

B. G. MARTIN.
Wrenches.

No. 156,365.

Patented Oct. 27, 1874.

Fig:1.

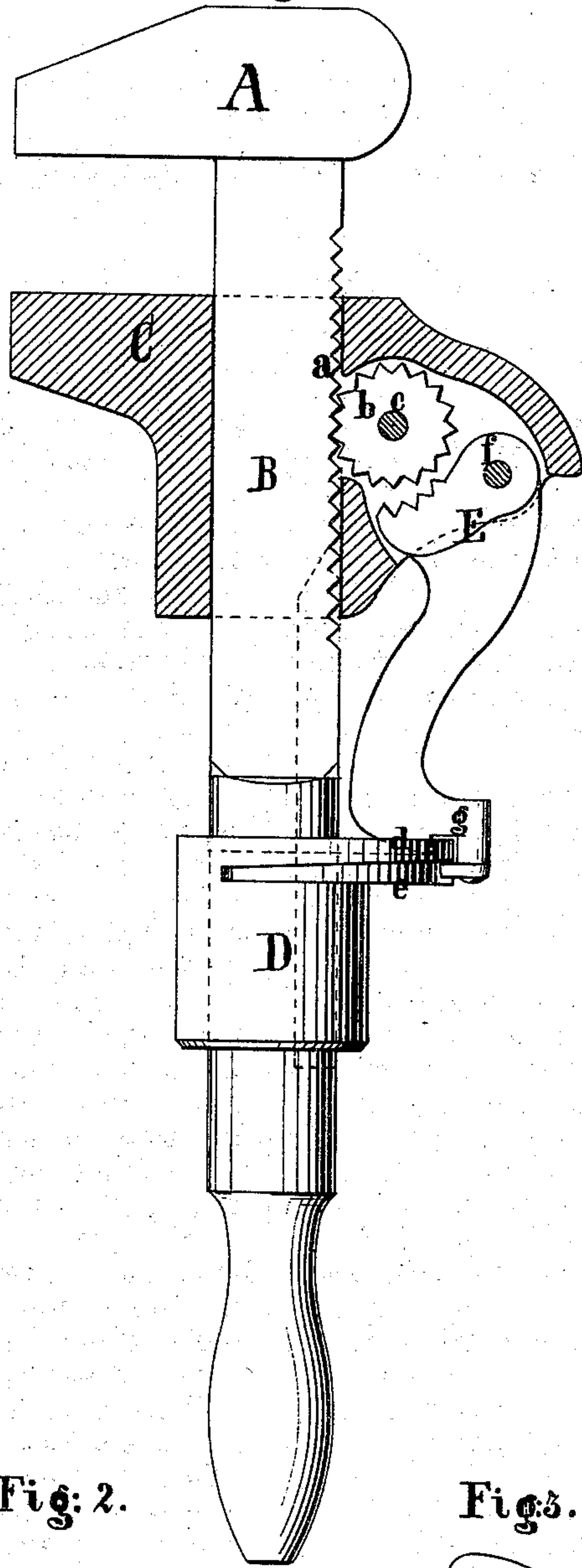
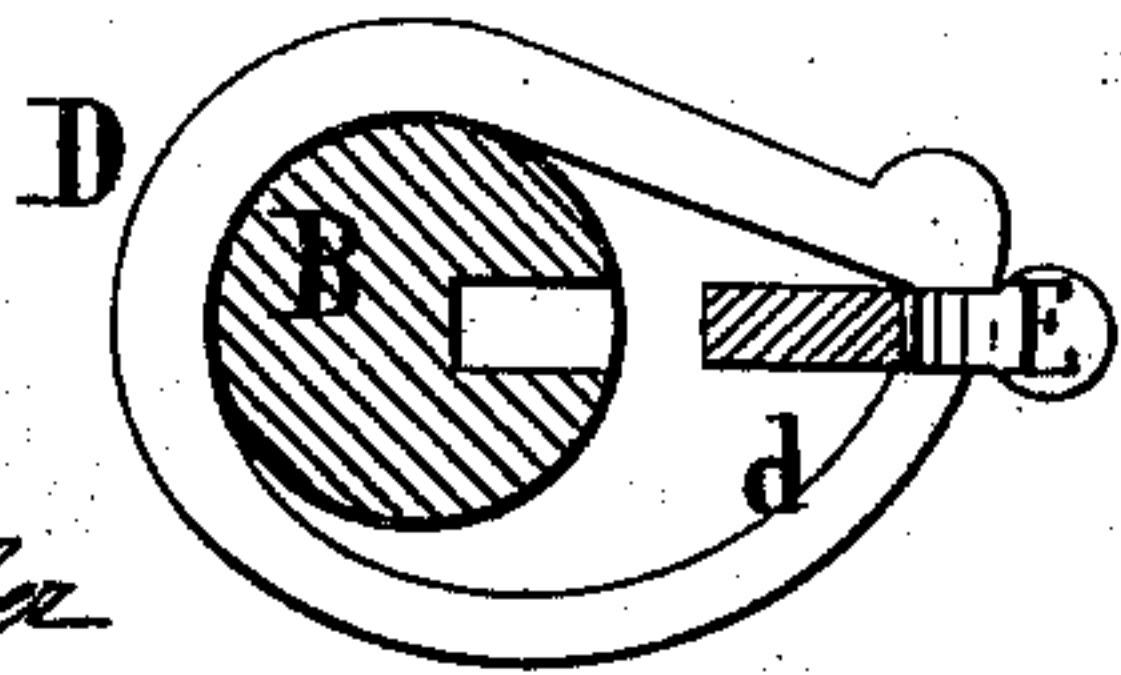


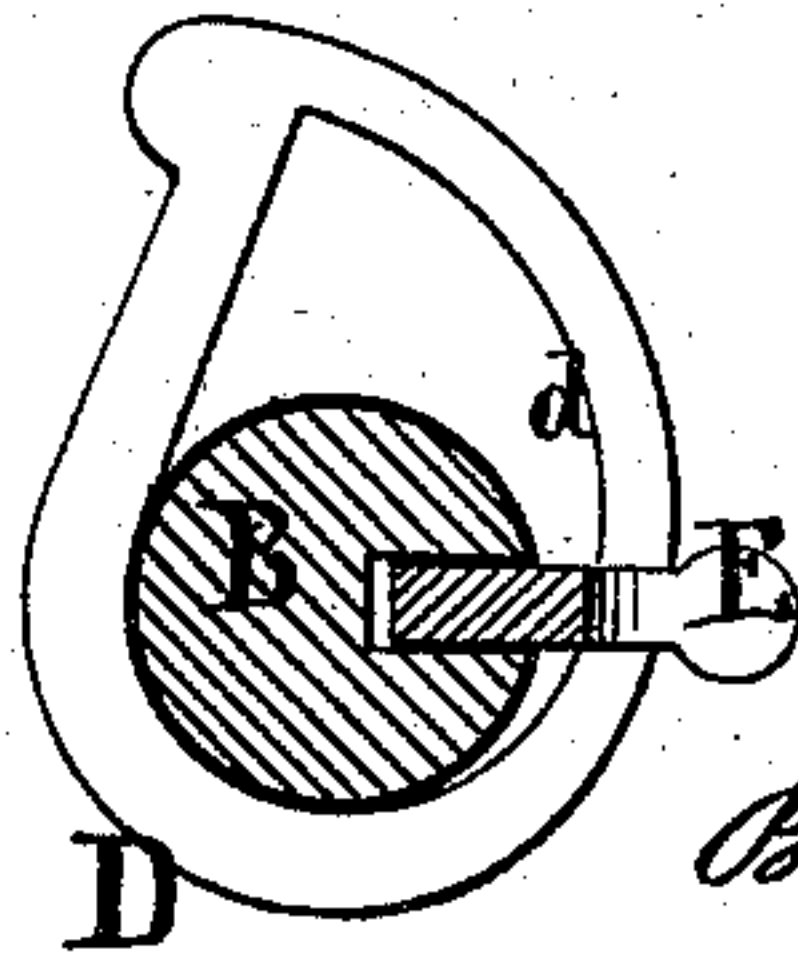
Fig: 2.



Witnesses:

Ernst Billmeyer
Henry Gentner

Fig:3.



Inventor:

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attors

UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **156,365**, dated October 27, 1874; application filed April 6, 1874.

To all whom it may concern:

Be it known that I, BENJAMIN G. MARTIN, of the city, county, and State of New York, have invented a new and useful Improvement in Wrenches; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a sectional side view of this invention. Fig. 2 is a horizontal section of the same in the plane $x x$, Fig. 1, when the movable jaw is unlocked. Fig. 3 is a similar section of the same when the movable jaw is locked.

Similar letters indicate corresponding parts.

This invention consists in the combination of a stop-pawl, a locking-sleeve, and a pinion with the movable jaw of a wrench, and with teeth cut in the shank of the stationary jaw in such a manner that by turning the locking-sleeve in one direction, the stop-pawl is thrown back from the pinion, and the movable jaw can be adjusted to suit the article to be acted upon, and by turning the locking-sleeve in the opposite direction, the stop-pawl is thrown in gear with the pinion and the movable jaw is locked securely in the desired position.

In the drawing, the letter A designates the stationary jaw of my wrench, from which extends the shank B, a portion of which is flat, and forms the guide for the movable jaw C, while another portion is round, and forms the guide for a sleeve, D. In one edge of the flat portion of said shank are provided teeth a , which engage with a pinion, b , mounted on a pin, c , that is secured in the back of the movable jaw. On the sleeve D is formed a double cam, $d e$, which engages with and acts upon

the shank of a stop-pawl E that swings on a pivot, f , secured in the back of the movable jaw. When the sleeve is turned in one direction, the cam d forces the shank of the stop-pawl back to the position shown in Figs. 1 and 2, and the pawl is thrown out of gear with the pinion b . In this position the jaw C can be freely moved up and down on the shank B. But if the sleeve is turned in the position shown in Fig. 3, the cam e throws the pawl in gear with the pinion b , and the movable jaw is firmly locked in position. The cam $d e$ of the sleeve engages with a recess, g , in the shank of the pawl, so that when the pawl is thrown out of gear with the pinion b , the sleeve and the movable jaw will slide together up or down on the shank B. When the pawl is thrown out of gear with the pinion, therefore, the movable jaw can be readily adjusted according to the nut or other article to be acted upon, and by turning the sleeve in the proper direction the movable jaw is firmly locked in the desired position. The operation of adjusting the movable jaw, and of locking it in position, can be readily performed with one hand, and a wrench is thus obtained, which is very convenient in its operation, which is not liable to get out of order, and which can be furnished at a comparatively low price.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of a stop-pawl, E, a locking-sleeve, D, and a pinion, b , with the movable jaw, C, and with teeth a in the shank of the stationary jaw A of a wrench, substantially in the manner herein shown and described.

B. G. MARTIN.

Witnesses:

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