

F. A. MISSMAN.  
ENGRAVING BLOCK.  
APPLICATION FILED JUNE 1, 1908.

915,872.

Patented Mar. 23, 1909.

Fig. 1.

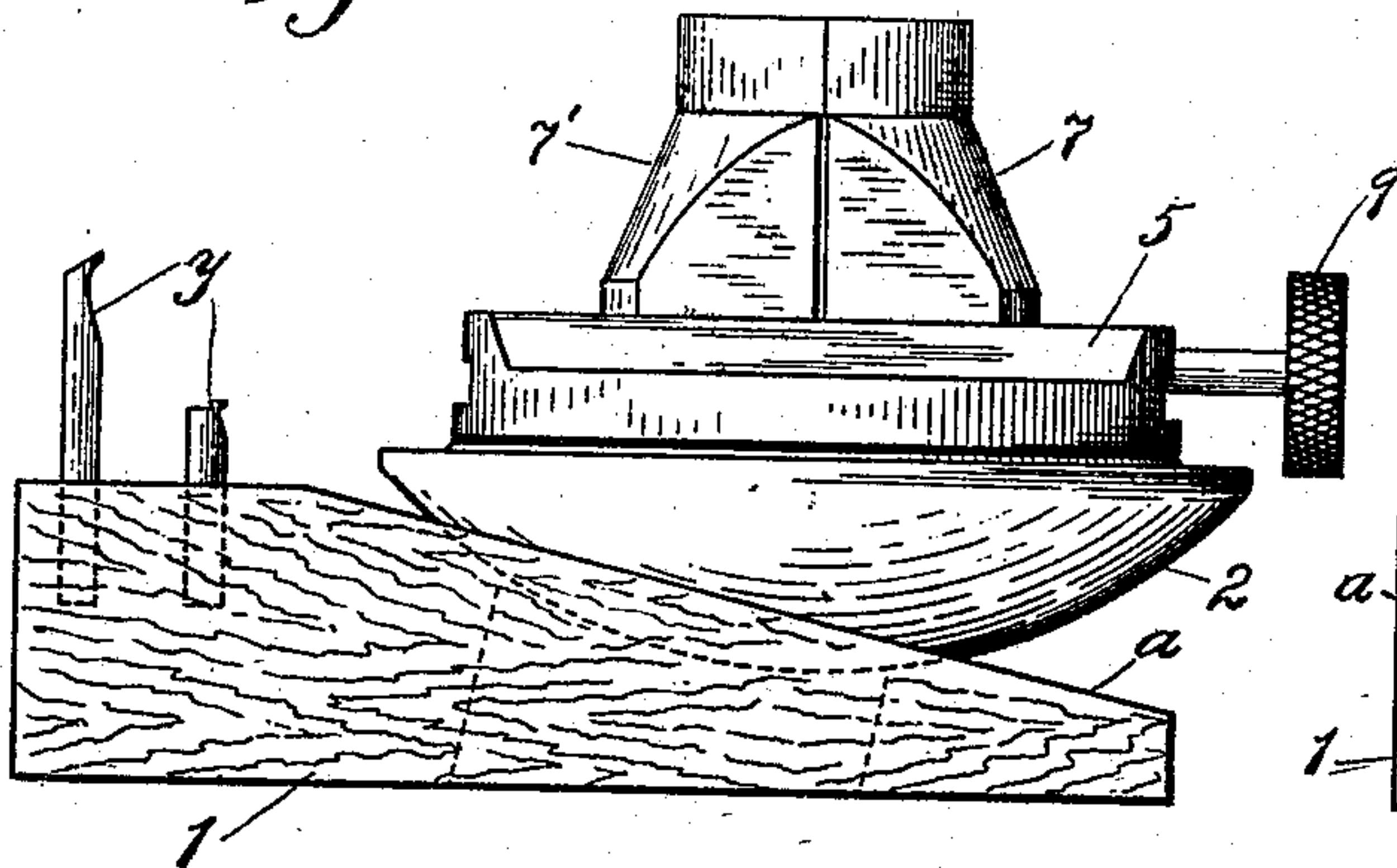


Fig. 2.

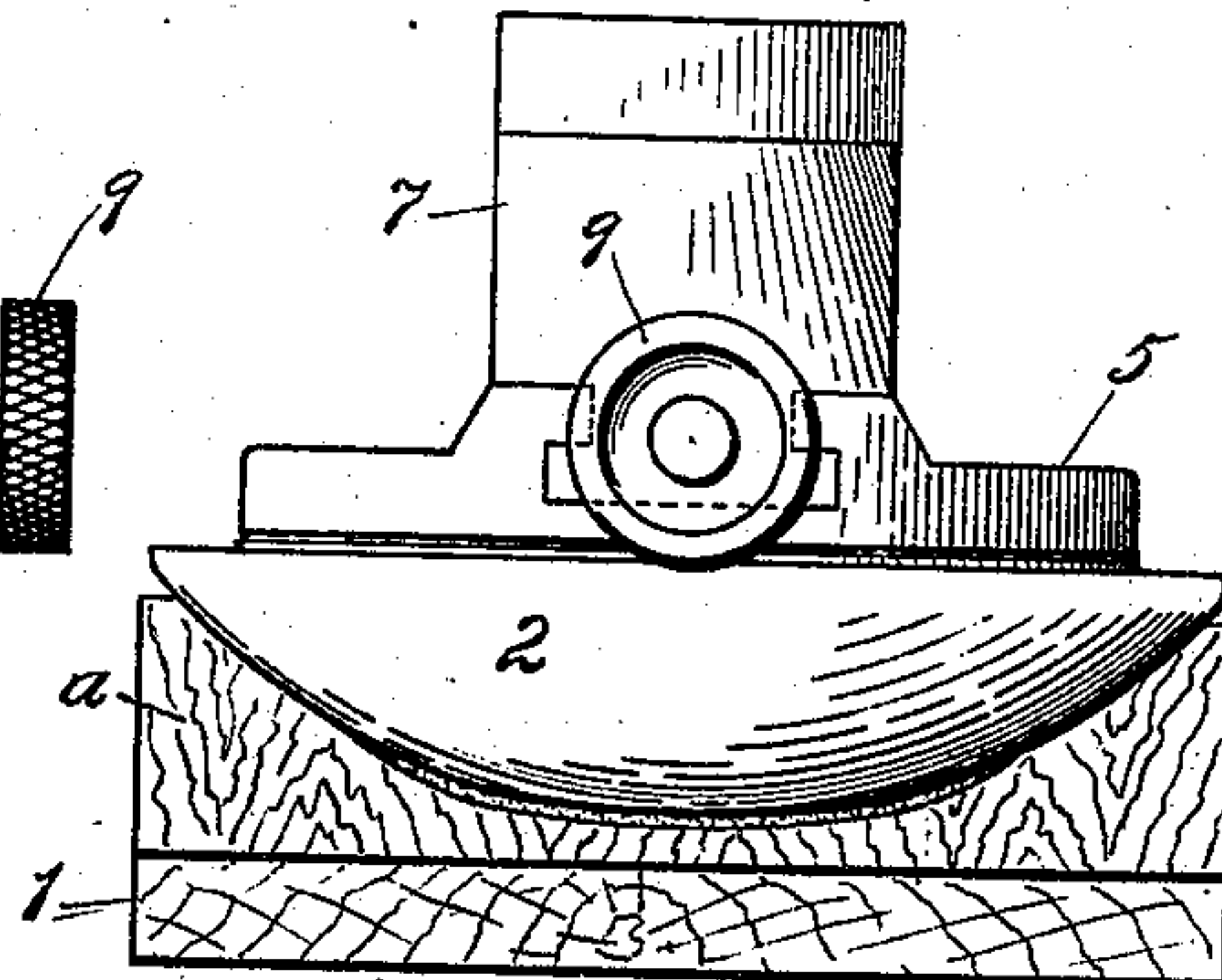


Fig. 3.

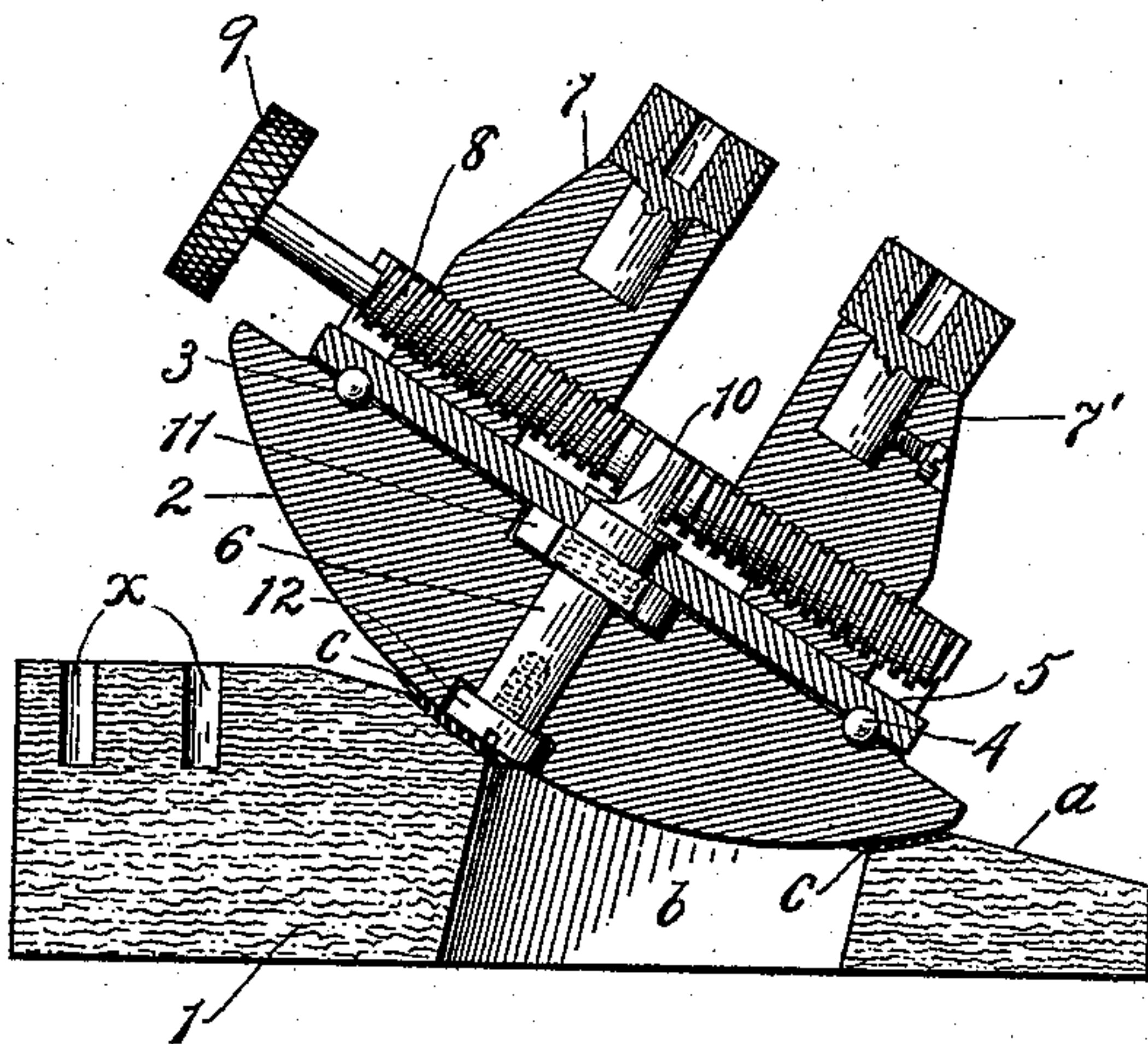
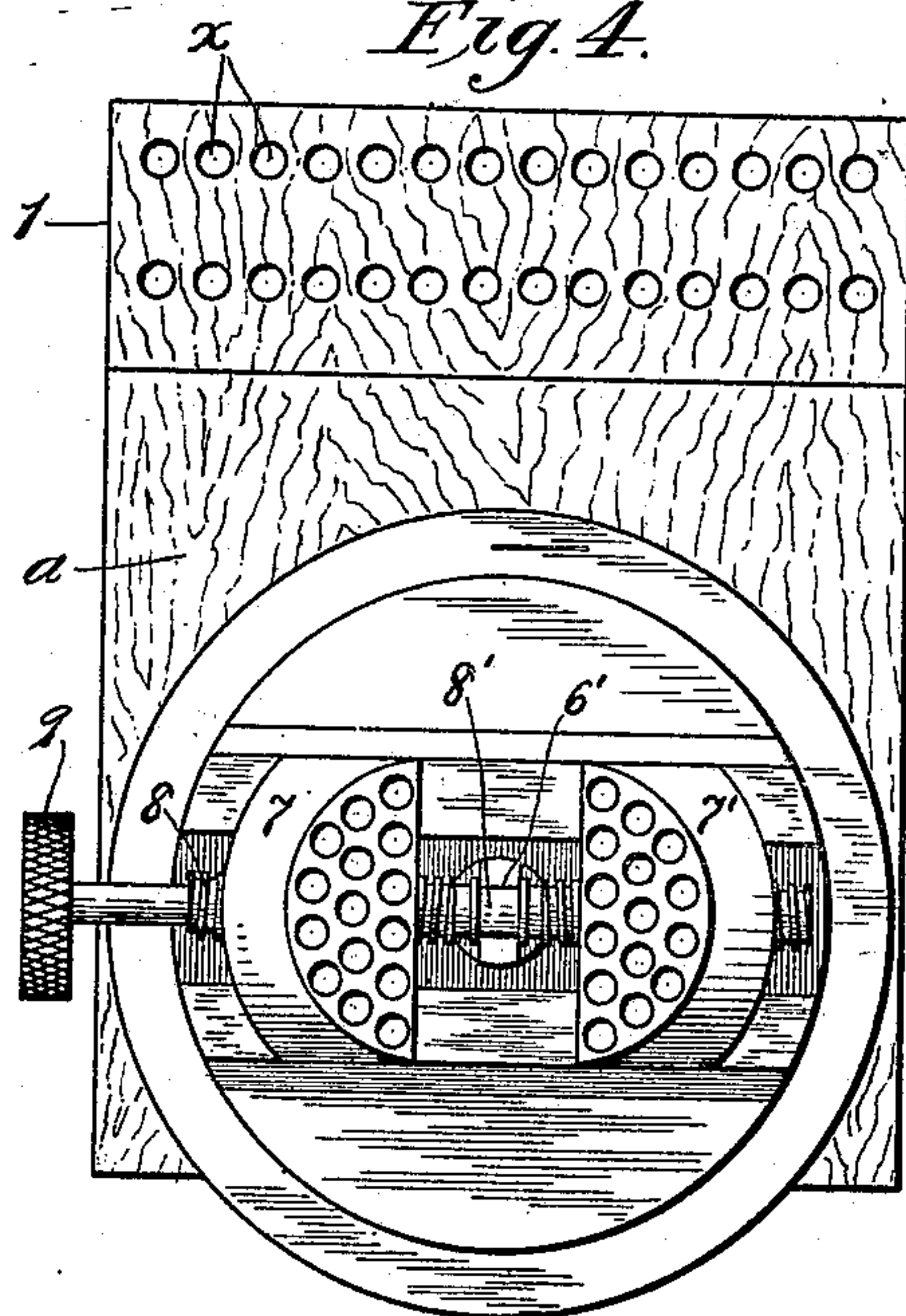


Fig. 4.



WITNESSES:

Robert A. Pollock.

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# UNITED STATES PATENT OFFICE.

FRANK A. MISSMAN, OF KANSAS CITY, MISSOURI.

## ENGRAVING-BLOCK.

No. 915,872.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed June 1, 1908. Serial No. 436,081.

*To all whom it may concern:*

Be it known that I, FRANK A. MISSMAN, a citizen of the United States, residing at Kansas City, in the county of Jefferson and State of Missouri, have invented a new and useful Engraving-Block, of which the following is a specification.

My invention relates to improvements in engraving blocks comprising a suitable vise having a convex base adapted to and movable upon a suitable pad or block to facilitate the adjustment of vise to convenient positions; and the objects of my improvements are, first, to provide a vise the general arrangement and construction of which will, when used in conjunction with the inclined pad or block, permit the tilting or inclination of said vise to the proper working position and yet keep the working face of jaws as low as possible; and second, to provide a vise having ball bearings so located between the turn table and the base that any wear on the bearing surfaces will be uniform and not permit one side of turn table to drag and bind on the base. It is a fact well known to engravers that the ease of manipulation of an engraving block depends largely upon the relative height of the working jaws from the bench, viz: Should the jaws be too high, as in most cases they are, where the ordinary block having a deep semi-spherical base and flat pad are used, the position of the operators arm is unnatural and strained and interferes materially with the successful handling of his tools; whereas, with the low working jaws, the operator's wrist can be held in a natural position, the pressure applied to the cutting tool will be more in line with the forearm when the elbow is resting on the bench, and the work can be more conveniently handled in many respects. I attain these objects by the use of the device illustrated in the accompanying drawing, in which—

Figure 1 is a side view of the vise and inclined block pad; Fig. 2 is an end view of the same; Fig. 3 is a vertical sectional view showing the relative position of parts, and showing the vise tilted on the inclined pad; and Fig. 4 is a plan view.

Similar figures or letters of reference refer to similar parts throughout the several views.

The pad 1 having the inclined face *a*, is provided with the hole *b* which is countersunk to conform to the curvature of the base

of the vise, said countersunk portion being lined with leather, rubber or other suitable material *c*.

The base of the vise, 2, is flat on its top surface and provided with the ball race 3 and the balls 4, upon which rests the turn-table 5, being held in position by the bolt 6. The under side of base 2 is convex and of such a curvature that, considering it as the segment of a sphere, the total thickness of base is approximately equal to one sixth the diameter of the said sphere. The angle of the inclined face of the pad 1 is such that, when the convex face of base 2 is resting in the countersunk portion of the hole *b* in said pad, the vise may be tilted to the desired working angle, or to any intermediate position, and held by the frictional contact between the two surfaces. The jaws 7 and 7' are dovetailed into the turn-table and are actuated by the right and left hand screw 8 by means of the thumb-wheel 9. The bolt 6 being slotted across its top end at 6', forms a yoke in which the groove 8' has bearing, and serves to hold said screw in place. The bolt 6, having the shoulder 10, passes through the turn-table 5, is securely fastened thereto by the lock nut 11 and at its lower end has the screw 12, which holds the turn-table and base together, yet allows the turn-table to revolve freely upon the base. The pad 1 is provided with a number of holes *x* for holding the attachments *y* when not in use.

I am aware that prior to my invention, engraving blocks have been made having revoluble ball-bearing turn-tables, and convex bases adapted to and movable upon a pad. I therefore do not claim such a combination broadly; but—

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in an engraving block of a suitable vise having a convex base adapted to and slidably movable upon the face of an inclined pad having a suitable opening or depression in its inclined face partially or wholly conforming to the curvature of the convex portion of said base, substantially as shown, for the purpose specified.

2. The combination in an engraving block of a revoluble turn-table upon which the jaws are mounted, and having rigidly attached thereto a bolt or stud serving as an axis thereof, one end of which forms a bearing for the



vise screw while the opposite end contains a shoulder screw for holding said turn-table to the base, said turn-table being mounted on said base through the medium of a ball bearing system disposed near the perimeter of said turn-table, substantially as set forth.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

FRANK A. MISSMAN.

Witnesses:

ROBERT A. POLLOCK,  
FRANK H. EYMAN.