

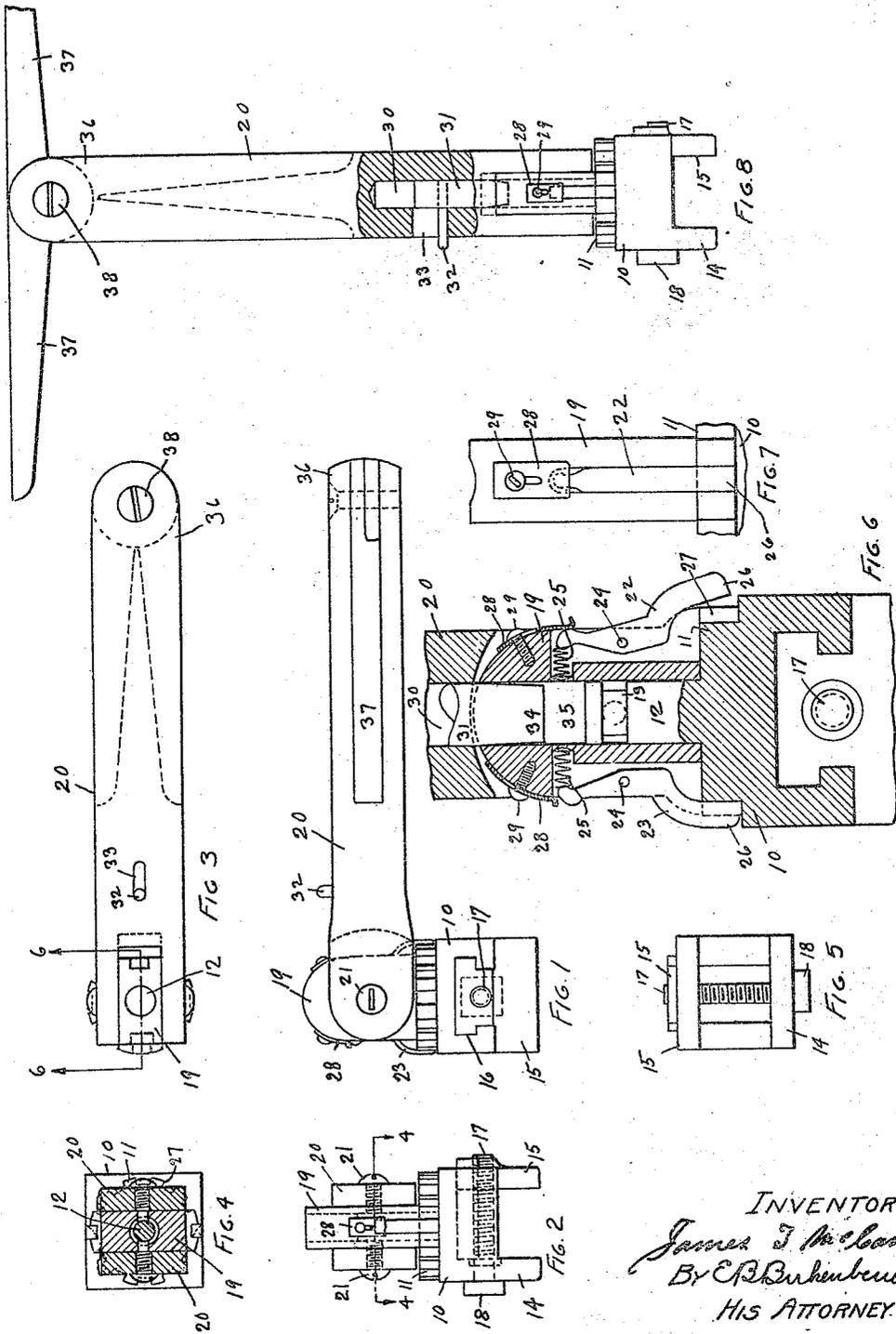
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WRENCH

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WRENCH.

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To all whom it may concern:

Be it known that I, JAMES T. McCANN, a citizen of the United States, and a resident of Glen Ellen, in the county of Sonoma and State of California, have invented a new and useful Wrench, of which the following is a specification.

This invention relates more particularly to a tool for holding or turning nuts in inaccessible places.

The objects of my invention are to provide an exceedingly simple and efficient wrench which can be operated either by a pumping action or rigidly when its operating lever is in either a straight line with the wrench or perpendicular thereto.

I accomplish these results in the manner set forth in the following specification or illustrated in the accompanying drawing, in which:

Figure 1 is a side elevation of my device with the handle in a horizontal position or perpendicular to the jaw portion of the wrench. Figure 2 is a front elevation of Fig. 1. Figure 3 is a plan of Fig. 1. Figure 4 is a horizontal section along the line 4-4 in Fig. 2. Figure 5 is a bottom view of Fig. 1. Figure 6 is an enlarged vertical section along the line 6-6 in Fig. 3. Figure 7 is a partial side elevation of Fig. 6 showing the pawl mechanism. Figure 8 is a front elevation similar to Fig. 2 with the handle in a vertical position and its cross arms extended. A portion of this figure is cut away in section for clearness.

Similar numbers of reference refer to the same or similar parts throughout the several views.

Referring in detail to the drawing, I have constructed my device of a relatively square body member 10 having formed on its upper side a ratchet wheel 11 from whose center projects the shank 12 provided with a groove 13.

The under side of the member 10 is provided with a stationary jaw 14 and a movable jaw 15 slidably mounted in the T slot 16 and actuated by the bolt 17 which is provided, for convenience, with a square head 18.

A wrist plate 19 serves as a holder for the shank 12 and has hinged thereto a forked handle 20 to which it is attached by means of the screws 21 which also pass into the groove 13 in the shank 12 and al-

lows the shank 12 to rotate within its holder 19. The holder 19 is slotted on its opposite sides to receive the pawls 22 and 23 which are pivoted on the pins 24. The pawls 22 and 23 are urged outwardly at their upper ends by means of the spring 25 which forces their lower ends into engagement with the teeth 27 of the wheel 11. The sliding latches 28 which are joined by means of the screws 29 to the holder 19 serve to hold either of the ends 26 out of engagement with the ratchet teeth 27 and thereby permit the free rotation of the shank 12 in either direction.

A hole 30 is provided in the handle 20 and contains a plunger 31 from which projects an operating pin 32 which slides in the slot 33. The lower end 34 of the plunger 31 is preferably tapered and is adapted to enter the upper end of the hole 35 in the holder 19.

Attached to the upper end 36 of the handle 20 are the two cross arms 37 pivoted on the screw 38 and which ordinarily lie within recesses formed in the sides of the handle 20, as illustrated in Figures 1 and 2. These cross arms are used to provide additional leverage when using the device as a T wrench.

The operation of my device is as follows: After placing the jaws 14 and 15 against the sides of a nut and tightening same thereon by means of the bolt 17, the operator disengages one of the pawls 22, if he desires to use the ratchet on the wrench, and then moves the arm 20 back and forth through as large an arc as is possible or desired. The same is true when using the device in the form shown in Figure 8 when one or both of the arms 23 may be extended and swung through an arc, as above suggested. It will be understood that in this event the pin 32 should be depressed.

I am aware that numerous styles and types of wrenches have been produced in the past, and I therefor do not claim my invention broadly but only within the limits set forth in the following claim.

What I claim as new is:

In a wrench, the combination of a nut-engaging means consisting of a rotatable body member having its under side dove-tailed and having one end of said dove-tailed portion closed by a projecting jaw, a sliding jaw in said dove-tailed member,

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a clamp screw passing through said fixed and sliding jaws, a ratchet wheel formed on the top of said body member, a grooved shank rising from the center of said ratchet, 5 a flat shank-receiving wrist plate rotatably attached to said shank by screws passing through said wrist plate, a slotted lever hinged to said wrist plate on said screws, a slidable pin within said slotted lever adapted to lock said lever in relation to said 10 wrist plate, and pawls on said wrist plate adapted to engage said ratchet in opposite directions.

JAMES T. McCANN.