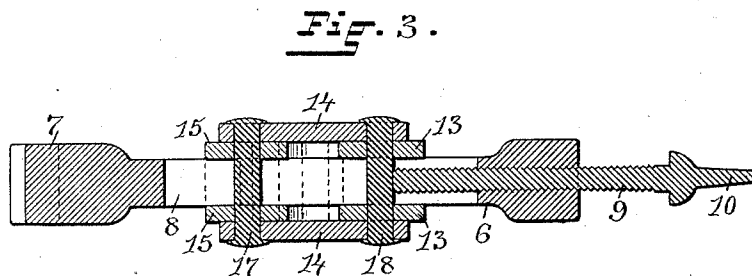
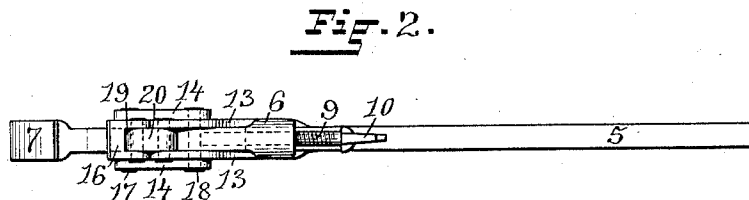
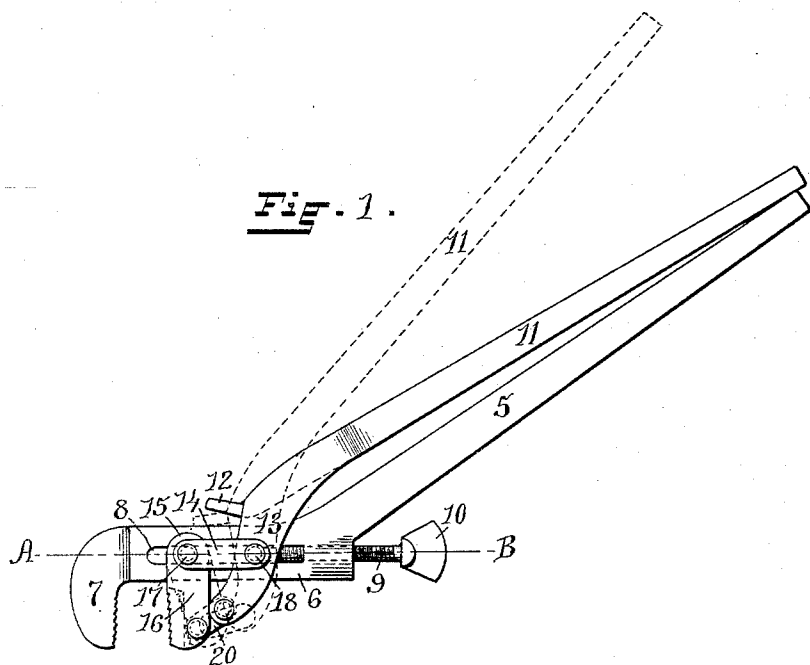


(No Model.)

S. COOK.
WRENCH.

No. 485,152.

Patented Oct. 25, 1892.



WITNESSES:

Henry J. Miller
M. F. Bligh.

INVENTOR:

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Attorneys.

UNITED STATES PATENT OFFICE.

SIDNEY COOK, OF PENSACOLA, FLORIDA, ASSIGNOR TO ARTHUR C. SIMPSON, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 485,152, dated October 25, 1892.

Application filed August 24, 1892. Serial No. 443,990. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY COOK, of Pensacola, in the county of Escambia and State of Florida, have invented certain new and useful Improvements in Wrenches; and I hereby declare that the following is a full, clear and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in adjustable wrenches for turning pipes, bolts, nuts, &c., to screw to or to unscrew the same from their fittings.

The object of this invention is to produce a wrench which will be adjustable as to the size of article to be grasped.

The further object of the invention is to produce a wrench which will be adapted to firmly grasp an article whether round or square.

Still further, the object of the invention is to provide a wrench, adjustable as to the size of article to be grasped, which will be adapted to secure a firmer hold on the article with any additional pressure required to turn the same.

The invention consists in the construction of the grasping-jaws and the levers peculiarly connected therewith, together with the adjustable fulcrum-bolt and other novel features of construction and combination of parts, which will hereinafter be more fully described, and pointed out in the claims.

Figure 1 represents a side elevation of the improved wrench, its operation being indicated in broken lines. Fig. 2 is an edge view of the same to more clearly show the construction. Fig. 3 represents an enlarged cross-sectional view taken on a line A B, Fig. 1, to show the manner of connecting the base of the pivoted jaw with the movable arm.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 5 indicates the stationary lever, which is formed in one piece with the frame 6 and the stationary jaw 7. The frame 6 is provided with a longitudinal transverse slot 8, which is connected with the rear end of the frame by a threaded perforation, in which the threaded bolt 9 is engaged, the rear end of this bolt being furnished with a flattened thumb-piece 10, by which the bolt may be

turned, while the forward end of the bolt forms a fulcrum to sustain the backward pressure of the movable jaw and its connections. The movable lever 11 has a stop 12, which is adapted to prevent the undue spreading of the levers, and is furnished with side members 13 13, which embrace the sides of the frame 6 and curve slightly forward, these members of the lever being pivotally connected by the links 14 14 with the short base members 15 15 of the pivoted jaw 16. The pivots 17 and 18, which respectively connect the forward ends of the links to the members 15 15, and the rear ends of such links to the lever members, extend through the slot 8 of the frame 6 and form a slide working therein, while the pivot 18 also forms a bearing-block resting against the end of the fulcrum-bolt 9.

The rear upper portion of the pivoted jaw 16 is furnished with a depression 19, in which is pivoted one end of the toggle-link 20, the rear end of this link being pivoted between the ends of the members 13 13 of the lever 11, slightly below the upper end of the jaw, so that when the lever 11 is brought toward the lever 5 an upward as well as a forward thrust is brought to bear on this end of the pivoted jaw. The inner faces of the jaws 7 and 16 are roughened or otherwise provided with biting-surfaces to better grasp an article held between them.

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

1. In a wrench, the combination, with a stationary lever, a frame having a longitudinal transverse slot and a grasping-jaw formed in one piece, and a fulcrum-bolt working through a threaded perforation in the rear end of said frame, of a movable lever having a stop adapted to strike the edge of the frame, members extending from this lever, and a movable grasping-jaw pivotally connected at its base and upper end to the members of the movable lever by links and pivots, one of said pivots forming a bearing-block resting against the fulcrum-bolt, as described.

2. The combination, with the stationary lever 5, having the frame 6 and jaw 7 formed integral therewith, said frame having the slot 8, and the fulcrum-bolt 9, working in a thread-

ed perforation in the rear portion of the frame
and extending into the slot, of the movable
lever 11, having the stop 12 and members 13
13, the jaw 16, having the members 15, the
5 links 14 14, connecting the members 15 15
with the members 13 13 on a line with the slot
8, the pivots 17 and 18 for securing the links
and members together, and the toggle-link 20,
pivotally secured at the rear end between the

ends of the members 13 13 and at its forward end in a recess in the upper end of the jaw 16, as and for the purpose described.

In witness whereof I have hereunto set my hand.

SIDNEY COOK.

Witnesses:

S. N. VAN PRAAG,
JNO. E. MAXWELL.