T. ASHWORTH.

BENCH AND FLOOR CLAMP.

APPLICATION FILED SEPT. 16, 1921.

1,421,370. Patented July 4, 1922.

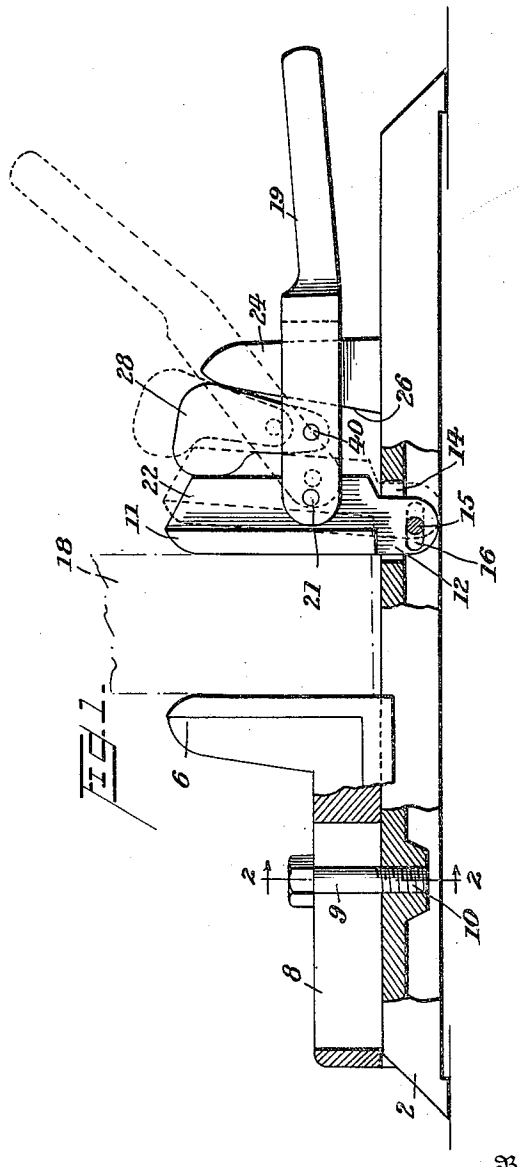


FIG. 1.

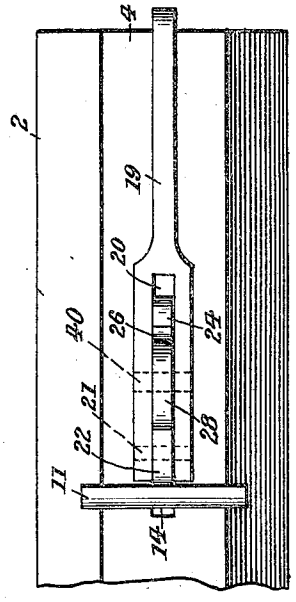


FIG. 3.

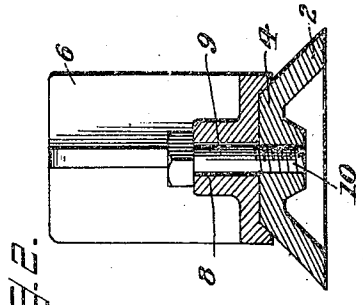


FIG. 2.

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THOMAS ASHWORTH, OF MILLERSBURG, OHIO.

BENCH AND FLOOR CLAMP.

1,421,370. Specification of Letters Patent. Patented July 4, 1922.

Application filed September 16, 1921. Serial No. 501,141.

To all whom it may concern:

Be it known that THOMAS ASHWORTH, a citizen of the United States, residing at Millersburg, in the county of Holmes and State of Ohio, has invented certain new and useful Improvements in Bench and Floor Clamps, of which the following is a specification.

The present invention relates to an adjustable clamp for holding lumber, such as doors, window sash and the like, which can not be conveniently held by hand while the carpenter or workman is operating upon them. It is especially adapted for use in fitting doors and sash into buildings, although capable of use as a bench vise or clamp.

One of the objects of my invention is to provide a clamp which is automatically adjustable and adapts itself to varying sizes of work.

It is another object of my invention to provide a clamping device which is operated to clamp or release the work by the foot, leaving the hands of the workman free for other purposes.

It is a further object of my invention to provide a clamp which when set, effectively maintains its position until positively released.

Other objects and advantages will appear upon reference to the accompanying specification taken in connection with the appended drawing in which:

Figure 1 is a side view, partly in section and partly in elevation showing in full lines, the work clamping position and in dotted lines, the released position;

Figure 2 is a vertical sectional view on the line 2—2 of Figure 1, illustrating the normally fixed but adjustable main jaw; and

Figure 3 is a plan view of a portion of the clamp illustrating the movable clamping jaw and operating mechanism.

Referring specifically to the drawing by numerals of reference, the bed plate or support for the clamp is designated by 2, and provided with a longitudinal raised portion 4 which acts as a guide for a main normally fixed, but adjustable jaw 6, the base of which is provided with a longitudinal slot 8 through which passes a vertical set screw or bolt 9 secured at 10 in the bed plate.

Opposed to this fixed jaw 6, and spaced therefrom, I provide an adjustable jaw 11, the lower portion 12 of which passes through a slot 14 centrally of the bed plate, and is pivotally mounted on a transverse pin 15 secured at its ends in the sides of the bed plate. The recess 16 through which passes the pin 15 is elongated to provide a floating or self-adjusting pivotal connection for the jaw 11.

For the purpose of moving the jaw 11 toward the jaw 6, into clamping engagement with the work 18, I provide an operating lever 19, bifurcated at 20 at one end and pivoted at 21 to a rib 22 on the rear of the jaw 11. Adjacent, and to the rear of the jaw 11, I provide the bed plate with an upstanding fulcrum post 24 having a cam or wedging face 26, said post passing upwardly between the arms of the bifurcated portion of the lever 19.

Pivoted at 40 on said lever 19, intermediate the flange, or rib 22, on the jaw 11 and the fulcrum post 24, and in alinement therewith, I provide a wedge 28 tapered generally inwardly and downwardly, and adapted when depressed by the lever 19, to engage the said rib 22 and cam or wedging face 26 of fulcrum post 24 and through the wedging action move said jaw 11 toward said jaw 6 and into engagement with the work.

To release the clamp, the workman merely lifts the free end of the lever 19 by the foot, the hands being thus free to manipulate the work or tools.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent, is:—

In an adjustable wood working clamp, a bed plate, a main stationary jaw, a pivoted and longitudinally movable supplemental jaw, an operating lever pivoted on said supplemental jaw, a fulcrum post fixed on said bed plate, and a wedge carried by said lever intermediate said supplemental jaw and said fulcrum post, whereby when said lever is depressed, the wedge will engage said fulcrum post and said supplemental jaw and cause the latter to be moved toward the main jaw.

In testimony whereof I affix my signature.

THOMAS ASHWORTH.