(No Model.)

R. SIMMONS & W. TYACK.

WRENCH.

No. 262,840. Patented Aug. 15, 1882.

Fig. 1.

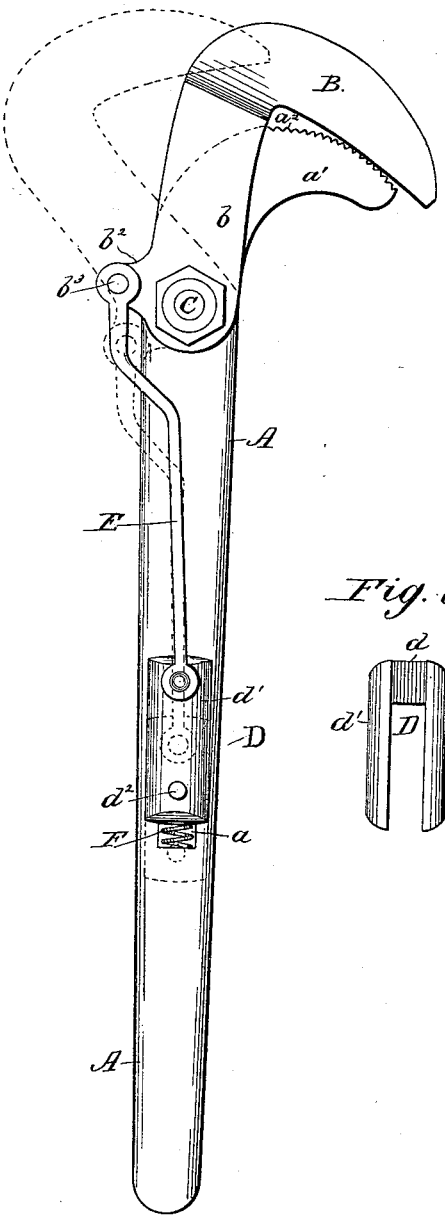


Fig. 2.

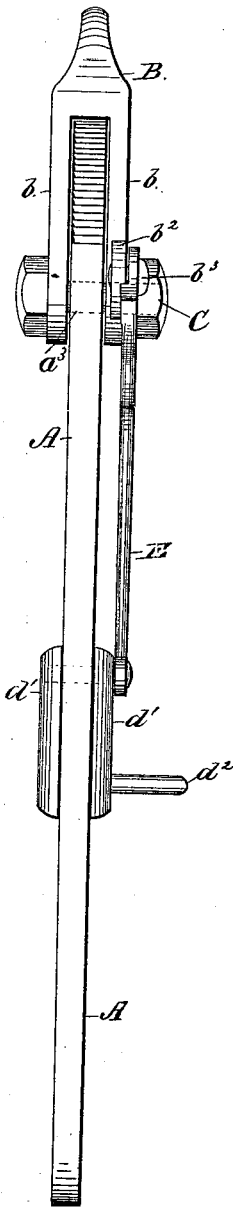
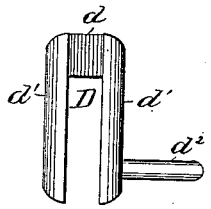


Fig. 3.



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RICHARD SIMMONS AND WILLIAM TYACK, OF BEACON, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 262,840, dated August 15, 1882.

Application filed May 1, 1882. (No model.)

To all whom it may concern:

Be it known that we, RICHARD SIMMONS and WILLIAM TYACK, of Beacon, in the county of Marquette and State of Michigan, have invented a new and useful Improvement in Wrenches; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of our improved wrench. Fig. 2 is a rear elevation of the same, and Fig. 3 is a detail view.

Our invention relates to improvements in wrenches; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth.

A represents the shank or handle portion, consisting of a metal bar, preferably of tapering form, which is provided near the smaller end of the same with an elongated slot, *a*, as shown, and at its larger end with a curved extension, *a'*, having serrations a^2, as shown.

a^3 represents an opening through the bar, near its larger or front end, which is adapted to take the pivot-bolt hereinafter referred to.

B represents a bent arm, the straight portion *b* of which is bifurcated and provided with openings adapted to take the pivot-bolt hereinafter referred to.

b^2 represents a projection upon one arm of the portion *b*, which is adapted to receive the securing-pin b^3 of the connecting-rod hereinafter referred to.

C represents the pivot-bolt, by means of which the two parts A and B are united together, the part A being held between the arms of the bifurcated portion *b*, as shown.

D represents a block, having a main portion, *d*, adapted to lie in the slot *a* of the bar A and move freely therein in a longitudinal direction, and overhanging flange portions, *d'*, on each side, by means of which the block is properly secured in place.

d^2 represents a handle-pin, by means of which the sliding block is actuated when desired.

E represents a connecting-rod, by means of which the sliding block D is united to the projection b^2 upon the arm B.

F represents a spring located in the slot *a*, by means of which the block and its attachments are returned to their normal positions after they have been removed therefrom.

The operation is substantially as follows: When it is desired to grasp an object the handle-pin d^2 is actuated to slide the block D up the bar A in a rearward direction. By means of this movement the arm B, through the action of the connecting-rod E, is swung upon its pivot, and thus caused to open the jaws to receive the object to be grasped. When the jaws inclose the object the same will be tightly grasped and securely held by the reaction of the spring F when the handle-pin is released.

The jaw B, it will be observed, is so hung relatively to the curved extension *a'* of the bar A as to swing over the same in the act of opening in such manner as to expose a constantly-increasing area, so that objects of various sizes may be grasped with equal facility.

This device may be used either as a wrench or pipe-tongs.

Some of the advantages are as follows: Only one handle is employed. After the jaws are opened the object inclosed by them is automatically grasped, when the handle-pin is released. Owing to the special construction of the jaws, an object may be grasped and held without injury. The tool is strong and durable, and it may be used in a small space.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

In combination with the handle portion A, having slot *a*, curved and serrated extension *a'*, and opening a^3, the bent arm B, having the projection b^2, the pivot-bolt C, the sliding block D, the connecting-rod E, and spring F, combined and arranged substantially as and for the purpose set forth.

RICHARD SIMMONS.
WILLIAM TYACK.

Witnesses:
GEO. MCALISTER,
DAVID T. PHELPS.