

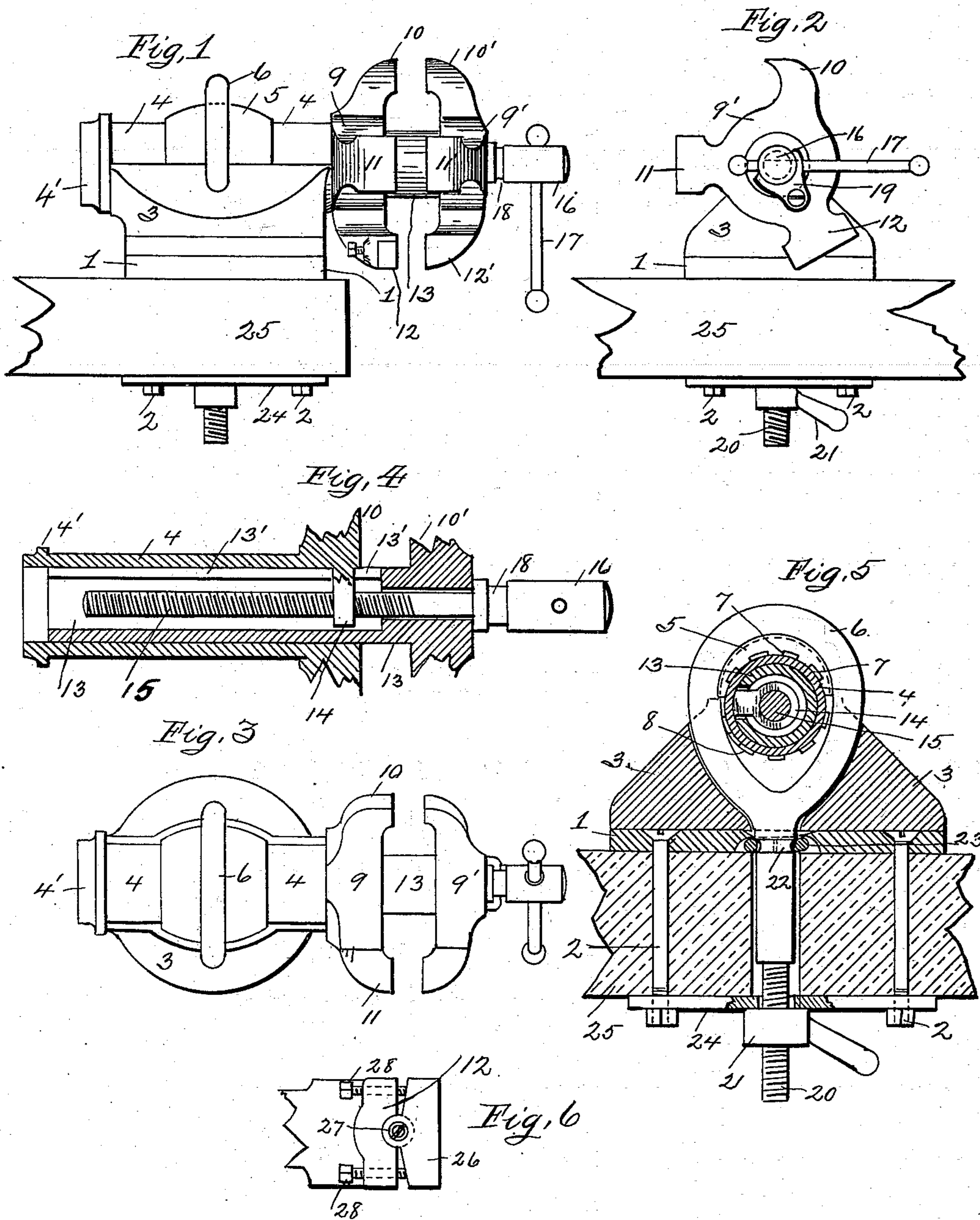
No. 651,929.

Patented June 19, 1900.

E. Q. OLSON.  
MULTIPLE VISE.

(Application filed Aug. 22, 1899.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

ERIK Q. OLSON, OF GREENSBURG, PENNSYLVANIA.

## MULTIPLE VISE.

SPECIFICATION forming part of Letters Patent No. 651,929, dated June 19, 1900.

Application filed August 22, 1899. Serial No. 728,077. (No model.)

*To all whom it may concern:*

Be it known that I, ERIK Q. OLSON, a citizen of the United States of America, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Multiple Vises; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved multiple vise; and it consists in certain details of construction and combination of parts, as will be fully described hereinafter.

In the accompanying drawings, Figure 1 is a side elevation of my improved vise, which is constructed and arranged in accordance with my invention. Fig. 2 is a front elevation of the same. Fig. 3 is a plan view. Fig. 4 is an enlarged detail sectional plan view of a portion of the vise, said section taken through the center of the working parts. Fig. 5 is an enlarged sectional end view showing the manner of clamping the vise to the bench. Fig. 6 is a plan view of one of the jaws.

To construct a multiple vise in accordance with my invention, I form from cast metal an annular base-plate 1 of a suitable size and having formed therein several openings for the reception of bolts 2, whereby the said base may be firmly attached to the work bench or table 25. Arranged upon the top of this base-plate 1 is a frame 3, also annular in form and provided with a semicircular recess extending along the top for the reception of a hollow cylindrical shaft 4, upon the forward end of which are formed the three single vise-jaws 10, 11, and 12, cast upon a head 9, integral with the shaft 4. This shaft 4 and head 9 may be revolved or turned in the bearing and are prevented from lateral movement by the head 9 upon the one side of the bearing and a collar 4', formed upon the other. The shaft 4 is confined in its bearing and prevented from rotary movement by a yoke 6, surrounding the same and engaging with the saddle-piece 5, resting upon the top of the shaft. This yoke 6 is provided with a shank 20, threaded at its lower por-

tion and extending downward through the frame 3, the base-plate 1, and the table 25, and is provided with a hand-nut 21, by means of which the parts may be made rigid the one with the other.

The interior of both the saddle-piece 5 and the semicircular bearing (see Fig. 5) for the shaft 4 are formed with a series of parallel ribs 7 and 8, extending in the direction of the length of the parts, and serve as a means of gripping the shaft 4 when pressure is placed upon the yoke 6.

To hold the frame 3 and base 1 together when the vise is detached from the bench or table, a groove is formed at a suitable point about the shank 20 and beneath the base 1 and an ordinary spring-ring 22 placed about the same.

Operating within the bore of the shaft 4 is another and similar shaft 13, capable of being moved in the direction of its length by means of a threaded shaft 15, passing through a threaded boss 14, attached to the inner periphery of the shaft 4, and operating through a slot 13', formed along the inner shaft 13. This threaded shaft 15 is provided at the outer extremity with a head 16 and cross-bar 17 and is prevented from lateral movement by a piece 19, attached to the head 9 and engaging with a groove 18, formed in the said threaded shaft.

Formed integral with the inner shaft 13 are three vise-heads 10', 11', and 12', corresponding in shape and construction with those of the outer shaft 4.

The jaws 10 and 10', forming the one vise, are of a peculiar form best adapted for any special work. The second vise 11 and 11' is of the ordinary form, and the third 12 and 12' provided with an adjusting-piece 26, (see Fig. 6,) arranged in a socket 27 and may be set at any angle by means of short set-screws 28, thereby providing a means of securing tapering pieces in the jaws of the vise.

In operation either of the vise-heads may be turned upward by simply releasing the hand-nut 21 to remove the pressure from the shaft 4, and at the same time the vise may be revolved about the base-plate 1 to any horizontal angle with the table 25 and by tightening the hand-nut 21 the parts made rigid.



The opening and closing of the jaws of the vise are accomplished by revolving the bar 17 in a manner well known in the art.

The advantage of a multiple vise such as described is that the one device answers the purpose of several and a shop may be equipped at a much less expense.

Various slight modifications may be made without departing from the spirit of the invention. Therefore I do not confine myself to the exact construction shown and described.

Having thus described my invention, I claim—

1. In combination, in a multiple vise, a base-plate, a frame, a stationary hollow shaft seated therein, means connected to said shaft for securing the same rigidly to the frame, a downwardly-extending threaded boss formed integral with said shaft, a series of differential jaws carried by the head of the shaft, a ribbed saddle-piece mounted on said shaft, a yoke engaging said saddle-piece for binding the same to the shaft and terminating in a threaded shank, means arranged within the base-plate for engagement with the shank to secure the yoke to the said base-plate, a longitudinally-movable hollow shaft arranged within the stationary shaft and provided with a slot to receive said threaded boss, a series of differential jaws carried by the movable shaft, a screw operating through the head of the movable shaft and engaging in said threaded boss, means carried by said screw for operating the same to actuate the movable shaft, and means carried by the head of the movable shaft for engagement with said screw, as and for the purpose described.

2. In a multiple vise, the combination with the bench or support and the base-plate secured to said support, of the frame rotatably mounted on said base-plate, a stationary hollow shaft seated in said frame, a saddle-piece engaging said shaft, a yoke engaging said saddle-piece and provided with a shank extending through the base-plate and support, a ring arranged within the base-plate and engaging said shank to hold the same in engagement with the base-plate, a hand-nut mounted on said shank for rigidly securing the parts to the bench or support, a series of differential jaws carried by said hollow shaft, a longitudinally-movable hollow shaft arranged within the stationary shaft, a series of differential jaws carried by said longitu-

dinally-movable shaft, and a screw operating through the head and bore of the movable shaft for moving its jaws toward or away from the jaws of the stationary shaft, substantially as described.

3. In a multiple vise, the combination, with the bench or support and the base-plate secured thereto, of the frame rotatably mounted on said base-plate, a stationary hollow shaft seated in said frame, a series of differential jaws carried by said shaft, a saddle-piece mounted on the shaft, a yoke engaging said saddle-piece for binding the same to the shaft and terminating in a threaded shank extending through the base-plate and bench or support, a hand-nut mounted on said threaded shank, means arranged within the base-plate and engaging said threaded shank for holding the parts together when detached from the bench or support, a longitudinally-movable hollow shaft arranged within the stationary shaft, a series of differential jaws carried by said movable shaft, and means operating within the movable shaft for moving its jaws toward or away from the jaws of the stationary shaft, as and for the purpose described.

4. In combination, with the bench or support and the base-plate mounted thereon, a frame rotatably mounted on said base-plate, a stationary hollow shaft seated in said frame, a series of differential jaws carried by said shaft, a ribbed saddle-piece mounted upon the shaft, a yoke engaging said saddle-piece and provided with a shank extending through the base-plate and bench or support, means carried by said shank for binding the parts to the bench or support, a spring-ring arranged within the base-plate and engaging said shank for binding the parts together when detached from the bench or support, a longitudinally-movable hollow shaft arranged within the stationary hollow shaft, a series of differential jaws carried by said movable hollow shaft, and means operating within said movable shaft for actuating the same, as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

ERIK Q. OLSON.

Witnesses:

CHAS. A. HALLBERG,  
BENJ. A. JOHNSON.