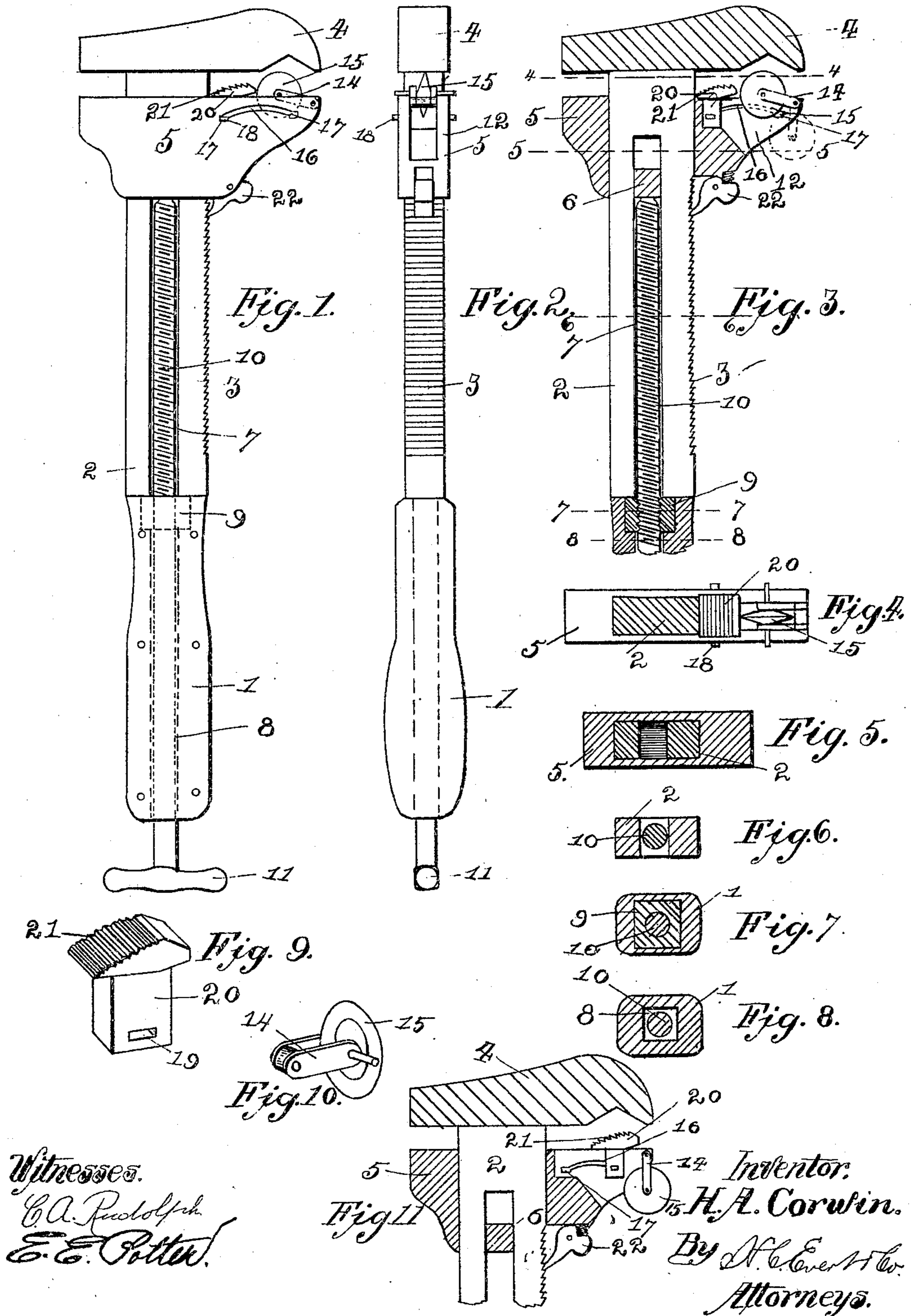


No. 799,539.

PATENTED SEPT. 12, 1905.

H. A. CORWIN.  
COMBINATION WRENCH.  
APPLICATION FILED MAY 8, 1905.



# UNITED STATES PATENT OFFICE.

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## COMBINATION-WRENCH.

No. 799,539.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed May 8, 1905. Serial No. 259,352.

*To all whom it may concern.*

Be it known that I, HERBERT A. CORWIN, a citizen of the United States of America, residing at Belle Vernon, in the county of Fayette and State of Pennsylvania, have invented certain new and useful Improvements in Combination-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in combination-wrenches, and has for its object the provision of novel means whereby several tools, all of which have a wrenching action, may be conveniently arranged and operated in a single device.

My improved wrench may also be used as a quick-acting monkey-wrench or pipe-wrench. Furthermore, the device may be 20 used as a pipe-cutter.

Another object of my present invention is to provide a tool of the character described that will be extremely simple in construction, strong and durable, and comparatively inexpensive to manufacture.

25 With the above and many other objects in view the invention finally consists in the novel construction, combination, and arrangement of parts, which will be hereinafter more fully described and then specifically pointed out in the claims, and, referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, 35 in which—

Figure 1 is a side elevation of my improved wrench and pipe-cutter. Fig. 2 is a front view thereof. Fig. 3 is a vertical sectional view, which is partly broken away. Fig. 4 is 40 a cross-sectional view taken on the line 4 4 of Fig. 3. Fig. 5 is a similar view taken on the line 5 5 of Fig. 3. Fig. 6 is a cross-sectional view taken on the line 6 6 of Fig. 3. Fig. 7 is a similar view taken on the line 7 7 of Fig. 3. Fig. 8 is a cross-sectional view taken on the line 8 8 of Fig. 3. Fig. 9 is a perspective view of the jaw adapted for use in connection with the pipe-wrench. Fig. 10 is a similar view of the pipe-cutter, and Fig. 11 is 50 a side elevation of the wrench when in position to be used as a pipe-wrench or monkey-wrench.

In the drawings the handle is indicated by the reference-numeral 1, said handle carry-

ing an extension 2, which is provided with a 55 toothed rack 3. At the upper end of the extension 2 is rigidly secured a fixed jaw 4. A sliding jaw 5 is arranged upon the extension 2, said sliding jaw carrying a central guide 6, operating in a guideway 7, formed in the extension 2. The handle 1 has formed therein 60 a central opening 8. At the upper end of said opening arranged in the handle is also secured a nut 9, the central opening of which registers with the opening for the reception 65 of a screw-threaded shaft 10, having formed at its lower extremity an operating-handle 11. The sliding jaw 5 is bifurcated, as shown at 12, wherein is pivotally secured a hanger 14, carrying a cutter 15. The sliding jaw 70 has also formed therein segmental guideways 16, which terminate at each end in seats 17, adapted to receive a pin 18, which extends through an opening 19, formed in the shank 20, which carries a jaw 21, the said shank 20 75 being also adapted to operate in the bifurcated portion 12. A spring-pressed pawl 22 is also pivotally secured within the sliding jaw and adapted to engage the toothed rack 3.

The operation of my improved combination-wrench is as follows: When the device 80 is placed in a position as shown in Figs. 1, 2, and 3 of the drawings, the wrench is used as a pipe-cutter, and as the pipe is cut the operating-handle 11 is turned, thereby gradually forcing the sliding jaw carrying the cutter into the pipe. In order to use my improved wrench as a pipe-wrench or monkey-wrench, the cutter is placed in a position as shown in dotted lines of Fig. 3 of the drawings 90 and the jaw 21 placed in position as shown in Fig. 11 of the drawings, thus moving this latter jaw 21 in a forward position to engage the pipe, and it will be seen that when the wrench is in this position the rear or opposite sides of the jaws may be conveniently 95 used as a quick-acting monkey-wrench. It will be further understood that when my improved tool is used either as a pipe-wrench or monkey-wrench the screw-threaded shank 100 10 is partly withdrawn from the handle in order to permit the sliding jaw a free and easy movement within the guideway of the handle extension.

It will be noted that various changes may 105 be made in the details of construction without departing from the general spirit and scope of the invention.

What I claim, and desire to secure by Letters Patent, is—

1. In a wrench, the combination with a handle, a rack-bar formed upon said handle, 5 a stationary jaw secured to the end of said handle, a sliding jaw, a guide carried by said sliding jaw and operating in a guideway formed in said handle, said sliding jaw having a segmental guideway formed therein, 10 said guideway terminating in seats at each end, a movable jaw, a shank formed on said movable jaw, said sliding jaw having its one side bifurcated for the reception of said shank of the movable jaw, and a pin extending 15 transversely through said shank and adapted to ride in said segmental guideway, substantially as described.

2. In a tool having a wrenching action, the combination of a fixed jaw and slidable 20 jaw, a movable jaw secured in said slidable jaw, a cutter, a pivoted hanger attached to said cutter and operating within said slidable

jaw, means extending through the handle to operate said slidable jaw, substantially as described. 25

3. In a wrench, the combination of a handle, a rack-bar formed on said handle, a stationary jaw fixed on said handle, a sliding jaw operating upon said handle, a screw passing through the handle, a nut fixed in 30 the handle and receiving said screw, a movable jaw secured in said sliding jaw, and a spring-pressed pawl secured in said sliding jaw and engaging said rack-bar, said screw bearing against the sliding jaw and serving 35 to move the same toward the stationary jaw, substantially as and for the purpose set forth.

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

HERBERT A. CORWIN.

Witnesses:

E. M. KYLE,

J. O. SPRINGER.