

No. 774,132.

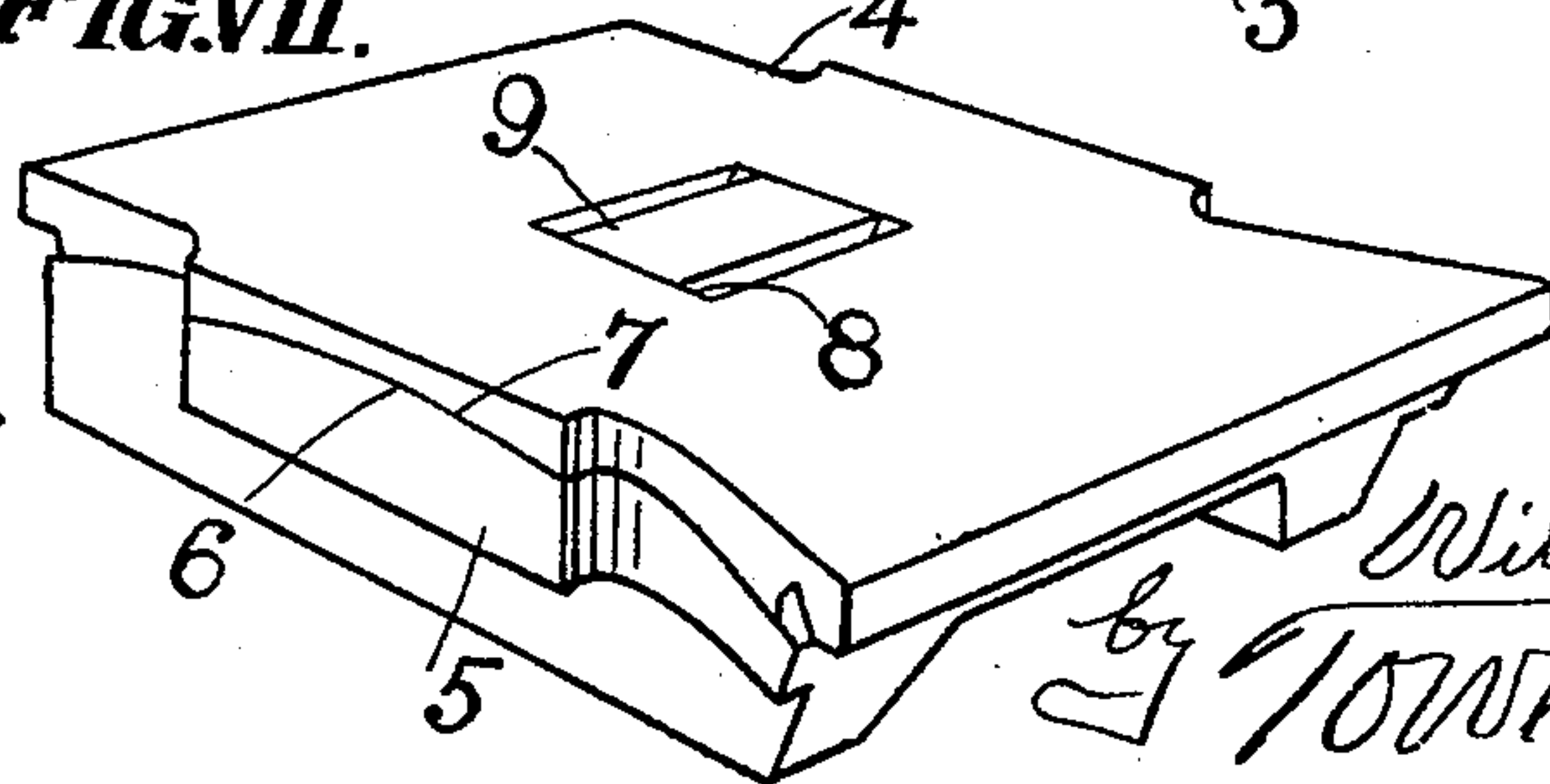
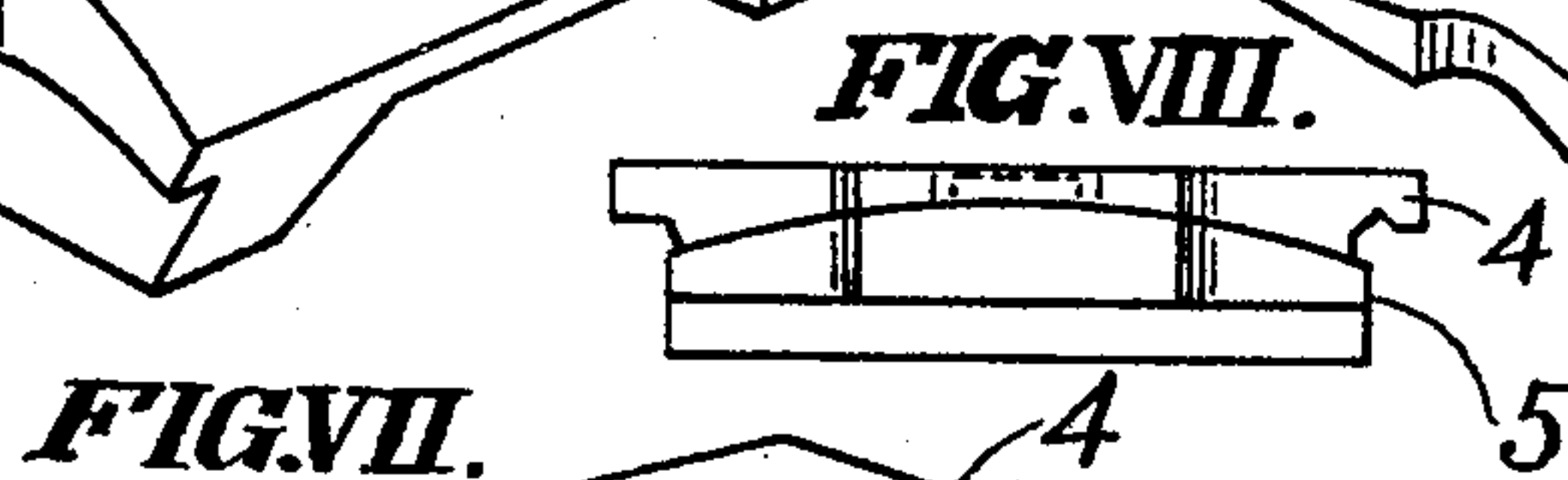
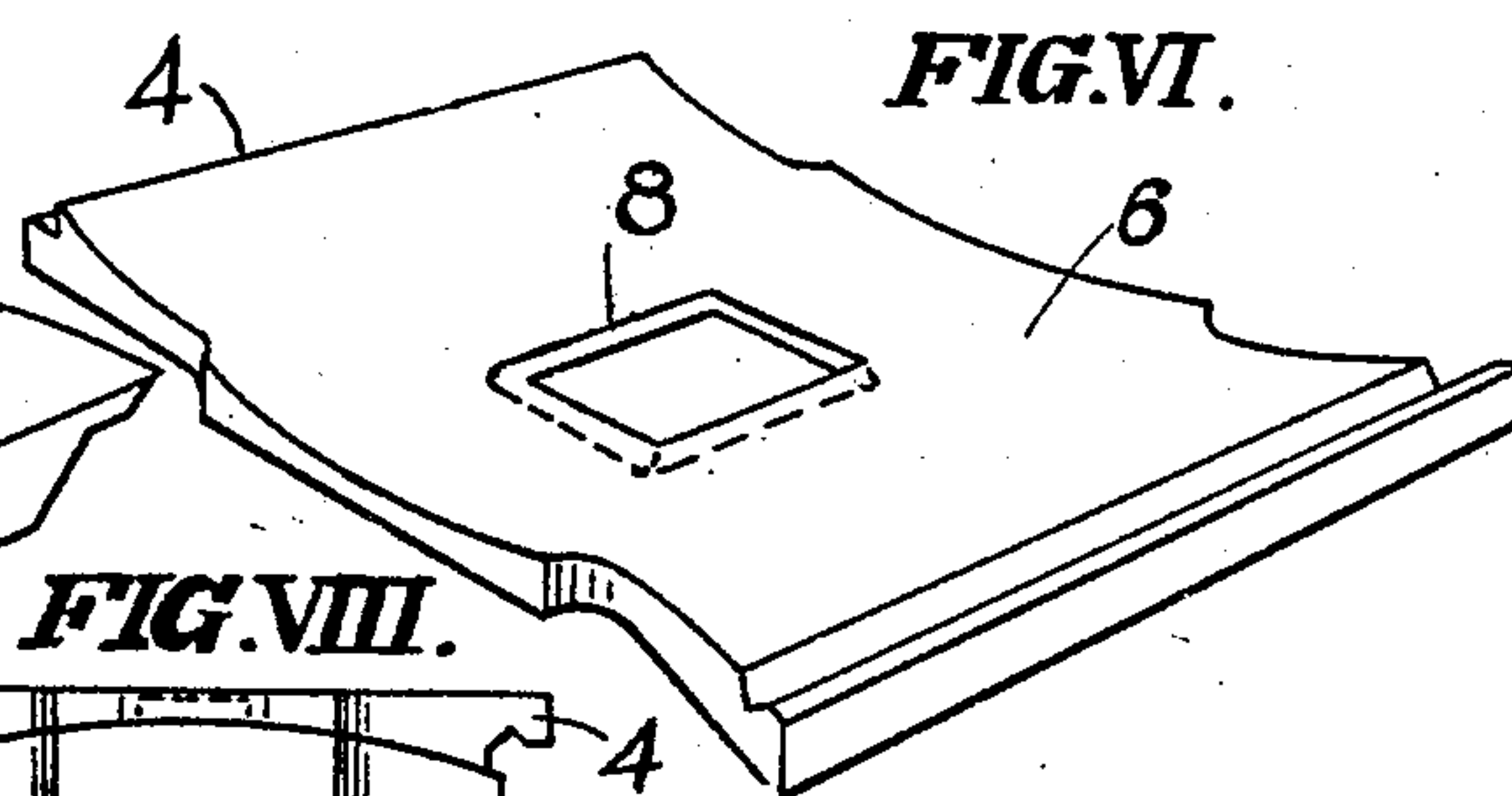
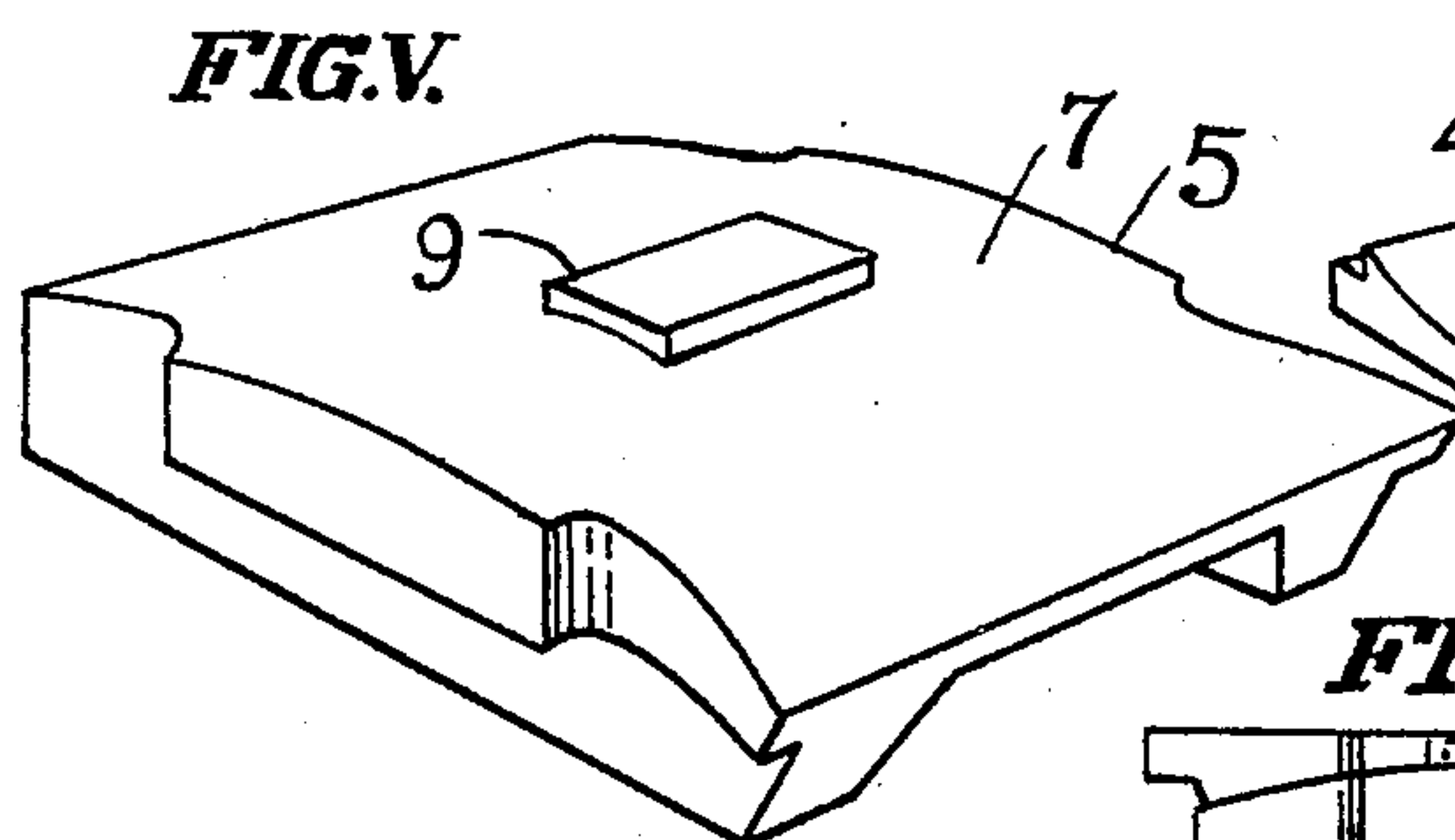
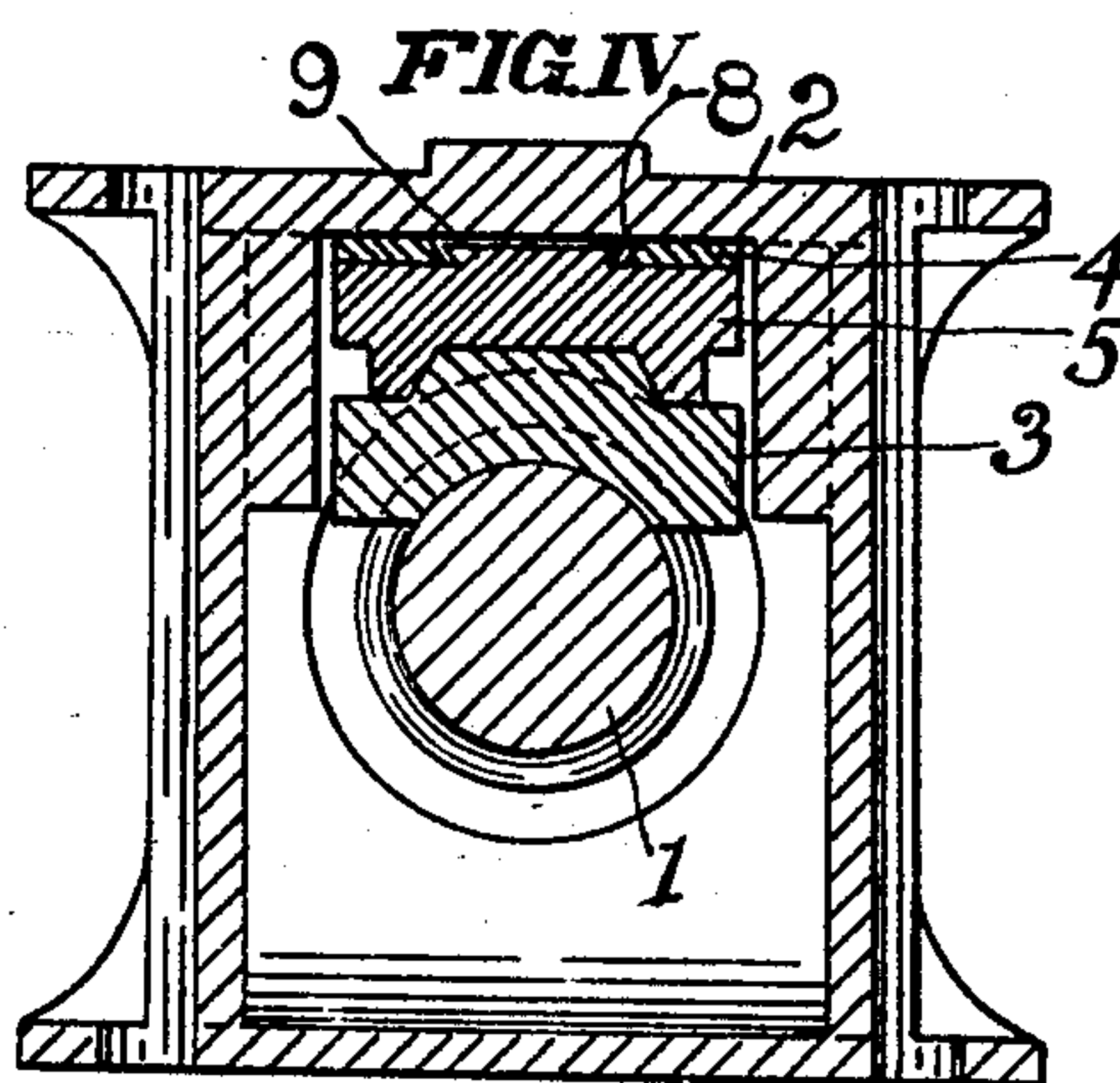
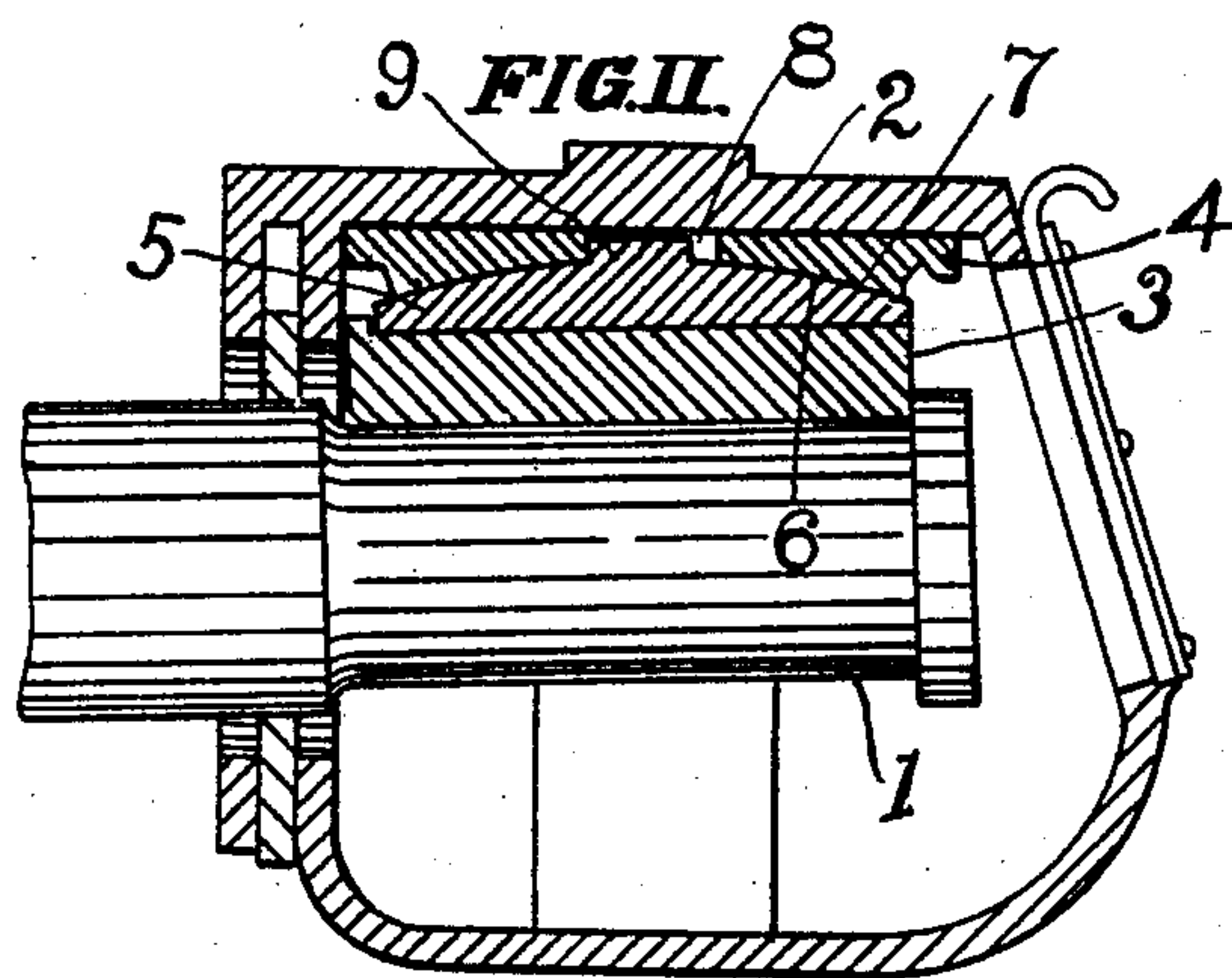
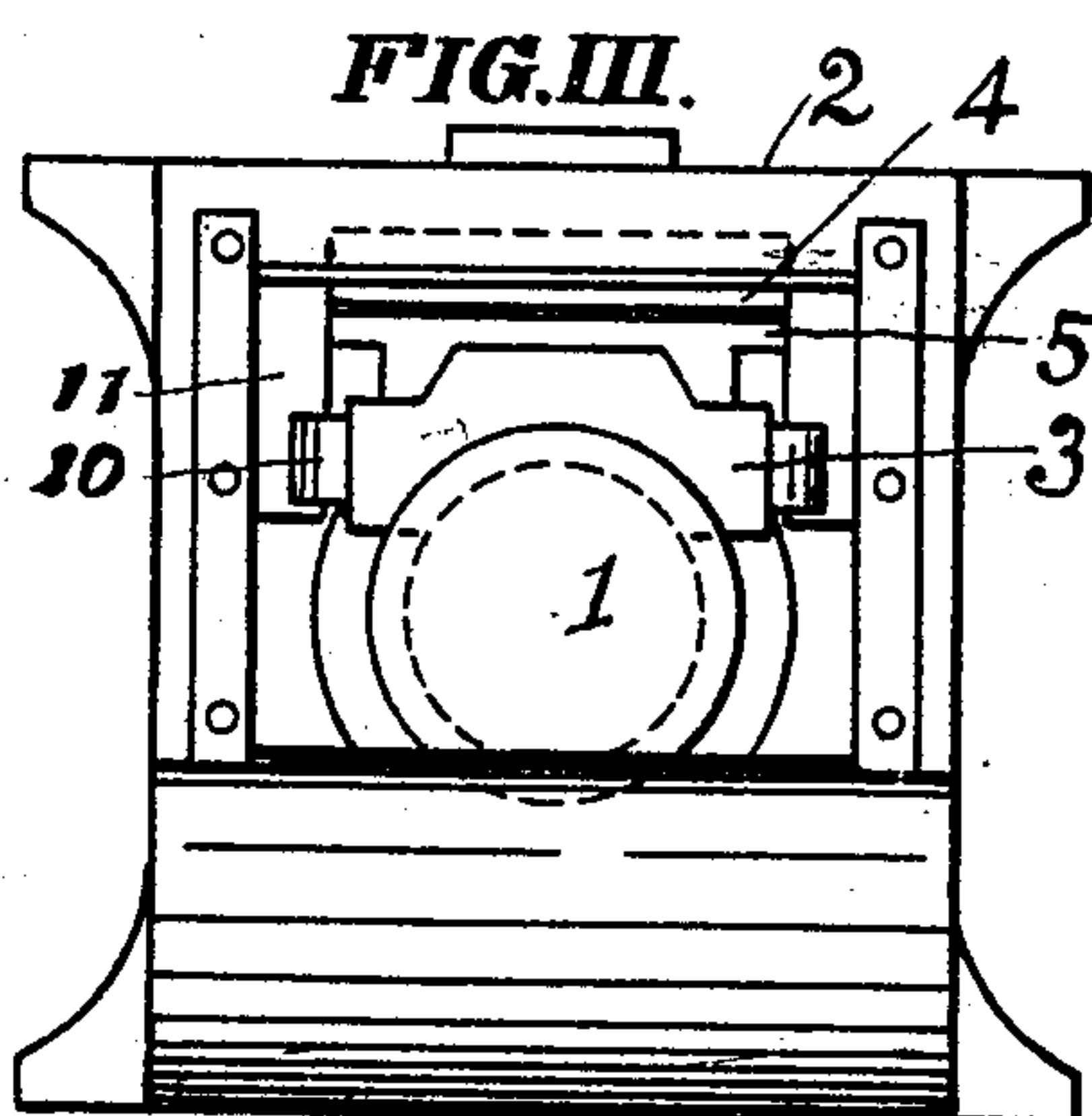
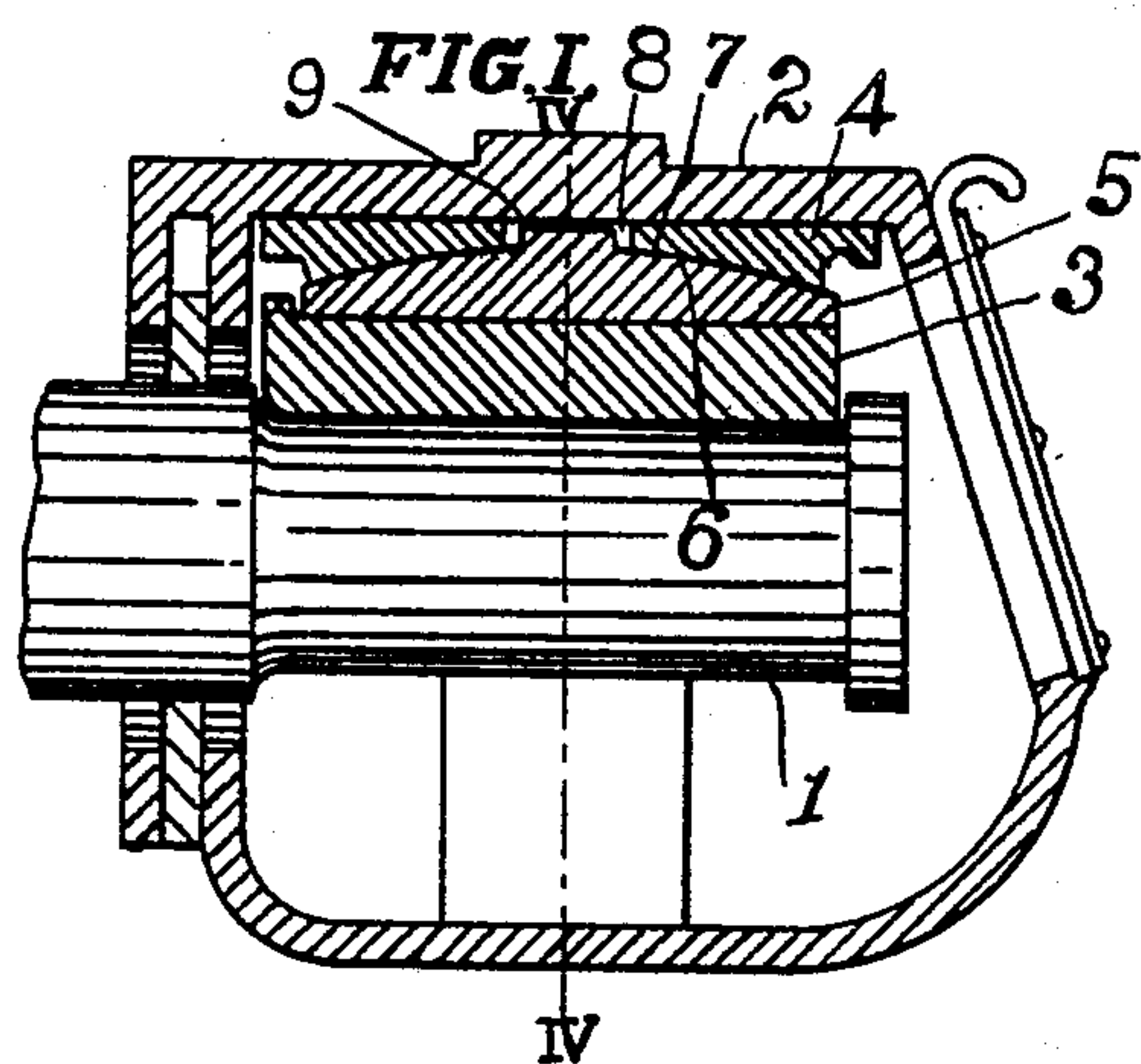
PATENTED NOV. 1, 1904.

W. N. BEST.

AUTOMATIC ADJUSTABLE WEDGE JOURNAL BEARING.

APPLICATION FILED DEC. 28, 1901.

NO MODEL.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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AUTOMATIC ADJUSTABLE-WEDGE JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 774,132, dated November 1, 1904.

Application filed December 28, 1901. Serial No. 87,597. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NEWTON BEST, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Automatic Adjustable-Wedge Journal-Bearing, of which the following is a specification.

An object of this invention is to provide means for automatically adjusting the pressure upon the journal-brasses of railway-coaches and freight-cars in order that the weight may be evenly distributed on the face of the journal.

By means of this invention compensation is made for the difference in elevation of track-rails at curves.

It is a well-known fact that the equalizers of passenger-coaches have a tendency to cause the weight to be unevenly distributed on the box because of the pressure outwardly on the equalizer caused by the weight of the coach which rests upon certain spiral springs or other means thrusting the equalizer out of the perpendicular when running at a high rate of speed or when going over a curved track, which causes the pedestals of the coach to spring outward from the perpendicular, as well as causing a great deal of the weight to rest upon the inner end of the journal-brasses, causing much friction and a great waste of material, both in brasses and journal, and making the journals wear tapering, and also require greater lubrication on the worn end of the journal. In fact, the majority of the journal-brasses become heated because of the lack of lubrication on the worn end of the journal by reason of this unequal distribution of weight.

One of the objects of this invention is to provide an automatic adjustable wedge that will meet the requirements of the Master Car-Builders' standard rules, so that the ordinary solid cast-iron wedge can be removed and the adjustable wedge substituted therefor with little delay and without the slightest alteration, the same being of the exact proportions and shape required by the Master Car-Builders' rules.

The surfaces of journal-boxes are often very rough and have undulations on which the wedge rests. This adjustable wedge compensates perfectly for any uneven surface of the box and causes the weight to be evenly distributed over the face of the journal.

This invention comprises a wedge formed of two members constructed to slide upon each other and having meeting faces which lie in the segment of a cylinder.

The accompanying drawings illustrate the invention.

Figure I is a sectional view of the invention with parts in the position they occupy when the journal is horizontal. Fig. II is a like section with the parts in the position they occupy when the journal is aslant. Fig. III is a view from the right of Fig. I, omitting the door of the box. Fig. IV is a section on line IV IV, Fig. I. Fig. V is a perspective view of the lower part of the wedge. Fig. VI is a perspective view of the upper part of the wedge inverted. Fig. VII is a perspective view of the wedge ready for insertion. Fig. VIII is a side elevation of the wedge detached.

1 designates the journal; 2, the box; 3, the brass on the journal. All of these elements may be of any suitable construction to conform to the Master Car-Builders' rules.

The wedge comprises two members 4 and 5, constructed to slide upon each other and having meeting faces 6 7, which lie in the segment of a cylinder, the axis of which is at right angles to the axis of the journal. A stop is provided to limit the movement of the wedges relative to each other. This stop comprises a wedge-shaped lug 9, which is integral with the member 5. The lug 9 projects into a hole 8 in the member 4. This stop is preferably formed as a lug or projection 9 upon one of the members, which fits in a hole or opening 8 in the other member. In the drawings I have shown the lug on the lower member 5 and the hole in the upper member 4, but of course the order might be reversed, if desired. As the two members are to take the place of a single member and are to be handled as such, it is desirable that they be permanently secured to-

gether without interfering with their free rocking or sliding motion upon each other. It is also desirable that the two members be held together, so as to prevent lateral movement relatively to each other, which would cause the weight to be unevenly distributed upon their adjacent faces and also upon the brass and axle. It is also desirable that the members be held in alinement with each other—that is, with their sides even—so that when being inserted or removed the members cannot rotate or pivot upon each other and cause the ends to spread laterally, and thereby be liable to strike against the sides of the box and stop further endwise movement in one direction or the other when inserting or removing them. I accomplish this triple function by forming the hole and the lug rectangular in area and in cross-section, respectively, with the lug equal in length to the width of the hole laterally, but of less width than the length of it. This will prevent any rotary or pivotal movement of the members upon each other and also any lateral or side movement, yet it will permit of a free longitudinal movement or movement in the length of the axle to the extent of the difference between the width of the lug and the length of the hole. By making the side walls of the hole parallel with the sides of its member or parallel with the axle and beveling or sloping them the top of the lug at each end or adjacent to each of said inclined walls can be battered or hammered down until it overhangs the wall, and will thereby prevent the accidental separation of the members, but will not interfere with the longitudinal movement of the members, there being sufficient play between the head or battered portion of the lug and the walls to compensate for the slight curvature of the circle on which the members move upon each other longitudinally. The brass 3 has the usual projections 10 upon its sides, which engage with the ordinary stop means 11 on the box, which will permit of a slight forward movement of the box relatively to the brass, which may be equal to the relative movement of the parts of the wedge upon each other. When constructed in this manner, it is evident that the wedge is of the same size and can be used in the same manner and places as the ordinary wedge of the Master Car-Builders' type and that it can be applied or removed as quickly and easily as it; but it will permit the two members to move freely upon each other when in place, thus causing the pressure of the brass upon the axle to be evenly distributed at all times and under all circumstances. Any change of angle between the box 2 and the journal 1 simply rocks or slides one member of the wedge relative to the other to compensate for any inequality, and as a result the weight is applied evenly from end to end of the brass and the brass

and journal wear evenly from end to end instead of wearing the journal tapering. When the wedge members slide upon each other, the thickness of the wedge is increased at one end and decreased at the other, thus conforming to the angle between the journal and the box and securing even distribution of the weight.

In the drawings the upper member is represented as concave and the under member convex, with the axis of its curve at right angles to the ordinary flanges upon its under side; but it is to be understood that the curvatures may be reversed without departing from this invention.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A journal-wedge consisting of two members, the contacting faces of which lie in the segment of a cylinder and one of them provided with a rectangular hole and the other with a lug rectangular in cross-section, the lug being equal in length to the width of the hole but less in width than the length of the hole, and means for securing the members together.

2. A journal-wedge consisting of two members, the contacting faces of which lie in the segment of a cylinder and one of them provided with a rectangular hole and the other with a lug rectangular in cross-section, the side walls of the hole being parallel with the side walls of the member in which it is located and inclined or beveled and the lug being less in width than the length of the hole but equal in length to the width of the hole and having its top extended to overhang said inclined walls.

3. A journal-wedge consisting of two members, the contacting faces of which lie in the segment of a cylinder and one of them provided with a rectangular opening and the other with a lug rectangular in cross-section, the side walls of the hole being parallel with the sides of the member in which it is located and inclined or beveled, and the lug being less in width than the length of the hole but equal in length to the width of the hole and having its top extended to overhang said inclined walls, the top of the perforated member being flat and its under side being concave, and the top of the other member being convex and having its under side provided with two parallel flanges, one near each side, said flanges being at right angles to the axis of the cylindrical curve of the top of said member, said lug and opening being located substantially centrally of their respective members.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, California, this 21st day of December, 1901.

WILLIAM NEWTON BEST.

Witnesses:

JAMES R. TOWNSEND,
JULIA TOWNSEND.