

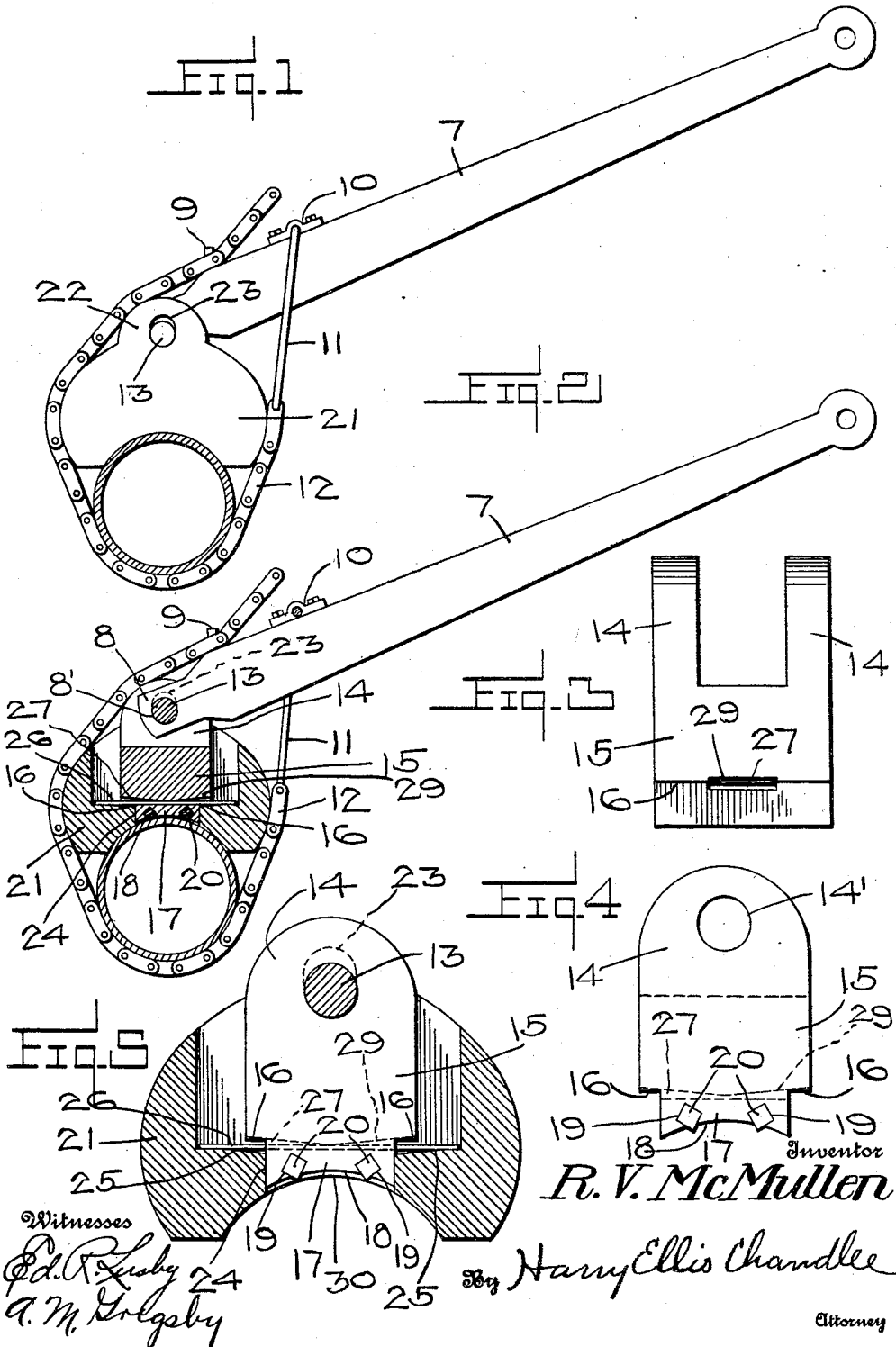
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WRENCH.

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UNITED STATES PATENT OFFICE.

ROBERT V. McMULLEN, OF COALINGA, CALIFORNIA.

WRENCH.

1,007,302.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT V. McMULLEN, a citizen of the United States, residing at Coalinga, in the county of Fresno and State of California, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to wrenches and more particularly to pipe wrenches, and has for its object to provide a wrench which will include a chain and a co-acting jaw, the latter including die keys and a mounting therefor so arranged that they will be brought out of engagement with the pipe when the wrench is turned back for the next grip.

Another object is to provide a structure of this character in which the die keys may be replaced when worn.

Other objects and advantages will be apparent from the following description, and it will be understood that changes may be made in the specific structure shown and described within the scope of the claims without departing from the spirit of the invention.

In the drawings: Figure 1 is a side elevation of the wrench, Fig. 2 is a longitudinal section, Fig. 3 is a detail of the jaw block in elevation, Fig. 4 is an end view of the jaw block, and Fig. 5 is an enlarged view showing the mounting of the casing.

Referring now to the drawings, the present wrench comprises a handle 7, having a reduced apertured stem 8 at one end, and having on one side, adjacent to the stem a chain-receiving stud 9. On the same side of the handle, rearwardly of the stud, there is an adjustable block 10 in which there is pivoted a yoke 11 which embraces the handle, and which at the opposite side of the handle from the stud has a chain 12 connected therewith. This chain is of course of such a length that it may be carried around the end of the handle and engaged with the chain stud 9. Engaged in the aperture 8' of the stem 8, there is a pivot pin 13, which is engaged at its ends in openings 14' in the arms 14 of a jaw-block 15. This jaw block at its forward portion is reduced to form shoulders 16 at its opposite edges, and an intervening jaw proper, indicated at 17, and having a curved forward face 18 with which there communicate a pair of transverse key receiving passages 19. In these passages, there are engaged

keys 20, which are arranged to bite into and grip a pipe which may be operated upon.

A casing 21 is provided, and has rearward ears 22, provided with elongated openings 23 which are engaged with the pin 13. The casing surrounds the jaw block, with the exception of the jaw proper 17, which projects through an opening 24 in the forward portion of the casing. At the sides of this opening, there are face plates 25, which receive against their inner faces, the ends of a plate spring 26, which is engaged in a passage 27 formed in the base of the jaw 17. The inner wall of this passage 27 is slanted from the ends of the passage to its center, as indicated at 29. The ends of the spring resting against the inner sides of the face plates 25, hold the casing 21 at the forward limit of its movement, when the keys 20 lie within the casing.

The arrangement is thus such that the wrench may be engaged with a pipe in the usual manner, and the handle 7 operated to force the edge of the casing 21 against the pipe, when the spring 26 will permit the casing to move rearwardly and allow the keys to bite into the pipe. The latter may then be turned, and when the handle is moved, in the opposite direction to take a new grip upon the pipe, the casing will be moved forwardly and will receive the pipe against its curved edge portions which lie at the sides of the opening 24, thus holding the keys out of engagement with the pipe and protecting them from the wear incident to such engagement.

What is claimed is:

1. A wrench comprising a handle, a jaw pivotally connected upon the handle, a chain connected with the handle for co-operation with the jaw, a casing connected with the handle for movement into and out of position to extend beyond the acting face of the jaw, and means for holding the casing yieldably in such position.

2. A wrench comprising a handle, a jaw pivoted to the handle, a chain connected with the handle for coöperation with the jaw, a casing slidably and pivotally connected with the handle and inclosing the jaw, said casing being shiftable through its sliding movement to extend beyond the working face of the jaw, and a spring extended through the jaw, and engaged with the casing and arranged to hold the cas-

ing yieldably against movement to expose the jaw.

3. In a pipe wrench, the combination with a pipe engaging jaw, of a casing surrounding the jaw and having an opening therein, and having face plates at the sides of the opening, said casing being slidable for the projection of the working face of the jaw through the opening, said jaw having
10 a passage formed therethrough provided with a rib on one wall, and a flat spring

engaged in the passage and resting against the rib and having its ends engaged beneath the face plates to hold the casing yieldably against movement to expose the jaw. 15

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

ROBERT V. McMULLEN.

Witnesses:

MATT SMITH,
B. L. WYLLIE.

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