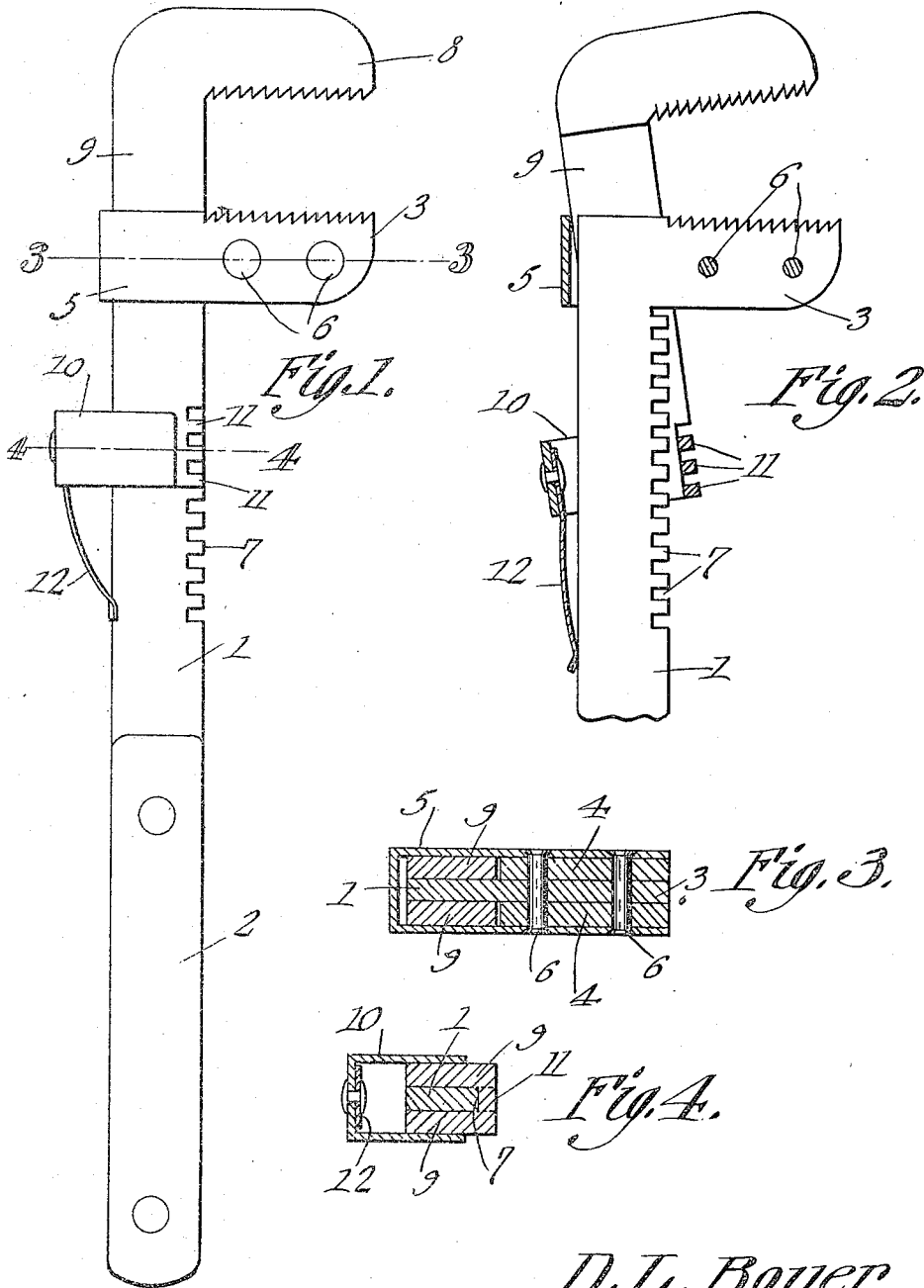


D. L. BOYER.
 WRENCH.
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Witnesses

J. P. Sullivan
R. Z. Parker

Inventor

D. L. Boyer

by

Chas. H. ...
 Attorneys

UNITED STATES PATENT OFFICE.

DAVID L. BOYER, OF SOLOMON, KANSAS, ASSIGNOR OF ONE-HALF TO CHARLES HENNING, JR., OF SOLOMON, KANSAS.

WRENCH.

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To all whom it may concern:

Be it known that I, DAVID L. BOYER, a citizen of the United States, residing at Solomon, in the county of Dickinson and State of Kansas, have invented a new and useful Wrench, of which the following is a specification.

The present invention appertains to wrenches, and aims to provide a novel and improved quick adjustable wrench, whereby the jaws can be adjusted relative to one another quickly to properly fit the nut or other object, and whereby when the jaws are adjusted to the desired position, they can be held effectively in position without danger of loosening.

It is also within the scope of the invention to provide a wrench embodying a unique assemblage of the component elements, whereby the wrench is not only comparatively simple, compact and inexpensive in construction, but is also thoroughly practical, convenient and efficient in use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a side elevation of the improved wrench, with the jaws locked. Fig. 2 is a fragmental section of the wrench, illustrating the movable jaw released so that it can be moved either toward or away from the stationary or fixed jaw. Figs. 3 and 4 are cross sectional details taken on the lines 3—3 and 4—4, respectively, of Fig. 1.

In carrying out the invention, there is employed a stock 1, preferably formed from a bar of suitable metal, and provided adjacent one end with a suitable handle 2. The other end of the stock 1 is provided with an angularly extending stationary or fixed jaw, which embodies an angularly extending portion 3 projecting from the outer end of the stock 1, and a pair of blocks 4 disposed upon opposite sides of the portion 3. A U-shaped yoke 5 has its limbs overlapping the remote or opposite sides of the blocks 4, and passes

around the outer end of the stock 1, the bend or intermediate portion of the yoke 5 being spaced from the stock and serving as a guide for the movable jaw, as will hereinafter more fully appear. The parts, 3, 4 and 5 are preferably secured together by means of rivets 6, although it is to be understood that said parts may be assembled in any other suitable manner, so that they are rigid with one another. That edge of the stock 1 which projects in the same direction as the portion 3, is provided with a longitudinal series of notches or teeth 7 for holding the movable jaw 8 at various adjusted positions.

The movable jaw 8 projects in the same direction as the stationary jaw, and is carried by a pair of parallel integral bars or strips 9 which overlap the opposite sides of the stock 1. The jaw 8 is carried by the outer ends of the bars 9 and project angularly therefrom, the bars 9 normally being in alinement with the stock 1, so that the jaws project in the same direction parallel with one another. The bars 9 pass slidably between the stock 1 and yoke or guide 5, whereby the bars 9 are held assembled with the stock, which enables the bars 9 to be swung slightly relative to the stock and stationary jaw, as illustrated in Fig. 2, which allows the movable jaw to be slid longitudinally.

The inner ends of the bars or strips 9 are connected by a U-shaped yoke 10 which projects in the same direction as the yoke 5, so that its bend passes around that edge of the stock 1 opposite the edge having the teeth or notches 7. The yoke 10 securely fastens the inner ends of the bar 9 together, to brace them, and the opposite edges of the bars 9 are connected adjacent their inner ends by cross members or teeth 11 which are interengageable with the teeth or notches 7 of the stock, when the bars 9 are swung into alinement with the stock 1, as illustrated in Fig. 1. The bend of the yoke 10 is spaced sufficiently from the stock, to allow the bars 9 to swing to the position illustrated in Fig. 2, whereby the teeth 11 are disengaged from the teeth 7, which permits the bars 9 to be slid longitudinally, for adjusting the jaw 8 either toward or away from the stationary jaw. The yoke 10 also serves as a support for a leaf spring 12, which has its butt end riveted to the bend of said yoke, and the free end of the leaf spring 10 bears against that edge of the stock 1 opposite the teeth 7, to

normally swing the bars 9 into alinement with the stock 1 so that the teeth 11 engage the teeth 7 for holding the jaws locked relative to one another.

5 In using the wrench, the yoke 10 can be readily pressed by the thumb or finger toward the stock 1, which releases the movable jaw, so that it can be adjusted to the desired position quickly, and when the yoke 10 is released, the bars 9 will be swung into alinement with the stock 1, to lock the movable jaw in its adjusted position.

The jaws may be toothed to enable them to grip a pipe or other cylindrical object, 15 so that the pipe can be used as a pipe wrench, or the jaws may be left plain when the device is used as a nut wrench.

Attention is directed to the fact that when the bars 9 are swung to release the movable 20 jaw, the movable jaw is swung away from the stationary jaw, so as to immediately release the nut or other object.

Having thus described the invention, what is claimed as new is:

25 1. A wrench embodying a stock having an angularly extending jaw at its outer end, that edge of the stock which projects in the same direction as said jaw having a longitudinal series of teeth, a bar overlapping 30 one side of said stock and having an angularly extending jaw at its outer end co-operable with the aforesaid jaw, said bar having teeth interengageable with the aforesaid teeth, the stock having means at its 35 outer end for guiding said bar, and spring means between said bar and stock tending to move said teeth into engagement.

2. A wrench embodying a stock having an angularly extending jaw at its outer end, 40 that edge of the stock which projects in the same direction as said jaw having a longitudinal series of teeth, a bar overlapping one side of said stock and having an angularly extending jaw at its outer end co- 45 operable with the aforesaid jaw, said bar having teeth interengageable with the aforesaid teeth, the stock having means at its outer end for guiding said bar, a member

carried by the inner end of said bar, and a spring carried by said member and bearing 50 against that edge of the stock opposite the teeth and tending to move the teeth into engagement.

3. A wrench embodying a stock having a jaw at its outer end, and a longitudinal 55 series of teeth along one edge, a pair of bars slidably overlapping opposite sides of said stock and having a jaw at their outer ends co-operable with the aforesaid jaw, said bars having teeth at their inner ends en- 60 gageable with the aforesaid teeth, said jaw having a guide at its outer end for guiding said bars, a yoke attached to the inner ends of said bars, and a spring carried by said yoke and bearing against the edge of the 65 stock opposite said teeth to move the teeth of the bars into engagement with the teeth of the stock.

4. A wrench embodying a stock having an angularly extending jaw at its outer end 70 and a longitudinal series of teeth projecting in the same direction as said jaw, a U-shaped yoke attached to said jaw and having its bend surrounding the outer end of said stock, a pair of bars fitting slidably between 75 opposite sides of said stock and said yoke and having an angularly extending jaw at their outer ends co-operable with the aforesaid jaw, said bars having teeth at their inner ends interengageable with the afore- 80 said teeth when the bars and stock are swung into alinement, a U-shaped yoke attached to the inner ends of said bars and projecting in the same direction as the aforesaid yoke, and a spring attached to the second men- 85 tioned yoke and bearing slidably against that edge of the stock opposite the teeth thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signa- 90 ture in the presence of two witnesses.

DAVID L. BOYER.

Witnesses:

PHILIP CARLSON,
T. T. RIORDAN.