

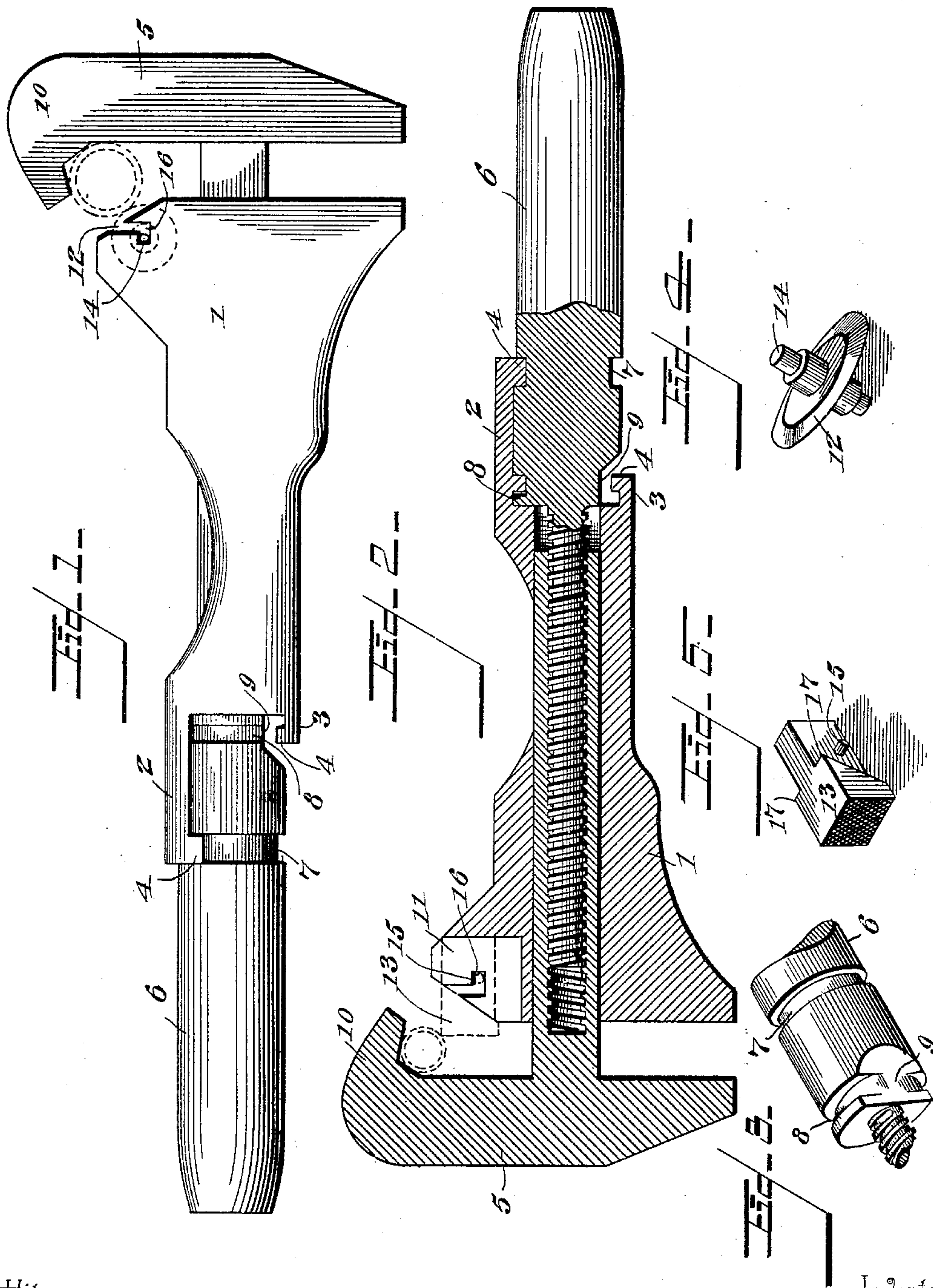
No. 638,759.

Patented Dec. 12, 1899.

G. W. PRINZING.
COMBINATION TOOL.

(Application filed Sept. 18, 1899.)

(No Model.)



Witnesses

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GEORGE W. PRINZING, OF BARTLETT, TEXAS.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 638,759, dated December 12, 1899.

Application filed September 18, 1899. Serial No. 730,932. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PRINZING, a citizen of the United States, residing at Bartlett, in the county of Williamson and State of Texas, have invented a new and useful Combination-Tool, of which the following is a specification.

My invention relates to combination-tools, and more particularly to wrenches which are adapted for use as pipe-cutters and pipe-wrenches by the addition thereto of interchangeable attachments, and has for its object to produce a tool which can be readily adapted for one use or another and is equally efficient for either.

My invention consists in the combination and improved construction of parts of a wrench, as will be hereinafter more fully set forth.

Referring to the accompanying drawings, in which the same reference-numeral indicates a corresponding part in each of the views in which it occurs, Figure 1 is an elevation of a wrench embodying my invention, the pipe-cutting attachment being shown in dotted lines. Fig. 2 is a longitudinal sectional view of the same, the pipe-wrench attachment being shown in dotted lines. Fig. 3 is a broken perspective view of a portion of the handle; and Figs. 4 and 5 are perspective views of the pipe-cutting and pipe-wrench attachments, respectively.

In practicing my invention I recess the rigid jaw 1 longitudinally and provide its rear end with two rearwardly-extending arms 2 and 3, each of which is provided with a lip or shoulder 4 and one of which is longer than the other. The movable jaw 5 has its shank perforated longitudinally and screw-threaded, so that it can be drawn back and forth within the recess of the rigid jaw by the rotation of the handle 6. The handle of the wrench has its shank screw-threaded to engage with the screw-threaded perforation of the shank of the movable jaw, and has its intermediate portion provided with two annular grooves 7 and 8 to register with the lips upon the arms of the rigid jaw to hold the handle and rigid jaw in fixed longitudinal arrangement with each other. The front wall of the forward groove is cut away to the bot-

tom of the recess, as shown at 9, to permit of the parts being assembled.

In assembling the parts of the wrench the shank of the handle is inserted into the recess of the rigid jaw at such angle as to permit the grooved portion of the handle passing in under the lip on the longer arm, the cut-away portion of the handle permitting that end to pass in over the lip on the short arm. As soon as the handle has been inserted, so as to cause the grooves to register with the lips, the shank of the movable jaw is inserted into the opposite end of the recess of the rigid jaw until the end of the shank of the handle will enter the recess in the movable jaw. The handle is then rotated to cause its screw-threaded shank to enter the recess of the shank of the movable jaw, and thus move said jaw back and forth relatively to the fixed jaw as the handle is rotated in reverse directions.

I prefer to extend the head of the jaws in the opposite direction from the usual tapered points and provide one of them with an overhanging portion 10 and the other one with a recess 11. In the drawings I have shown the head of the movable jaw provided with an overhanging portion and the fixed jaw with a recess. Removably seated within the recess may be placed a rotary pipe-cutter 12 or a pipe-jaw 13, each of which is provided with lateral projections 14 and 15, respectively, which fit within slots 16 in the walls of the recess. The bottom of this slot is preferably extended at an angle a short distance to the rear to permit of the projections on the attachments fitting therein to hold them against accidental displacement.

The projections on the rotary cutter form an axle, on which it rotates, and the corner of the jaw at the recess is cut away at an incline, beyond which the periphery of the cutter projects for engagement with the pipe when held by the overhanging portion of the movable jaw. The head of the pipe-wrench attachment is provided with a shoulder 17, which is preferably inclined to engage with said inclined portion of the fixed jaw when the rear portion is seated within the recess 11.

When it is desired to use my wrench as a vise, the rigid jaw is firmly secured in a fixed

position in such manner as to leave the movable jaw and the handle free to be operated, as above described. By arranging the inclined points of the wrench upward it can be
 5 used as a vise having file edges, and by securing it in the reverse position it can be used as a pipe-cutter or a pipe-wrench, according as to whether the cutter or the pipe-wrench attachment is seated within the recess.

10 As the wrench proper comprises but three elements—the two jaws and the handle—it is evident that it can be manufactured very cheaply and that it is compact and very durable. The use of the attachments with the
 15 jaws renders the wrench capable of use as a combination-tool of wide scope and utility.

Changes in the form, proportion, size, and minor details of construction may be made within the scope of the appended claims without departing from the spirit or sacrificing
 20 any of the advantages of the present invention.

Having thus described my invention, what I claim is—

25 1. In a wrench, the combination, with a longitudinally-slotted fixed jaw, the rear end of which is provided with extended arms, one of which is longer than the other one, and the end of each is provided with a lip, a
 30 movable jaw, the shank of which fits within the fixed jaw and is provided with a longitu-

dinal screw-threaded perforation, and a handle, the shank of which is screw-threaded and the intermediate portion is provided with annular grooves in position to receive said lips 35 when the parts are assembled, the front wall of one of said grooves being cut away.

2. In a wrench, the combination, with a longitudinally-recessed rigid jaw, the head of which is extended and provided with a recess, 40 the side walls of the recess being cut off at an angle, and each provided with an angular slot extending from the cut-off portion, of a movable jaw, the head of which is extended and provided with an overhanging portion 45 the shank of which fits within the longitudinal recess of the rigid jaw and is provided with a screw-threaded perforation, a handle, the shank of which is screw-threaded and the intermediate portion is interlocked with the 50 rigid jaw, and an attachment adapted to fit within the recess in the head of the rigid jaw each side of which is provided with a lateral projection to fit within the respective slots in the side walls of the recess. 55

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE W. PRINZING.

Witnesses:

W. W. WALTON,
 CHAS. HARRINGTON.