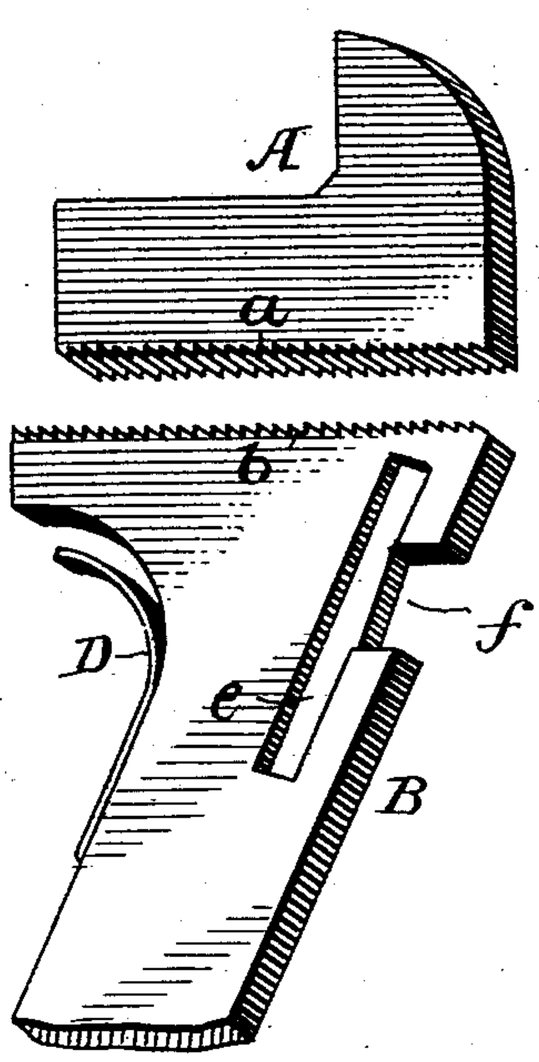
(No Model.)

R. M. CARROLL.

WRENCH.

No. 572,191. Patented Dec. 1, 1896.

Fig. 1.



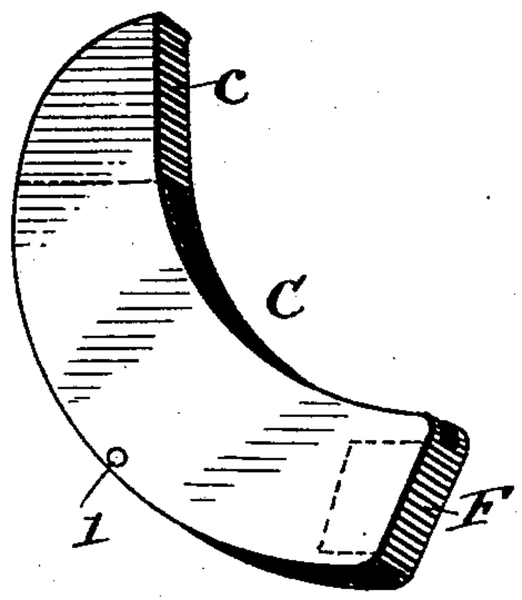
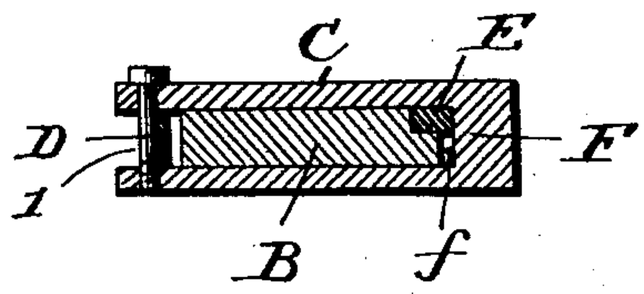
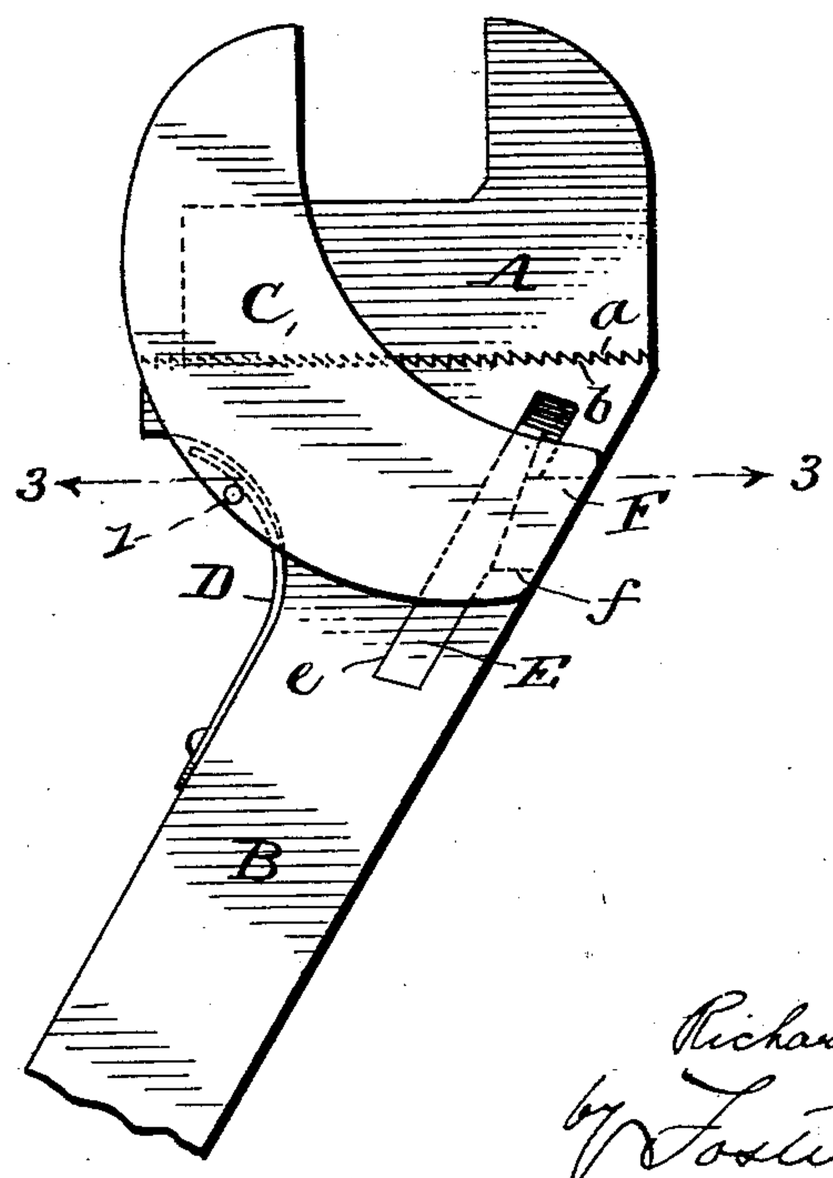


Fig. 2.

Fig. 3.





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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 572,191, dated December 1, 1896.

Application filed May 6, 1896. Serial No. 590,488. (No model.) Patented in England June 2, 1894, No. 10,761.

To all whom it may concern:

Be it known that I, RICHARD MICHAEL CARROLL, a subject of the Queen of Great Britain, residing at Woodville, Emily Street, Marrickville, Sydney, in the Colony of New South Wales, have invented certain new and useful Improvements in Spanners and Wrenches, (for which I have obtained Letters Patent in Great Britain, dated June 2, 1894, No. 10,761,) of which the following is a specification.

This invention has for its object a spanner or wrench the jaws of which can be at once adjusted to fit different sizes of pipes, nuts, and bolts. It is adapted to catch upon the head of almost any bolt or nut to turn it or to hold a nut or pipe from turning when the bolt is being rotated.

By my invention I obtain the adjustment of the jaws by the employment of two rows of teeth or their equivalent. One of these rows is formed in one with the movable jaw, and it engages the other row of teeth which is formed at the enlarged end of the handle or bar. The two rows of teeth engage one another, and all that is required to adjust the spanner is to disengage these two racks, when the jaws can be widened or narrowed at pleasure.

In order to more fully explain the nature of my invention, I will now proceed to describe the construction with reference to the drawings accompanying this specification, it being obvious that the invention is not limited to the precise arrangement therein shown and now described, as detail modifications in the shape of the parts and of the tool as a whole may be made without departure from the principle of the invention.

Figure 1 shows the various parts of a wrench or spanner, and Fig. 2 shows the same in place ready for use. Fig. 3 is a cross-section on the line 3 3, Fig. 2.

Referring to Figs. 1 and 2, the loose jaw A rests upon the enlarged end of handle B, in which position the rack *a* engages in the teeth of the rack *b*, effectively locking the jaw A in any position in which it may have been placed. The loose clamp C is hollow, except at *c*, where at its upper end it forms the other jaw of the tool, and at its lower end where at F it is formed or provided with a boss or block engaging in the notch or recess *f* of the handle B. A wedge E is arranged to slide in the slot *e* for the purpose of adjusting the jaws of the tool with greater exactitude, the said slot *e* not extending all the way through the handle portion but being sunken therein.

When the loose clamp C is in place, its block F engages in the notch or recess *f* and is pressed down by the spring D, which bears against a cross-pin *l*, passing through the two sides of the clamp C at near the outer edge thereof and extending across the space between the said sides. To set the tool to any desired position, it is only necessary to press up the loose clamp C, thus liberating the jaw A, which is then set at the required distance, and the pressure of spring D, acting on clamp C, causes the ratchets *a* and *b* to interlock. The final adjustment of the grip is obtained by moving the wedge E.

The mode of action is as follows: One hand only is required to slightly raise the pivoted jaw on its axis. This releases the sliding jaw or clamp C, which with the other hand may then be moved into the required position to fit the nut. As soon as this position is found the pivoted jaw is released, which then falls back by the action of the spring and grasps a certain part of the sliding jaw, locking it in place. Any amount of force applied in turning a nut will not alter the width of the jaws until the pivoted jaw is raised to enable the teeth to be disengaged. The inner face of the jaws may be serrated, if desired.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A spanner or wrench comprising a handle portion having its upper end enlarged and serrated, and formed with the longitudinal slot and the adjacent notch, a wedge working in said slot, a clamp in part constituting one of the jaws and having a boss fitting within the notch, an adjustable and removable jaw also serrated and held in position by the clamp, and a spring acting upon said clamp, substantially as shown and described.

2. A spanner or wrench comprising a han-

dle-bar having an enlarged end provided with serrations and formed at or near one of its edges with a slot and a notch, a wedge in said slot, a spring beneath the enlargement of the handle-bar, a removable and adjustable jaw correspondingly serrated and provided with a spanner portion, and a clamp also having a spanner portion and embracing the shank of the movable jaw and the enlarged end of the handle-bar, and being provided with a block entering the notch, substantially as described.

Signed at Amberley House, Norfolk Street, London, W. C., this 4th day of March, 1896.

RICHARD MICHAEL CARROLL.

Witnesses:

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