

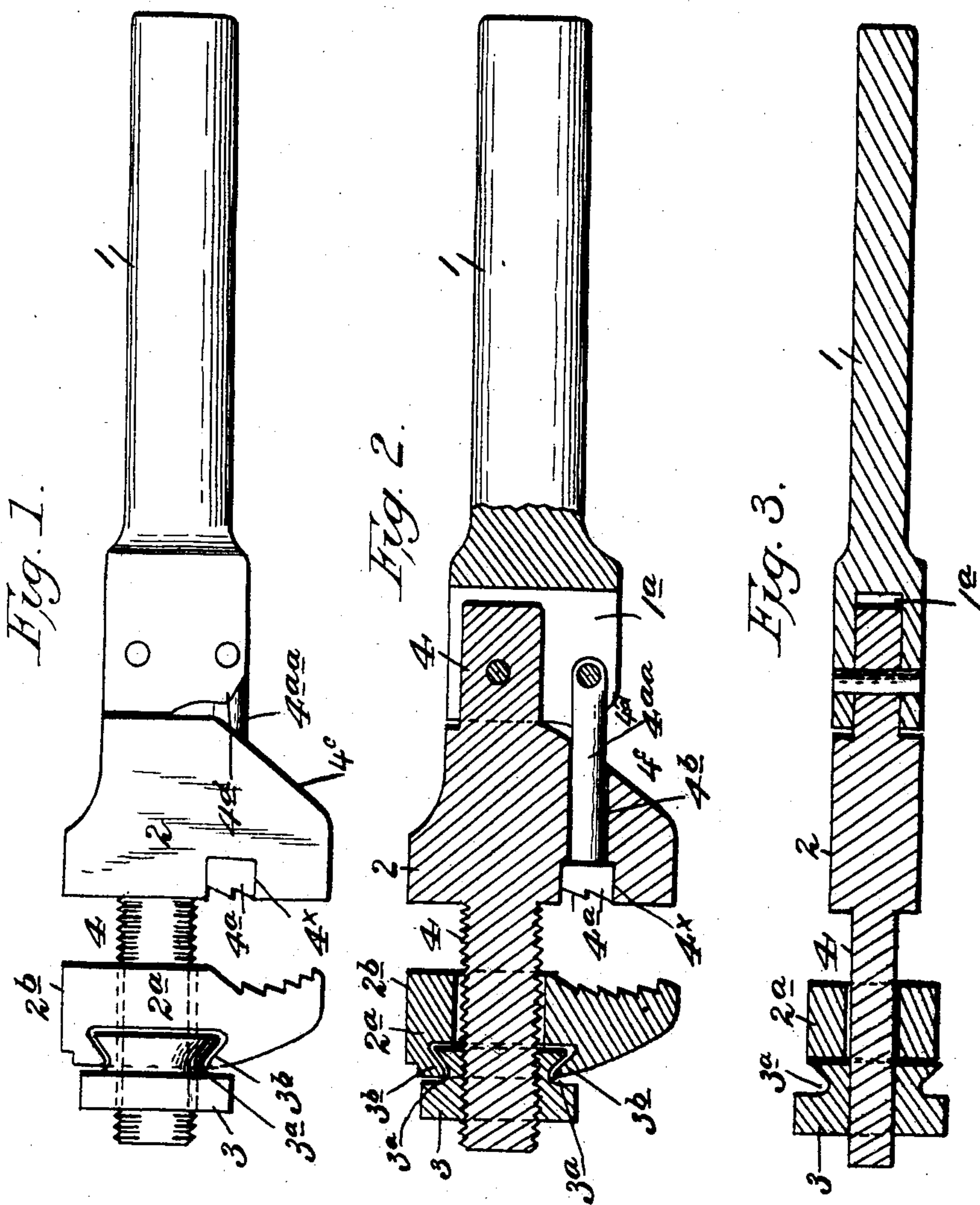
No. 765,066.

PATENTED JULY 12, 1904.

C. C. COOPER.  
WRENCH.

APPLICATION FILED JAN. 5, 1904.

NO MODEL.



# UNITED STATES PATENT OFFICE.

CHARLES C. COOPER, OF NOCONA, TEXAS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 765,066, dated July 12, 1904.

Application filed January 5, 1904. Serial No. 187,757. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES C. COOPER, a citizen of the United States, residing at Nocona, in the county of Montague and State of Texas, have invented new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to improvements in wrenches, particularly for manipulating or connecting and disconnecting pipe-sections.

It has for its object to provide for accomplishing the foregoing quickly and effectively, as will be apparent later.

Said invention consists of the detailed construction and combination of parts substantially as hereinafter more fully disclosed by the following description and particularly pointed out by the claims concluding said description.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a side elevation thereof. Fig. 2 is a vertical section in the plane of its relatively greater transverse area. Fig. 3 is a similar section produced at right angles to the last-noted section.

In the carrying out of my invention I construct or form the tool or wrench principally of a handle member 1, two jaw members 2<sup>a</sup>, a nut 3, and a screw-threaded shank-like portion or member 4, preferably oblong in cross-section, the jaw member 2 being integral or in one piece with said shank portion or member. Said handle member is cast at one end with a preferably rectangular socket 1<sup>a</sup>, within which is pivoted the shank-like portion or member 4 at its inner end, and upon said latter member are loosely fitted or arranged the outer jaw member 2<sup>a</sup> and the nut 3, engaging the screw-threaded portion of said member 4, which nut may be actuated by the fingers or a separate wrench, according to the requirement of the case.

The jaw member 2, conjointly with the jaw-member 2<sup>a</sup>, at one edge is preferably adapted to form a hammer-face, as at 2<sup>b</sup>, the purpose of which is apparent, and arranged in connection with said inner jaw member 2 is a supplemental jaw or dog 4<sup>a</sup>, let into a recess or socket 4<sup>x</sup> in the face of said jaw member 2,

said supplemental jaw or dog having its face at the forward edge provided with a transverse ridge or tooth to more effectively engage the object or pipe operated upon. Said supplemental jaw or dog has its shank or stem 4<sup>aa</sup> arranged within a passage 4<sup>b</sup> of the jaw member 2, said stem or shank projecting beyond the latter and entering and pivoted within the socket 1<sup>a</sup> of the handle member, while said jaw member has its inner edge reduced or tapered, as at 4<sup>c</sup>, toward and inward beyond the opposite forward edge of the handle member, and the last noted is notched or recessed, as at 4<sup>d</sup>, at this point to receive the angular edge of said jaw member as the parts are actuated in applying the wrench, as presently more fully disclosed.

The outer jaw member 2<sup>a</sup> has its face concaved in general outline to conform to and to more advantageously engage the rounded surface of the object or pipe interposed between the jaws, said face also having ratchet-teeth or serrations to render effective the gripping action of the jaw member upon said object or pipe, as in turning the same. The nut 3 is provided laterally in its outer surface or circumference with an annular groove 3<sup>a</sup>, receiving inward-extending edges or flanges 3<sup>b</sup>, formed by recessing the outer surface of said jaw member 2<sup>a</sup>, with undercut walls engaging the inner flared surface of said nut produced by so recessing said outer surface of said jaw member.

It will be observed that, the nut 3 having been properly adjusted to permit the application of the jaw members to the cylindric surface or pipe interposed therebetween and said nut then screwed firmly upon the jaw member 2<sup>a</sup> to suitably bear thereon, the handle member 1 is now flexed inward or toward the gripped pipe, when the supplemental jaw or dog 4<sup>aa</sup> is brought forcibly against said pipe, thus aiding and combining with the jaw member 2<sup>a</sup> to grip the latter, whereby by the continued application of pressure upon said handle member in the same direction the initial turn will be imparted to said pipe and by a repetition of such actuation of said handle member the pipe-turning operation will be effected, providing for the separation of pipe-



sections or the connecting together of the same, as will be readily appreciated. It will also be noted that the opposed surface of the jaw members 2 2<sup>a</sup> where the latter extend to the right beyond the member or part 4 are preferably roughened or transversely notched to provide for securing an effective gripping action upon any object placed therebetween—as, for instance, in improvising the same for use—as a vise.

Latitude is allowed as to details herein as circumstances may suggest without departing from the spirit of my invention and said invention still be protected.

I claim—

1. A wrench comprising a handle member having pivoted thereto a screw-threaded shank member bearing jaw members and a nut, said nut having rotatable connection with one of said jaw members and one of said jaw members having a supplemental jaw or dog, whose stem or shank is pivoted to said handle member.

2. A wrench comprising a handle member having pivoted thereto a screw-threaded shank member bearing jaw members and a nut having an annular groove and flange connection with one of said jaws, and a supplemental jaw or dog actuated from the other of said jaws.

3. A wrench comprising a handle member having pivoted thereto a screw-threaded shank member bearing jaw members and a nut having an annular groove engaged by flanges upon one of said jaw members, and a supplemental jaw or dog carried by the other of said jaw members and having its stem or shank portion pivoted to said handle member.

4. A wrench consisting of a handle member having a rectangular socket in one end, a jaw member having its shank let into said socket and pivoted to said handle member, a supplemental jaw or dog let into a recess or socket of said jaw member, with its stem extending through a passage in said jaw member and pivoted to said handle member, a second jaw member opposed to the aforesaid jaw member, and a nut having an annular groove receiving flanges upon the latter jaw member, and fitting upon the screw-threaded portion of the shank of the first-referred to jaw member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES C. COOPER.

Witnesses:

STANTZ B. COOPER,  
J. W. HUMPHREY.