

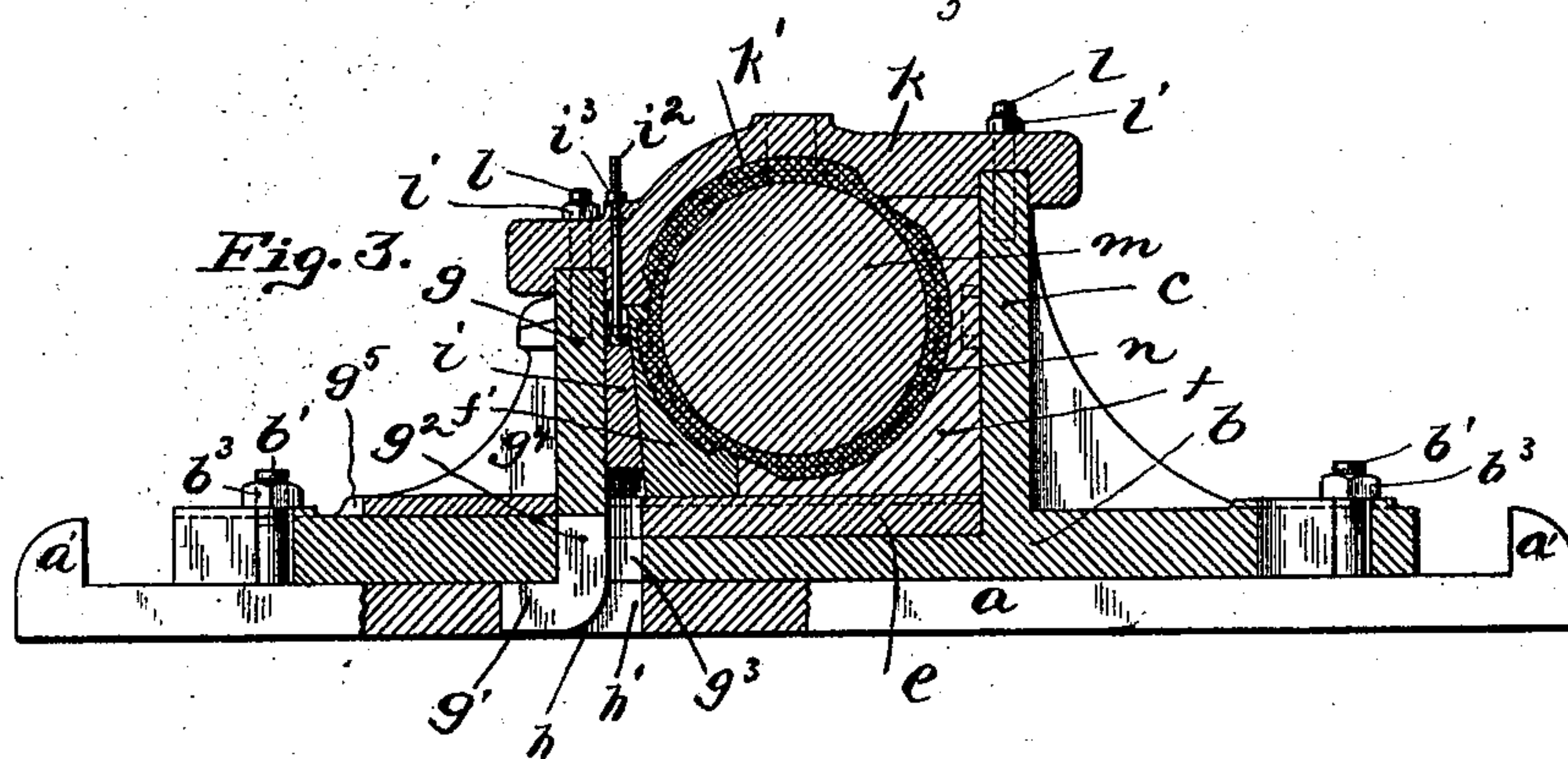
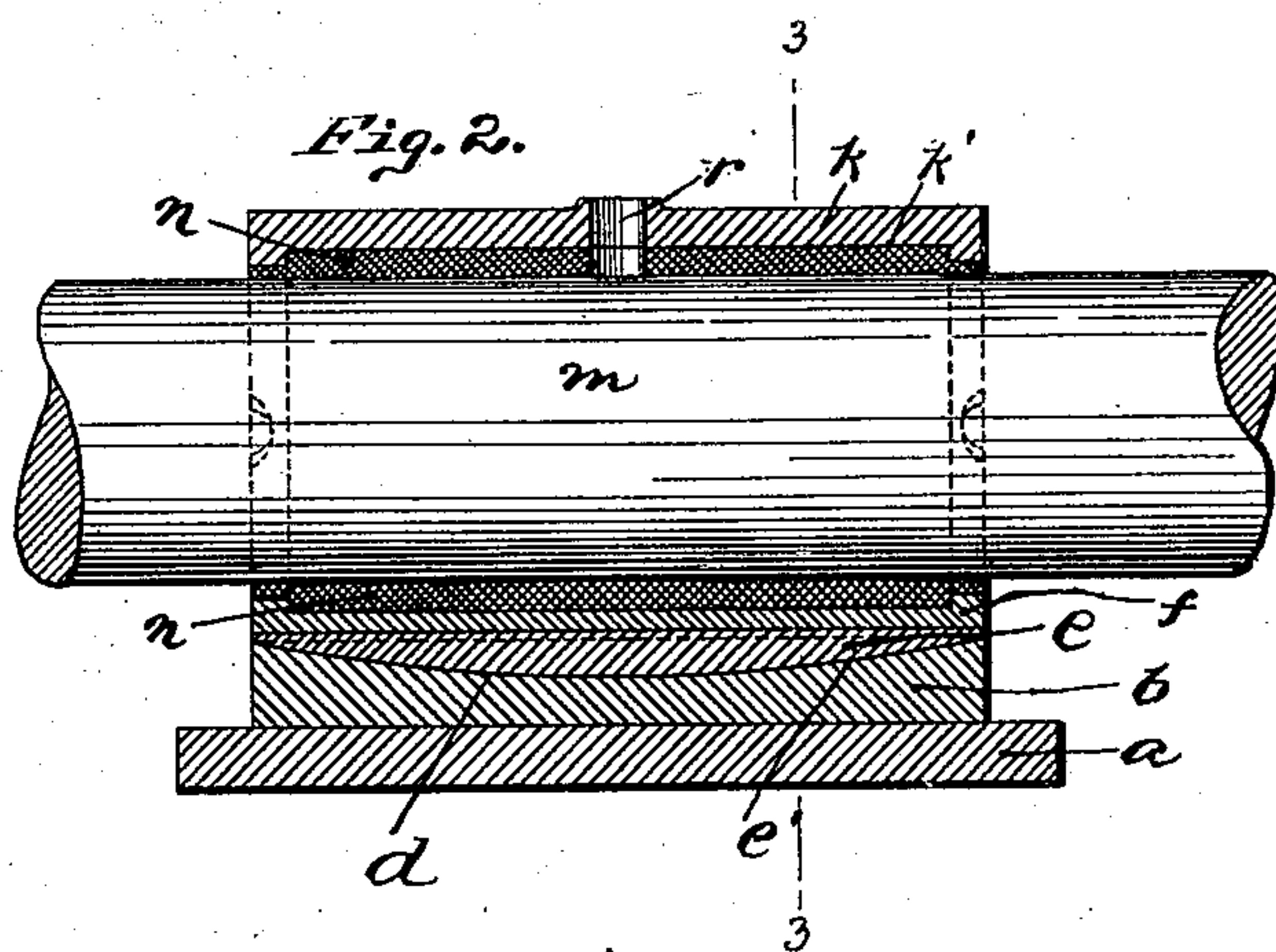
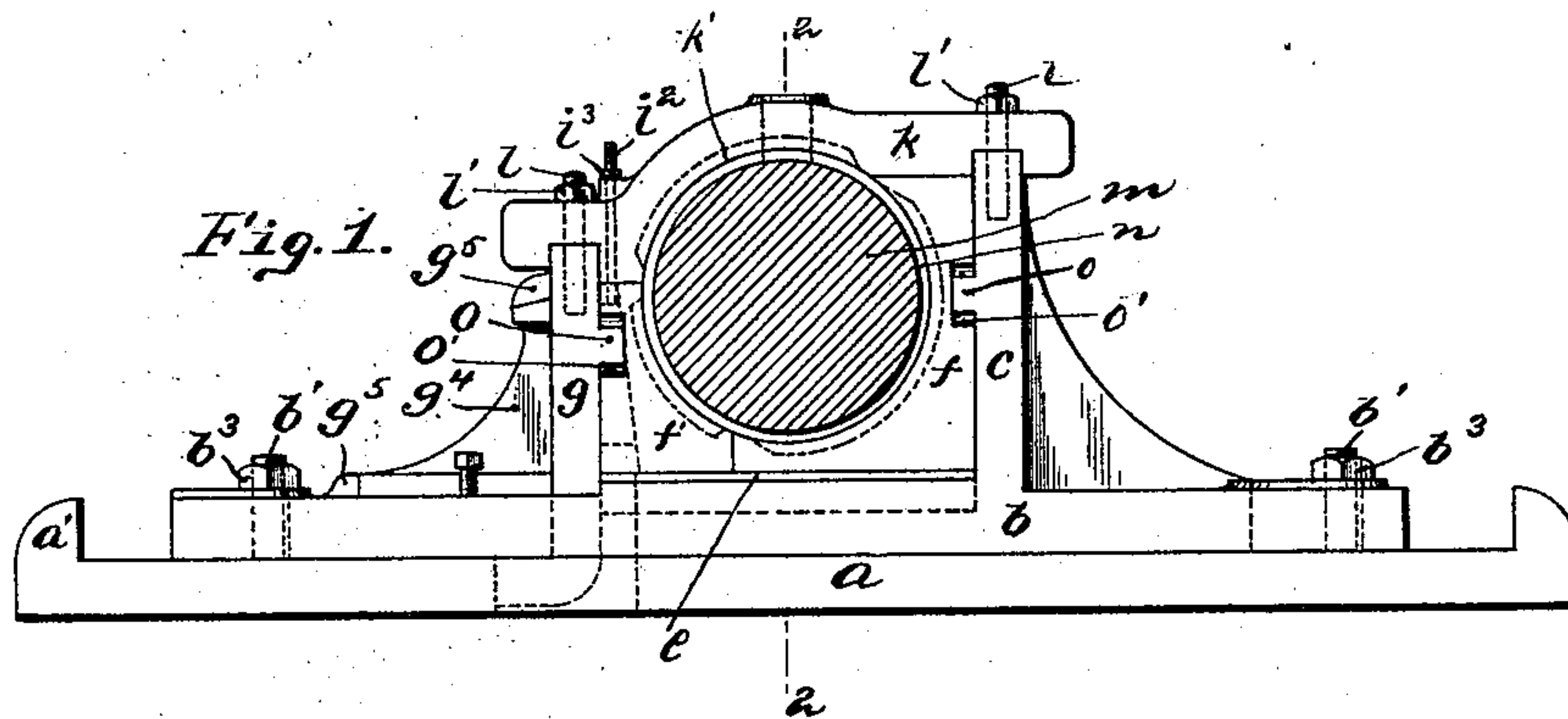
(No Model.)

2 Sheets—Sheet 1.

W. J. DALY.
PILLOW BLOCK.

No. 601,769.

Patented Apr. 5, 1898.



Witnesses:

Walters Farnories

Robert C. Zotten

Inventor:

William J. Daly
By Kay M. Gatten

Attorneys

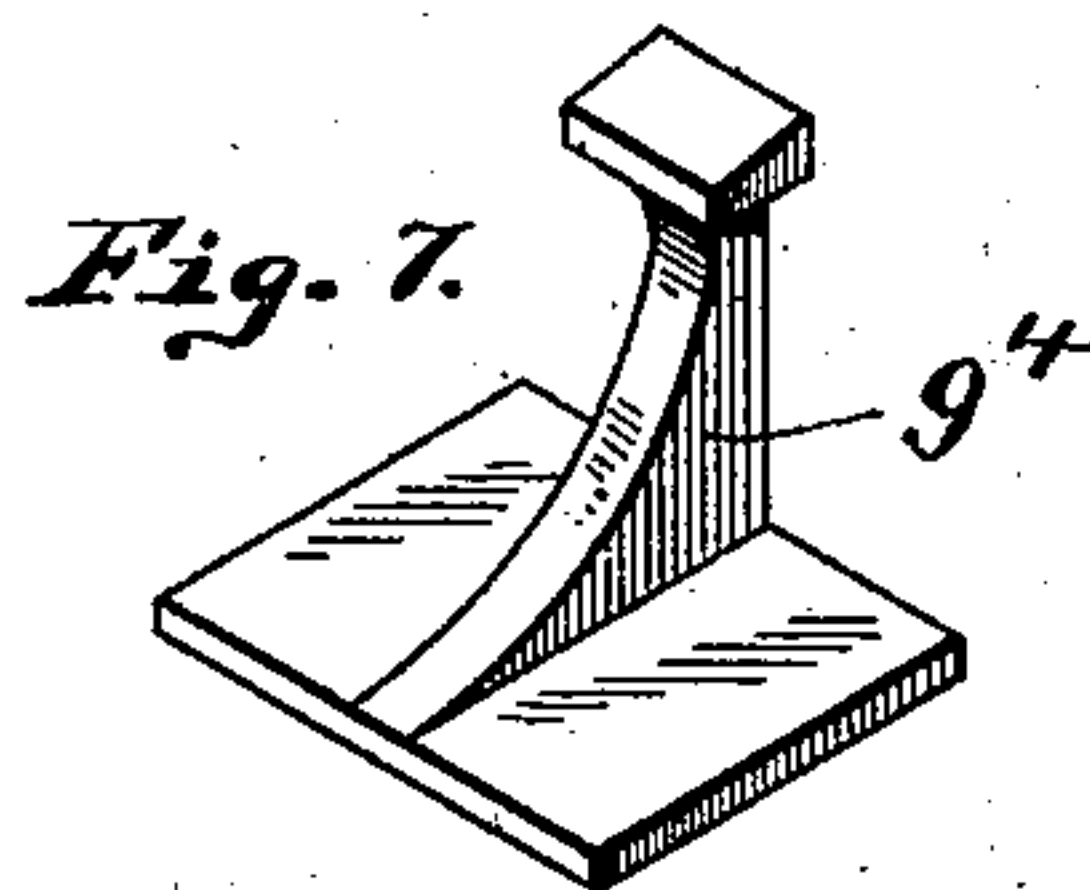
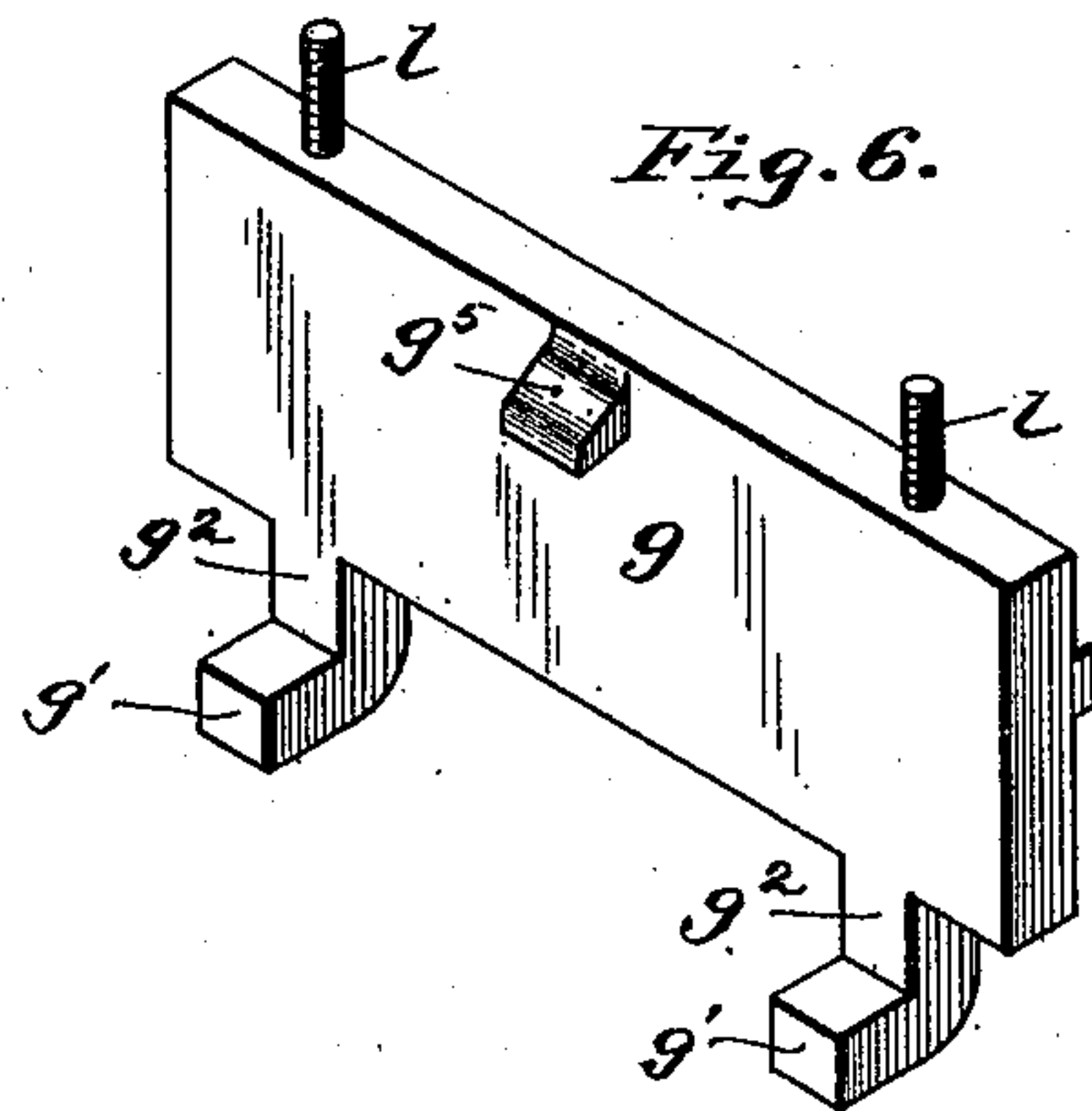
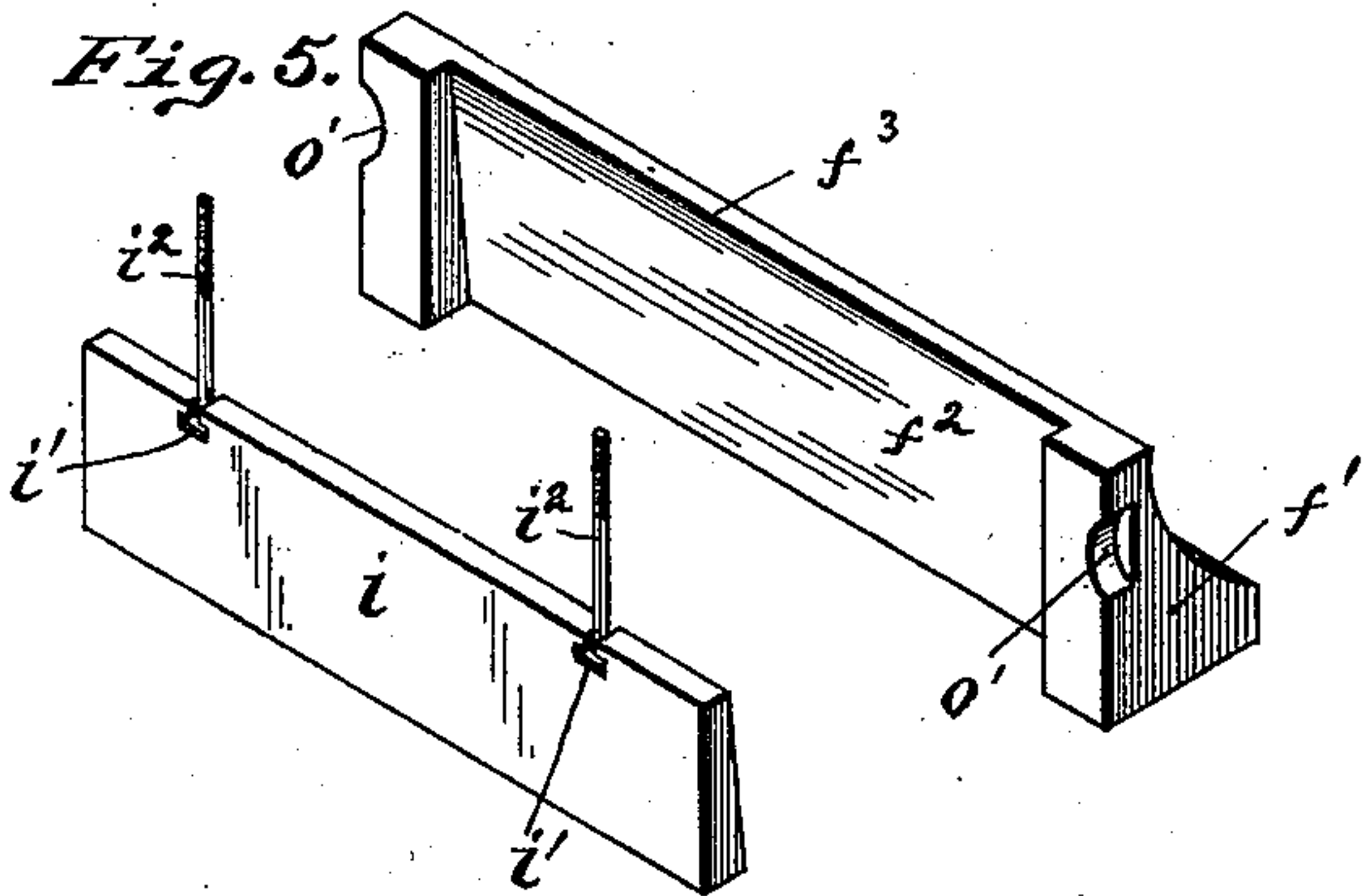
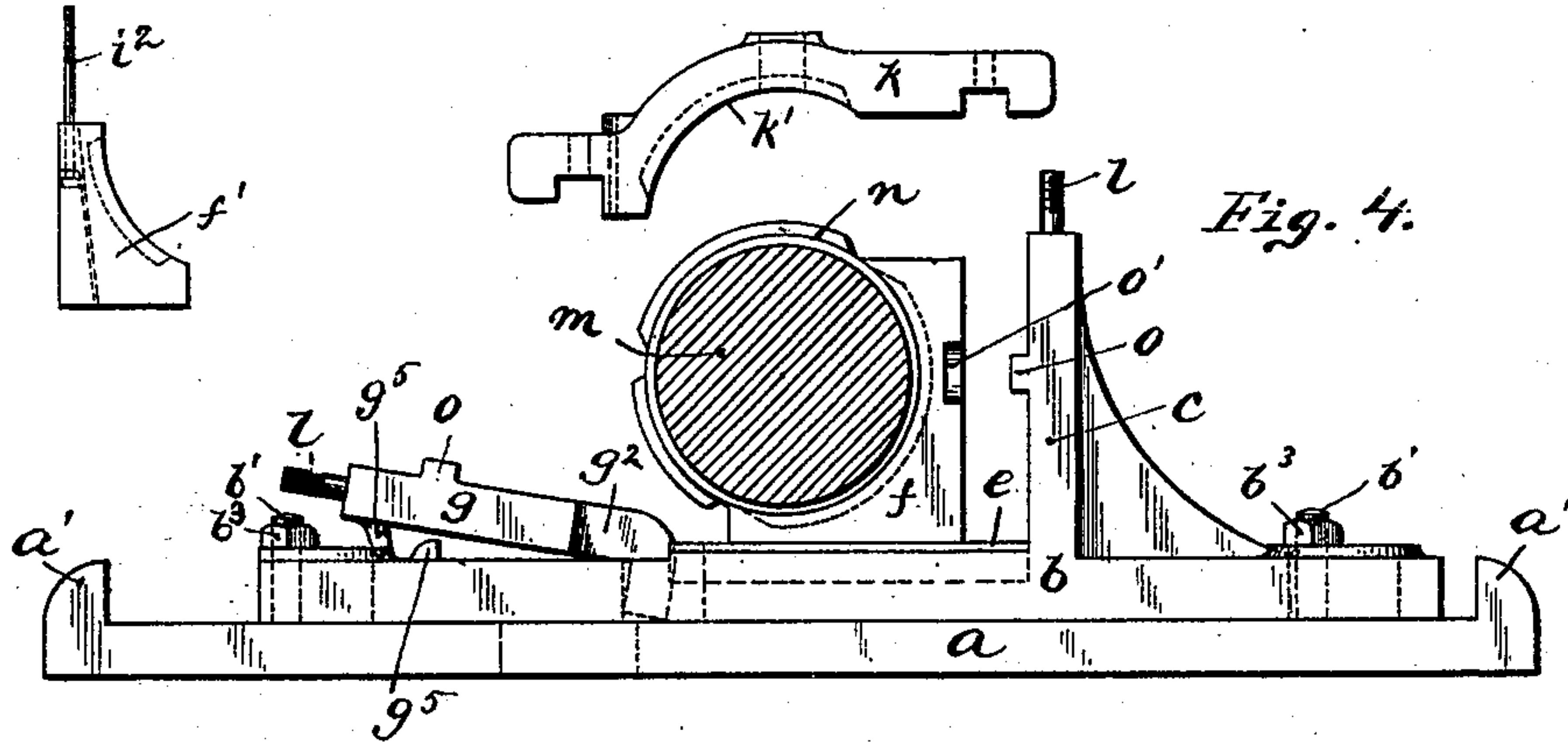
(No Model.)

2 Sheets—Sheet 2.

W. J. DALY.
PILLOW BLOCK.

No. 601,769.

Patented Apr. 5, 1898.



Witnesses:

Edwin Hamariss
Robert C. Totten

Inventor:

William J. Daly
By Kay & Mott
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM J. DALY, OF RANKIN, PENNSYLVANIA.

PILLOW-BLOCK.

SPECIFICATION forming part of Letters Patent No. 601,769, dated April 5, 1898.

Application filed June 10, 1897. Serial No. 640,161. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. DALY, a resident of Rankin, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Pillow-Blocks; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to pillow-blocks or journal-boxes for rotating shafts.

One of the chief objects of my invention is to provide a pillow-block which will accommodate itself to a downward thrust or pull on the shaft and so adjust itself as to keep the shaft in proper alinement with the surfaces of the bearing-blocks.

Another object of my invention is to provide for the removal of the bearing-blocks and their adjustment into position again without the difficulty and delay usually necessary in such an operation.

My invention comprises the new and original features described and claimed hereinafter.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is an end view of my improved pillow-block, showing the shaft in section. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a cross-section on line 3 3, Fig. 2. Fig. 4 is an end view showing the movable side piece lowered. Figs. 5, 6, and 7 are enlarged detail views of some of the parts.

Like letters indicate like parts in each of the figures.

The letter *a* represents a suitable bed-plate or base upon which the pillow-block rests. This bed-plate *a* has the shoulders *a'*, which regulate the amount of movement on the part of said pillow-block.

The letter *b* represents the main frame of the pillow-block, said frame being secured to the bed-plate *a* by means of the bolts *b'*, said bolts passing through slots (shown in dotted lines) in the said frame, whereby on loosening the nuts *b''* on said bolts the frame can be moved on the bed-plate *a*. The frame *b* has the side piece *c* preferably formed integral therewith. Formed within the main frame

b of the pillow-block is the concave seat *d*, adapted to receive the block *e*, having the convex face *e'*. Resting on the flat upper surface of the block *e* are the bearing-blocks *f* and *f'*. The bearing-block *f* is the larger of the two, and it is supported by the side piece *c*. The smaller bearing-block *f'* is supported by the opposite side piece *g*, which is adapted, when released, to swing down in such position as to permit of the easy removal of the bearing-blocks, as will more fully hereinafter appear. Accordingly this side piece *g* is provided with the feet *g'*, which are adapted to enter the apertures *h*, formed in the bed-plate *a*, said feet when in said apertures engaging the bottom face of the frame *b* and holding said side piece against vertical movement. The legs *g''* on said side piece *g* pass down through openings *g'''* in the frame *b*. In order to permit of the side piece *g* taking the position shown in Fig. 4, a space *h'* must be provided in the bed-plate and frame of the pillow-block, so that the feet *g'* may have sufficient play. Said side piece may be entirely removed, if desired. A brace-block *g''* acts to brace the side piece *g*, said brace-block engaging the lugs *g'''* on the frame *b* and said side piece.

A wedge-block *i* is interposed between the bearing-block *f'* and the movable side piece *g*, said bearing-block having the recess *f''*, with the inclined face *f'''*, against which said wedge-block *i* rests. The wedge-block *i* has the seats *i'* formed therein to receive the heads on the threaded bolts *i''*. These bolts *i''* pass up through openings in the top piece *k* and have nuts *i'''* engaging therewith and by means of which the wedge-block *i* is raised and lowered. The movable side piece *g*, as well as the stationary side piece *c*, have the threaded bolts *l* projecting up therefrom, said bolts passing up through openings in the top piece *k*. Nuts *l'* engage the upper ends of said bolts *l* and secure the top piece in place. A portion of the top piece *k* is curved on its inner face, as at *k'*, to correspond with the circumference of the shaft *m* and so forms part of the bearing for said shaft.

The bearing-blocks *f* and *f'* and curved portion *k'* of the top piece *k* are lined with Babbitt or like metal, as indicated by the letter *n*.

To guard against any longitudinal movement on the part of the bearing-blocks $f f'$, the side pieces c and g are provided with the lugs o , said lugs being slightly curved on their inner faces and engaging curved seats o' in the bearing-blocks $f f'$. In this manner a certain amount of play is allowed the bearing-blocks $f f'$ when the thrust or pull on the shaft is in a downward direction.

10 The letter r represents an oil-cup for lubricating the pillow-block.

When my improved pillow-block is in use, its action is as follows: With the parts in the position shown in Figs. 1, 2, and 3 and the shaft m rotating, if said shaft is connected up with a form of apparatus which causes a downward thrust or pull on said shaft the convex block e will adjust itself accordingly and compensate for this downward thrust on the part of said shaft. As the bearing-blocks $f f'$ rest upon said convex block e they will also partake of the movement of said convex block, and in this manner the shaft m is kept parallel with the bearing-surfaces of the bearing-blocks and the wear on said blocks is even, while at the same time the friction on the shaft is reduced. The convex block e , resting in a concave seat, adjusts itself readily to any position the shaft m may assume in rotating, and although its movement may be very small yet in practice a slight variation makes a great difference in the result.

To remove the bearing-blocks $f f'$, it is only necessary to remove the nuts l' and lift off the top piece k , whereupon the side piece g is swung back to the position shown in Fig. 4, or it may be entirely removed, if desired. The bearing-block f' can then be quickly removed. By loosening the nuts b^3 the frame b can be moved over on the bed-plate a far enough to permit of the removal of the other bearing-block f .

I do not wish to limit myself to the exact construction shown, as it may be modified without departing from the spirit of my invention.

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

1. A pillow-block having a concave seat formed therein, a block having a convex face engaging therewith, and a bearing-block sep-

arate from and supported on said block, substantially as set forth.

2. In a pillow-block, the combination of a main frame, a stationary side piece extending up therefrom, a movable side piece opposite said stationary side piece and extending up from said frame, bearing-blocks between said side pieces, and a top piece secured to said side pieces, substantially as set forth.

3. In a pillow-block, the combination with a suitable bed-plate having an aperture therein, of a main frame resting thereon, a stationary side piece on said frame, a movable side piece having a foot entering said aperture in said bed-plate, and a top piece secured to said side pieces, substantially as set forth.

4. In a pillow-block, the combination with a suitable bed-plate having an aperture therein, of a main frame resting thereon, a stationary side piece on said frame, a movable side piece passing down through an opening in said frame, a foot on said movable side piece entering said aperture in said bed-plate, said foot engaging the inner face of said frame, and a top piece secured to said side pieces, substantially as set forth.

5. In a pillow-block, the combination with a suitable bed-plate, of a main frame resting thereon and adapted to move transversely, a stationary side piece on said frame, a movable side piece, bearing-blocks between said side pieces, and a top piece secured to said side pieces, substantially as set forth.

6. In a pillow-block, the combination with a suitable bed-plate having an aperture therein, of a main frame resting thereon, a stationary side piece, a movable side piece passing through an opening in said frame, said movable side piece having a foot entering said aperture in said bed-plate, said foot engaging the inner face of said frame, said frame and movable side pieces having lugs thereon, a brace-block engaging said lugs, and a top piece secured to said side pieces, substantially as set forth.

In testimony whereof I, the said WILLIAM J. DALY, have hereunto set my hand.

WILLIAM J. DALY.

Witnesses:

FRED TICKLE,

Mrs. A. J. DICKERSON.