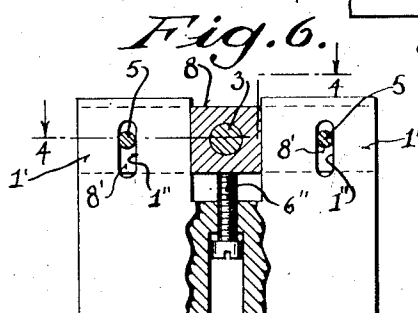
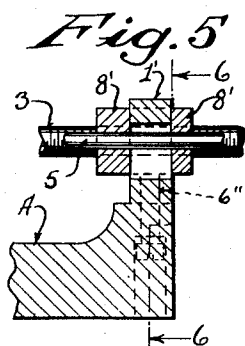
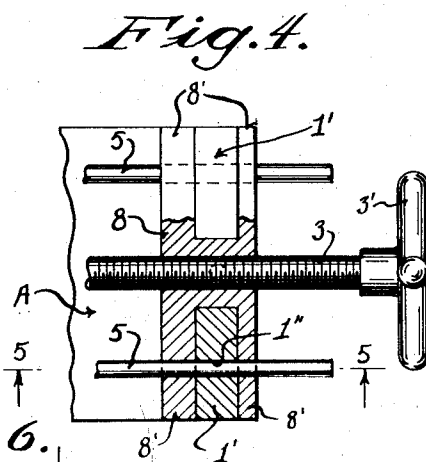
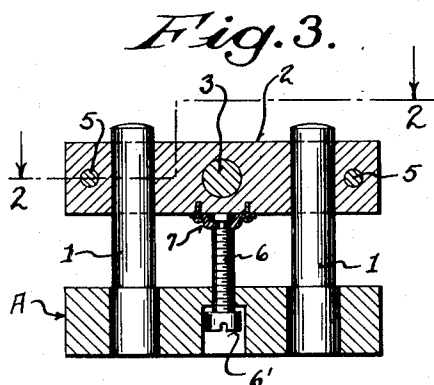
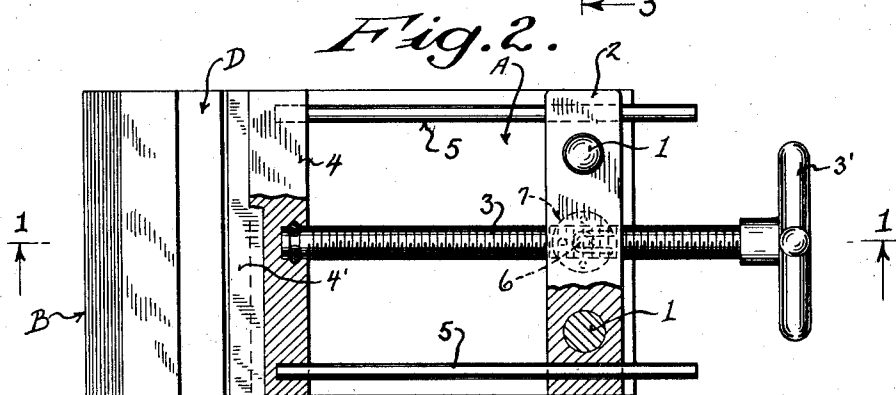
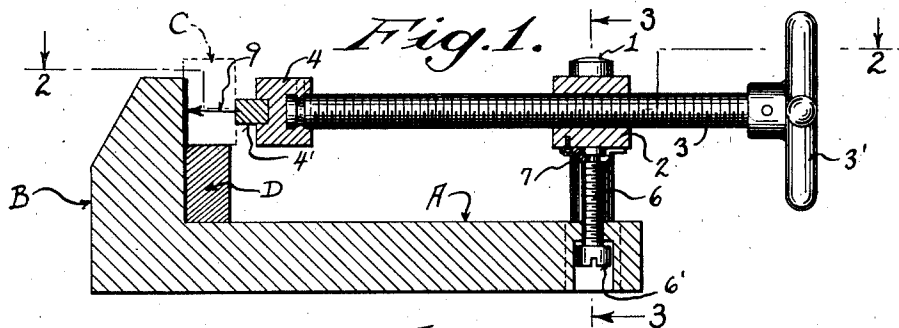


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H. FUHR

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SCREW-OPERATED-VISE HAVING VERTICALLY ADJUSTABLE
AND GUIDED NUT-BLOCK MOUNTING AND GUIDING
A HORIZONTALLY MOVABLE VISE-JAW
Filed Jan. 2, 1948



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SCREW-OPERATED VISE HAVING VERTICALLY ADJUSTABLE AND GUIDED NUT-BLOCK MOUNTING AND GUIDING A HORIZONTALLY MOVABLE VISE JAW

Henry Fuhr, Milwaukee, Wis.

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2 Claims. (Cl. 81-33)

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My invention refers to vises and it has for its primary object to provide a base, having a right angle fixed jaw extending therefrom, provided with legs upon which is mounted a vertical adjustable block, carrying a threaded spindle, upon which is mounted the adjustable jaw, whereby the same may be raised or lowered relative to the fixed jaw.

A further object of my invention is to provide the adjustable jaw with guide rods, which are slidable in the spindle carrying block.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the novel construction, combination and arrangement of parts, substantially as hereinafter described, and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the herein disclosed invention may be made as come within the scope of the claims.

In the accompanying drawings is illustrated one complete example of the physical embodiment of the present invention constructed according to the best mode so far devised for the practical application of the principles thereof.

In the drawings, Figure 1 represents a sectional elevation of a vise embodying the features of my invention.

Figure 2, a plan view of the same with parts broken away and in section, as indicated by line 2-2 of Figure 1.

Figure 3, a cross section of the vise, the section being indicated by line 3-3 of Figure 1.

Figure 4, a fragmentary plan view illustrating a modified form of the spindle carrying block, the same being partly in section, as indicated by line 4-4 of Figure 6.

Figure 5, a longitudinal sectional view of the modified spindle carrying block and associated parts, the section being indicated by line 5-5 of Figure 4, and

Figure 6, a cross sectional view of the modification, the same being indicated by line 6-6 of Figure 5.

Referring by characters to the drawings, A indicates a base block having a horizontally disposed face, from one end of which extends a fixed jaw B. The opposite end of the base extends upwardly and forms a pair of guide legs 1-1, which guide legs have slidably mounted thereon, a block 2. The block 2 carries a manually actuated spindle 3, in threaded union with a central aperture through the block 2. The outer end of the spindle carries a handle 3' and the inner end of said spindle has loosely mounted

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thereon, an adjustable vise jaw 4, carrying a horizontally disposed biting bar 4', which bar is permanently secured to the adjustable vise jaw and is positioned opposite the biting face of the fixed jaw B.

The ends of the adjustable jaw 4, carry guide rods 5-5, which guide rods are slidably mounted in apertures of the vertical adjustable block 2, whereby said adjustable jaw is held in its correct parallel relation with the fixed jaw.

In order to vertically adjust the adjustable jaw 4, I provide a set bolt 6, which set bolt is in threaded union with the base A, and the head 6' of said bolt is nested within a socket formed in the base. The outer end of the set bolt 6 is suitably shouldered and nested within a cap 7, which is secured to the bottom face of the adjustable block 2.

Thus, it will be noted, when it is desired to vertically adjust the biting bar of the fixed jaw 4 with relation to the biting face of the fixed jaw, it is only necessary to manipulate the set bolt 6, whereby the block 2, and the adjustable jaw 4, may be raised or lowered.

In practice it has been found that for efficient gripping of a piece of work, as indicated at C in dotted lines, Figure 1, it is advisable under all conditions to present a right angled bottom seating face for the work C. Hence, when a piece of work is of insufficient length to rest solidly upon the base A, I provide a supplemental rectangular base seat D, as indicated in Figure 1 of the drawings. This base seat may be replaced by similar seats of different dimensions, whereby the work C is properly nested in a horizontal position.

Referring to Figures 4 to 6 inclusive, I have illustrated another form of adjustable block 8. This block is of the H type, having wings 8' which straddle rectangular guide legs 1'-1', which guide legs extend upwardly from the base A.

As best indicated in Figures 5 and 6 of the drawings, the legs 1' of the base are provided with slots 1'' through which slots the guide rods 5 extend, it being apparent that said guide rods are axially slidable in the block wings 8'.

In this exemplification of my invention, I provide a set bolt 6'' in threaded union with the base and the upper end of said set bolt is adapted to engage the lower face of the block 8, whereby said block may be positively adjusted upwardly and in its downward adjustment, the weight of the adjustable jaw 4 and the associated parts, will cause said block to drop when the bolt 6' is lowered.

From the foregoing description it is apparent

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that by this simple mechanism, a horizontal adjustment of the movable jaw is obtained, and the movable jaw is positively held in said adjusted position, for accommodating various pieces of work to be operated upon.

It is quite important that the biting center of the bar 4' should be centered between the upper bed line of the base seat D, and top face of the fixed jaw B, whereby as indicated by the arrow 9, pressure upon the work C, is balanced to prevent tipping of said work. It is also apparent that the biting bar 4' may be removed for substituting other biting bars with narrower gripping faces.

I claim:

1. A two-way adjustable vise comprising a base having a fixed jaw at a right angle thereto, legs extending upwardly from an end of the base opposite the fixed jaw, a block slidably mounted upon the legs, means carried by the base and block for vertical adjustment of said block, a second jaw having guide rods slidably mounted in said block and a spindle in threaded union with

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the block and having one end swivelly connected to said second jaw.

2. A two-way adjustable vise comprising a base having a fixed jaw at a right angle thereto, legs extending upwardly from an end of the base opposite the fixed jaw, a block slidably mounted upon the legs, a bolt carried by the base for vertical adjustment of said block, a second jaw having guide rods slidably mounted in said block, and a spindle in threaded union with the block and having one end swivelly connected to said second jaw.

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