No. 799,840. PATENTED SEPT. 19, 1905.

F. A. EDWARDS.

WRENCH.

APPLICATION FILED JUNE 13, 1905.

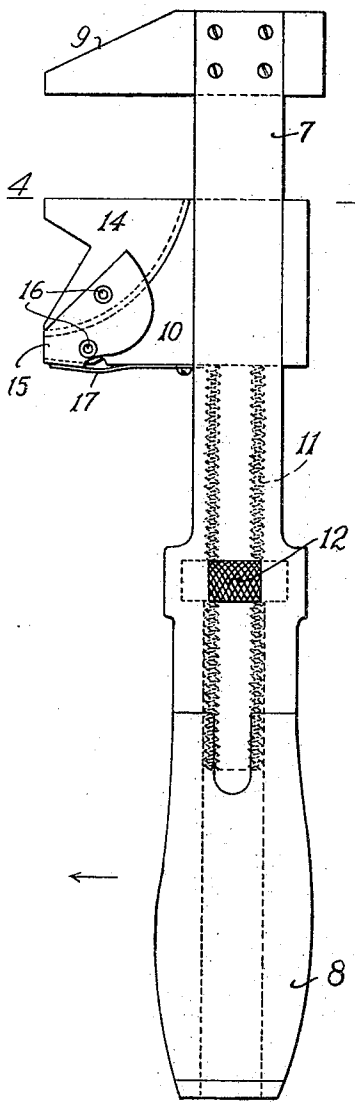


FIG. 1.

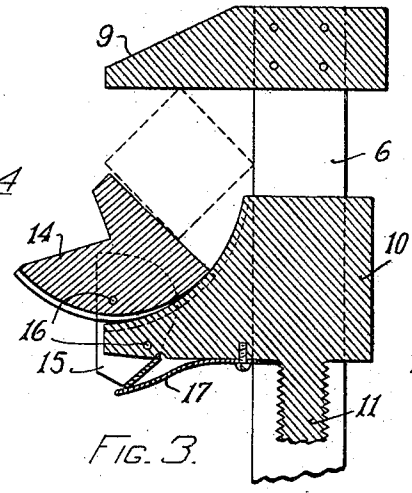


FIG. 3.

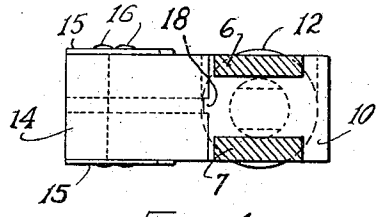


FIG. 4.

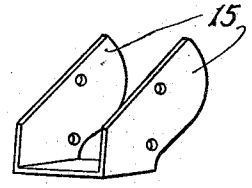


FIG. 5.

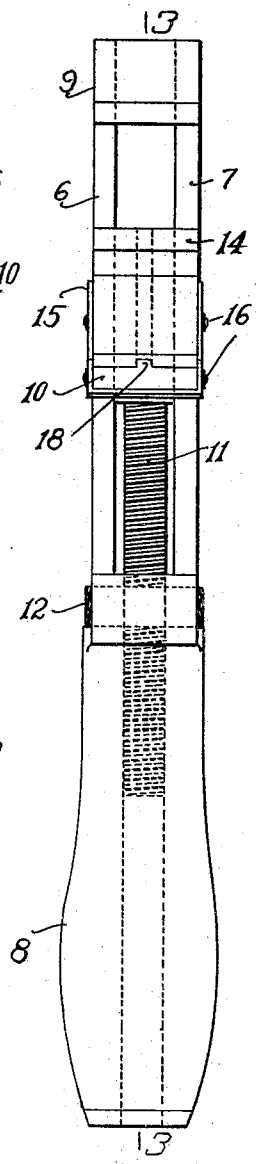


FIG. 2.

WITNESSES

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WRENCH.

No. 799,840. Specification of Letters Patent. Patented Sept. 19, 1905.

Application filed June 13, 1905. Serial No. 265,032.

To all whom it may concern:

Be it known that I, FREDERICK A. EDWARDS, of Lincoln, in the county of Penobscot and State of Maine, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

The object of this invention is to provide a quick-working monkey-wrench of improved construction whereby the wrench retains its hold upon the bolt being inserted during the backward stroke of the wrench instead of being detached therefrom and again applied, as is customary.

The especial feature of novelty in my wrench is the composite movable jaw, adjustable toward and from the fixed jaw by any preferred screw-nut arrangement and comprising a sliding member and a swinging member pivotally connected to each other by a hinge-plate bent to inclose the opposite sides of each member and by a pair of rivets extending through each side of said plate and respectively through said members. A flat spring fixed to the sliding member tends to restore the swinging member to place by pressure upon the transverse connecting-piece of the hinge-plate. These members are somewhat wedge-shaped, either plane or curved, and their abutting faces preferably tongued and grooved.

In the drawings, Figure 1 is a plan or side view of the wrench complete. Fig. 2 is a front edge view. Fig. 3 is a longitudinal section through the head of the tool in the plane of line 3 3 of Fig. 2. Fig. 4 is a transverse section on line 4 4 of Fig. 1. Fig. 5 is a perspective view of the hinge-plate detached.

In the form of wrench shown in the drawings the shank of the tool consists of two parallel side bars 6 and 7, suitably joined in a terminal handle 8. Between those bars at the head end the recessed jaws are located, the fixed jaw 9 being secured in position at the extreme end, while the body of the movable jaw 10 is arranged to be adjustable according to the size of the bolt or nut to be turned. As herein illustrated, the adjusting-screw 11, formed integral with jaw 10, is flat, threaded on its edges only and actuated by a milled nut 12, inserted in a transverse recess between the bars in an enlarged part of the shank, whence part of the milled surface of the nut protrudes. The screw may, however, extend along the edge of the shank instead of lying between its bars and the nut work edgewise in a recess therein to actuate the jaw.

The movable jaw is formed of two coöperating parts, the body or sliding member 10 and the swinging member 14, having curved abutting surfaces, as shown in Figs. 1 and 3. These members are connected pivotally by the hinge-plate 15, bent as shown in Fig. 5, and by strong rivets 16, extending, respectively, through said members and both headed in the inclosing wings of the hinge-plate. The curved faces of these members are preferably tongued and grooved, as indicated at 18 in the drawings. The flat spring 17, secured to the under side of body 10, bears against the cross-piece of the hinge-plate and is deflected or put under tension when the swinging member 14 is tilted, as in Fig. 3, during the back stroke of the wrench-handle; but when another forward or tightening movement of the wrench occurs the parts assume the position shown in Fig. 1, and the forward movement of the handle 18 will be in the direction of the arrow, Fig. 1. This produces a wedging action of the members 10 and 14 during the forward stroke, which is relieved on the back stroke, the tilting of part 14 permitting the reverse stroke without removing the wrench.

I claim as my invention—

1. The described improvement in wrenches comprising the movable jaw formed of two coöperating members pivotally connected to each other, the body or carrying member and a projecting wedge-like formation, and having a sliding adjustability on the tool-shank the swinging member formed with a curved bearing-surface held movably on such wedge-like projection by a connecting-link and actuated by a spring, bearing on said link, substantially as set forth.

2. In a screw-wrench, the shank and handle, the fixed jaw secured terminally thereto and the rotatable actuating-nut, in combination with the composite movable jaw adjustable along the shank and comprising a sliding

member and swinging member connected to each other by marginal plates formed integral and parallel transverse pivots, the abutting faces of said members having a curved, wedge-like formation, and a spring secured to the sliding member acting to restore the swinging member to place when displaced during the backward stroke of the handle without removing the wrench, substantially as set forth.

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

FREDERICK A. EDWARDS.

Witnesses:

WM. W. WEATHERBEE,

LYMAM A. HUNT.