

P. FERNANDEZ.
WRENCH.
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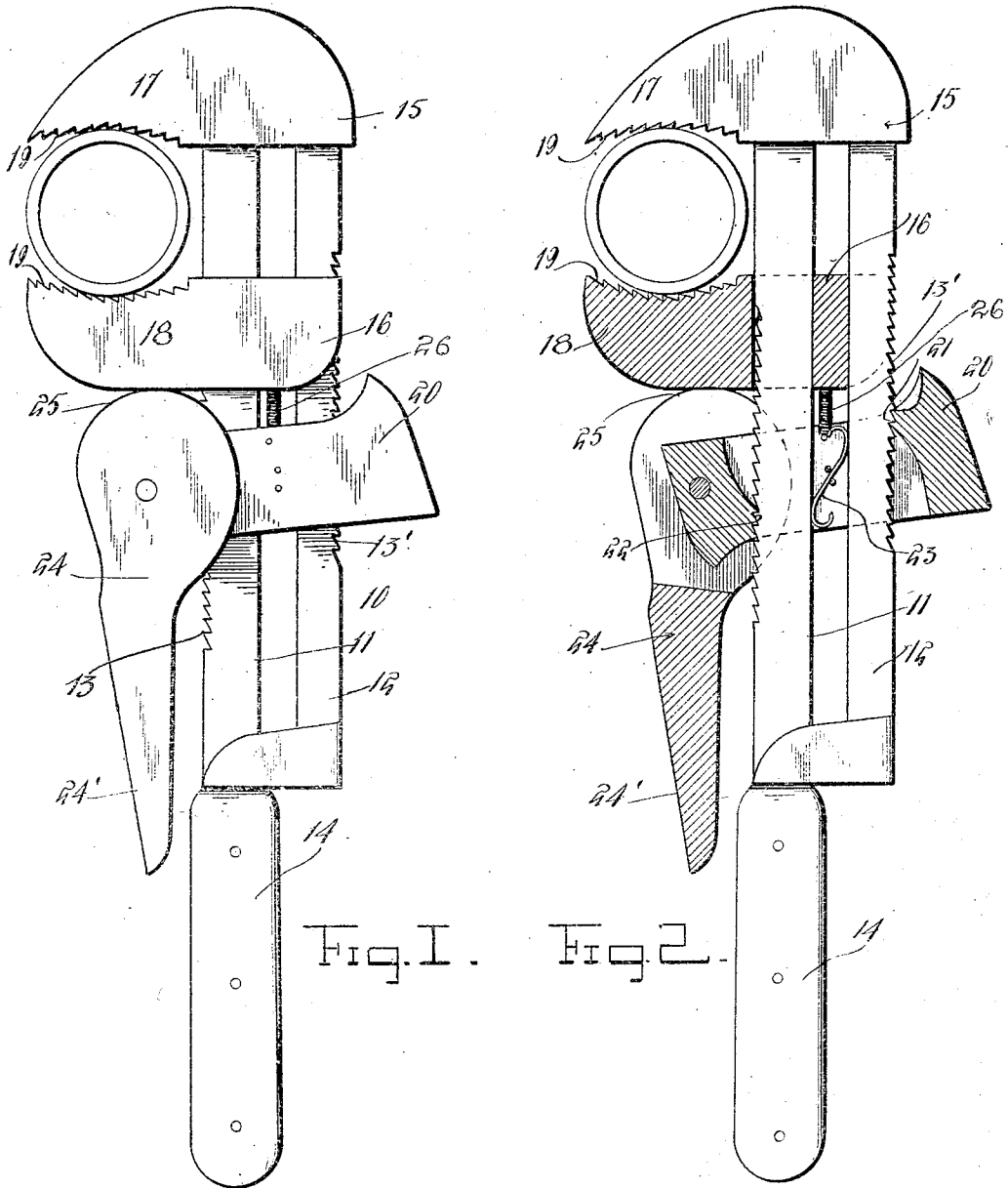


Fig. 1. Fig. 2.

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To all whom it may concern:

Be it known that I, PEDRO FERNANDEZ, a citizen of the United States, residing at Victoria, in the county of Victoria, State of Texas, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in wrenches, and particularly to the type of sliding inner jaw.

The principal object of the invention is to provide a simple device of this character having means for locking the sliding jaw against movement, and also means for simultaneously accomplishing said result, and forcing the sliding jaw against the work.

Other objects and advantages will be apparent from the following description and with particular reference to the accompanying drawings.

In the drawings: Figure 1 is a side elevation of a wrench made in accordance with my invention, Fig. 2 is a view similar to Fig. 1, certain parts being broken away.

Referring particularly to the drawings, 10 represents the shank of the wrench which comprises the spaced members 11 and 12, on the outer edge faces of which are formed the series of rack teeth 13 and 13'. On one end of the shank is a handle 14, while on the opposite end is a stationary jaw 15. Embracing the members 11 and 12, and slidable thereon is the movable jaw 16, both of the jaws 15 and 16 having the extensions 17 and 18 provided with the jaw teeth 19 for engagement with the work. Inwardly of the sliding jaw 16, and embracing the shank is a locking yoke member 20 on the inner face of the ends of which are formed respectively the teeth 21 and 22, for engagement with the rack teeth 13' and 13. Secured at its center to the yoke member and engaging with its opposite ends against the inner faces of the members 11 and 12 is an S-shaped member 23 which normally cants the yoke member so that its teeth are always in yielding engagement with the rack teeth. On the end of the yoke and directly below the extension 18 of the jaw 16 is pivoted a cam lever 24 having a cam face 25 for engagement with the said extension of the jaw 16.

In the operation of the wrench the outer jaw is brought into engagement with the pipe, and then the inner jaw is moved up until it engages on the opposite side of the pipe. The locking yoke is then slipped along the shank into close proximity to the sliding jaw whereupon the cam lever 24 is rotated until the handle 24' is adjacent the shank. This causes the cam face 25 to bear against the extension 18 of the jaw 16, and simultaneously rocks the locking yoke to bring its teeth into positive engagement with the rafters of the shank, and to force the movable jaw tightly against the work. The S-shaped spring holds the locking yoke in a position so that its teeth are always in engagement with the racks, thus making it possible to slide the yoke toward the sliding jaw, but making it impossible for the yoke to be moved in the opposite direction until it is cornered so that its teeth are out of engagement with the racks of the shank. Secured at its opposite ends, respectively, to the sliding jaw 16, and the yoke 20 is a coil spring 26 which normally draws the jaw downwardly toward the yoke, and is put under tension when the cam lever 24 is thrown into locking position. When the jaws of the wrench are engaged with a pipe, the teeth bite into the pipe, so that when the lever 24 is thrown outwardly, the jaw 16 will not readily release itself from the pipe, except when assisted by the hand of the user. The spring 26 will automatically draw the jaw 16 away from the pipe when the lever 24 is thrown outwardly.

What is claimed is:-

1. In a wrench, a shank having racks on the front and rear edges thereof, a stationary outer jaw, a slidable inner jaw, a rocking locking member having teeth for engagement with the racks, and a cam lever on one end of the locking member for engagement with the slidable jaw, whereby said slidable jaw is forced against the work and the locking member rocked into positive engagement with the racks.

2. In a wrench, a longitudinally slotted shank having racks on the front and rear edges, a stationary outer jaw, an inner jaw slidable on the shank, a yoke plate slidable on the shank, teeth on the yoke for engagement with the racks, an S-shaped spring on the yoke engaging the walls of the slot of the shank for normally canting the yoke into engagement with the racks, and a cam

lever pivotally carried on one end of the yoke plate and adapted for engagement with the slidable jaw to simultaneously force said jaw against the work and rock the yoke into locking engagement with the shank.

3. In a wrench, a shank having racks on the front and rear edges thereof, a stationary outer jaw, a slidable inner jaw, a rocking locking member having teeth for engagement with the racks; and a cam lever on one end of the locking member for engagement with the slidable jaw, whereby said slidable

jaw is forced against the work and the locking member rocked into positive engagement with the racks, and resilient means between the inner jaw and the locking member for withdrawing said inner jaw from the work when the cam lever is released.

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

PEDRO FERNANDEZ.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."