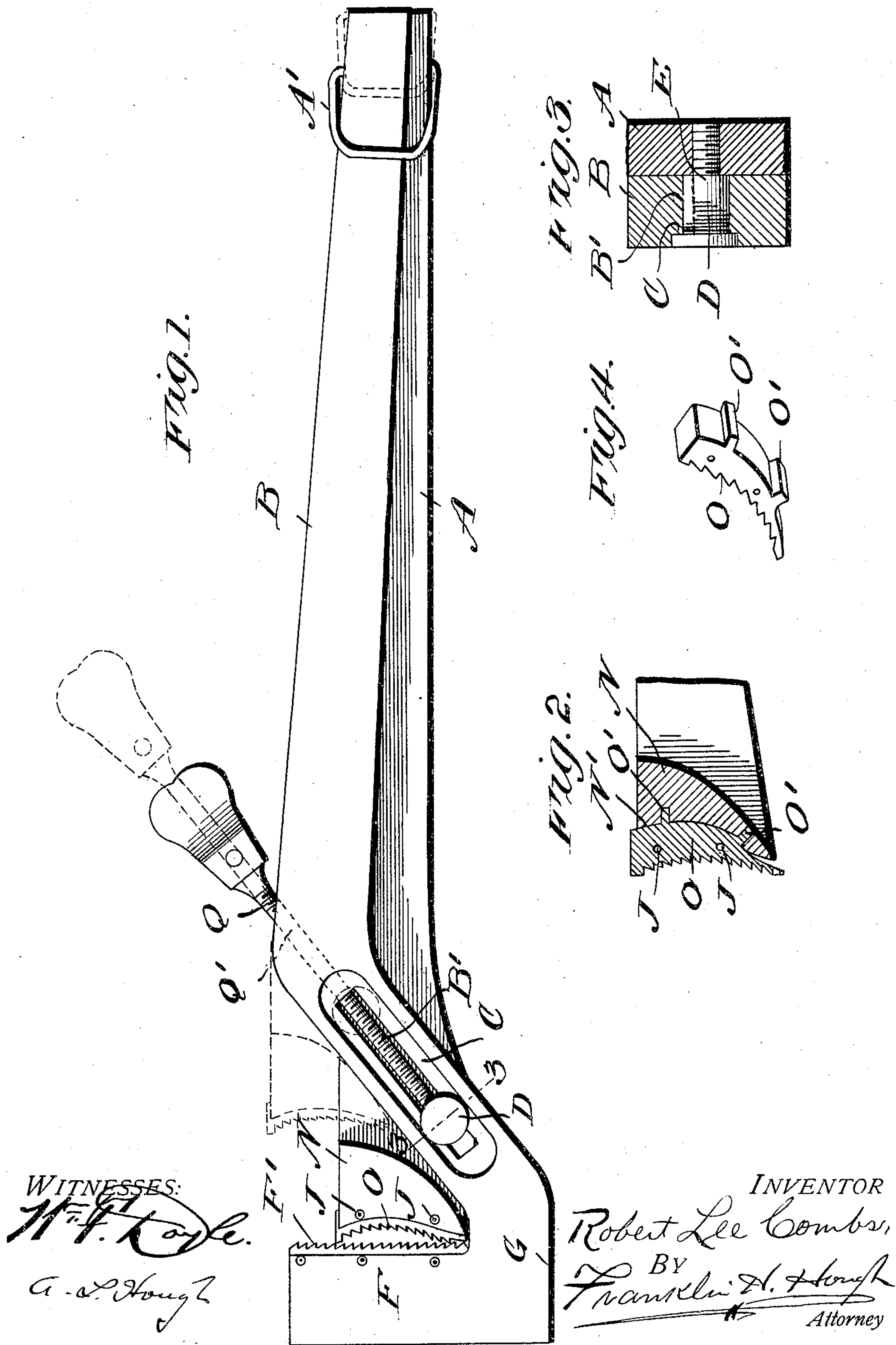


No. 789,717.

PATENTED MAY 16, 1905.

R. L. COMBS.
WRENCH.

APPLICATION FILED NOV. 19, 1904.



UNITED STATES PATENT OFFICE.

ROBERT LEE COMBS, OF ARCO, OKLAHOMA TERRITORY, ASSIGNOR OF TWO-THIRDS TO GEORGE E. OAKLEY AND GENERAL MARION REECE, OF ARCO, OKLAHOMA TERRITORY.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 789,717, dated May 16, 1905.

Application filed November 19, 1904. Serial No. 233,503.

To all whom it may concern:

Be it known that I, ROBERT LEE COMBS, a citizen of the United States, residing at Arco, in the county of Woods, Oklahoma Territory, 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in wrenches; and the object of the invention is to produce a device of this character having a slotted fulcrumed guide and so arranged that pipes or other articles may be securely gripped and held, the jaws being adapted to be adjusted while the handles are held together.

The invention consists, further, in various details of construction and combinations and arrangements of parts, which will be herein-after fully described and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my improved wrench, the adjustment of the jaws being shown by dotted lines. Fig. 2 is a sectional view through one of the jaws. Fig. 3 is a cross-sectional view on line 3 3 of Fig. 1, and Fig. 4 is an enlarged detail view of one of the jaws removed from the handle.

Reference now being had to the details of the drawings by letter, A and B designate the two handles of the wrench, one of which carries a bail A', which is designed to engage over the other handle and hold the two together. Said handle B has a diagonally-disposed portion provided with an elongated slot B', which has a shoulder C, formed by recessing the face of the handle about the margin of said slot.

D designates a headed pin which is carried by the handle A, and the shank portion of said pin projects through the slot B', the head of the

pin being adapted to slide upon the shoulder C and hold the two handles together. Said pin passes through a block E, which is of a thickness equal to the width of said slot in which it has a play and serves as a guide in adjusting the jaws of the wrench nearer together or farther apart.

The handle B has an angled end forming a jaw F with teeth F' thereon, while the portion G may be enlarged and formed suitably for use as a hammer.

The handle A has an offset N upon one end thereof, which has a play over the inclined edge of the handle B when the two jaws are being adjusted in different positions. The edge of said offset, which is adjacent to the diagonally-disposed part of the handle B, is slightly convexed, as will be observed upon reference to Fig. 1 of the drawings, thereby allowing the two handles to be tilted upon their pivots without any interference between said offset and the handle B. The end of said offset portion is recessed, as at N', and a concaved jaw O is seated in said recess and held therein by means of pins J, which pass through registering eyes in the side walls of the recessed portion of said offset and said concaved jaw. In order to further strengthen and hold said concaved jaw in the recess in said offset, lugs O', which project from said jaw O, are provided, which engage apertures in the bottom wall of said recess.

Q designates a screw which is mounted in a threaded aperture Q' in the handle B and in alinement with the slot B'. Said screw is adapted to bear against said sliding block E within said slot, whereby the jaws may be screwed together for adjusting the wrench to fit different-sized pipes, rods, or other articles, as may be desired.

In operation the two ends of the handles, one carrying the bail, may be held together by the latter, and when it is desired to open or close the jaws to grip any object the thumb-screw is operated in one direction or the other and when turning any object gripped by the jaws the bail holding the ends of the handles together will serve to hold the jaws

securely when the wrench is turned in one direction, and when turned in the opposite direction the offset on the handle A will contact with the inclined portion of the handle B
5 and receive the strain that comes upon the jaws.

While I have shown a particular construction of apparatus illustrating my wrench, it will be understood that the details of the same
10 may be varied, if desired, without in any way departing from the spirit of the invention.

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

15 A wrench comprising a fixed jaw having an angled end, a portion of the handle of said jaw being diagonally disposed and provided with an elongated slot with a recess about the marginal edge of said slot, a second handle, a

shouldered screw passing through said slot 20 and having its inner contracted end engaging the threaded aperture in said second handle, and the head of the screw positioned in said recess about the slot, an adjusting-screw passing through the shank portion of the fixed 25 jaw and extending into said slot and adapted to bear against said shouldered screw, a curved jaw having ribs upon its convex surface seated in the concaved end of said second handle with said lugs engaging recesses in the 30 handle, and means for fastening said curved jaw to its handle, as set forth.

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

ROBERT LEE COMBS.

Witnesses:

C. A. RIPPEY,
K. H. KENDALL.