No. 687,055. Patented Nov. 19, 1901.

H. T. NEFF.

WRENCH.

(Application filed Sept. 5, 1901.)

(No Model.)

Fig. 1.

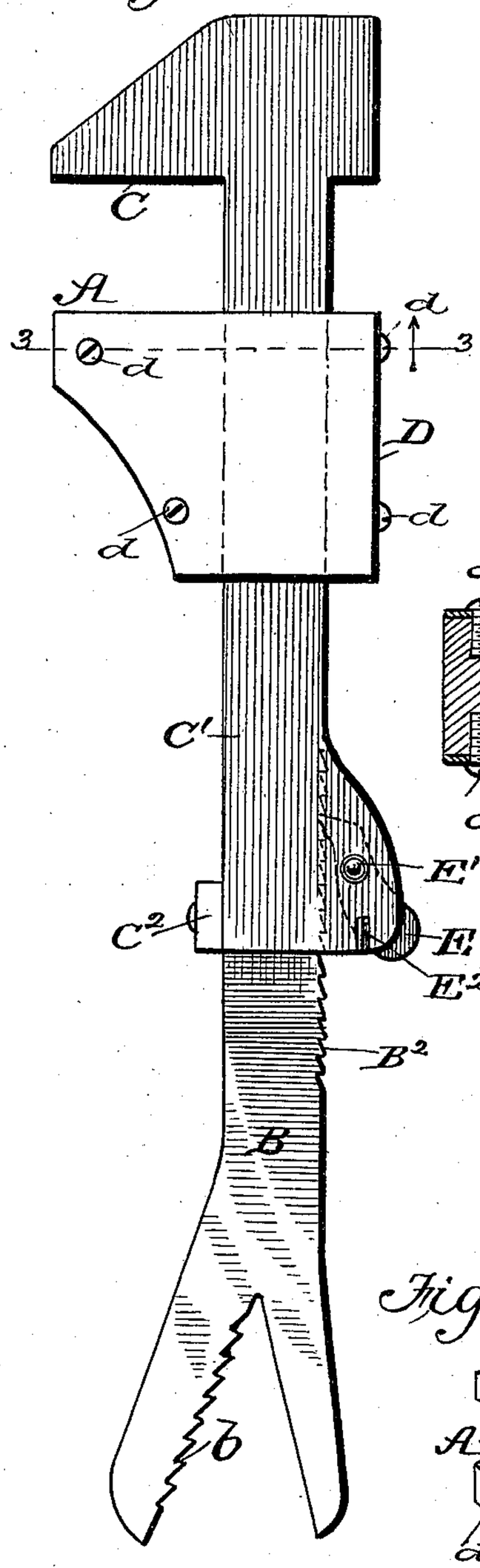


Fig. 2.

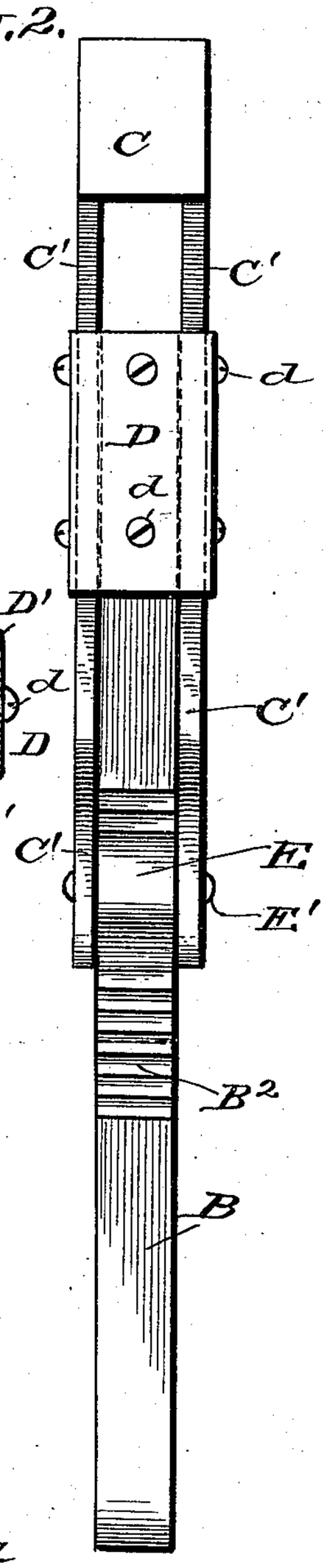


Fig. 3.

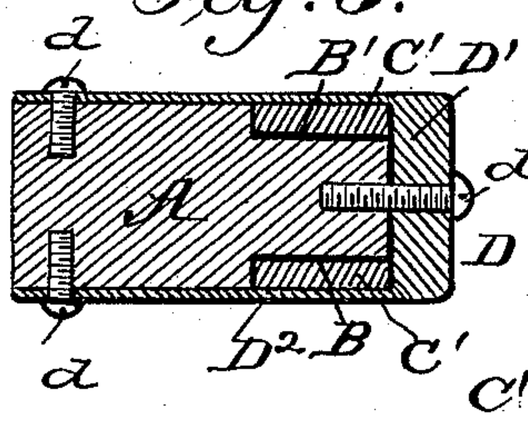


Fig. 4.

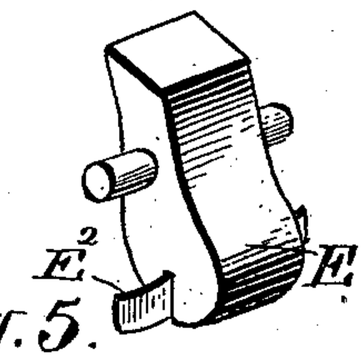
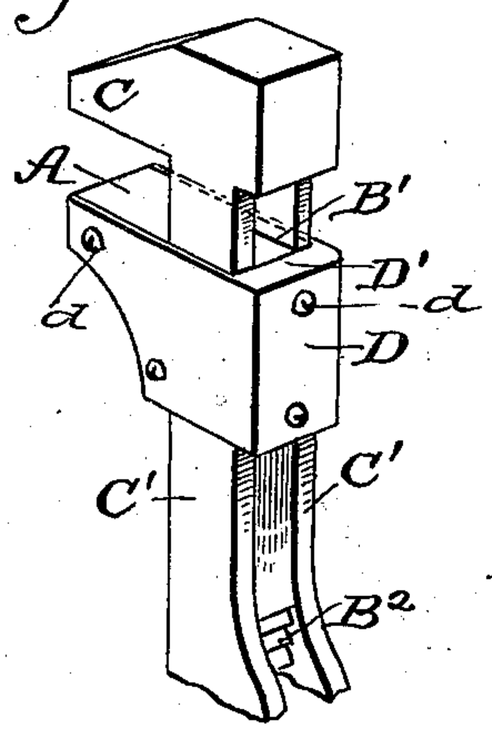


Fig. 5.



WITNESSES:
Jos. A. Ryan
Percy B. Turpin.

INVENTOR
Henry T. Neff.
BY Munn & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY TICE NEFF, OF NEMAHA, NEBRASKA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 687,055, dated November 19, 1901.

Application filed September 5, 1901. Serial No. 74,396. (No model.)

To all whom it may concern:

Be it known that I, HENRY TICE NEFF, a citizen of the United States, residing at Nemaha, in the county of Nemaha and State of Nebraska, have made certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention is an improvement in wrenches of the class generally known as "monkey-wrenches;" and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side view, and Fig. 2 a back view, of a wrench embodying my invention. Fig. 3 is a cross-sectional view on about line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of the pawl, and Fig. 5 is a perspective view showing the fixed sliding jaws and the parts connected therewith partly broken away.

In the present invention the inner jaw A is rigid with the shank or handle B of the wrench, and the outer jaw C is slidable with respect to the handle and inner jaw A in order to adjust the wrench to fit bolts or nuts of different sizes. In the construction shown and as preferred the shank B is formed with the jaw A, whose body portion A′ is widened equal to the thickness of the arms C′ of the jaw C, so there is provided on opposite sides of the shank B above the jaw A recesses or ways at B′ in which the arms C operate.

As shown in the drawings, the shank or handle B is provided at one end with the pipe-wrench construction *b*, while its other end has formed on one side the jaw A, which is widened on both sides, so it will project beyond the sides of the handle B to form the seats B′, as before described.

The jaw C is formed with the arms C′, which lap on opposite sides of the handle or shank B and slide in the ways B′, being held in said ways by the cuff D, which is formed with a back plate D′ to extend over the back of the handle B and the arms C′ and with the side plates D^2, which overlap the arms C′ and the jaw A, and preferably extend to the edge of the said jaw, as shown in Figs. 1 and 3, the cuff being secured to the handle B and the jaw A by screws, as shown at *d*. By this construction the arms of the sliding jaw slide alongside the shank or handle which carries the fixed jaw, so it can be conveniently adjusted to any desired size, and the cuff D operates to retain the arms C′ in connection with the fixed handle and the fixed jaw to provide guides for the said arms in the different adjustments of the wrench. At their free ends the arms C′ are connected beneath the handle B by the short cross-bar C^2, and such ends of the arms C′ are widened on the outer side of the handle B and receive between them and support the pawl E, which is pivoted at E′, so its point can engage with the ratchet-teeth B^2, formed in the outer edge of the handle B, as shown. It will be noticed that the square shoulders of the ratchet-teeth B^2 face toward the end *b* of the handle B, so the pawl-and-ratchet construction will operate to prevent the spreading of the jaws A and C apart, it being understood that the pawl may be readily adjusted into and out of engagement with the ratchet-teeth in order to secure any desired adjustment of the jaws of the wrench.

To hold the pawl E into engagement with the teeth B^2, a spring E^2 is arranged in proper relation between the widened portion of the arms C′ and the pawl, and the end of the pawl is allowed to project beyond said widened portion, as shown, to permit it to be conveniently acted upon by the thumb.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The wrench herein described, comprising the handle provided at its outer end with the fixed jaw, and having said jaw widened or made to project beyond the opposite sides of the handle whereby to provide ways alongside the said handle for the arms of the sliding jaw, the sliding jaw movable toward and from the fixed jaw, and having projecting from its rear side parallel side arms which fit within the ways provided above the fixed jaw, and alongside the handle-shank, the free extremities of the arms being widened to project above the back of the handle-shank, a bar connecting the said arms at their free ends and extending beneath the handle-shank, the pawl supported between the widened ends of the jaw-arms, a ratchet being provided on the handle-shank for engagement by said pawl, and the cuff fitting over the handle-

shank and the arms of the sliding jaw, and secured to the fixed jaw, all substantially as and for the purposes set forth.

2. In a wrench substantially as described, the combination of the shank or handle having the fixed jaw at its end and widened to provide ways for the arms of the sliding jaw, the sliding jaw having its arms fitted in the said ways and extending alongside the handle-shank, the cuff fitting over the said arms and handle and secured to the fixed jaw, and detent means for securing the wrench in its different adjustments, substantially as set forth.

3. A wrench comprising the handle provided at its outer end with a fixed jaw, and the sliding jaw arranged beyond the outer end of the handle, and having arms lapped and movable alongside the handle, and detent mechanism substantially as described.

4. The combination in a wrench of the handle provided at its outer end with the fixed jaw, the movable jaw arranged beyond the outer end of the handle and having arms sliding along the opposite sides of the handle and widened on one side to project beyond the handle and support the pawl, a cross-bar connecting the free ends of the arms on the side of the handle opposite the widened portions of said arms, and the pawl supported between the widened portions of the arms, and engaging the handle-shank, substantially as set forth.

5. The combination of the bar provided at one end of the jaw, said jaw being widened to project at its opposite sides beyond the bar to form ways for the arms of the sliding jaw, the sliding jaw having arms fitting in said ways and extending on opposite sides of the bars, and the cuff fitting over said arms, and secured to the jaw, substantially as set forth.

6. The combination of the handle-bar having the fixed jaw, the sliding jaw arranged beyond the end of the handle-bar and having arms extending and sliding alongside the handle-bar, and means for securing the said arms slidably in connection with the handle-bar, substantially as set forth.

HENRY TICE NEFF.

Witnesses:
J. W. WHITE,
J. M. WORKMAN.