

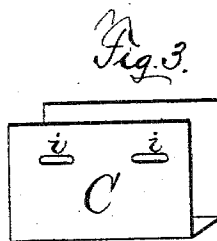
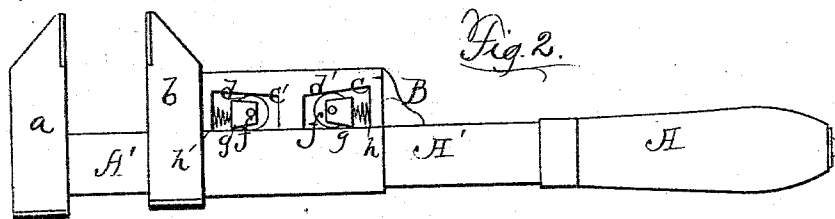
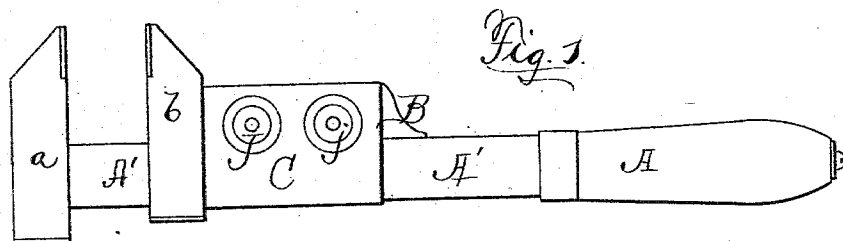
(No Model.)

B. F. BENNETT.

AUTOMATIC SELF SETTING WRENCH.

No. 287,998.

Patented Nov. 6, 1883.



Witnesses:
T. H. Parsons.
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UNITED STATES PATENT OFFICE.

BENJAMIN F. BENNETT, OF LOCKPORT, NEW YORK.

AUTOMATIC SELF-SETTING WRENCH.

SPECIFICATION forming part of Letters Patent No. 287,998, dated November 6, 1883.

Application filed September 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. BENNETT, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Automatic Self-Setting Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a self-setting wrench; and the invention consists in arranging, in connection with the usual movable jaw and its sliding bar, an automatic-acting stop, so that in use any back-pressure on the movable jaw only sets it tighter, all as fully hereinafter explained.

In the drawings, Figure 1 is a side elevation; Fig. 2, the same with the covering-plate removed; Fig. 3, perspective of plate removed; Fig. 4, detail of roller and follower.

A represents the handle on end of long bar A', the outer jaw, *a*, at its end, as usual. *b* is the movable jaw on the end of a short bar, B, and which slides on bar A'. In bar B are open chambers *c c'*, having the under side of the upper surface, *d*, inclined. Where two chambers are employed, the one, *d*, next the jaw *b* will slant therefrom, and the other, *d'*, slanting thereto, as clearly shown in Fig. 2. In each of these chambers is set crosswise a metal roller, *f*, running free on a loose shaft or axle in a frame or follower, *g*, open in front, the open end of the follower always toward the narrow part of the incline in the chamber.

Against the flat back of the follower is set a coiled or other spring, *h*, in connection therewith, or between it and the back of each chamber, as shown. This spring always keeps the follower in position midway between the bottom and top of the chamber, so it cannot drop on the bottom or tilt up to the top. A metallic plate, C, incloses the two sides of both bars and bottom of main bar, acting as a cover to the chambers and as a sleeve for the long bar to move through, it being fastened to the sliding bar only. In the sides of this plate are longitudinal slots *i i*, (see Fig. 3,) through which the shafts of the rollers extend a little way, and are provided on both ends with a button, *j*, or other suitable device, by which the sliding bar is operated.

The working of this device is as follows: When desired to open or draw apart the jaws *a b*, the thumb on one side and forefinger on the other side pull back on the two rear buttons *j j*. This pulls the roller inside chamber *c* from the narrow to the enlarged part of said chamber by the pressure compressing the spring against the back of the chamber. The front roller in the chamber *c'* is naturally forced back by its own friction on the main bar, which makes the bottom of both chambers. To bring the jaws together or nearer together, the thumb of the hand and forefinger push against the forward buttons *j j*. This reverses the action just explained, and when the hand is removed from the buttons any attempt to move the jaw *b* backward or forward only sets the same tighter by forcing the rollers into the narrow parts of their respective chambers. Ordinarily but one chamber (the back one) need be constructed, as it is only against the backward movement of the sliding jaw that the wrench need be set, and a slight push of the jaw forward or a pull back on the buttons will unlock it.

I claim—

1. In a wrench, in combination with the jaw *a* and long bar A A', the sliding jaw *b* on sliding short bar B, the latter having either one or two chambers, *c*, therein, with the upper or under part, *d*, inclined, and with the movable rollers *f* in frame *g*, and spring *h* in connection therewith, all arranged and operating substantially as specified.

2. In a wrench, in combination with bar A A' and chambered bar B c c', the metallic plate C, arranged as described, having one or two longitudinal slots, *i*, in the sides, and the buttons *j j*, or their equivalents, in connection therewith, and on the ends of the shafts of the rollers *f* inside the chamber or chambers, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN F. BENNETT.

Witnesses:

J. R. DRAKE.

GEO. A. BURNETT.