

(No Model.)

E. C. WELLS.
MONKEY WRENCH.

No. 513,354.

Patented Jan. 23, 1894.

Fig. 1.

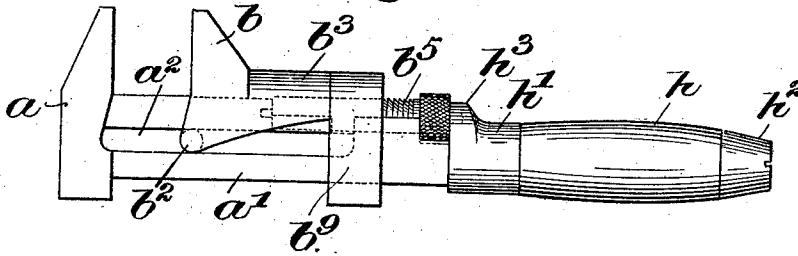


Fig. 2.

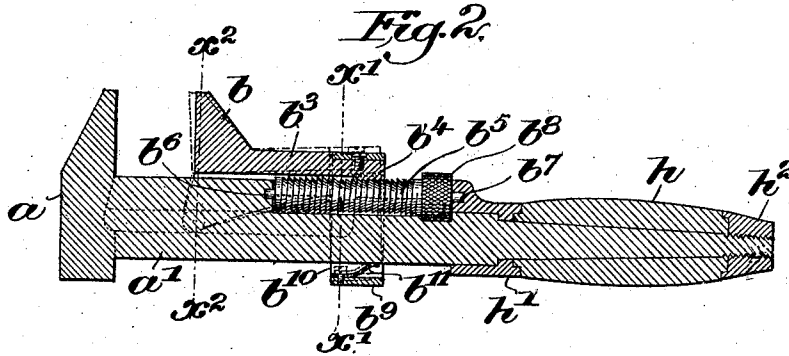


Fig. 4.

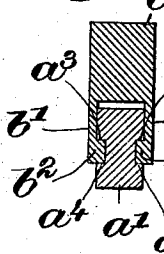
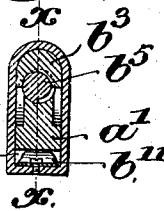


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

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MONKEY-WRENCH.

SPECIFICATION forming part of Letters Patent No. 513,354, dated January 23, 1894.

Application filed June 23, 1893. Serial No. 478,594. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. WELLS, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Monkey-Wrenches, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to monkey wrenches, particularly to wrenches of that class in which the movable jaw may be disengaged from the adjusting device or screw and moved independently thereof toward or from the fixed jaw and again thrown into engagement with the said adjusting device or screw for final adjustment and locking in position. In wrenches of this class as now commonly constructed, the movable jaw at its front end adjacent the fixed jaw is provided with a strap which encircles the shank of the fixed jaw to hold the movable jaw in position, the latter jaw at its rear end being held in engagement with the adjusting screw by a spring or other yielding device. In wrenches of this class when it is attempted to slide the movable jaw in either direction, especially toward the fixed jaw, said movable jaw is liable to become cramped on the shank of the fixed jaw and to stick, making it difficult to slide it. In my efforts to obviate this sticking or cramping of the movable jaw I have found that, by providing the shank of the fixed jaw with two guiding surfaces and providing the movable jaw with a portion or portions extended between these guiding surfaces, so that the movable jaw when moved into an angular position to disengage it from the adjusting device shall be moved about this extended portion or portions as a fulcrum, the movable jaw is prevented from excessive wobbling or looseness when in its proper position, yet the said movable jaw may be readily moved into such angular position as is necessary to permit it to be moved along the shank independently of the adjusting device.

In the drawings, Figure 1 represents in side elevation one form of wrench embodying this invention; Fig. 2, a vertical longitudinal section of the same, the section being taken on the dotted line $x-x$ Fig. 3. Fig. 3 is a vertical section taken on the dotted line $x'-x'$,

Fig. 2, and Fig. 4, a cross section taken on the dotted line x^2-x^2 , Fig. 2.

Referring to the drawings, a represents the fixed jaw of a wrench, it being provided with the usual shank a' , upon the end of which is mounted the usual handle h , the latter being held between the two end pieces h^1 and h^2 . The movable jaw b is of suitable or desired shape and construction, it being provided in accordance with this invention and as shown in Figs. 1 and 4, with two ears b^1 , which overlap the sides of the shank a' , and at their ends and preferably at the middle of the shank the said ears are provided each with an inwardly projecting lug b^2 , which enter grooves of the slots a^2 cut longitudinally in the opposite sides of the shank a' , the top and bottom edges a^3 , a^4 , of the said grooves constituting guiding surfaces for the lugs b^2 to guide the latter and the movable jaw in their longitudinal movement on and with relation to the shank a' and the fixed jaw.

The movable jaw b is provided, as herein shown, with a short shank b^3 , which, for a short distance at its rear end and at its inner side, is threaded as at b^4 , Fig. 2, to engage the threads of the adjusting screw or device b^5 let into the top side of the shank a' and journaled at b^6 at its front end therein and at b^7 at its rear end in a lug h^3 on the end piece h^1 . See Figs. 1 and 2. The threaded adjusting device herein shown as a screw is provided with the usual finger piece b^8 by which the screw may be rotated freely in either direction. A strap b^9 secured to the rear end of the shank b^3 or if desired formed as a part thereof, encircles the shank a' and is made somewhat longer than the depth of the said shank in order to leave a space b^{10} in which is placed a spring b^{11} which acts to hold the threads b^4 of the movable jaw normally in engagement with the adjusting screw of the wrench.

When it is desired to move the movable jaw any considerable distance to fit nuts or bolt heads of greatly varying sizes, the operator by pressing upon the under side of the strap b^9 or by grasping the movable jaw in his hand may turn the latter into its dotted line angular position Fig. 2, compressing the spring b^{11} and moving the threads b^4 out of engagement

with the adjusting screw b^5 , thereby permitting the movable jaw to be slid along free of the adjusting screw into desired position, when it may be released to permit the spring b^{11} to again throw it into engagement with the adjusting screw for final adjustment and to be locked in position.

In my improved wrench, Figs. 1 to 4 inclusive, it will be seen that the movable jaw is fulcrumed upon the lugs b^2 which run between the guiding surfaces a^3, a^4 ; and that the fulcrum lugs b^2 , fitting accurately the grooves between the guiding surfaces a^3, a^4 , prevent the movable jaw from wobbling from side to side into contact with the top or bottom of the shank, but preserve the said movable jaw always at a proper definite distance from the shank and out of contact therewith, so that the shank may be moved into any desired angular position practically without fear of any part of it contacting with the top or bottom of the shank. Inasmuch as the fulcrum lugs b^2 are rounded and fit tightly the grooves in the sides of the shank, the jaws are not cramped at these points, for the said lugs simply slide along in the groove and there are no corners or other parts to cramp and bind.

Any action tending to spread the jaws a and b , only acts to force the threads b^4 into engagement with the threads of the adjusting screw, so that there can be no danger of the movable jaw slipping.

As herein shown and preferably, the grooves a^2 at their rear ends adjacent the handle will be turned upwardly at an angle, and run out of the top edge of the shank, as shown in dotted lines Figs. 1 and 2, in order to provide a way for entering the lugs b^2 into the said grooves.

It is obvious of course that the grooves a^2 may be dispensed with and a single slot cut entirely through the shank employed in their stead, in which case instead of the two lugs b^2 there will be a single pivotal lug or bolt extended from side to side of the shank.

This invention is not restricted to the particular construction herein shown, for it is evident the same may be varied in many

ways without departing from the spirit and scope of this invention.

I claim—

1. In a wrench, a fixed jaw and its shank provided with two guiding surfaces, and a threaded device for adjustment combined with a movable jaw having a portion or portions extended between the said guiding surfaces, to constitute a guide for said movable jaw, and a fulcrum about which the same may be moved into and out of engagement with said threaded device, substantially as described.

2. In a wrench, a fixed jaw and its shank provided with two guiding surfaces, combined with a movable jaw having a guiding portion extended between the said guiding surfaces, and a strap at its rear end encircling the said shank, a screw, and means to retain the said movable jaw normally in engagement therewith yet permit movement of the said movable jaw independently of said screw, substantially as described.

3. In a wrench, a fixed jaw and its shank provided with a screw, and two guiding surfaces, combined with a movable jaw fulcrumed upon a portion or portions extended between the said guiding surfaces and movable about its fulcrum into and out of engagement with said screw, and yielding devices to retain the said movable jaw normally in engagement with said screw, substantially as described.

4. In a wrench, a fixed jaw and its shank provided at opposite sides with grooves to furnish guiding surfaces a^3, a^4 , combined with a movable jaw as b having ears extended at opposite sides said shank and provided with fulcrum lugs b^2 , the strap b^9 , and spring b^{11} , and the adjusting screw, all to operate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD C. WELLS.

Witnesses:

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