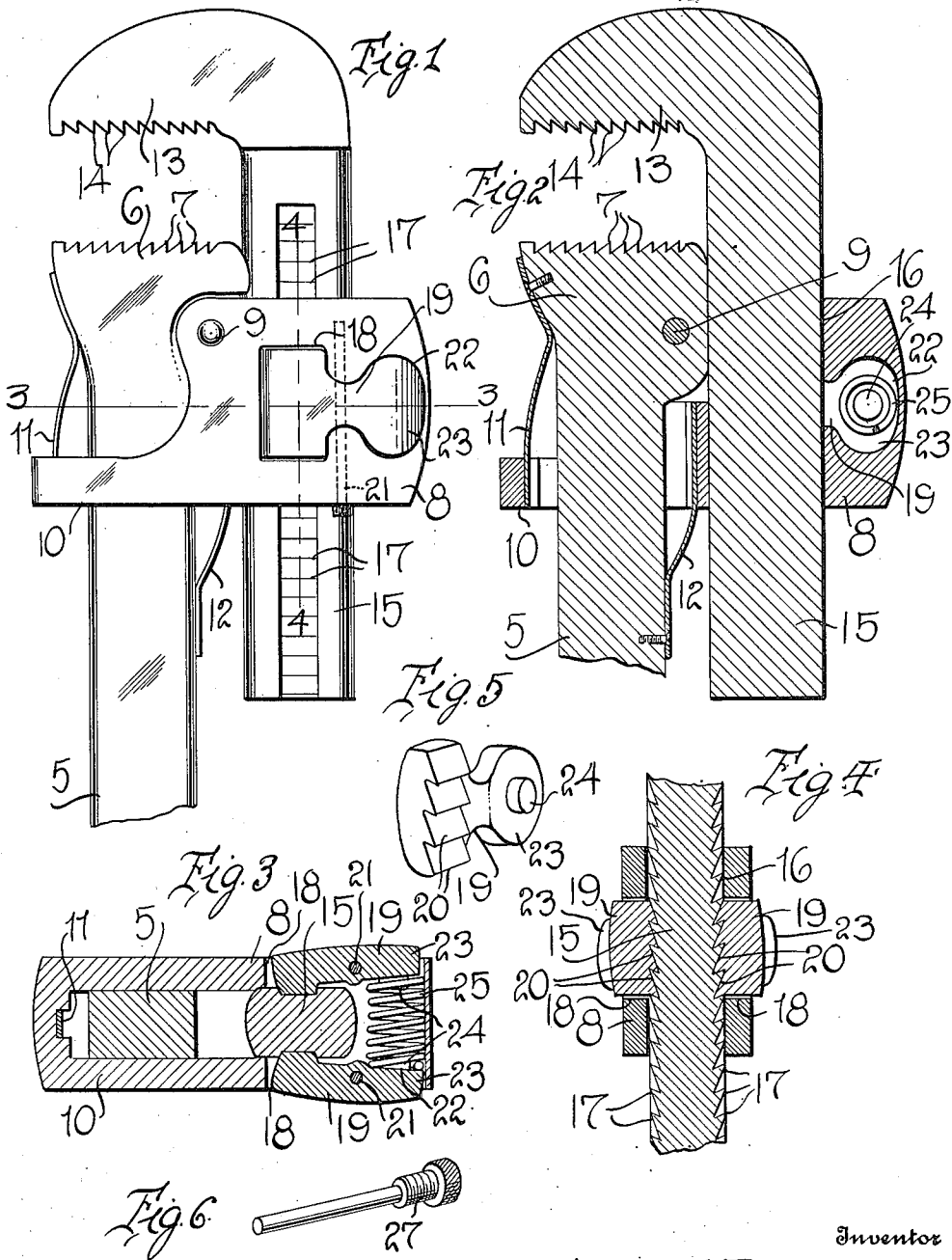


1,176,328.

Patented Mar. 21, 1916.



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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, JAMES E. TRESSLER, a citizen of the United States, residing at Riverton, in the parish of Caldwell and State of Louisiana, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to wrenches and more particularly to an improved quick adjustable pipe wrench, the invention having for its primary object to provide improved means for easily and quickly effecting the adjustment of the movable wrench jaw and securely holding the same in its adjusted position.

The invention has for a further object to provide a wrench of the above type, embodying a stationary jaw having a shank, a spring held yoke member pivotally mounted upon the shank and an adjustable jaw also provided with a shank slidably mounted in said yoke member, said latter shank having ratchet teeth formed upon opposite sides thereof, and spring pressed locking dogs mounted in the yoke member for engagement with the ratchets on said shank.

It is a further general object of my invention to improve and simplify the construction of wrenches of the above type, whereby the same are rendered extremely strong and durable and highly serviceable and convenient in practical use.

With the above and other objects in view, my invention consists in the novel features of construction, combination, and arrangement of parts to be hereinafter more fully described, claimed, and illustrated in the accompanying drawing, in which,

Figure 1 is a side elevation of a wrench illustrating the preferred embodiment of my invention; Fig. 2 is a longitudinal section of the same; Fig. 3 is a section taken on the line 3—3 of Fig. 1; and Fig. 4 is a section taken on the line 4—4 of Fig. 1. Figs. 5 and 6 are detail perspective views of certain of the parts.

Referring in detail to the drawing, 5 designates the handle bar of the wrench which is provided upon one end with a stationary wrench jaw 6 having gripping teeth 7 formed or cut upon the end face thereof.

The jaw 6 is of somewhat greater width than the handle 5, and upon one end of the jaw, at one side of said handle, the yoke

or guide member 8 is pivoted, as indicated at 9. This yoke is provided with a laterally extending rectangular loop 10 through which the handle bar 5 is loosely engaged. One end of a leaf spring 11 is fixed at one end of the jaw 6 and bears at its free end against the inner side of the outer end of the loop 10. A second leaf spring 12 is fixed at one of its ends to the opposite edge of the handle 5 with respect to the spring 11 and bears at its free end against the body of the yoke member at the opposite or inner end of the loop 10 thereof. These springs exert counteracting pressures upon the yoke and normally maintain the opposite end walls of the loop 10 in spaced relation to the edges of the handle bar 5 which extends therethrough.

The adjustable wrench jaw 13 is arranged in opposed relation to the stationary jaw 6 and the opposed face thereof is provided with a series of gripping teeth 14. This adjustable jaw is provided upon one end with the integral shank 15 which is loosely disposed through the opening 16 of the yoke member. In the opposite sides of the shank 15, a longitudinally extending series of ratchet teeth 17 is formed, and the outer edges of these teeth may either be flush with the peripheral surface of the shank, or may project beyond the same. The end faces of the ratchet teeth are undercut or beveled as clearly shown in Fig. 4. In the side walls of the yoke member 8, rectangular openings 18 are formed to accommodate the locking pawls or dogs 19, each of which is provided with a series of teeth 20 on its inner face for locking engagement with the respective ratchets 17 on the shank 15. These locking dogs are pivotally mounted upon the pins 21 which are frictionally engaged in suitable bores or openings provided in the body of the yoke at one side of the openings 18. These openings communicate with the opposite ends of a transverse opening 22 formed in the body of the yoke, and each of the locking dogs 19 is provided with a thumb piece 23 which fits within one end of this opening. Upon the inner face of this thumb piece, a lug 24 is formed.

25 designates a coil spring which is arranged in the opening 22 and in the ends of which, the lugs 24 are engaged. This spring normally acts, under expansion, to hold the locking dog yieldingly against pivotal movement and maintain the teeth 19

thereon in locking engagement with the ratchet 17 on the adjustable wrench shank.

If desired, instead of employing the frictionally held pivot pins 21 upon the locking bolts, I may provide the pins on one end with a threaded portion, indicated at 27, as shown in Fig. 6, for engagement with the threaded outer end of the opening in the body of the yoke member, but preferably, for convenience in inserting or removing the pin, I employ a frictionally held pin.

In the operation of my invention, it will be understood that the jaw 13 may be very easily and quickly adjusted with respect to the stationary jaw 6 by pressing inwardly upon the finger extensions 23 of the locking dogs so as to disengage the inner ends thereof from the ratchet 17 of the shank 15. This shank may now be shifted through the yoke member so as to dispose the jaw 13 in proper spaced relation to the jaw 6. The springs 11 and 12, cooperating with the yoke member, tend to yieldingly hold said yoke against pivotal movement with respect to the stationary jaw 6, and thus maintain the teeth on said jaw and on the adjustable jaw 13 in effective gripping engagement upon opposite sides of the pipe. By yieldingly mounting of said yoke member, however, the adjustable jaw 13 may shift laterally with respect to the stationary jaw so that, while the latter jaw is stationary upon one side of the pipe, the other jaw 13, by a turning movement of the handle, may effectively grip upon the opposite side of the pipe. In this manner, it will be seen that the wrench may be very easily and quickly applied to the pipe to securely hold or grip the same. In view of the fact that the invention embodies but few elements in its construction, it will be appreciated that the wrench is extremely strong and durable and may also be produced at relatively small manufacturing cost.

While I have shown and described the

preferred construction and arrangement of the several parts, it is to be understood that the device is susceptible of considerable modification therein, and I, therefore, reserve the privilege of resorting to all such legitimate changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having thus fully described the invention, what I desire to claim and secure by Letters Patent is:—

A wrench including a handle having a stationary jaw on one end, a yoke member pivotally mounted on said jaw, means yieldingly holding said yoke member against pivotal movement with respect to said stationary jaw, an adjustable jaw disposed in opposed relation to the stationary jaw and having a shank extending through said yoke member, said shank being provided on opposite sides with a longitudinally extending series of ratchet teeth, the opposite walls of the yoke being provided with rectangular openings and the medial portion of said yoke outwardly of the shank having a transverse opening formed therethrough communicating at its opposite ends with said rectangular openings, removable pivot pins traversing the connecting passages between said openings and disposed longitudinally of the shank, locking dogs pivotally mounted upon said pins, and a coil spring arranged in said transverse opening and bearing at its extremities against the corresponding ends of said dogs to yieldingly hold the opposite ends thereof in locked engagement with the ratchet teeth on the opposite sides of the shank.

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

JAMES E. TRESSLER.

Witnesses:

JOHN HUMBLE,
LE ROY E. COLE.