

G. MERRITT.  
PIVOT.

APPLICATION FILED JULY 9, 1904.

Fig. 1.

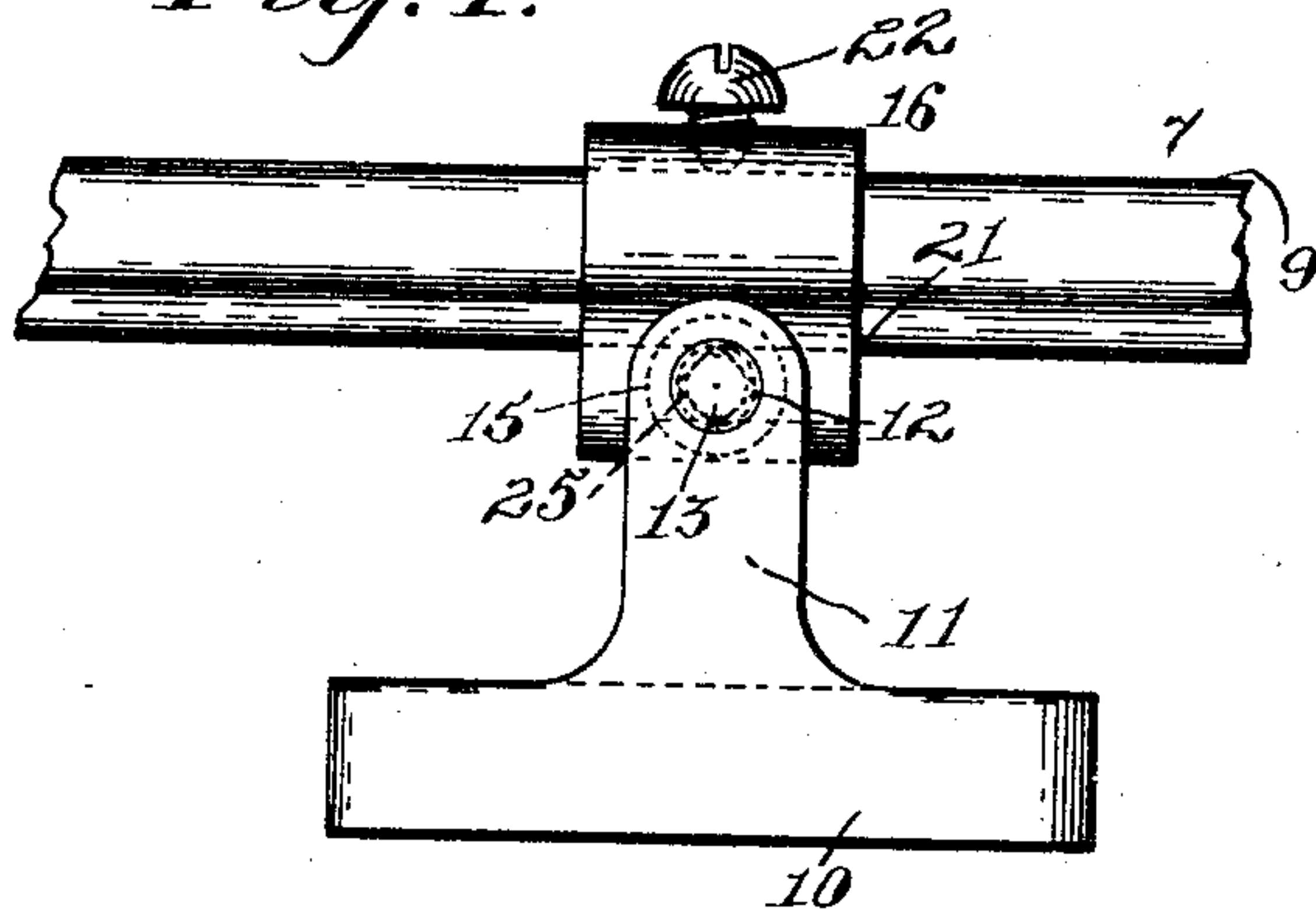


Fig. 2.

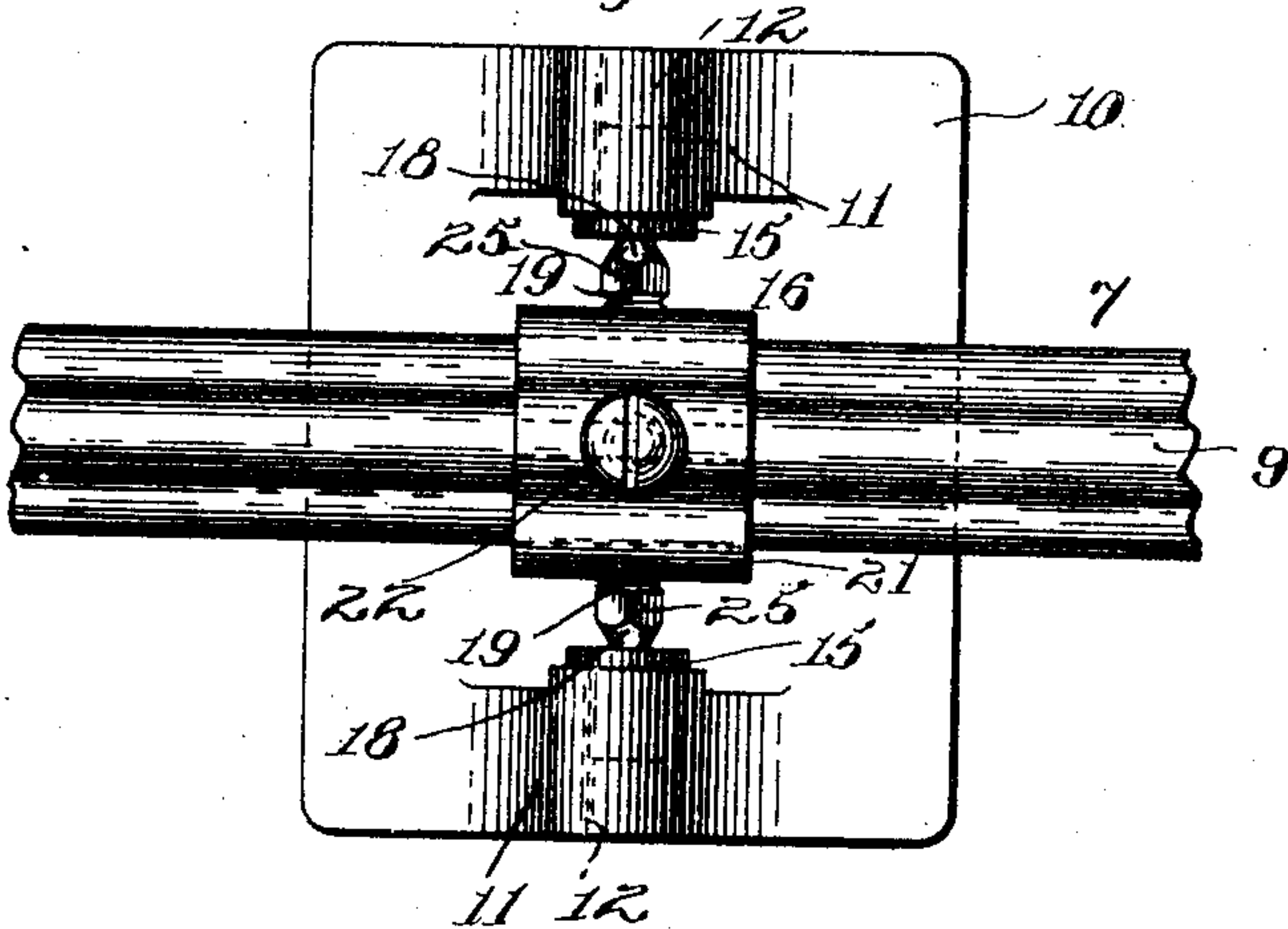
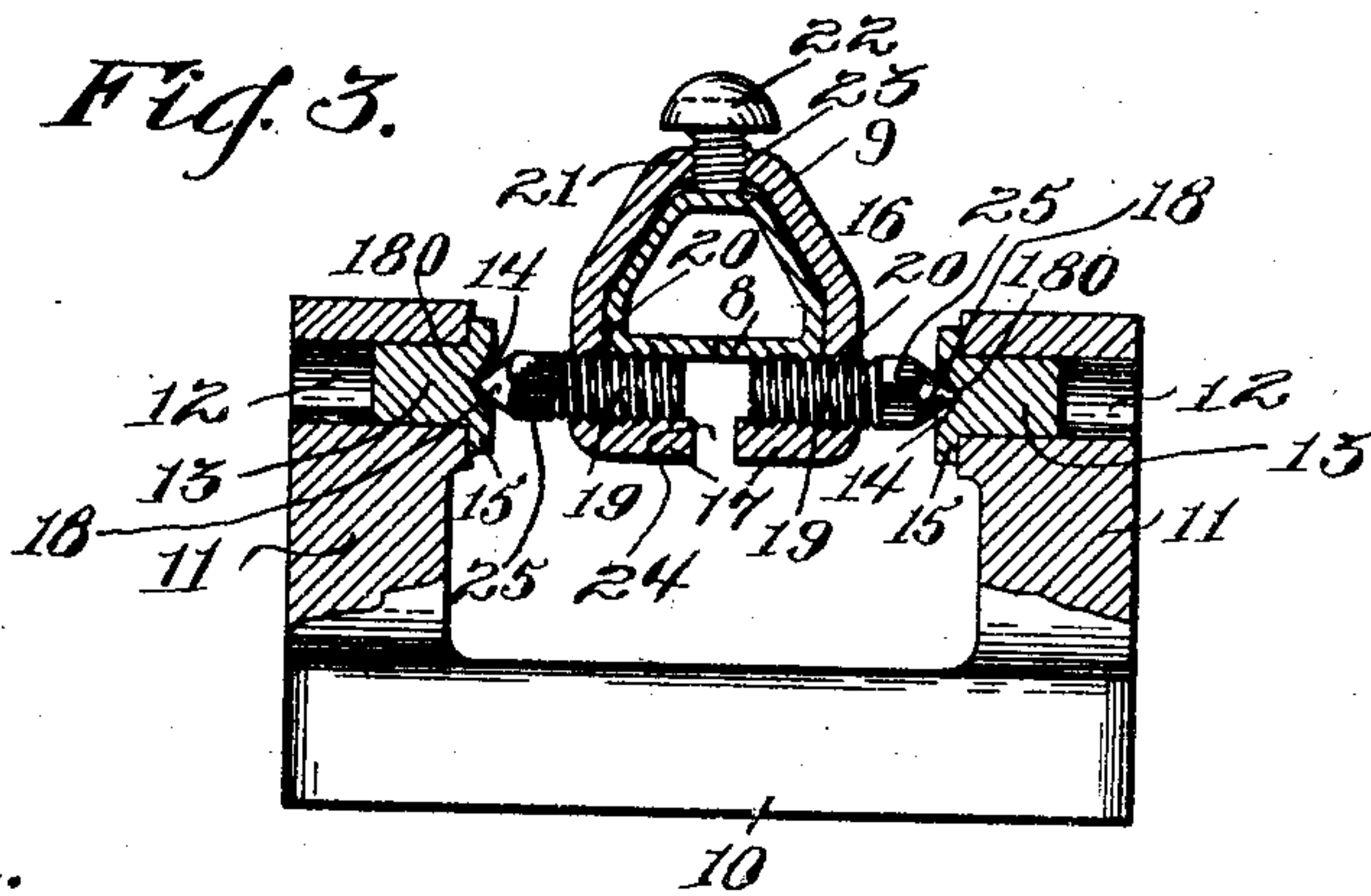


Fig. 3.



Witnesses:

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By his Attorney,

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# UNITED STATES PATENT OFFICE.

GORDON MERRITT, OF RIDGEWOOD, NEW JERSEY.

## PIVOT.

SPECIFICATION forming part of Letters Patent No. 786,509, dated April 4, 1905.

Application filed July 9, 1904. Serial No. 215,862.

*To all whom it may concern:*

Be it known that I, GORDON MERRITT, a citizen of the United States, residing in Ridgewood, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Pivots, of which the following is a specification.

This invention relates to and has for an object to provide an improved pivot for levers.

In the drawings accompanying and forming part of this specification, Figure 1 illustrates in side view an embodiment of my present improvements. The lever or bar which is pivoted is shown as broken away, sufficient, however, of the bar being presented to illustrate the surrounding features. Fig. 2 is a plan view of the device shown in Fig. 1, and Fig. 3 is a cross-section thereof upon the axial line of the pivot.

Similar characters of reference designate like parts in the various figures.

One feature sought to be accomplished in the present improvements is to afford a lever-pivot which may be readily adjusted to permit the lever to be removed from its support and also to afford lateral adjustment as well as to take up play in the pivot-bearings, and also one to permit the longitudinal adjustment of the lever relative to its bearing.

This invention is useful in various structures wherein a lever is to be pivoted and in which ready adjustment of the pivots is desirable as well as the removability of the lever, and one such use is in connection with piano-pedals.

The lever (designated in a general way by 7) is illustrated as broken away at its ends and may be attached to any suitable elements for performing any function which may be desired and in which this form of pivot is required. The lever is shown as made of sheet metal and has a bottom portion 8, which is represented as being substantially flat, and a top bearing portion 9 to act as a seat for some clamping or securing device.

For the purposes of the present description the device is shown mounted upon a base or bed plate 10, having a pair of standards 11, each of which standards has a socket 12, in which sockets bearing-blocks 13 are mounted,

which bearing-blocks in the present instance are shown as having conoidal bearing-surfaces 14 and as having shoulders which may be in the form of a flange 15 to prevent the bearings from being displaced in the sockets. Although these bearings are shown as carried by separate blocks, yet in practice in some instances it may be found desirable to put the bearings for the pivots directly upon the machine or part instead of employing the separate bearing-blocks.

The lever is shown supported by pivots 18, carried by a carrier designated in a general way by 16, and which in the present instance is in the form of a yoke, having at its bottom portion substantially straight or flat members 17, being practically parallel with the face or portion 8 of the lever. The pivots in the present instance each has a conoidal bearing-point 180, which in practice may be more acute than the bearings 14, and each of which pivots in the present instance has a shank portion 19, carrying screw-threads and passing through screw-threaded openings 20 in the sides of the yoke. The pivot-shanks when in position will be exposed in part to the lever and in the illustration lie between the portions 17 of the yoke and the portion 8 of the lever, and by means of some clamping device the carrier and lever may bind the pivots in their positions of adjustment. In the present illustration the clamping device bears upon the face 9 and reacts upon the portion 21 of the yoke. The shanks of the pivots will be securely held in place between the lever and the yoke, so that after their adjustment the clamping of the lever in place will clamp the pivots in place also. In the present instance a set-screw 22 enters a screw-threaded opening 23 in the portion 21 of the yoke and will press the lever upon the shanks of the pivots. It will be noticed in the illustration that the screw-threads upon the shanks are sunk into the lever and the yoke, thereby accelerating the clamping action. To afford a certain amount of yieldability, the yoke may have adjacent to the pivots an opening 24. The yoke having such formation may yield when pressure is applied to the set-screw and put an amount of tension on the



pivots. The pivots are shown as having squared or nut-formed ends 25 to receive a wrench for effecting their adjustment. Other than screw-threaded shanks may be carried by the pivots; but the screw-threads will permit adjustment more readily in some instances than plain shanks and also afford a stronger lock when the lever is clamped in position.

From the foregoing description it will be evident that the lever after having been adjusted longitudinally may be adjusted laterally by means of the adjustment of the pivots and then the whole device secured in an adjusted position by means of a single clamping element, in the present illustration a set-screw. It will also be observed that the bearing-blocks 13 may be made free in their sockets and held in place by means of the pivots and that such pivots are adjustable and project outwardly from the sides of the lever to engage the bearing-blocks.

I do not limit myself to the exact details of construction herein illustrated, since changes in construction may be made within the scope of my invention.

Having thus described my invention, I claim—

1. The combination with a lever, of a pivot-carrying member, pivots adjustably carried thereby, and means to clamp said member and pivots against said lever.

2. The combination with a lever, of pivots having screw-threaded shanks; a carrier for the pivots and having screw-threaded sockets for said pivots and such carrier exposing portions of said pivots to contact with the lever, and means to draw said carrier toward the lever to clamp the pivots thereto and in their positions of adjustment.

3. The combination with a lever, of pivots adjustable outwardly and inwardly therefrom; and means to bind the pivots against the said lever to hold the pivots to the lever as its fulcrum and to secure them in their positions of adjustment.

4. A pivot-bearing embodying bearing-faces, a lever, a yoke surrounding the lever, pivot members carried by the yoke and having shanks lying between the lever and one side of the yoke and a single clamping device for binding the lever in the yoke and clamping the same against the shanks of the pivots.

5. The combination of a lever, a yoke surrounding the lever, pivots carried by the yoke and each having a portion located between the lever and a portion of the yoke, and a set-screw to press the lever against the pivots for binding the lever and the pivots in the yoke.

6. The combination of bearing-faces, a lever, a yoke surrounding the lever, pivots for engaging said bearing-faces carried by the yoke and each having a shank located between the lever and a portion of the yoke at one side thereof and a single set-screw at the other side thereof to press the lever against the shanks.

7. A pivot for a lever embodying pivot-bearings, a yoke surrounding the lever, pivots carried thereby and having their shanks within the yoke, and means to bind the lever in the yoke and adapted to jam the pivot-shanks between the lever and the yoke.

8. The combination with a lever, of a yoke surrounding the same, pivot members carried by the yoke and having screw-threaded shanks interposed between the lever and the yoke and a set-screw to bind the lever upon the screw-threaded shanks and to press the same against the yoke.

9. The combination with a base, members carried thereby and having sockets, bearing-blocks mounted in the sockets and having bearing-faces directed toward each other and stop-faces to prevent the blocks from displacement through the sockets, a lever, a yoke surrounding the same, pivots having bearing-points for engaging said bearing-faces, and said pivot members being outwardly adjustable to engage said bearing-faces and having shanks disposed within the yoke and between the same and said lever, and a set-screw to clamp the lever upon the screw-shanks and press the same against the yoke.

10. The combination of a member having sockets, bearing-blocks mounted in the sockets and having bearing-faces directed toward each other and stop-faces to prevent the blocks from displacement through the sockets, a lever, a yoke surrounding the same, pivots for engaging said bearing-faces and carried by the yoke, and said pivot members being outwardly adjustable to engage said bearing-faces.

11. The combination of a member having sockets, bearing-blocks mounted in the sockets and having bearing-faces directed toward each other and stop-faces to prevent the blocks from displacement through the sockets, a lever, a yoke surrounding the same and having an open side, pivots for engaging said bearing-faces and carried by the yoke adjacent to said open side, and said pivot members being outwardly adjustable to engage said bearing-faces.

12. The combination with a lever, of a pair of pivots one or both of which are adjustable toward and from the lever, and means to clamp the pivots to the lever.

13. The combination with a lever, of a pair of pivots, one or both of which is provided with a screw-threaded shank; a pivot-carrier having sockets for said pivots and one or both of which are screw-threaded, and means to clamp the carrier and the screw-threaded shank or shanks against the lever.

Signed at Nos. 9 to 15 Murray street, New York, N. Y., this 7th day of July, 1904.

GORDON MERRITT.

Witnesses:

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JOHN O. SEIFERT.