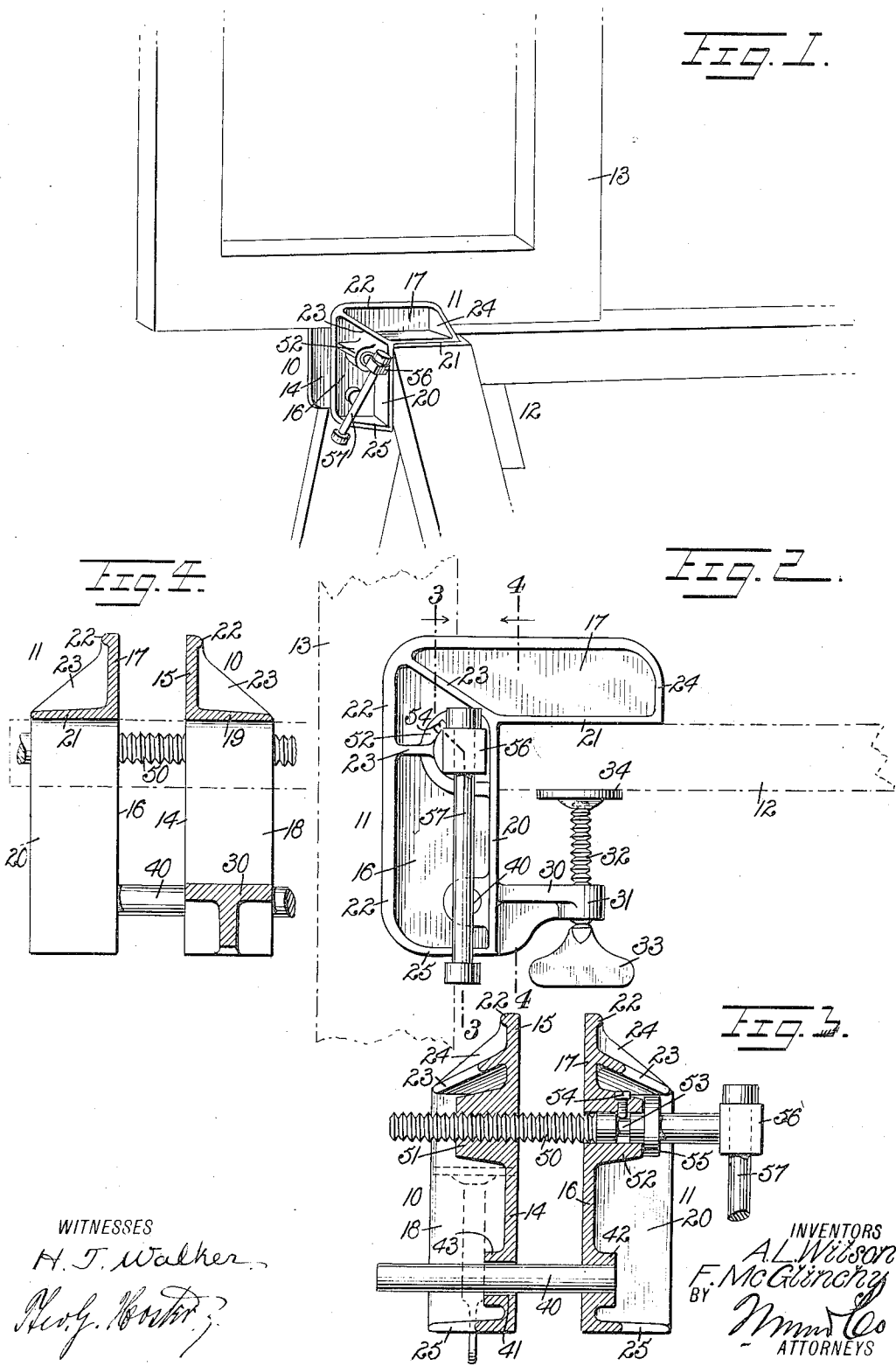


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 WOODWORKING VISE.
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WOODWORKING-VISE.

1,211,024.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, ALBERT L. WILSON and FRANK McGLINCHY, both citizens of the United States, and residents of Willoughby, in the county of Lake and State of Ohio, have invented a new and Improved Woodworking-Vise, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved woodworking vise arranged to permit its convenient attachment to a bench, saw horse or other suitable support and adapted to readily clamp and securely hold a piece of work in position for the carpenter or other person to work on.

In order to produce the desired result, use is made of a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one relatively to the other to fit against the edge and face of a support, the opposite faces of the jaws being parallel, attaching means on the fixed jaw for fastening the latter to the support, transverse guiding means for guiding the movable jaw transversely toward and from the fixed jaw, and manually operated transverse adjusting means for moving the movable jaw transversely toward and from the fixed jaw.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the woodworking vise as applied to a saw horse; Fig. 2 is a side elevation of the same as applied to a work bench; Fig. 3 is a cross section of the same on the line 3—3 of Fig. 2; and Fig. 4 is a cross section of the same on the line 4—4 of Fig. 2.

The vise in its general construction consists of a fixed jaw 10 and a movable jaw 11, of which the fixed jaw is adapted to be fastened to one end of a saw horse, bench or other suitable support 12, and the work 13 is adapted to be clamped between the jaws 10 and 11, as hereinafter more fully explained. The fixed jaw 10 consists of a vertical leg 14 and a horizontal leg 15, the legs

being formed of a single casting, and the movable jaw 11 consists of similar legs 16 and 17. The jaws 10 and 11 have the opposite faces of their legs in parallelism so as to readily clamp the work 13 between them, either between the vertical legs 14 and 16 (see Fig. 2) or the horizontal legs 15 and 17 (see Fig. 1). The work may also be held between the jaws at the corners or joints of the legs.

The legs 14 and 15 of the fixed jaw 10 are provided with outwardly extending flanges 18 and 19 at right angles to the clamping faces of the said legs, and similar flanges 20 and 21 project outwardly from the legs 16 and 17 thus providing broad contacting faces for engagement with the edge and top of the support 12 to which the vise is attached at the time. The outer legs 14 and 15 of the jaw 10 and the legs 16 and 17 of the jaw 11 are strengthened along their outer edges by beads 22, and a rib 23 extends diagonally at the outer surface of each corner of a jaw, and ribs 24 and 25 are arranged at the ends of the legs of each jaw, thus strongly reinforcing the jaws.

From the inner face of the flange 18 of the leg 14 of the fixed jaw 10 extends integrally a bracket 30 terminating in a nut 31 in which screws a clamping screw 32 provided at its lower end with a handle 33 and provided at its upper end with a loosely turning head 34 adapted to engage the under side of the support 12 directly opposite the flange 19 of the horizontal leg 15 of the fixed jaw 10. By the arrangement described, the fixed jaw 10 can be readily secured in position on the support 12.

In order to guide the movable jaw 11 toward and from the fixed jaw 10, use is made of a transversely extending pin 40, preferably secured to the lower end of the vertical leg 16 of the movable jaw 11 and slidingly engaging a bearing 41 formed on the lower end of the vertical leg 14 of the fixed jaw 10. The vertical leg 16 is preferably reinforced by a boss 42 at a point at which the pin 40 is attached to the said leg 16, and the bearing 41 is reinforced by a boss 43 on the leg 14, both bosses 42 and 43 being on the outer

faces of the legs so as not to obstruct the clamping faces thereof and allow the jaw 11 to move very close to the clamping jaw 10 for clamping very thin work between the two.

In order to move the jaw 11 toward and from the fixed jaw 10, use is made of a screw 50 which screws in a nut 51 integrally formed on the vertical leg 14 of the jaw 10, and the said screw 50 is mounted to turn in a bearing 52 formed on the vertical leg 16 of the movable jaw 11. The screw 50 is provided with an annular groove 53 into which projects a set screw 54 screwing in the bearing 52 to hold the screw 50 against transverse movement in the leg 16 of the jaw 11 but to allow turning of the screw in the bearing 52. A collar 55 is formed on the screw 50 and bears against the outer face of the bearing 52 to relieve the set screw 54 of undue strain when moving the jaw 11 toward the jaw 10 and in engagement with the work 13 to clamp the latter between the jaws. The outer non-threaded end of the screw 50 is provided with a head 56 having a slidable handle 57 to permit the user to conveniently turn the screw 50. By reference to the drawings it will be noticed that the screw 50 is located a distance above the guide pin 40 and both the screw 50 and the guide pin 40 are located a distance from the outer sides of the legs 14 and 16 of the jaws 10 and 11 to provide sufficient clamping surface between the said legs for holding the work 13, as indicated in Fig. 2. It will also be noticed that the adjusting screw 50 is located below the under surfaces of the horizontal legs 15 and 17 so that the work does not touch the adjusting screw 50 when clamped between the legs 15 and 17, as shown in Fig. 1.

From the foregoing, it will be seen that by the arrangement described the fixed jaw can be firmly fastened in position on the support 12 and the movable jaw 11 can be readily moved toward and from the fixed jaw 10 on turning the screw rod 50, the said movable jaw 11 being guided in its transverse movement by the pin 40 and also by contact of the legs 16 and 17 with the edge of the upper face of the support 12.

The woodworking vise shown and described is very simple and durable in construction and can be cheaply manufactured. Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A vise, comprising a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one relative to the other to fit against the edge and face of a support, the opposite faces of the jaws being parallel, attaching means on the fixed jaw for fastening the latter to the support,

transverse guiding means for guiding the movable jaw transversely toward and from the fixed jaw, and manually operated transverse adjusting means for moving the movable jaw transversely toward and from the fixed jaw.

2. A vise, comprising a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one to the other to fit against the edge and face of a support, a bracket on the inner face of one of the legs of the fixed jaw and provided with a nut, a clamping screw screwing in the said nut and having its clamping head directly opposite the under side of the other leg of the fixed jaw to fasten the fixed jaw to the support, transverse guiding means for guiding the movable jaw transversely toward and from the fixed jaw, and a transverse adjusting screw screwing in one jaw and mounted to turn in the other jaw to move the movable jaw toward and from the fixed jaw.

3. A vise, comprising a fixed jaw, a jaw movable transversely toward and from the said fixed jaw, each of the jaws having integral legs at a right angle one to the other to fit against the edge and face of a support, a bracket on the inner face of one of the legs of the fixed jaw and provided with a nut, a clamping screw screwing in the said nut and having its clamping head directly opposite the under side of the other leg of the fixed jaw to fasten the fixed jaw to the support, a transverse guiding pin attached to one of the said jaws and slidingly engaging the other jaw, and a transverse adjusting screw mounted to turn in one of the said jaws and screwing in the other jaw, the said guiding pin and the said adjusting screw engaging the same legs one above the other and a distance inward from the outer edges of the legs.

4. A vise, comprising a fixed jaw, a jaw movable transversely in parallelism toward and from the said fixed jaw, each of the jaws having integral horizontal and vertical legs, of which the under side of the horizontal jaw is adapted to rest on the face of a support, and the inner face of the vertical jaw is adapted to abut against an edge of the support, the opposite faces of the jaws presenting clamping surfaces at both the horizontal and vertical legs of the jaws, a bracket extending integrally from the lower end of the vertical leg of the fixed jaw, below and parallel to the horizontal leg of the fixed jaw, the free end of the bracket being threaded to form a fixed nut, a clamping screw screwing in the said nut and having a head adapted to engage the under side of the support directly opposite the horizontal member of the fixed jaw, a transverse guide pin attached to the vertical leg of one of the jaws and slidingly engaging the vertical leg of the

other jaw, and a transverse adjusting screw mounted to turn in the vertical leg of the movable jaw and screwing in the vertical leg of the fixed jaw, the said guide pin and
5 adjusting screw being located one above the other and spaced from the outer edges of the vertical legs of the jaws, and the said adjusting screw being a distance below the under sides of the horizontal legs of the jaws.

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