

No. 790,165.

PATENTED MAY 16, 1905.

B. L. WILLIAMSON.
BENCH VISE.

APPLICATION FILED SEPT. 26, 1904.

Fig. 3.

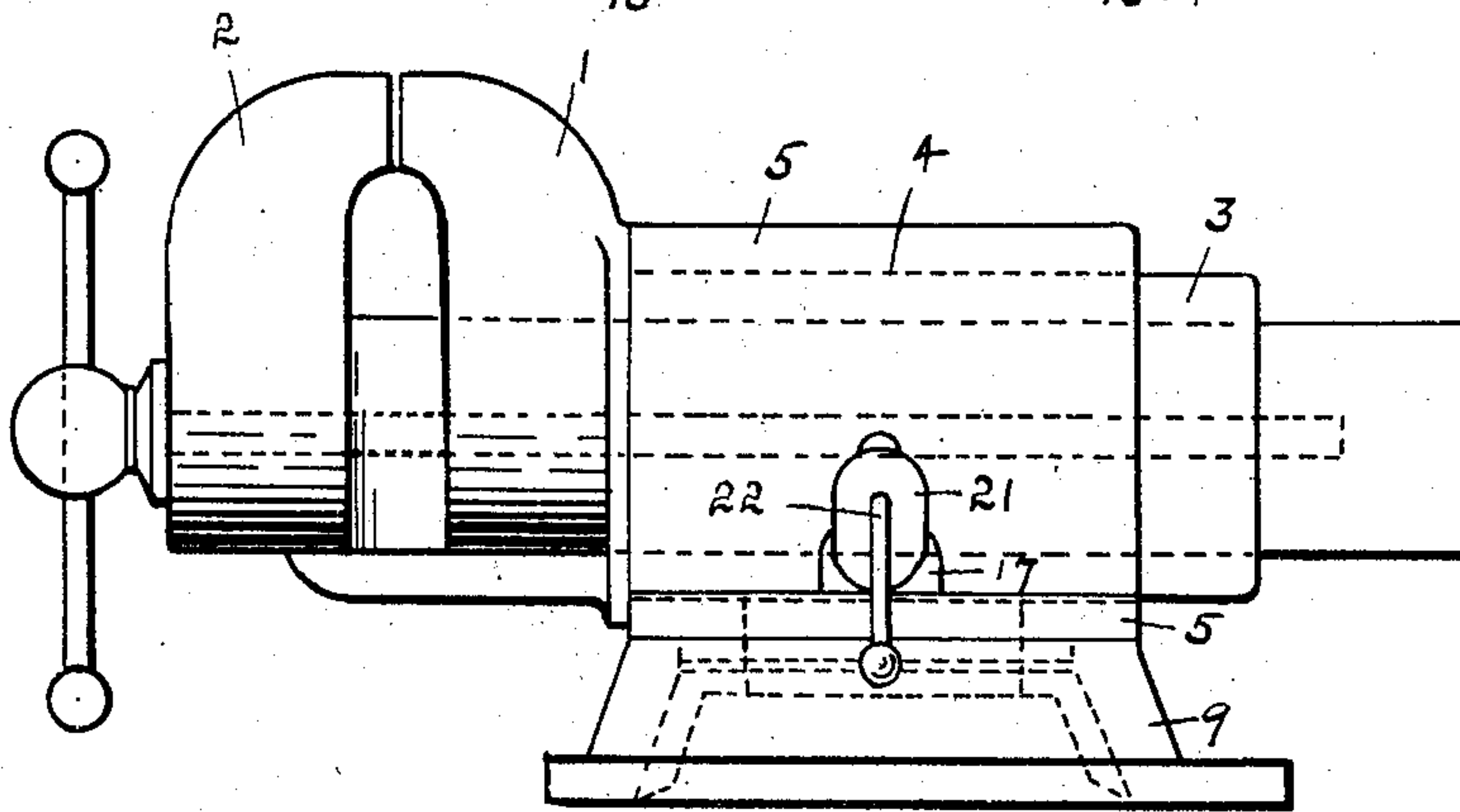
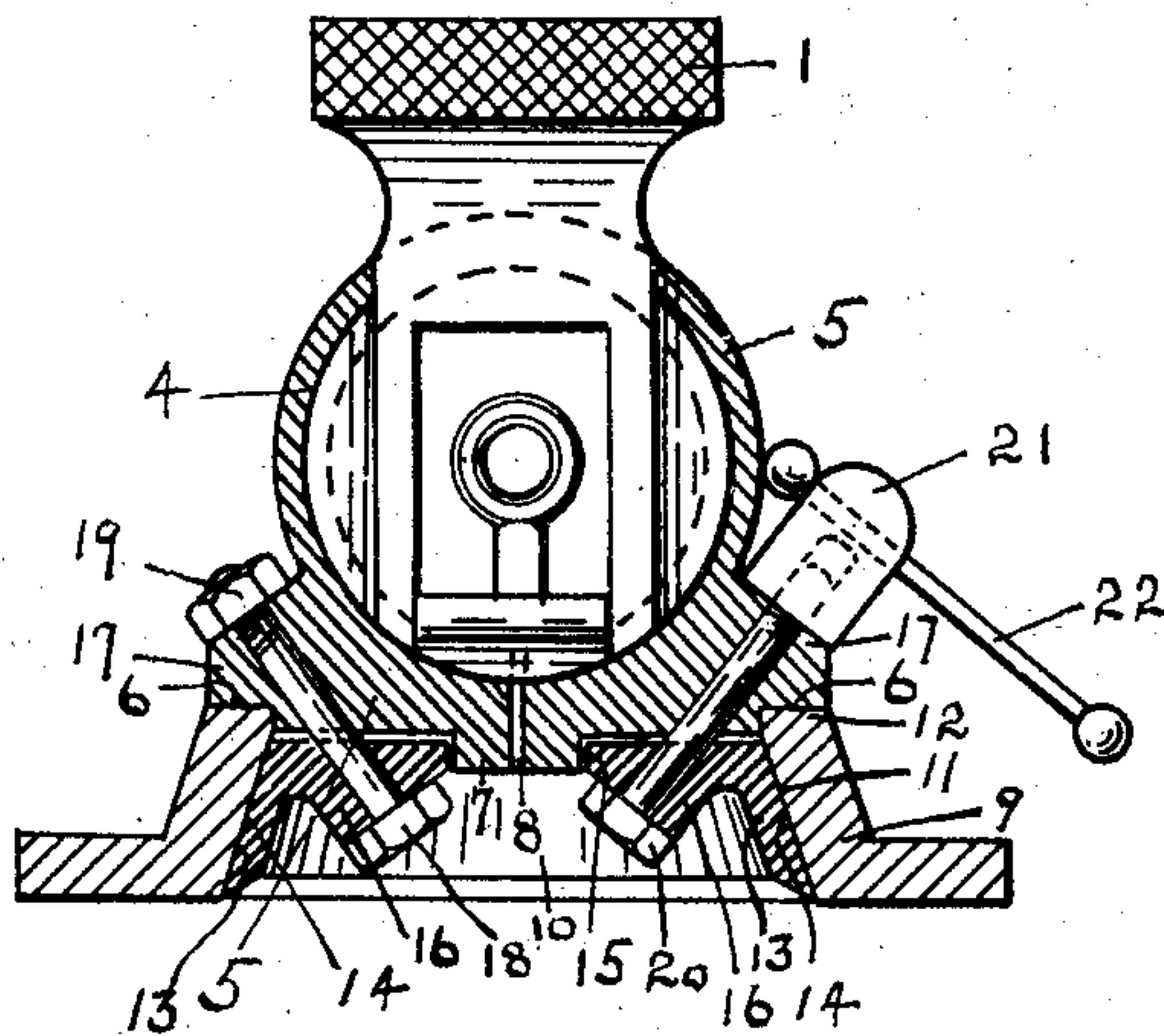


Fig. 1.

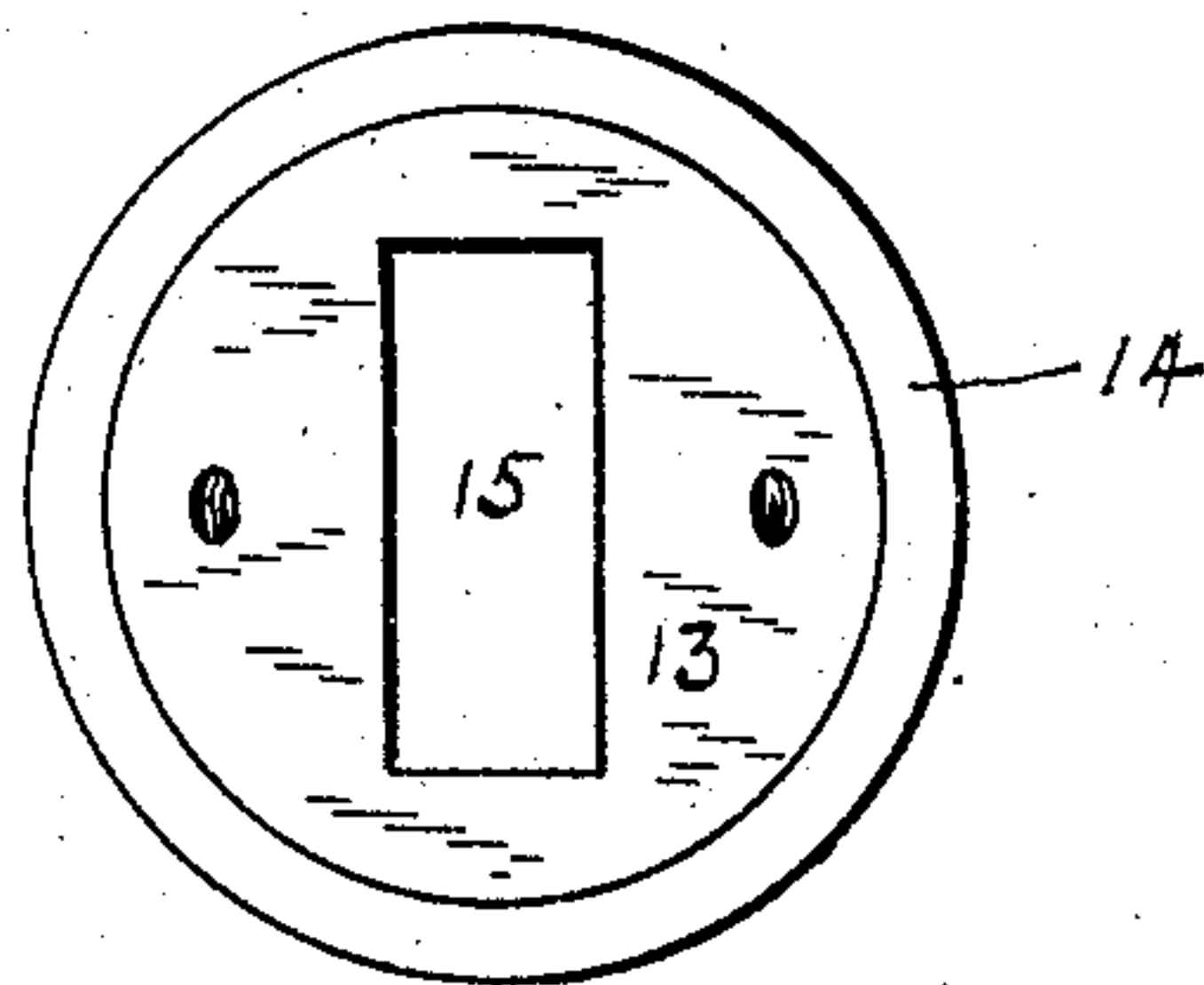


Fig. 2.

WITNESSES.

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BENCH-VISE.

SPECIFICATION forming part of Letters Patent No. 790,165, dated May 16, 1905.

Application filed September 26, 1904. Serial No. 225,896.

To all whom it may concern:

Be it known that I, BENJAMIN L. WILLIAMSON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Bench-Vises; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in bench-vises, and more particularly to that type in which provision is made for both the vertical and horizontal adjustment of the jaws.

The object of my present invention is to improve the mechanism for setting the jaws and their carrying-frame in their different planes of adjustment by the employment of a single device, requiring but one manipulation to simultaneously set the jaws in their frame and the frame in its base.

To that end my invention consists in the combination, with the jaws, of a frame carrying a horizontal socket in which the jaws are adjustable in a vertical plane, a supporting-base upon which the carrying-frame is adjustable in a horizontal plane, such base having a central opening and an inner annular inclined wall, a collar having an outer annular inclined wall adapted for upward bearing contact with the inner annular inclined wall of the supporting-base, means for locking the collar on the carrying-frame, and bolts passing up through the collar and the carrying-frame, one of such bolts being provided with means for simultaneously tightening the horizontal socket around the jaws and the frame upon its supporting-base.

In the drawings, Figure 1 is a side elevation of my improved vise. Fig. 2 is a top plan view of the collar detached; and Fig. 3 is an end view of the inner jaw, with the carrying-frame, supporting-base, and collar in section.

Referring to the drawings, 1 is the inner jaw, and 2 is the outer jaw, movable to and from the inner jaw 1 in any well-known man-

ner, such construction forming no part of my invention. The shank 3 of the inner jaw 1 is adapted for adjustable engagement with the cylindrical socket 4 of the carrying-frame 5, provided with the outer annular shoulder 6 and the central depending projection 7. This carrying-frame is split from the socket 4 down through the depending projection 7, as at 8.

9 is the supporting-base, which is secured to a bench and is provided with the central opening 10, having the inner annular inclined wall 11. The annular top 12 of the base rests in the shoulder 6 of the carrying-frame, which is revoluble on the base in a horizontal plane.

13 is the collar, having the outer annular inclined wall 14 bearing against the inclined wall 11 of the base 9, and 15 is a rectangular slot in such collar, adapted for the locking reception of the projection 7 on the carrying-frame. The collar 13 is provided with the diametrically opposite bosses 16 16 and the carrying-frame 5 with similar bosses 17 17. A bolt 18 is passed up through one pair of bosses 16 17 and loosely secured by the outside nut 19. Another bolt 20 is passed up through the opposite bosses 16 17 and engages with the tightening-cap 21, loosely carrying the turning-lever 22. When the cap 21 is turned down on the bolt 20, it brings the inclined surfaces 11 and 14 of the base 8 and collar 13 into tight frictional holding contact with each other and squeezes the split socket 4 around the jaw 1, thus simultaneously locking the vise-jaws in both horizontal and vertical planes.

It will be seen that the jaws 1 and 2 are susceptible of adjustment in any position in a vertical plane by turning them in the horizontal socket 4 in the carrying-frame 5. They can also be adjusted to any position in a horizontal plane by turning the carrying-frame 5 upon its supporting-base 9, and when adjusted to the proper position they can be rigidly fixed therein by a single manipulation of the turning-lever 22, which simultaneously sets the jaws in the carrying-frame against movement in a vertical plane and the carrying-frame upon its supporting-base against movement in a horizontal plane.

I claim—

In a bench-vise, the combination with the jaws, of a frame carrying a horizontal socket, in which the jaws are adjustable in a vertical
5 plane, such frame being split through its lower section, a supporting-base upon which the carrying-frame is adjustable in a horizontal plane, such base having a central opening and an inner annular inclined wall, a collar hav-
10 ing an outer annular inclined wall adapted for upward bearing contact with the inner annular inclined wall of the supporting-base, means for locking the collar on the carrying-

frame, and bolts passing up through the collar and the carrying-frame, one of such bolts 15 being provided with means for simultaneously tightening the horizontal socket around the jaws and the frame upon its supporting-base.

In testimony whereof I have signed my name to this specification in the presence of two sub- 20 scribing witnesses.

BENJAMIN L. WILLIAMSON.

Witnesses:

PERRY A. LITTLE,
W. T. MILLER.