No. 800,814. PATENTED OCT. 3, 1905.

R. H. MARTENS.

WRENCH.

APPLICATION FILED MAY 5, 1905.

Fig. 2.

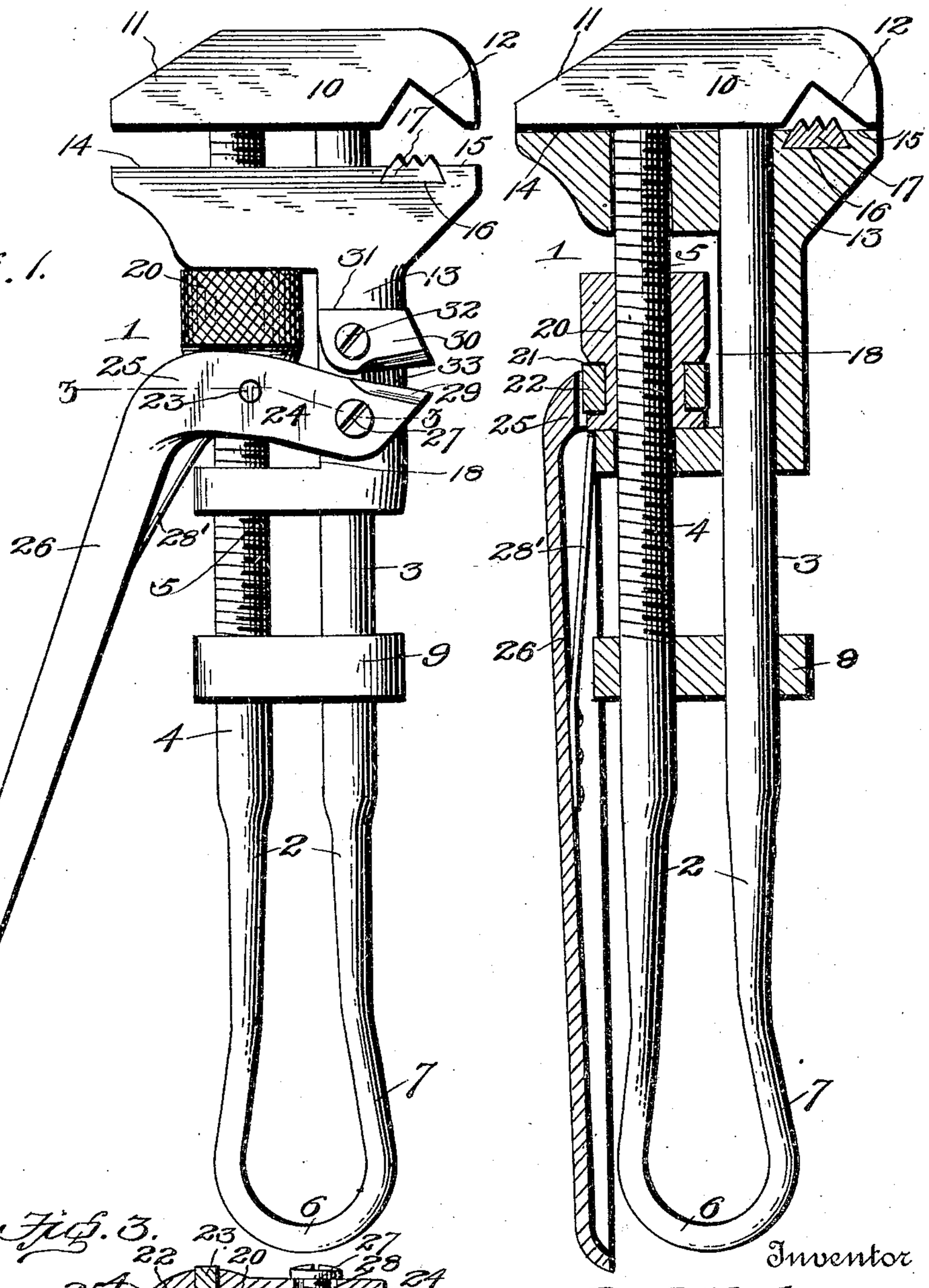
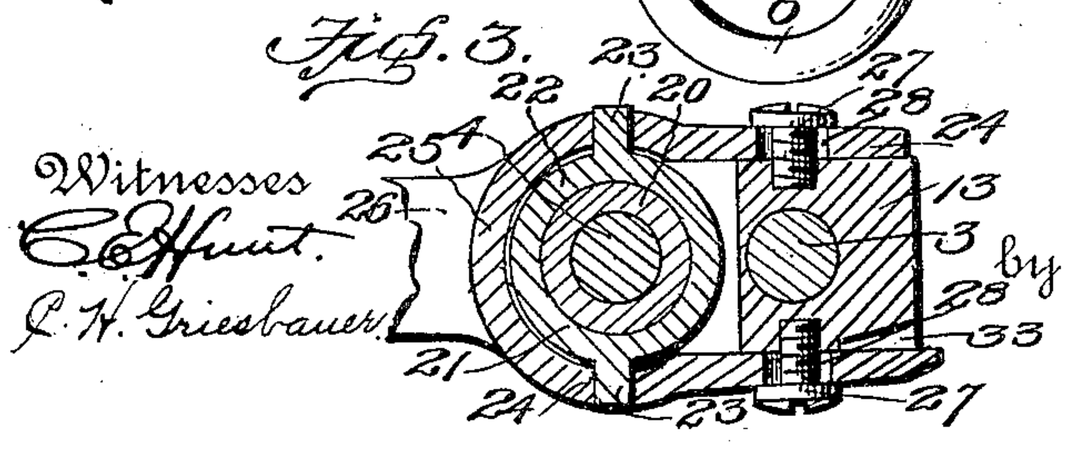


Fig. 1.

Fig. 3.



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UNITED STATES PATENT OFFICE.

RUDOLPH H. MARTENS, OF ROCKFORD, WASHINGTON, ASSIGNOR OF ONE-FOURTH TO E. R. WALKER AND ONE-FOURTH TO W. RIGHTER, OF ROCKFORD, WASHINGTON.

WRENCH.

No. 800,814. Specification of Letters Patent. Patented Oct. 3, 1905.

Application filed May 5, 1905. Serial No. 258,938.

To all whom it may concern:

Be it known that I, RUDOLPH H. MARTENS, a citizen of the United States, residing at Rockford, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Wrenches; and I do 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.

My invention relates to improvements in wrenches; and it consists in the novel construction, combination, and arrangement of devices herein shown and described.

The object of the invention is to provide a simple, durable, and efficient wrench which may be conveniently used as a pair of pliers, as a wire-cutter, and for various other purposes.

The above and other objects, which will appear as the nature of my invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved wrench, showing the hand-lever in its normal position. Fig. 2 is a longitudinal sectional view showing the lever swung inwardly to operate the sliding jaw, and Fig. 3 is a transverse sectional view taken on the line 3 3 in Fig. 1.

Referring to the drawings by numerals, 1 denotes my improved wrench, which comprises a shank 2, formed of two members 3 and 4, the member 3 being preferably cylindrical in form and the member 4 being externally screw-threaded, as shown at 5. This shank 2 is preferably formed from a single piece of metal rod which has its central portion flattened, as shown at 6, and bent upon itself to form a handle 7 for the wrench and the portions 3 and 4 of the shank. The central portions of the members 3 and 4 are connected by a cross-piece 9, and their upper ends project into and are secured in a head 10, which has its opposite ends formed with stationary or fixed wrench-jaws 11 and 12, the jaw 12 being preferably formed with a V-shaped or concaved recess to receive a pipe or rod.

Slidably mounted upon the shank 2 is an element 13, which forms the sliding jaw of the wrench, its upper end being formed with two jaw-faces 14 and 15 to coact with the jaws 11 and 12, respectively. The jaw-face 15 is preferably formed with a transversely-extending dovetail recess 16 to receive a serrated plate 17, which permits said jaw to firmly engage a pipe, rod, or other object. The body portion of the movable jaw is formed with longitudinally-extending parallel openings, through which the members 3 and 4 of the shank extend, and upon one of its sides with a recessed portion 18, which exposes a portion of the threaded member 4 of the shank. Upon this portion 5 within said recess 18 is an adjustable nut 20, which may be screwed up and down upon the part 5 to adjust the movable jaw. This nut is provided with a milled outer surface and has swiveled to its lower end, as shown at 21, an element 22, preferably in the form of a cylindrical sleeve or collar. Upon diametrically opposite points of the element 22 are formed pivot-studs 23, which project into openings formed in the arms 24 of a forked or bifurcated end 25 of a hand-lever 26. The arms or ends 24 of said lever have their outer portions pivotally connected to the sliding jaw 13 by means of screws or the like 27, which are passed through slots or elongated openings 28, formed in said arms 24. It will be seen that when the lever 26 is in its normal position (shown in Fig. 1 of the drawings) the jaw 13 will be held in engagement with the upper end of the nut 20 and that when said lever is pressed inwardly its end 24 will slide the jaw 13 away from the nut 20 and toward the fixed jaw of the wrench, so that the latter may be used as a pair of pliers. A spring 28′ is provided upon the inner side of the lever 26 and has its free end bearing against the lower portion of the movable jaw, so as to hold the latter and said lever in their normal position. (Shown in Fig. 1.)

One of the ends or arms 24 of the lever 26 is formed with a beveled edge 29, which forms a movable cutting-blade and which is adapted to coact with a stationary cutting-blade 30, which is removably secured in a recessed portion 31 of the jaw 13 by means of a screw or the like 32. A portion of the jaw 13 adjacent to the cutting edge of the blade 30 is recessed or cut away, as shown at 33, to permit a piece of wire or the like to be readily inserted between said cutting-blades.

The construction, use, and advantages of the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It

will be seen that by adjusting the nut 20 the device may be used as an ordinary monkey-wrench for engaging nuts, bolts, pipes, rods, or other objects and that when the movable jaw is adjusted a short distance from the stationary jaw and the lever 26 is operated the movable jaw will coact with the stationary one, so that the device may be used as a pair of pliers for working on wire and for other purposes. When the lever 26 is operated, the device may also be used as a cutter for severing wires, nails, rods, and the like.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A wrench comprising a shank consisting of two parallel members, one of which is screw-threaded, a fixed jaw upon one end of said shank, a movable jaw slidably mounted upon said shank, an adjustable nut upon the threaded member of said shank, an element swiveled upon said nut, a lever pivoted intermediate its ends upon said element, and having one of its ends pivotally connected to said sliding jaw, and a spring for holding said sliding jaw normally in its open position, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

RUDOLPH H. MARTENS.

Witnesses:

J. B. GILBERT,

J. H. MORRISON.