

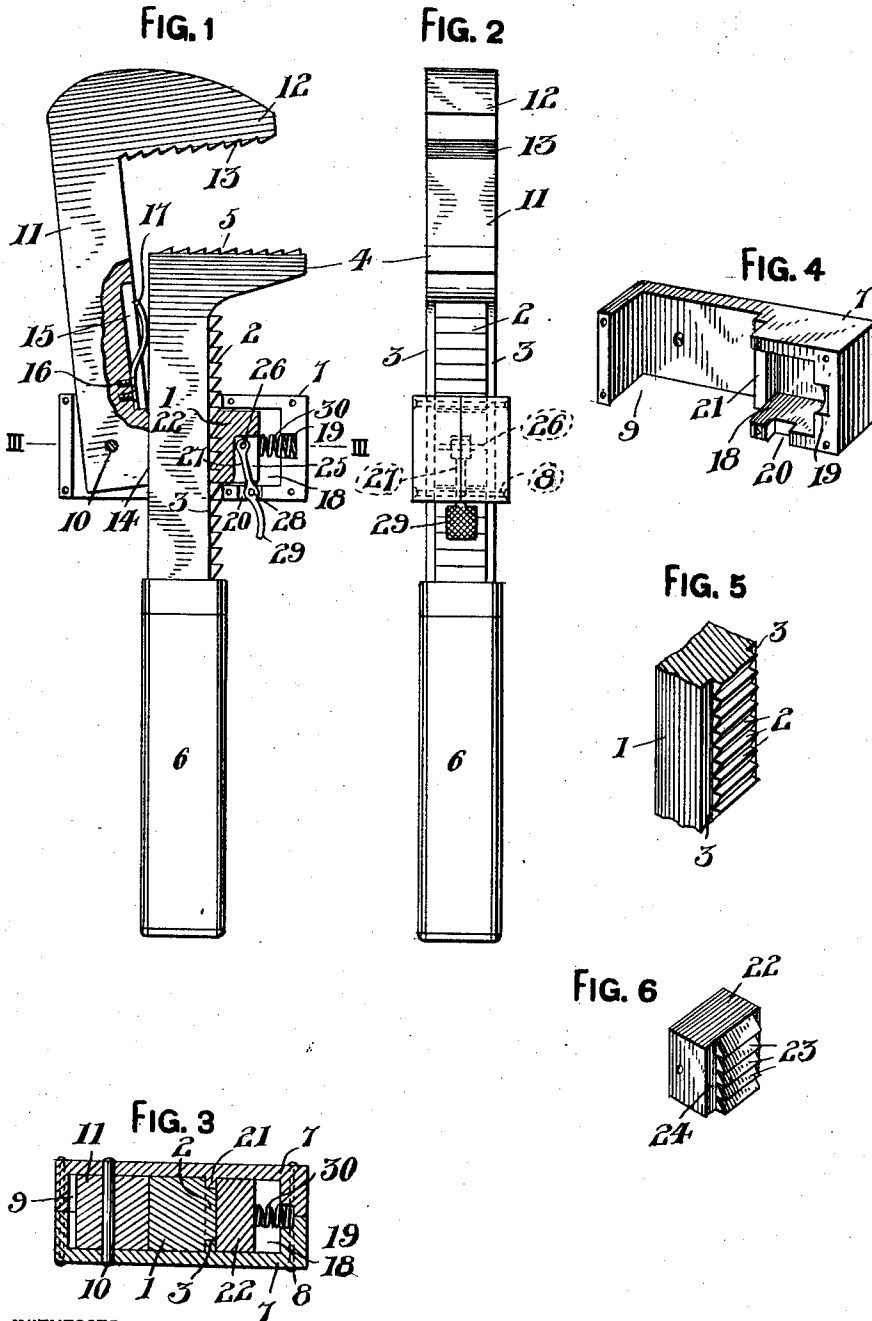
W. G. NATZMER.

WRENCH.

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WITNESSES

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WILLIAM G. NATZMER, OF McKEESPORT, PENNSYLVANIA.

WRENCH.

1,034,138.

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To all whom it may concern:

Be it known that I, WILLIAM G. NATZMER, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to wrenches, and more particularly to a quick acting pipe wrench.

The primary object of my invention is to furnish a pipe wrench with a novel adjustable jaw that can be easily and quickly shifted to firmly grip a pipe or structure having a curved or irregular surface.

Another object of this invention is to provide a wrench of the above type consisting of comparatively few parts that are inexpensive to manufacture, durable and highly efficient for the purposes for which they are intended.

A further object of this invention is to accomplish the above results by a mechanical construction that will be hereinafter specifically described and then claimed.

Reference will now be had to the drawing, wherein:—

Figure 1 is a side elevation of the wrench, partly broken away and partly in section, Fig. 2 is a front elevation of the same, Fig. 3 is a horizontal sectional view of the wrench taken on the line III—III of Fig. 1, Fig. 4 is a perspective view of a portion of the adjustable jaw body, Fig. 5 is a perspective view of a portion of the shank of the wrench, and Fig. 6 is a perspective view of a detached gripping block.

A wrench in accordance with my invention comprises a shank 1 rectangular in cross section and having the front side thereof provided with a rack 2 that is of less width than the shank, thereby providing longitudinal shoulders 3. The outer end of the shank 1 has a jaw 4 that extends from the front side of the shank, said jaw having a serrated or roughened gripping surface 5. The inner end of the shank 1 has a handle 6 of the ordinary and well known type.

Movably mounted upon the shank 1 is a sectional jaw body, comprising sections 7 connected together by rivets 8 or other fastening means. The sections 7 are cut away, as at 9 to embrace the shank 1 and pivotally mounted in the cut away portions 9 of the

jaw body by a pin 10 is the stem 11 of an adjustable jaw 12, said jaw extending at right angles to the front side of the stem 11 and having a serrated or roughened gripping surface 13 confronting the gripping surface 5 of the jaw 4. The inner end of the stem 11 is beveled, as at 14 to engage the rear side of the shank 1, and the front side of the stem 11 has a longitudinal groove 15 in which is fixed by screws 16 or other fastening means the end of a flat spring 17 that bears against the rear side of the shank 1 and retains the stem 11 normally at an angle to the shank 1, consequently the jaw 12 is positioned at an angle relatively to the jaw 4 and said jaws can be easily placed in engagement with a pipe.

The sections of the jaw body are provided with confronting recesses 18, a pocket 19, an opening 20 and a vertical slot 21. The vertical slot 21 receives the rack 2 of the shank 1 and the shoulders 3 of the shank ride against the edges of the slot 21. Arranged in the confronting recesses 18 is a gripping block 22 that has a rack 23 to engage the rack 2 of the shank 1, said rack extending into the slot 21 with the shoulders 24 of said block engaging the side edges of the slot 21. The gripping block has a recess 25 and pivotally mounted in said recess by a pin 26 is a fulcrumed lever 27, said lever being fulcrumed by a pin 28 within the opening 20 of the jaw body. The outer end of the lever 27 provides a knurled thumb piece 29, which when pressed moves the gripping block out of engagement with the shank 1. To retain the gripping block normally in engagement with the shank 1, a coiled compression spring 30 is located within the pocket 19 to bear against said gripping block. The adjustable jaw 12 can be opened relatively to the jaw 4 without pressing the thumb piece 29, as the rack 23 of the gripping block 22 recedes over the rack 2 of the shank 1. To close the jaw 12 it is necessary that the thumb piece 29 be pressed to move the gripping block whereby the adjustable jaw body can be shifted upon the shank 1. When the handle 6 is pressed from left to right, counter-clockwise after the jaws have been placed in engagement with a pipe, the stem 11 of the jaw 12 is shifted into parallelism with the shank 1, consequently the serrated or roughened gripping surfaces of the jaws 4 and 12 firmly grip or bite into the surface

of a pipe and prevent the jaws from slipping.

It is thought that the operation and utility of the wrench will be apparent without further description, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements are susceptible to such variations, as in the size, shape and manner of assemblage, as fall within the scope of the appended claim.

What I claim is:—

A wrench embodying a shank, a rack carried by the front side of said shank and of less width than said shank, a jaw carried by the outer end of said shank, a sectional jaw body embracing said shank, a stem having the inner end thereof pivotally mounted in said jaw body and beveled to engage the rear side of said shank, said stem having a longitudinal groove formed in the front side thereof, a flat spring having one end thereof mounted in said groove and the op-

posite end thereof bearing against the rear side of said shank and adapted to maintain said stem at an angle thereto, a jaw carried by the outer end of said stem, said jaw body having recesses formed therein, a gripping block movably arranged within said recess, a rack carried by said block and engaging the rack of said shank, a lever fulcrumed in said jaw body and having the inner end thereof pivotally mounted in said gripping block, a thumb piece carried by the outer end of said lever, and a coiled compression spring arranged in said jaw body and engaging said gripping block and adapted to retain said gripping block in engagement with said shank.

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

WILLIAM G. NATZMER.

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."