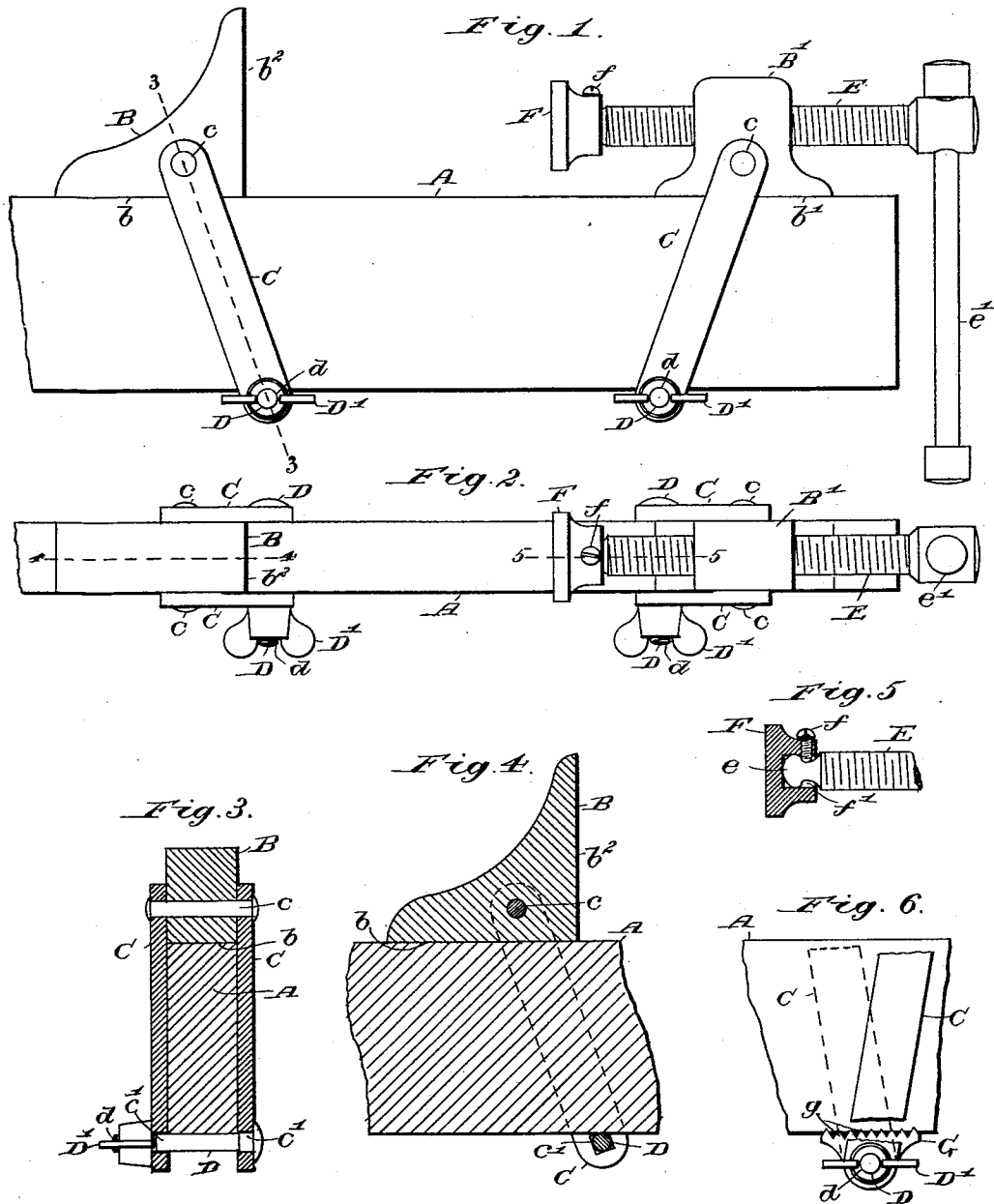


(No Model.)

A. WILSON.
WOODWORKER'S CLAMP.

No. 573,745.

Patented Dec. 22, 1896.



Witnesses—
Kirkley Hyde,
Grace E. Gilbert.

Inventor—
Addison Wilson,
By Albert M. Moore,
His Attorney.

UNITED STATES PATENT OFFICE.

ADDISON WILSON, OF LOWELL, MASSACHUSETTS.

WOODWORKER'S CLAMP.

SPECIFICATION forming part of Letters Patent No. 573,745, dated December 22, 1896.

Application filed March 6, 1896. Serial No. 582,046. (No model.)

To all whom it may concern:

Be it known that I, ADDISON WILSON, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Woodworkers' Clamps, fully described in the following specification.

My invention relates to woodworkers' clamps, for the use of carpenters, joiners, cabinet-makers, carriage-makers, upholsterers, and others in holding together separate pieces of wood for gluing or other purposes.

The clamps which most nearly resemble the one herein described commonly have each a stationary head, rigidly and permanently secured by bolts to a heavy wooden clamp-bar, which must be of considerable length to accommodate work of the largest size, and this bar is pierced with holes or provided on its lower surface with notches to receive or engage a bolt carried by a movable jaw and hold said movable jaw fixed. Such clamps made as above described are too heavy and take up too much room to be carried conveniently in a tool-chest. I make both jaws or heads detachable from the bar and provide means whereby each may be readily attached to any bar having a rectangular cross-section of suitable dimensions without boring holes or cutting notches in said bar, so that a carpenter or other workman may carry said jaws in his tool-chest and make the bar from any refuse stock lying about at the place where the work is to be performed.

In the accompanying drawings, Figure 1 is a side elevation of a woodworker's clamp embodying my improvement; Fig. 2, a plan of the same; Fig. 3, an inclined transverse section, on the line 3 3 in Fig. 1, through the middle of the straps; Fig. 4, a central vertical longitudinal section on the line 4 4 in Fig. 2; Fig. 5, a central vertical longitudinal section, on the line 5 5 in Fig. 2, of the swivel and its retaining-screw and of a part of the clamp-screw; Fig. 6, a side elevation having a clamp-bar with parts of straps and a gripping-block having a roughened face next the clamp-bar.

A is a straight clamp-bar of uniform rec-

tangular cross-section, and may be formed of wood, as usual.

B is a jaw having a flat under surface b , which rests upon the clamp-bar A, and also having a flat surface b^2 , which serves as the gripping-face of said jaw and is at right angles to the surface b . Two equal straps C, preferably metallic, are pivoted by a common horizontal pivot c to opposite sides of said jaw and extend down on opposite sides of said clamp-bar, and below the same are provided with holes c' , as shown in Fig. 3, through which holes a bolt d is passed below said bar. A nut D' , preferably a thumb-nut, turns on the threaded end d of said bolt to draw said straps C against the sides of said clamp-bar. The holes c' may be round or one of them may be square, as shown in Figs. 3 and 4, to receive the square neck of a carriage-bolt, and by making the holes in both straps square such a carriage-bolt or a machine-bolt or a bolt with a round neck may be put through both straps in either direction, to suit a right-handed or left-handed person. The other jaw B' has a surface b' which rests upon the clamp-bar A, and is held to said clamp-bar by straps C, which are duplicates of those above described and are similarly pivoted at c and are drawn against the sides of the clamp-bar by a bolt D and nut D' , which are exactly similar to those above described with reference to the jaw B.

A clamp-screw E is turned in a threaded hole in the jaw B' , parallel with the clamp-bar A, by means of a lever or handle e' , just as the screw of a machinist's vise is turned and in a well-known manner.

The point e of the screw E is ball-shaped and enters a socket f' of the swivel-piece F, and is retained therein by a screw f , which passes radially into said socket f' back of said ball e .

By loosening the nuts D' slightly the jaws may be removed from the clamp-bar and, as above intimated, by tightening said nuts the straps may be forced against the sides of the clamp-bar sufficiently to hold the jaws immovable thereon.

The above-described construction allows the distance between the jaws to be adjusted

by much smaller amounts than is possible where holes or notches are used to receive the bolts, owing to the danger of the wood of the clamp-bar being broken out between the successive holes or notches.

5 In Fig. 6 a gripping-piece G is shown as pivoted on the bolt D of either jaw and having its upper surface roughened or toothed at g, to engage the under side of the clamp-bar and prevent the movement of the jaw by the slipping of the straps C, but this gripping-piece will not be necessary except when the jaws are used with a clamp-bar much too small for them.

15 I claim as my invention, in a woodworker's clamp—

1. The combination of a clamp-bar a jaw, straps, pivoted thereto at opposite sides thereof, and a screw or bolt passing through said straps below said clamp-bar to draw said straps against said clamp-bar, and to hold said jaw by the friction of said straps on said bar as and for the purpose specified.

25 2. The combination of a clamp-bar two jaws, a pair of straps, pivoted to opposite

sides of each of said jaws, and screws or bolts, each passing through both straps of the same pair below said clamp-bar, to draw said straps against said clamp-bar and to hold said jaws by the friction of said straps on said bar, one of said jaws having a gripping-surface integral therewith, a screw, turning in the other of said jaws, and a gripping-piece, arranged to swivel upon the point of said screw, as and for the purpose specified. 30

3. The combination of a clamp-bar a jaw, straps, pivoted thereto at opposite sides thereof, a screw or bolt to draw said straps against said clamp-bar and a gripping-piece pivoted on said screw or bolt and having a roughened or toothed surface to engage said clamp-bar, as and for the purpose specified. 35

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 3d day of March, A. D. 1896. 40

ADDISON WILSON.

Witnesses:

ALBERT M. MOORE,
KIRKLEY HYDE.