April 7, 1953 G. C. STRANGE 2,633,767

JAW CONSTRUCTION FOR BENCH VISE

Filed March 4, 1950

FIG. 4.

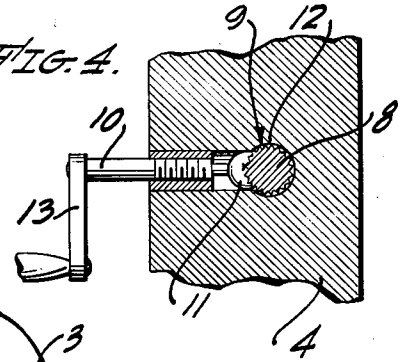
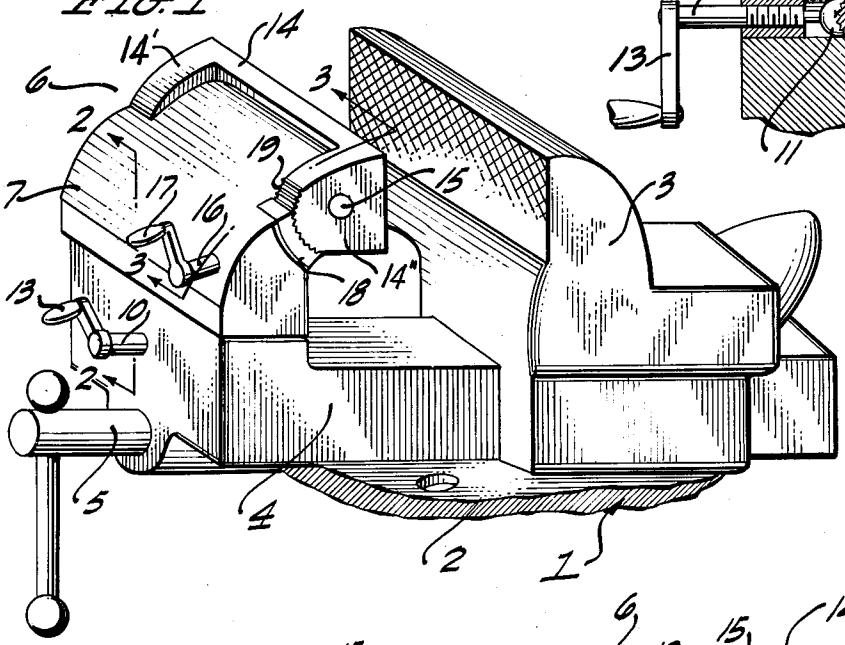


FIG. 1



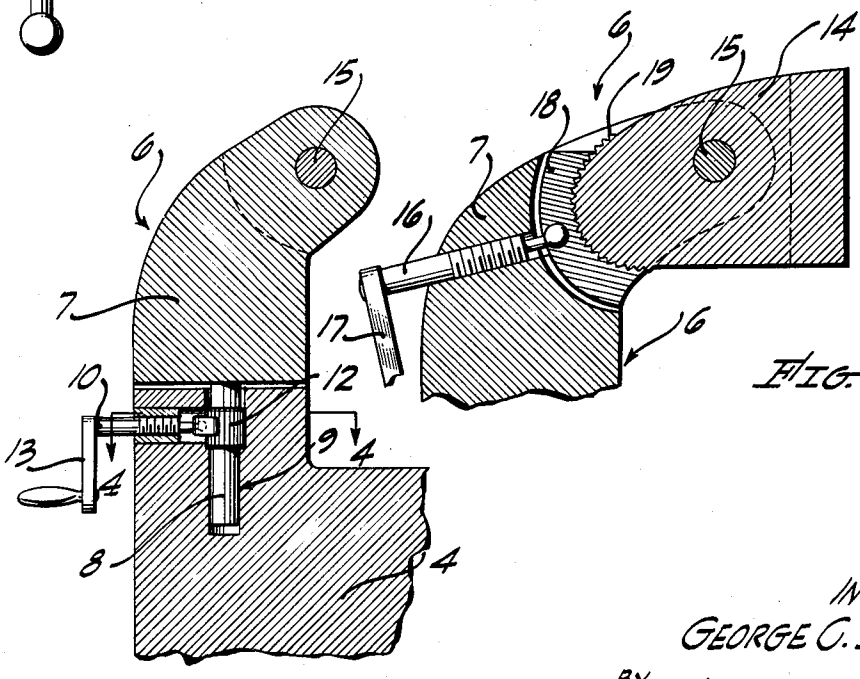


FIG. 3.

FIG. 2.

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JAW CONSTRUCTION FOR BENCH VISE

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1 Claim. (Cl. 81—22)

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This invention relates to a jaw construction for a bench vise, in which at least one of the jaws of the vise is so constructed and mounted that it can move about both a horizontal and a vertical axis, in order to permit the jaw to conform to the shape of the work which is grasped in the vise.

Another object of my invention is to provide a novel jaw construction for a bench vise of the type stated above, and in which either the work-engaging part or the jaw may be locked to prevent movement.

A feature of my invention is to provide a novel jaw construction for a bench vise in which the vertical trunnion may be engaged and locked against rotation to hold the jaw in a fixed position and the work-engaging piece may also be locked to prevent movement about a horizontal axis, if desired.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claim.

In the drawing:

Figure 1 is a fragmentary perspective view of a bench vise embodying my construction.

Figure 2 is a fragmentary sectional view taken on line 2—2 of Figure 1.

Figure 3 is a fragmentary sectional view taken on line 3—3 of Figure 1.

Figure 4 is a fragmentary sectional view taken on line 4—4 of Figure 2.

Referring more particularly to the drawing, the numeral 1 indicates a bench vise which consists of a bottom flange 2, by means of which the vise is attached to a bench. A fixed jaw 3 rises from the flange 2, and the construction and arrangement of this jaw is usual and well known.

A slide 4 is movable in the jaw 3, all of which is usual and well known, and the slide 4 is adjustable by a threaded shaft or worm 5, all of which again is the usual and well known construction.

A movable jaw construction 6 is mounted on the slide 4 and consists of the following parts:

A standard 7, which is approximately the same width as the slide 4, a trunnion 8, which extends downwardly from a base of the standard 7, and fits in an appropriate bore 9 in the slide 4, and an offset upper portion which is provided with a notch or recess in each side.

It will, therefore, be evident that the movable jaw 6 can rotate with the trunnion 8 about a vertical axis.

If it is desired to hold the jaw 6 against rotation, I provide a locking mechanism which consists of a screw 10, which threads into the slide 4, substantially as shown, and is provided with a shoe 11 engaging a toothed or knurled portion 12, on the trunnion 8. The screw 10 is rotated by the handle 13, when it is desired to lock the jaw 6.

A work-engaging face plate 14 having rear-

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wardly extending ears or flanges 14', 14'' positioned in said recesses, is mounted on the standard 7 by a shaft 15 that passes through aligned holes in said ears and said standard, whereby the face plate 14 is movable about a horizontal axis to conform to the shape of the work engaged by the vise. The ears 14' and 14'' are formed one at each end of the jaw face plate 14.

If it is desired to lock the face plate 14 in a given position, I provide a second screw 16, which threads into the upper portion of the standard 7 and is rotatable by the handle 17. A block 18 is positioned in one of said recesses and is attached to the inner end of the screw 16 and engages a toothed or knurled surface 19 of the adjacent ear 14''.

By retracting the block 18, the face plate 14 will be free to move around the shaft 15 and accommodate itself to the shape or contour of the work in the vise.

If it is desired to lock the face plate 14, the screw 16 is threaded inwardly until the block 18 engages the surface 19, and thereafter the face plate 14 will be locked in position.

Having described my invention, I claim:

In a bench vise including a slide member with a jaw mounted on the slide member, a recess in at least one end of said jaw, a jaw face plate located in front of said jaw and having at least one rearwardly extending flange, said flange being positioned in said recess, a shaft extending through said flange and said jaw, whereby said jaw face plate is pivotally mounted on the jaw for movement about a horizontal axis, a screw threaded into said jaw, and a block positioned in said recess and attached to an inner end of said screw, said block engaging an adjacent surface of said flange to hold said jaw face plate against movement about a horizontal axis after said screw is tightened.

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