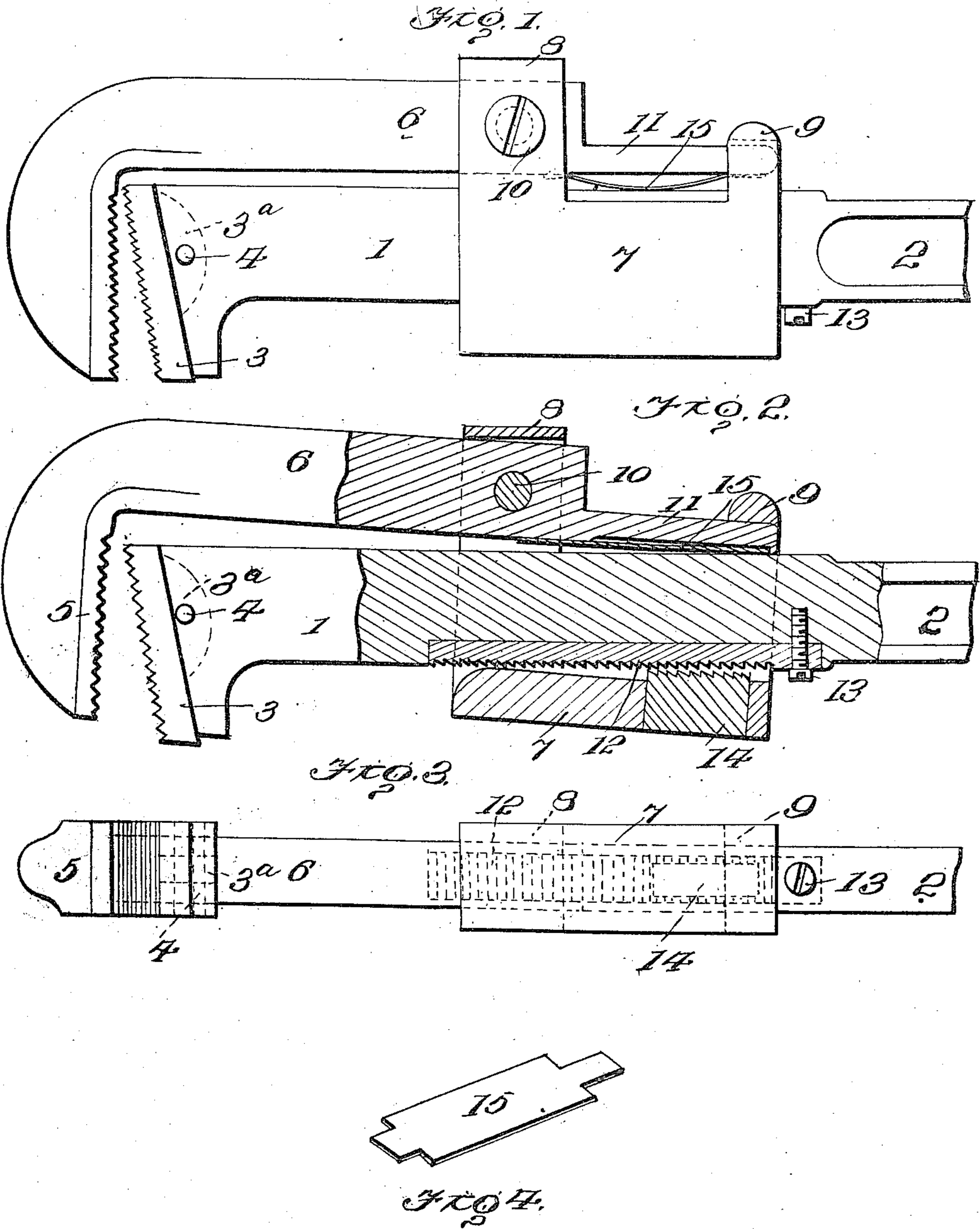


J. F. WRIGHT.
PIPE WRENCH.

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UNITED STATES PATENT OFFICE.

JAMES F. WRIGHT, OF CANTON, OHIO.

PIPE-WRENCH.

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To all whom it may concern:

Be it known that I, JAMES F. WRIGHT, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

This invention has for its object a simple, durable and efficient construction of pipe wrench, which may be quickly adjusted to the work and used in the nature of a ratchet wrench to obtain repeated holds or grips upon the pipe or the like in the operation of turning the same, without the necessity of repeated adjustments of the jaws.

With this and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a side elevation of a pipe wrench constructed in accordance with my invention; Fig. 2 is a similar view partly in section; Fig. 3 is an edge view; and, Fig. 4 is a detail perspective view of a spring employed.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to the drawing the numeral 1 designates the shank of my improved pipe wrench, the same being preferably composed of a steel bar with a handle portion 2 at one end. At its opposite end the shank 1 is preferably beveled as shown and carries an inserted block 3 which is preferably composed of tool steel and which is secured to the end of the shank in any desired way as by the lip 3^a and cross pin 4 of steel.

5 designates the relatively movable jaw of the wrench, said jaw as well as the relatively stationary jaw, which is formed by the block 3, being serrated or roughened on their opposing faces, as clearly illustrated in the drawing, so as to obtain a proper hold on the work. The jaw 5 is formed as a preferably integral angularly disposed end of a bar 6 of steel.

7 designates a sliding head which is mounted on the shank 1 and which is pro-

vided with a relatively large yoke 8 and a relatively small check yoke 9. The bar 6 passes through the yoke 8 and is pivotally mounted therein on a screw 10 or similar pivot, and the rear end of the bar 6 is preferably reduced as indicated at 11 and has its extremity mounted for a limited movement in the check yoke 9.

12 designates an inserted tool steel rack which is secured to the shank 1 by the screw 13 which also serves the function of a stop for the sliding head 7, and the latter is provided at its rear end with an inserted steel dog or pawl 14 which is toothed as shown and which is designed for engagement with the rack 12.

A spring 15 is interposed between the rear edge of the shank 1 and the adjacent edge of the bar 6 between the pivot 10 thereof and the extremity of the reduced end 11, the ends of the spring fitting within the yokes 8 and 9 and the spring being preferably bowed as shown and engaging the rear edge of the shank 1 so as to serve the double function of holding the head with the dog 14 in engagement with the rack 12 and also as a means for tilting the bar 6 in a direction to carry the movable jaw toward the relatively stationary jaw so that after the wrench has been adjusted to the work and the pipe or the like given a partial turn, the wrench may be moved backwardly again on the work for a fresh hold without the necessity of again adjusting the jaws, it being manifest that in such backward movement, the jaw 5 will be permitted to yield or tilt.

It is to be particularly noted that the pivot pin 10 is located at a point between the toothed block 14 and the free outer end of the bar 6. By this arrangement of parts, as best illustrated in Fig. 2, it will be seen that the block may be easily released by the operator pressing his thumb inwardly upon the check yoke 9, the head 7 being thereby tilted and it being unnecessary to press the entire head away from the shank 1 which would be the case if the pivot pin 10 were located just above or in transverse alinement with the block 14. It is also to be noted that by arranging the pivot point 10, as before described, the forward edge of the relatively large yoke 8, serves as one check, while the yoke 9 serves as the other check, in the operation of automatically releasing the tool from the work in the ratchet

action to obtain a fresh hold thereon, these checks operating to limit the free outward movement of the jaw 5 in the reverse movement of the wrench to obtain a fresh hold, 5 so said jaw can not pass to a position where it is locked on the work and thereby prevent the ratchet action. No stirrups or other parts, other than the yokes 8 and 9, are necessary in my device to obtain the proper 10 check effect. Furthermore, by making the check yoke 9 relatively small and reducing the rear end of the bar 6, as at 11, not only is the weight reduced without sacrificing strength, the yoke 9 being merely a check 15 yoke, but in addition to this the facility with which the wrench may be manipulated is increased, owing to the fact that the operator can easily press his thumb on the yoke 9, using the thumb of the same hand 20 which grasps the handle 2, and this would otherwise be very inconvenient if not impossible, with the larger sizes of wrench.

Having thus described the invention, what is claimed as new is:

25 A pipe wrench, comprising a toothed shank provided at one end with a jaw and

at its other end with a handle, a sliding head mounted on said jaw and provided with a relatively large forward yoke and a relatively small rear yoke in spaced relation to 30 the forward yoke, a bar pivotally mounted in the forward yoke, the head being provided with a toothed dog adapted to engage the toothed shank and the pivot pin of the bar being in advance of and out of 35 alinement with said dog, the rear end of the bar being reduced and extended into the relatively small yoke, said yoke and the forward edge of the other yoke serving as checks for said bar in the releasing ratchet 40 operation, the bar being formed at its forward end with a jaw co-acting with the first named jaw and a spring interposed between the rear edge of the shank and the bar, for the purpose specified. 45

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

JAMES F. WRIGHT. [L. s.]

Witnesses:

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