

W. J. MORRISON.

WRENCH.

APPLICATION FILED APR. 10, 1909.

Patented Sept. 21, 1909.

2 SHEETS—SHEET 1.

934,929.

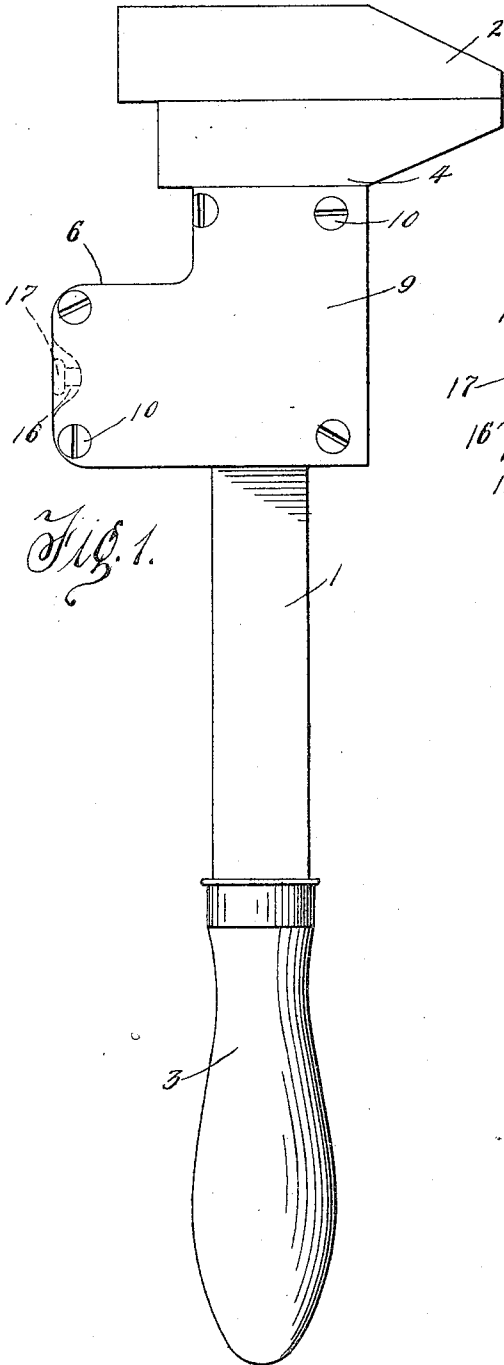


Fig. 1.

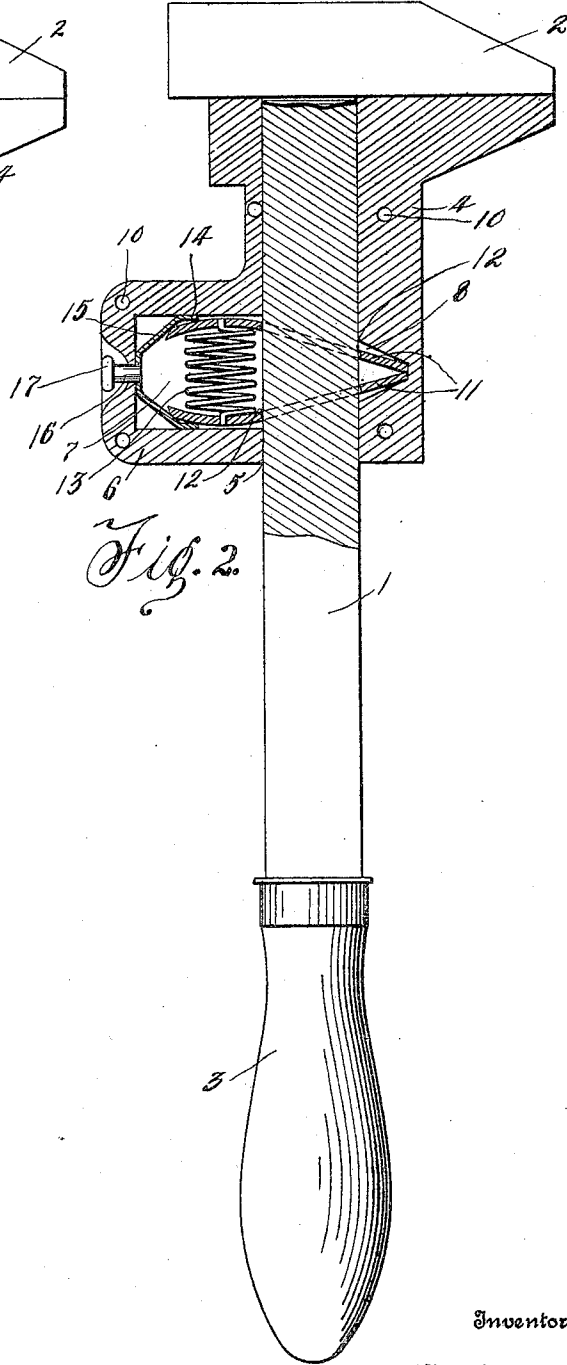


Fig. 2.

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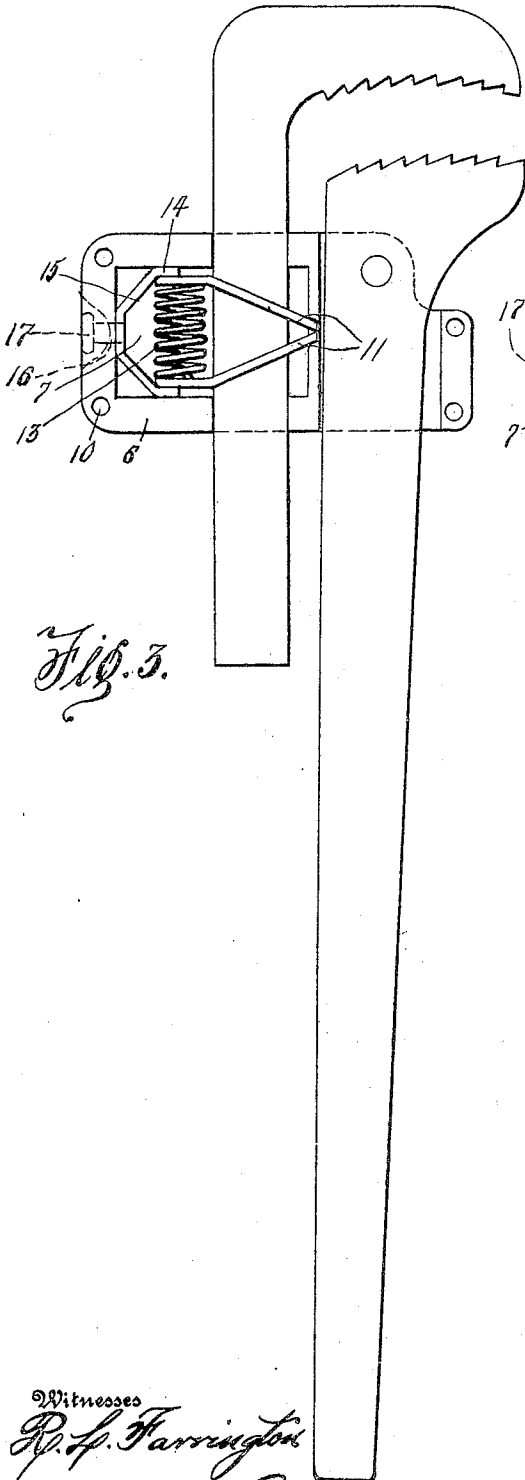


Fig. 3.

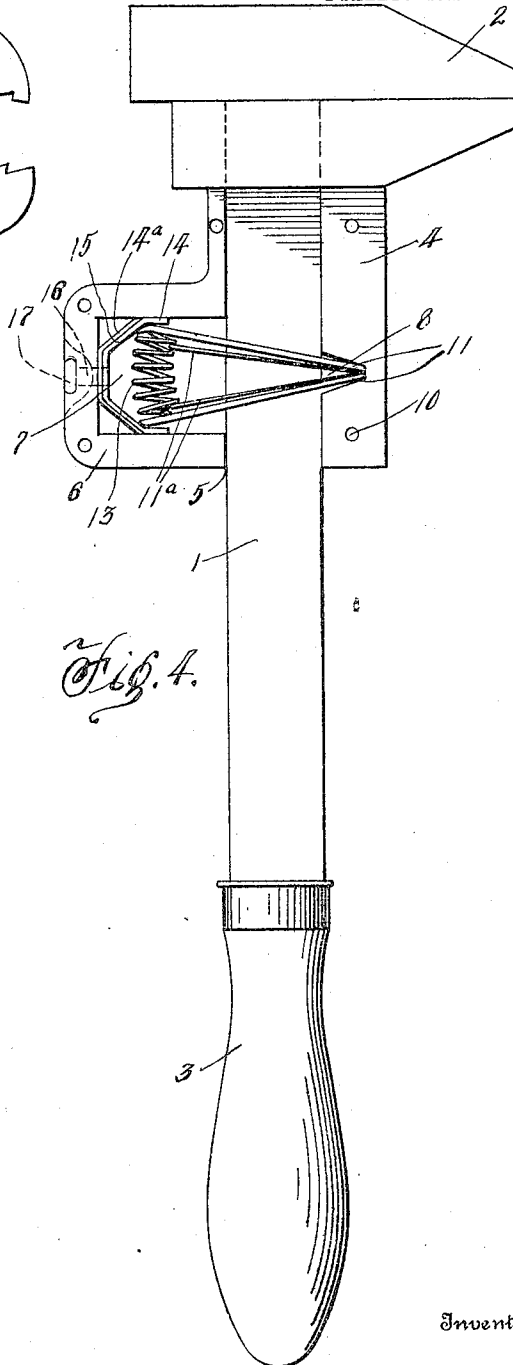


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM J. MORRISON, OF WHEELING, WEST VIRGINIA.

WRENCH.

934,929.

Specification of Letters Patent. Patented Sept. 21, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM J. MORRISON, a citizen of the United States of America, residing at Wheeling, in the county of Ohio and State of West Virginia, 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 that type of wrench commonly styled a "monkey" wrench.

The invention aims to obviate the necessity of using screw threads and nuts for adjusting the movable jaw of a wrench by providing simple and effective means for frictionally gripping the shank of a wrench and holding the movable jaw thereof in an adjusted position.

The invention further aims to provide a simple, durable and inexpensive wrench that will be positive in its action and free from injury by ordinary use, and highly efficient for the purposes for which it is intended.

The invention will be hereinafter considered in detail and then specifically pointed out in the appended claims, and reference will now be had to the drawing forming a part of this application, wherein there is illustrated the preferred embodiments of the invention, but it is to be understood that the structural elements thereof can be varied or changed as to the shape, proportion and exact manner of assemblage without departing from the spirit of the invention.

In the drawings:—Figure 1 is a side elevation of the wrench constructed in accordance with the invention, Fig. 2 is a similar view, partly broken away and partly in section, Fig. 3 is a side elevation of a pipe wrench constructed in accordance with the invention, and Fig. 4 is a side elevation of a modified form of wrench.

In the accompanying drawings, 1 designates a shank having a fixed jaw 2 and a detachable handle 3.

4 designates a movable jaw slidably mounted upon the shank 1, said jaw having a vertical opening 5 to receive the shank 1, and a right angular extension 6 provided with a spring compartment 7. This compartment 7 is adapted to confront a V-shaped recess 8 formed in the jaw 4, and in order that easy access can be had to the compartment 7 and the recess 8, the inner side of the jaw 4 is cut away and provided with a plate 9 which is

attached to the jaw 4 by screws 10 or similar fastening means.

11 designates two resilient plates arranged in the V-shaped recess 11 and extending into the compartment 7, said plates having openings 12 formed therein to receive the shank 1.

13 designates a coil spring interposed between the confronting ends of the plates 11 within the compartment 7, said spring having the ends thereof fixed in the plates 11, whereby said plates will bind against the shank 1 and hold the jaw 4 in the position to which it is adjusted. The ends of the plates 11 within the compartment 7 are curved and are engaged by a yoke 14 having inclined sides 15 adapted to force the ends of the plates 11 toward one another, when said yoke is pushed inwardly by pressing upon a pin 16 connected to said yoke and protruding through the right angular extension 6, said pin having a head or button 17.

It will be observed that since the ends of the plates 11 are confined within the recess 8 and the opposite ends of the plates normally separated, that opposite edges of the plates bordering upon the opening 12 will bind against opposite edges of the shank 1 and frictionally hold said jaw relative to the shank 1.

In Fig. 3 of the drawings, my invention as applied to a pipe wrench is shown, wherein one of the side plates of the wrench is removed in order that the arrangement of the mechanism can be observed.

A modification of the invention is illustrated in Fig. 4, wherein the yoke 14 is provided with a reinforcement or stiffening rib 14^a, and besides using the two plates 11, additional plates 11^a are provided, said plates extending into the recess 8 between the plates 11, while the opposite ends of the plates 11^a are held by the upper and lower convolutions of the spring 13.

The manner of assembling the parts of the wrench is as follows: The plates 11 with the spring 13 connecting the curved ends thereof are placed in the compartment 6 and the recess 8 of the jaw after the yoke 14 has been placed in the compartment 7 and connected to the pin 16. The shank 1, with the handle detached, is then placed in the upper end of the jaw 4 and pushed through the openings 12 of the plates 11, while said plates are held by the yoke 15. The handle can then be placed upon the shank 1 and the plate 9 secured to the jaw.

Having now described my invention what I claim as new, is:—

1. In a wrench, the combination with a shank having a fixed jaw and a detachable handle, of a movable jaw slidably mounted upon said shank, said jaw having an opening to receive said shank, said jaw having a spring compartment formed therein and a recess opposite said compartment, plates pivotally mounted in the recess of said jaw and extending into said spring compartment, said plates having openings to receive said shank, a spring interposed between the ends of said plates within said compartment for binding said plates against said shank, and means located in said jaw and protruding therefrom for moving the spring held ends of said plates toward one another to release said jaw.

2. A wrench of the type described, embodying a shank, a fixed jaw, a movable jaw slidably mounted upon said shank, said jaw

having a right angular extension provided with a spring compartment, said jaw having a recess formed therein opposite said compartment, plates arranged within said recess and extending into said compartment, said plates having openings formed therein to receive said shank, a spring interposed between the ends of said plates within said compartment for frictionally holding said plates in engagement with said shank, a yoke arranged within said compartment for engaging the ends of said plates and moving said plates toward one another to release said shank, and a pin protruding into said extension and connecting with said yoke.

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

WILLIAM J. MORRISON.

Witnesses:

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