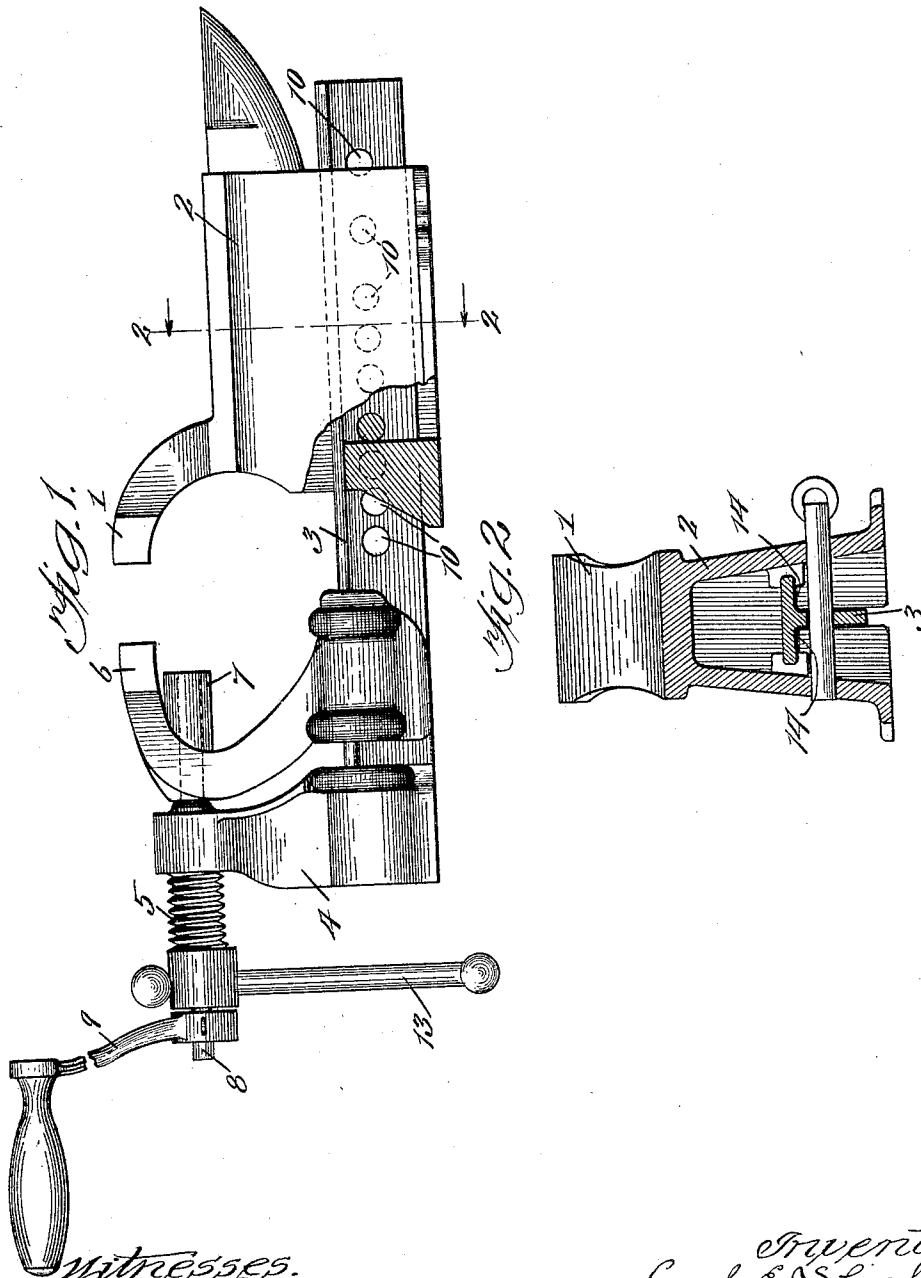


C. E. SHIELDS.
ADJUSTMENT FOR BENCH VISES.
APPLICATION FILED JUNE 3, 1911.

Patented Sept. 22, 1914

1,111,103.



Witnesses.
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UNITED STATES PATENT OFFICE.

CARL E. SHIELDS, OF ROCK ISLAND, ILLINOIS.

ADJUSTMENT FOR BENCH-VISES.

1,111,103.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARL E. SHIELDS, a citizen of the United States of America, and resident of Rock Island, Rock Island county, Illinois, have invented a certain new and useful Improvement in Adjustments for Bench-Vises, of which the following is a specification.

My invention relates to bench vises, and more particularly to a vise provided with improved adjusting means whereby the position of the movable jaw with respect to the stationary jaw can be easily regulated. In devices of this character it is often desirable to make a large adjustment of the jaws, that is, move the movable jaw far away from the stationary jaw; or, if the jaws are in open position, it may be desired to move them close together in order to hold a small article therebetween. It is likewise necessary to provide means whereby the movable jaw can be firmly pressed against the article after the same has been placed in position between the jaws. In devices heretofore it has been customary to accomplish this adjustment by mounting the movable jaw upon a rod having threaded engagement with the standard upon which the stationary jaw is mounted. By this means, however, it is necessary to rotate this rod many times in order to cause a large adjustment of the jaws, and likewise this threaded rod must be made of excessive length, thus increasing the cost of the device.

By my invention, I provide one adjustment, or primary adjustment, whereby the jaws can be quickly adjusted to approximately the proper position, and then a secondary adjustment, whereby the exact adjustment of the jaws can be obtained, and whereby the requisite pressure can be obtained after the article to be held has been placed in position between the jaws. These and other objects of my invention will be more clearly understood by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved device, part of the standard upon which the movable jaw is mounted being shown in section. Fig. 2 is a sectional view taken on line 2—2 of Fig. 1, looking in the direction of the arrows.

As thus shown, my improved structure comprises a movable jaw 1 mounted upon a suitable support or anvil 2. This sup-

port is inverted U-shape in cross section as shown in Fig. 2, the end sections being provided with a vertical and longitudinal slot to receive and support both the vertical web and T-arms of the T-bar 3. This T-bar is of sufficient length so as to extend through the support and to a suitable distance to one side of the same. Upon one end of this bar is mounted an upright standard 4. Passing through a threaded opening in the upper part of this standard is a threaded rod 5. Upon one end of the rod is supported the movable jaw 6, which jaw is mounted so as to slide readily upon the T-bar 3 and to be guided by the same, as clearly shown in the drawings. This jaw is swiveled upon the rod 5, so that the jaw moves forward and backward upon rotation of this rod, which rotation is accomplished by means of the operating handle 13. This rod is preferably made hollow, and has mounted thereon a suitable tool holder 7 attached to a rod 8 passing through this hollow rod, said rod 8 being provided with an operating handle 9. The shank of the T-bar 3 is provided with a series of holes, and passing through each side of the support 2 is a hole 11 adapted to register with one of the holes 10. A pin 12 is provided, which pin is adapted to pass through the holes 11 and one of the holes 10.

When it is desired to adjust the movable jaw, the pin 12 is first removed, and then the T-bar 3 slid in or out, as the case may be, upon the supporting sections 14 of the support 2, until the approximate adjustment is obtained. The pin 12 is then inserted through the holes 11 and through the hole 10 which registers at this time with the holes 11, and thus securely holds the T-bar, and with it the upright standard 4, in the adjusted position. In order to obtain a finer adjustment and also to apply the requisite pressure upon the article which it is desired to hold between the jaws, the operating handle 13 is then rotated so as to cause the threaded rod 5 to advance or retract the movable jaw 6, as will be clearly understood. In order to remove the article, it is only necessary to loosen the jaws by a slight movement of the operating handle 13. If it is then desired to grip an article of a much smaller or greater dimension than the first, instead of having to move the jaw 6 in or out by means of a threaded rod at-

tachment, which would be tedious and necessitate a very long rod, and thus increase the expense of the construction, I first remove the pin 12 and obtain a rough adjustment very easily and quickly by means of the pin and hole construction, as above described, and then obtain a more accurate adjustment by means of the operating handle 13.

10 It is oftentimes desirable to bore a hole in the article while it is held between the jaws, and for this reason I provide the toolholder 7, in which can be inserted a suitable tool and which can then be operated by the
15 operating handle 9, as will be readily understood.

It will thus be seen that I have devised an improved means for adjusting the jaws of a vise, and while I have shown the same in
20 connection with a bench vise it is to be understood that I do not wish to limit myself to such use, as it will be apparent that my invention is capable of use with other types

of vises and other implements in which a similar adjustment is desired. 25

What I claim as my invention is:

In a bench vise, an anvil carrying a stationary jaw, a T-bar passing through said anvil, supports in said anvil supporting the vertical web of said bar and bearing beneath the flanged portion of said bar, a pin
30 and hole adjustment for adjusting the position of said bar with respect to said support, a standard rigidly mounted upon one end of said bar, a movable jaw slidably
35 mounted upon said bar, and a threaded rod passing through said standard and attached to said movable jaw, whereby said jaw may be adjusted with respect to said standard.

Signed by me at Chicago, Illinois, this
40 23rd day of May, 1911.

CARL E. SHIELDS.

Witnesses:

H. A. SWENARTON,
R. KEARNS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."