the jaw or head 3, the

outer end of the widened portion 1^c of the member 1^a thus forming a partition between opposing recesses 3^b in the jaw or head 3. The outer corner of the enlargement 1^c is cut away or beveled as indicated at 1^d to form an inclined bearing or engaging surface at the inner end of the gripping member 3^c of the head 3.

4 represents the sliding jaw body, this jaw body being of a general yoke form, the body portion 4^a of which is formed with opposing end openings which conform to the shape of and which receive slidably the bar 1. These end openings in the sliding jaw body 4 form end continuations of an intermediate slot or way 5 which is formed in the inner face of the member 4^a between the forward and rear arms 4^b and 4^c of said yoke-shaped body. As shown in the drawing, the teeth 1^b of the member 1^a are adapted to project through the slotted opening 5. It will be understood that the outer arm 4^b is provided with the usual projecting gripping or jaw member 4^d, which opposes the member 3^c of the fixed jaw. It will also be noted that the central portion of the forward end of the member 4 is formed with an extension in the nature of two parallel opposing lugs 4^e, the outer opposite corners of which are inclined or beveled to form angular engaging surfaces as shown at 4^f. These extension members 4^e are adapted when the sliding body 4 is in its outermost position, to enter and fit within the sockets or recesses 3^b of the head 3.

Between the projecting members 4^b and 4^c of the sliding body 4, I provide a rotatable feed screw 6, the teeth of which are adapted, when a screw fitting action is desired, to engage the teeth 1^b of the rack member of the bar 1. This rotatable screw feed member is rotatably mounted upon a pin or shaft indicated at 6^a, the outwardly extending ends of said pin or shaft being connected with the corresponding end portions of two opposing bearing plates 7, these bearing plates being pivoted eccentrically through the medium of pivot pins 7^a to the outer portions of the jaw arms 4^c and 4^b. On corresponding sides of the members 4^c and 4^b are secured the outer ends of opposing flat spring plates 8, the free inner ends of which extend slightly beyond the inner faces of the members 4^c and 4^b. It will be understood that the bearing of the outwardly projecting portions of these spring plates 8 against corresponding por-

tions of the plates 7, will serve to hold the feed screw member 6 in operative engagement with the teeth 1^a of the wrench bar member 1^a, thus providing for feeding the sliding jaw body 4 either toward or away from the fixed jaw 3 by the rotation of the member 6. It will be noted that each of the plates 7 is provided on its normally inner end with a rounded recess cut to produce oppositely located inclined shoulders 7^b which shoulders when the plates 7 are in position to hold the feed screw in engagement with the teeth of the bar, are in engagement with correspondingly shaped shoulders 7^c which project from the base portions of the members 4^c and 4^b. In order to disengage the feed member 6 from the teeth of the bar 1^a, it is only necessary to exert a reasonable degree of outward pressure upon the feed member 6 and its bearing plates 7 to result in said feed member and its plates swinging outwardly against pressure of the spring plates 8 until the threads of the member 6 are out of engagement with the threads of the bar, thus permitting the sliding jaw member to be moved rapidly to a closed or open position upon the bar. When in its open position the screw feed member 6 is frictionally held against automatically returning to its engagement with the teeth of the bar, by the pressure of the springs 8 against opposing corners of the plates 7 as shown more clearly in Fig. 4 of the drawing.

From the construction and operation described, it will readily be understood that when a gradual feed or return of the sliding jaw body is desired, it is only necessary to bring the feed member 6 into engagement with the teeth of the wrench bar in the manner described, whereupon the movable jaw may be made to travel in the desired direc-

tion by the turning of said feed member. However, where a quick sliding movement of the movable jaw body is desired, it is obvious that the feed screw member may be readily moved out of engagement with the teeth of the wrench bar to permit the free sliding action of the movable jaw.

In Fig. 1 of the drawing, I have shown surfaces of the grip members 3^c, 4^a, 1^c and 4^c in gripping contact with the faces of the hexagonal nut, the latter being indicated in dotted lines. As indicated, a nut of this character may thus have four of its sides engaged at one time, thus insuring a desirable grip on the nut. It is obvious, however, that the usual four-sided nut or a similar body, may be engaged between the jaw members 3^c and 4^a in the usual manner. It will also be understood that a wrench constructed as that herein shown and described, will be of great strength and utility.

What I claim, is—

A wrench comprising a rack bar, a fixed head on said rack bar, a complementary jaw body slidable on said rack bar, said jaw body having a recess therein, bearing plates pivotally mounted at one end on opposite sides of the recessed portion of said jaw body, a feed screw between said bearing plates and journaled in their free ends, and a flat spring plate mounted on said jaw body adjacent said recess and adapted to bear against the pivoted end of one of said bearing plates to resiliently maintain said feed screw in or out of engagement with said rack bar.

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

STEVE TAKÁCS.

Witnesses:

ANDY BROWN,
JOHN TAYLOR.