

O. T. BEDELL.

Wrenches.

No. 153,528.

Patented July 28, 1874.

Fig. 1.

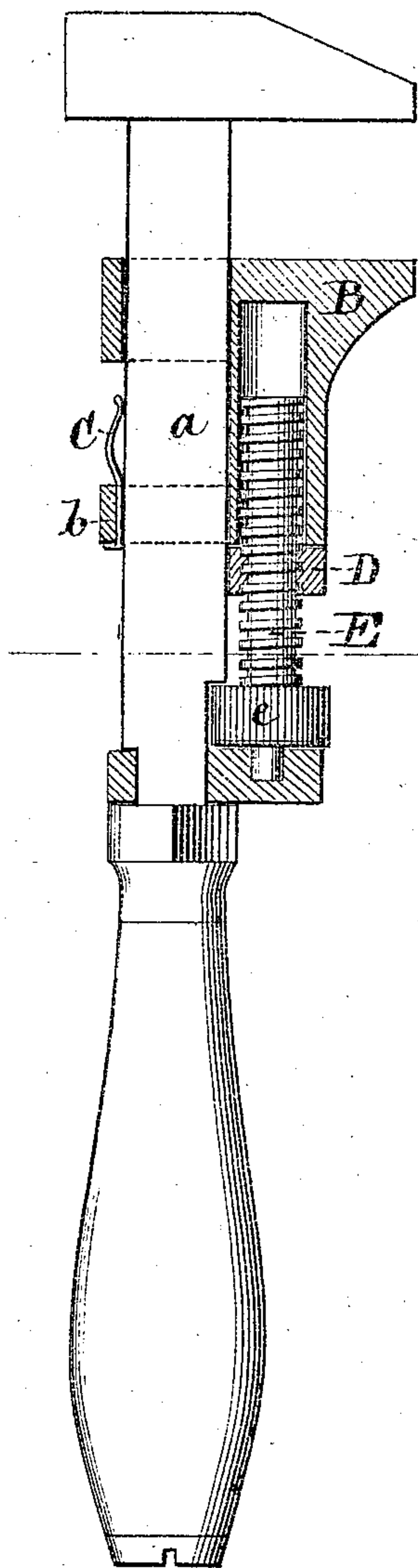


Fig. 3.

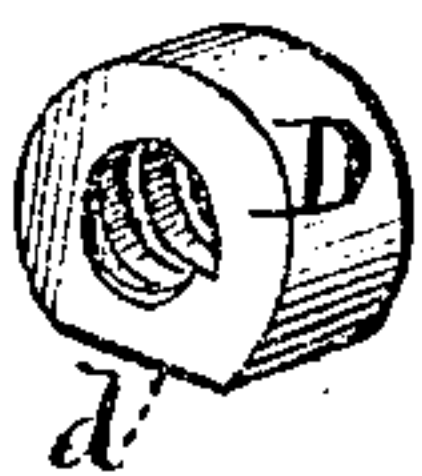
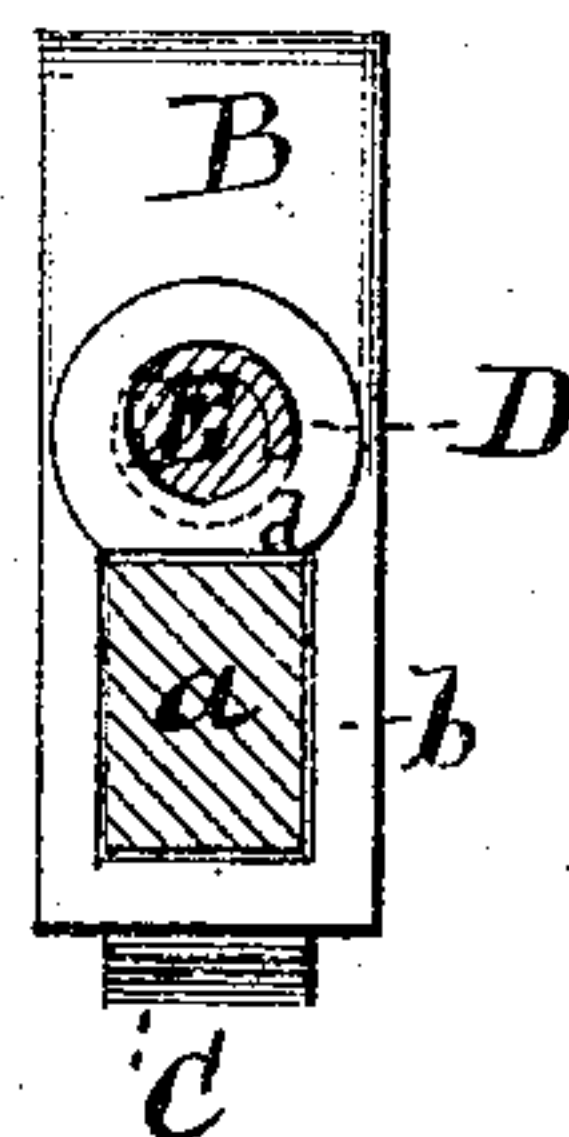


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

OTIS T. BEDELL, OF NEW YORK, N. Y.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **153,528**, dated July 28, 1874; application filed January 10, 1874.

To all whom it may concern:

Be it known that I, OTIS T. BEDELL, of the city, county, and State of New York, have invented certain Improvements in Wrenches, of which the following is a specification:

My invention relates to certain improvements in screw-wrenches, whereby the movable jaw may be quickly and readily adjusted to different-sized nuts or bolt-heads, with a very slight application of power being required; and it consists in a movable jaw formed without a female screw-thread, and sliding freely on the operating screw, being provided with a spring of just sufficient stiffness to hold it in position when no resistance is brought to bear upon it, combined with an independent nut or carriage traveling upon the screw, and bearing against the movable jaw for the purpose of holding it in position when pressure is brought to bear upon it, said carriage being in lieu of the female thread in the movable jaw.

In the accompanying drawing, Figure 1 is side view, partly in section, of a wrench embodying my improvements. Fig. 2 is a transverse section, taken in the line *x x* of Fig. 1. Fig. 3 is a perspective view of the carriage.

The movable jaw B is made in the usual form, except that there is no female screw-thread in the bore in which the screw works, in consequence of which said movable jaw may readily slide on the bar *a* independently of the screw. Between the bar *a* and the lower strap or keeper *b* is inserted a spring, C, which is made of a flat piece of metal, and is held in place by being bent up on each side of the keeper, as shown in Fig. 1. This spring is of just sufficient stiffness to overcome the weight of the movable jaw, and hold it in position when no resistance is brought to bear upon it. The carriage D consists of a block of metal with a female screw-thread formed in it for engagement with the screw E, which is attached to the wrench in the usual way, and provided with a milled head, *e*, for turning it. The carriage D may be made in the form of a nut; or it may be of an inverted U shape, so as

to be dropped over the screw and held in place by a hinged rod; or it may be made in two pieces, hinged together and held in place by a spring when placed on the screw. The most convenient and preferable form, however, is that shown in the drawing, being a circular block with a piece cut from one side, so as to form a plane surface, *d*, for engagement with the bar *a*. When made in this form it is placed upon the screw before the latter is inserted in the movable jaw and secured in place.

When the screw is turned to the right or left the carriage travels upon it either toward or away from the movable jaw, the plane surface *d* bearing against the flat side of the bar *a*, and preventing the carriage from turning.

In using this wrench, the movable jaw is adjusted to the desired distance from the fixed jaw, and the screw is then turned until the carriage bears against the movable jaw. If the space between the jaws is to be made less the movable jaw is pushed toward the fixed one, and the screw is turned to the right until the carriage D bears against the jaw B, as shown in Fig. 1. If the space between the jaws is to be made greater, the screw is turned to the left, so as to move the carriage away from the jaw B, which is then pulled away from the fixed jaw to the required point and the carriage moved against it.

The movable jaw is held in any position in which it is placed by means of the spring C, the tension of which is just sufficient to sustain the weight of the jaw and at the same time allow it to be easily moved by the thumb and finger.

This wrench can be readily operated with one hand, as the jaw B is easily moved on the bar *a*, and the screw turned by the thumb while the handle is grasped by the fingers. It will, therefore, be found of invaluable service in positions where the person using it can apply but one hand to the work.

The jaw can be instantly moved to the desired point, and the screw, having only the

weight of the carriage to resist it, requires but a slight application of power to manipulate it.

I claim—

In a screw-wrench, the jaw B, formed without a screw-thread, so that it may slide freely on the bar independent of the screw E, in combination with the spring C, for holding

said jaw in position when no resistance is brought to bear upon it, and nut or carriage D, substantially as described, for the object specified.

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Witnesses:

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