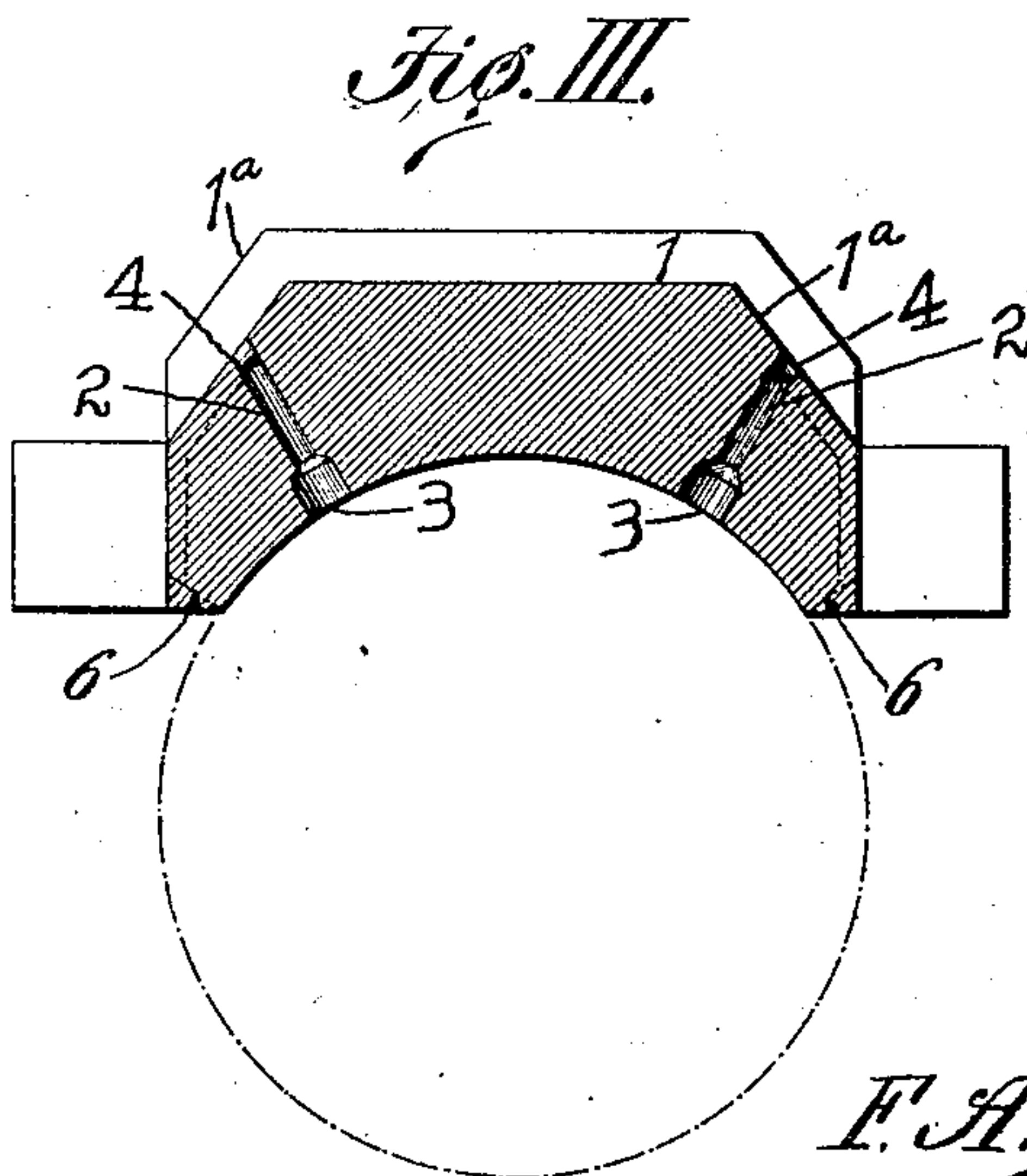
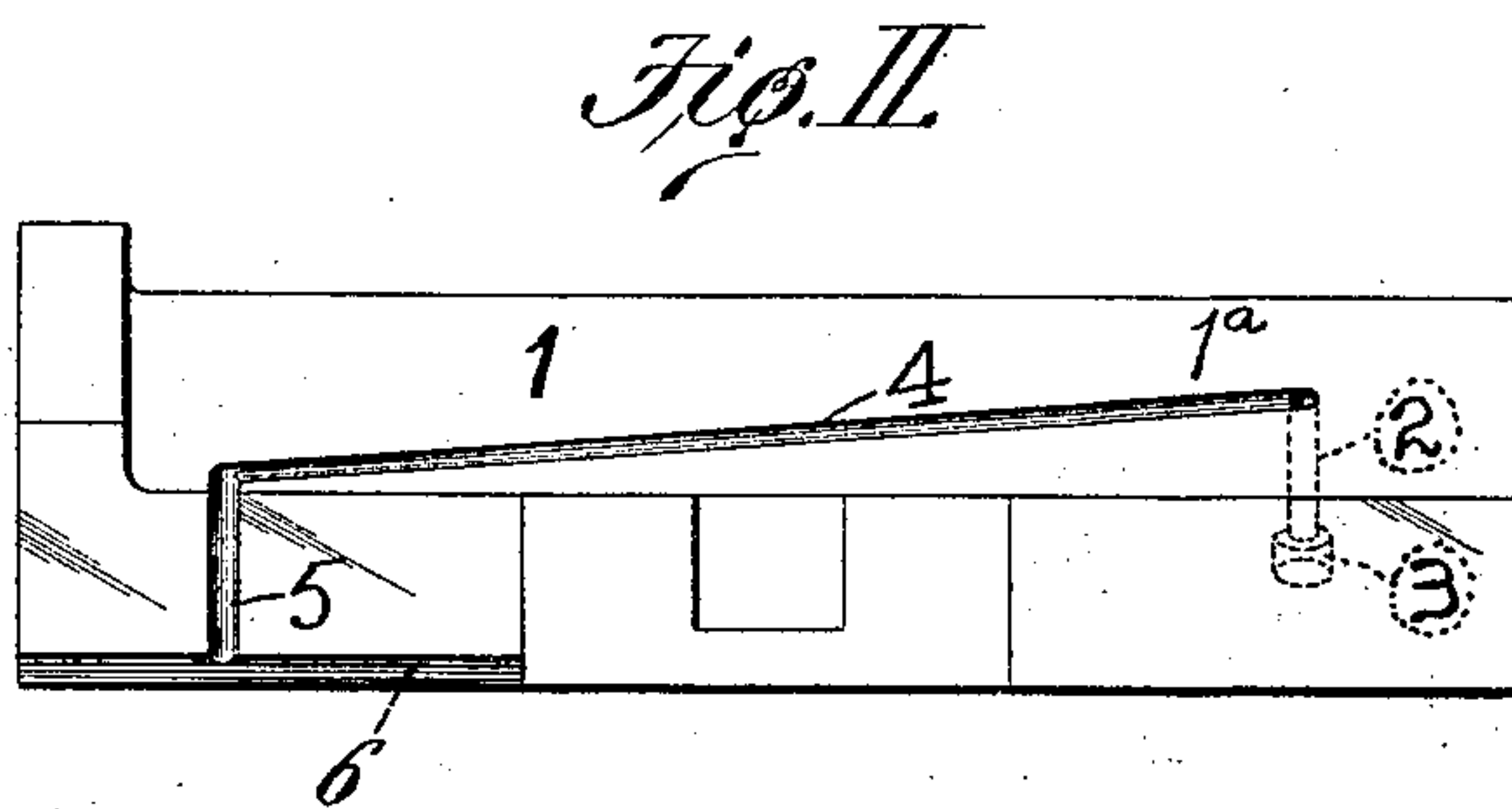
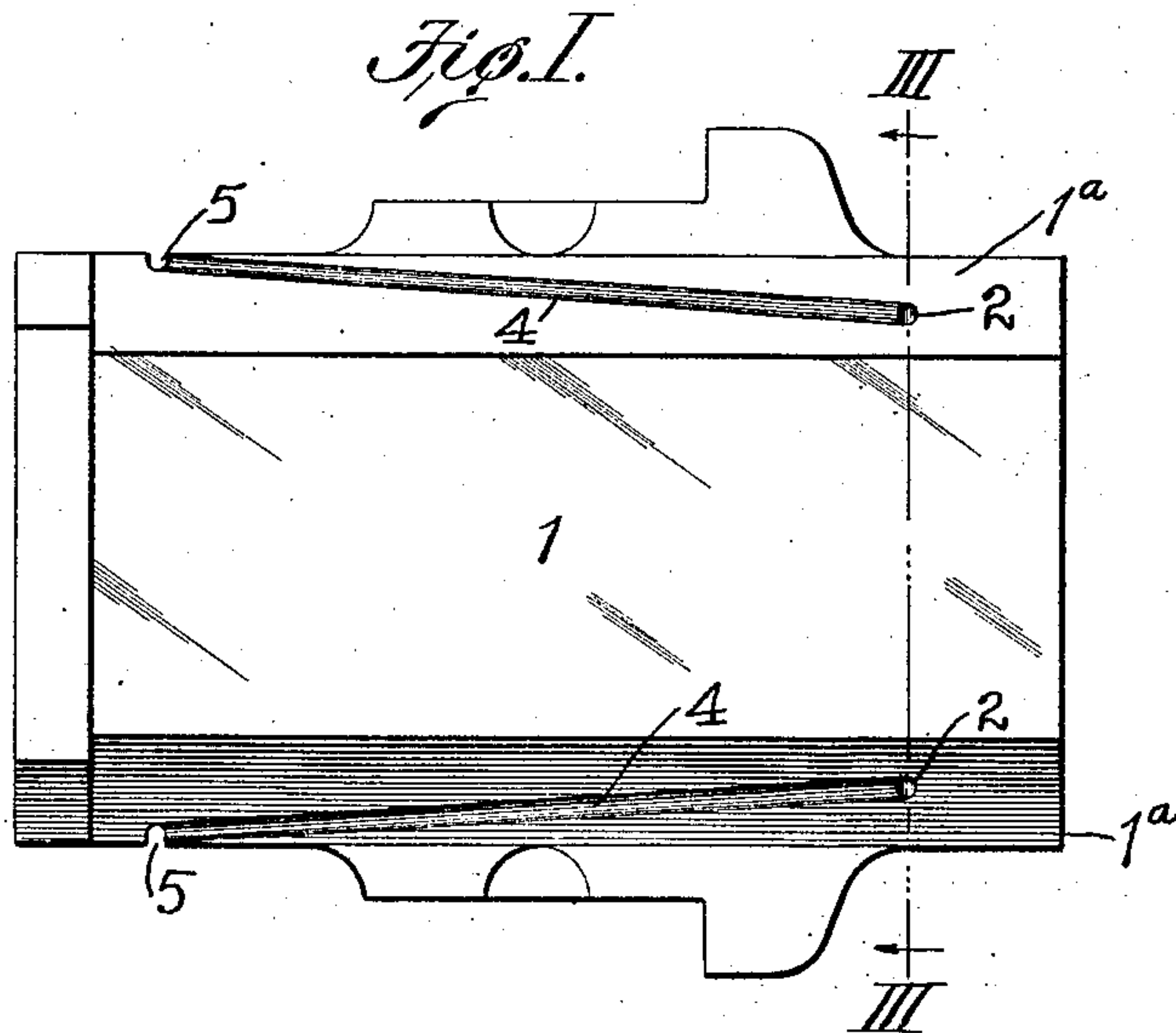


F. A. McARTHUR.
CAR AXLE JOURNAL BRASS.
APPLICATION FILED OCT. 27, 1909.

998,914.

Patented July 25, 1911.



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UNITED STATES PATENT OFFICE.

FREDERICK A. McARTHUR, OF SPRINGFIELD, MISSOURI.

CAR-AXLE JOURNAL-BRASS.

998,914.

Specification of Letters Patent.

Patented July 25, 1911.

Application filed October 27, 1909. Serial No. 524,865.

To all whom it may concern:

Be it known that I, FREDERICK A. McARTHUR, a citizen of the United States of America, residing at Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in Car-Axle Journal-Brasses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a car axle journal brass, and it has for its object to so construct such a brass as to provide for its serving as a means for transmitting the lubricant in the car axle box in which the brass is used from the front end of the box to the rear end of the brass.

As is well known, there is a constant source of trouble and annoyance in car axle boxes due to heating of the brasses, as a consequence of lubricant placed in the boxes being insufficiently supplied to the rear or inner portions of the axle journals, and the bearing surfaces of the brasses contacting therewith. This is due to the fact that when the original supply of lubricant placed in the box has become diminished or exhausted, the lubricant that is introduced into the box at its forward end to replenish the supply remains in the main, if not entirely, in the front end of the box, so that there is no replenishment of the lubricant at the rear end of the box to lubricate the journal and its brass at this point. By my improvement, I provide for a sufficient amount of the lubricant present in the front end of the box being transmitted or transferred by the bearing or journal brass to the rear portion of the brass and the journal on which it operates.

Figure I is a top or plan view of my brass. Fig. II is a side elevation of the brass. Fig. III is a cross section taken on the line III—III, Fig. I.

In the accompanying drawings: 1 designates my brass as a whole, and which in general configuration and material is similar to brasses as ordinarily made and may have present therein and forming a part of it the usual lining. The brass has the usual inclined top surfaces 1^a extending from its flat middle portion.

2 designates ducts leading upwardly in

the brass near its front end and which extend from the inner bearing face of the brass to the inclined sides 1^a, the inner ends of the ducts being enlarged to provide lubricant receiving cavities 3. The upper ends of the ducts terminate at channels 4 that extend longitudinally of the brass and rearwardly from the ducts in the inclined portions 1^a, the channels being extended in a downwardly inclined course along the inclined portions 1^a in their rearward extension, with the object in view of providing "fall" for the flow of lubricant delivered into the channels. Each channel leads at its rear end into a vertical channel 5 at the outer face of the side of the brass at which the duct 2 and channel 4 are located and through which vertical channel lubricant may be delivered to the rear portion of a journal on which the brass rests, as indicated by dotted lines, Fig. III. The lower edges of the sides of the brass are inclined inwardly, at 6, in order that the lubricant descending through the vertical channels may be connected directly to the surface of a journal without liability of its dripping from the lower edges of the brass before reaching the journal.

In the practical use of my brass, lubricant gathered by the journal in a car axle box from the supply of lubricant in the front end of the axle box is delivered into the enlarged cavity 3 of one of the ducts 2, according to the direction in which the journal is rotating, and the lubricant gradually accumulates in said cavity and extends upwardly in the duct so that the duct becomes in reality a lubricant well. As the supply of lubricant delivered into the duct 2 increases, the lubricant rises until it enters into the longitudinal channel 4 in communication with the duct and flows rearwardly in said channel to the communicating vertical duct 5 through which it descends to the rear portion of the journal. It is, therefore, apparent that after a flow of lubricant has been established through the course pointed out, this flow will be maintained so long as there is lubricant in the forward end of the axle box that may be gathered by the forward end of the journal and that consequently the rear portion of the journal will be kept constantly lubricated, notwithstanding the fact that all of

the lubricant lying in the axle box in position to be touched by the journal is located at the front end of said box.

I claim:—

- 5 1. A journal brass, the top surface of which is inclined downwardly at its side margins, the front portion of the brass being provided with a duct leading from the bottom face of the brass to one of said inclined top faces, said inclined top face having a diagonal oil receiving groove which extends downwardly and rearwardly from said duct to a point near the rear end of the brass.
- 10 2. A journal brass having substantially vertical side faces and a top face which is inclined downwardly at its side margins,

the front portion of the brass being provided with ducts leading from the bottom face of the brass to said inclined top faces, 20 each of the inclined top faces having a diagonal oil receiving groove which extends downwardly and rearwardly from one of said ducts to a point near the rear end of the brass, the vertical side faces of the brass 25 having oil receiving grooves forming continuations of said diagonal grooves, the lower edges of the brass being inclined inwardly and downwardly at the termination of the grooves in its side faces.

FREDERICK A. McARTHUR.

In the presence of—

A. J. McCauley,
E. B. Linn.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
