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J. J. HENNESSEY.

ROCKER SIDE BEARING FOR RAILWAY CARS.

(Application filed May 29, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

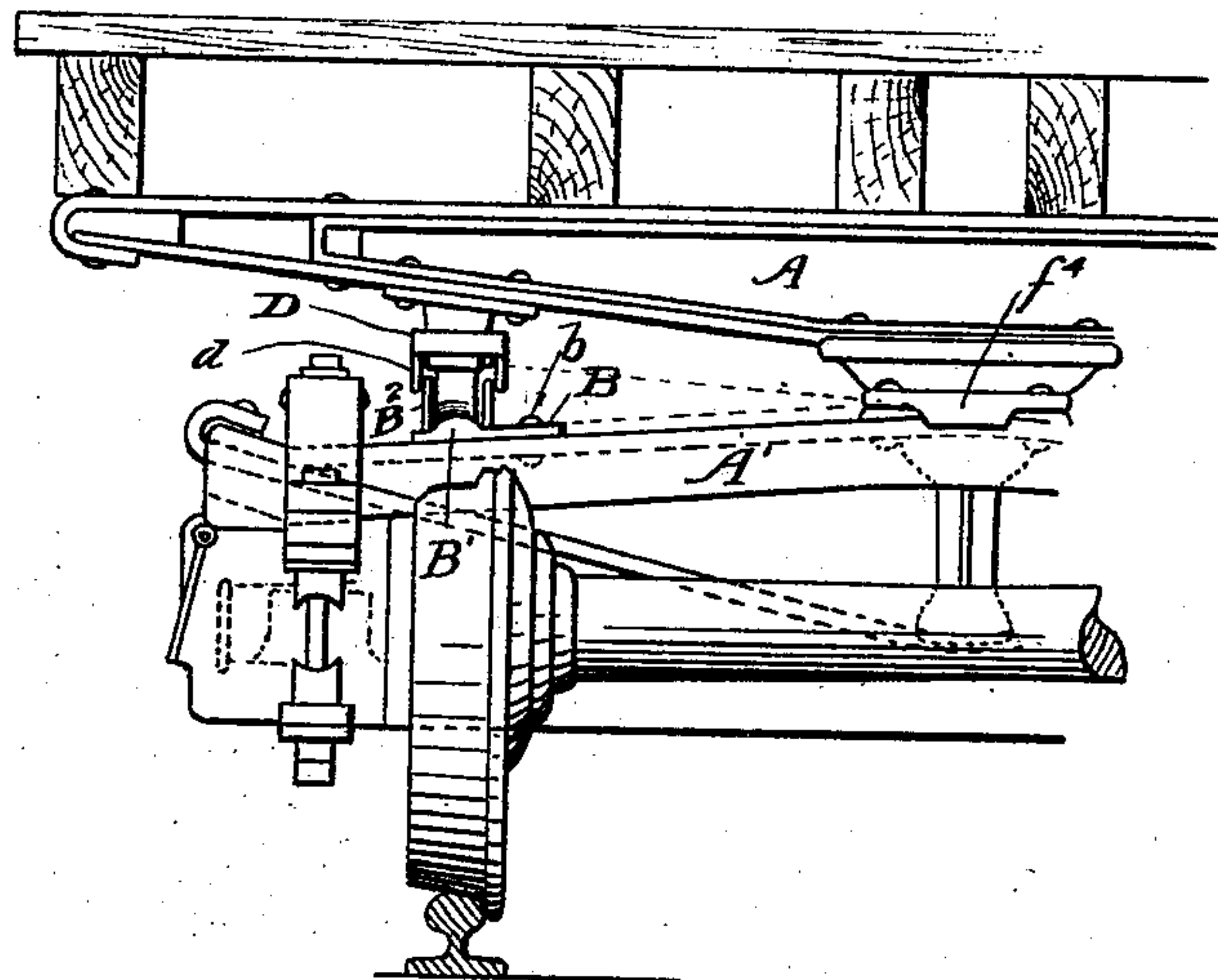
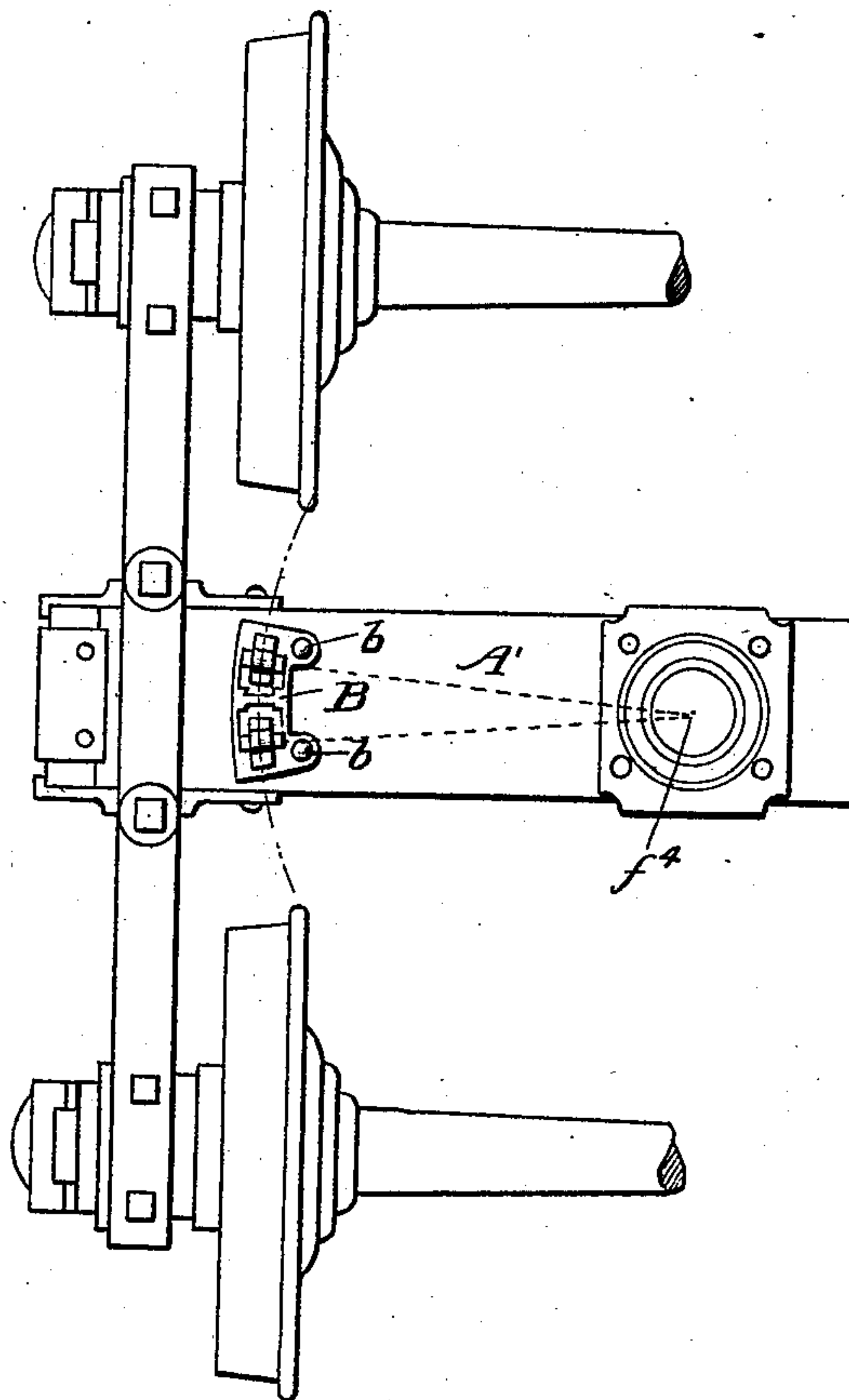


Fig. 2.



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Fig. 3.

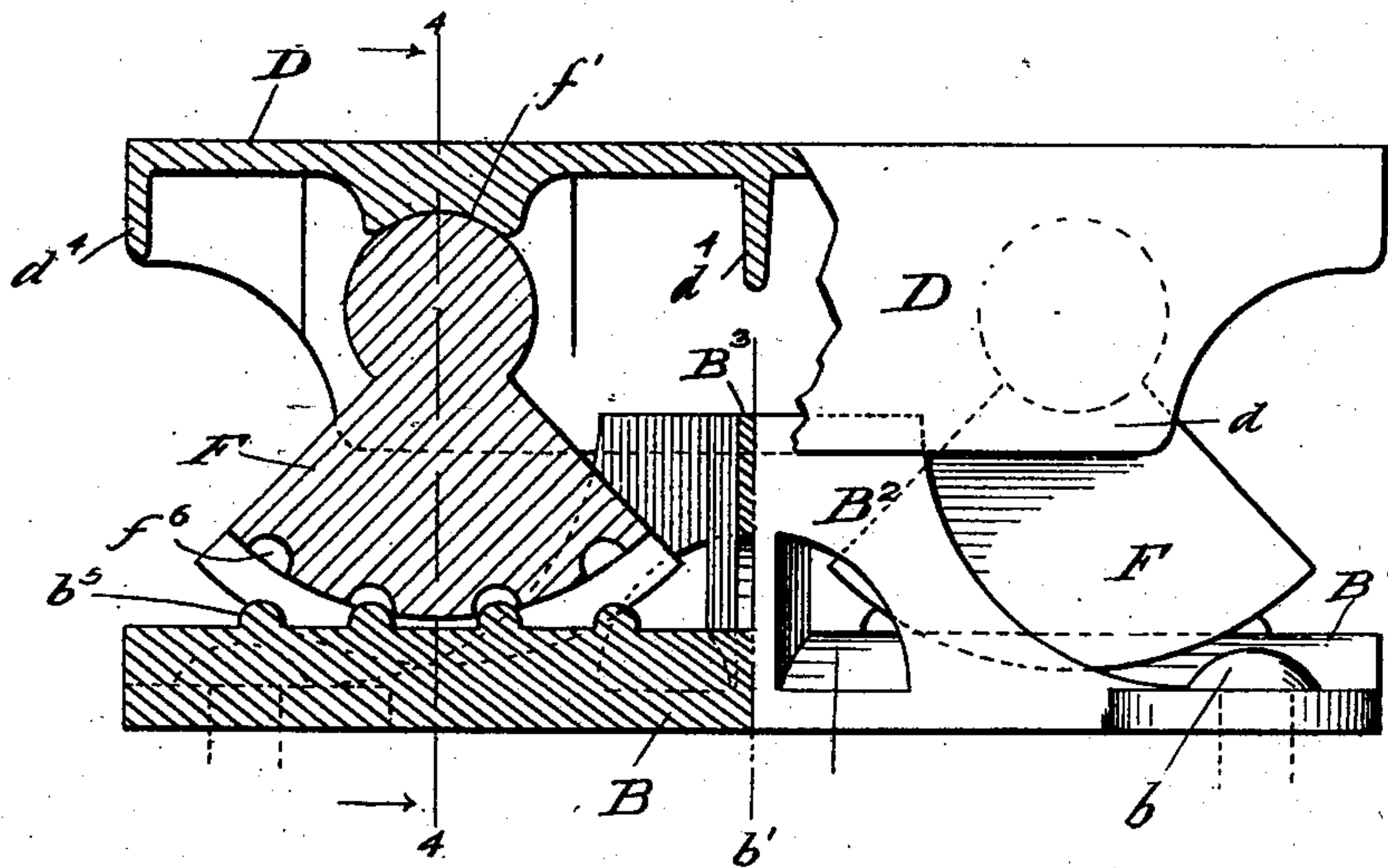


Fig. 4.

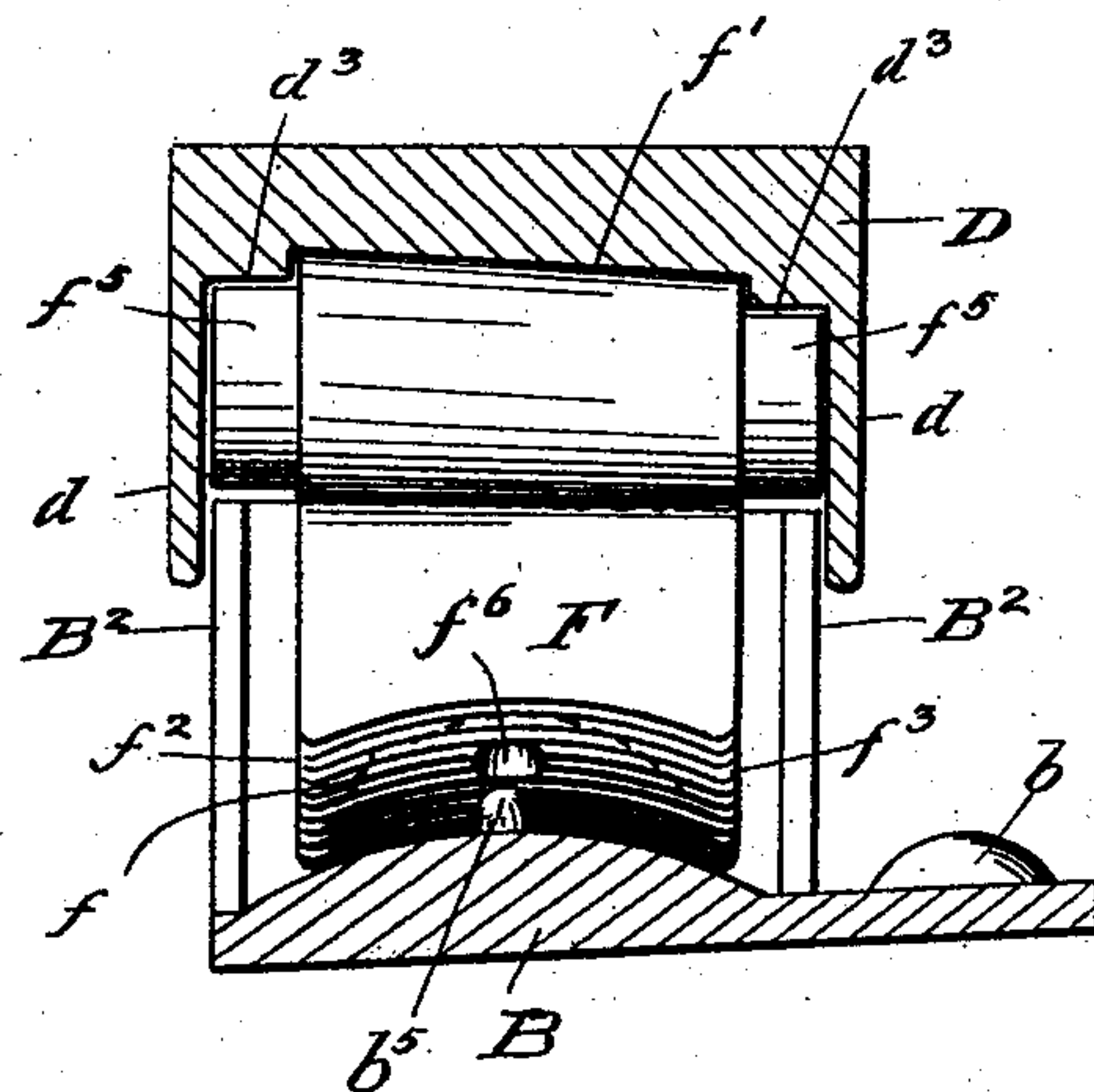
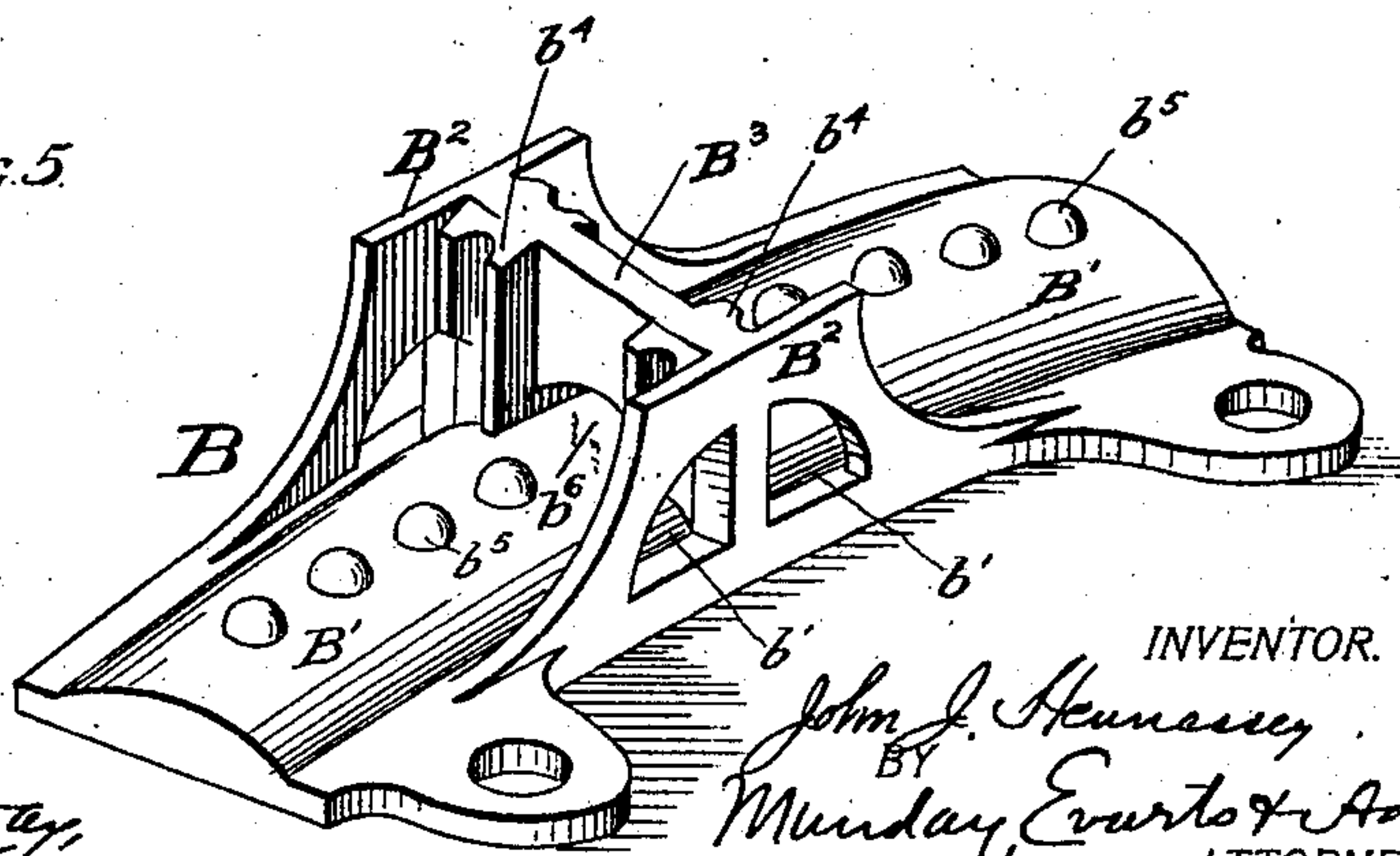


Fig. 5.



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ROCKER SIDE BEARING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 715,577, dated December 9, 1902.

Application filed May 29, 1902. Serial No. 109,442. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HENNESSEY, a citizen of the United States, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Rocker Side Bearings for Railway-Cars, of which the following is a specification.

My invention relates to improvements in rocker side bearings for railway-cars, and more particularly to improvements upon the gravity-rocker side bearing heretofore patented to me in Letters Patent of the United States No. 648,986, of April 10, 1900, and No. 668,642, of February 26, 1901.

Heretofore in the practical operation of rocker side bearings difficulty is sometimes experienced by reason of sand or dust raised or sucked up from the track by the swift motion of the train lodging or collecting on the tread of the bottom plate under the rockers, and thus interfering with the proper operation of the rocker side bearing.

The object of my invention is to improve the construction of the rocker side bearing heretofore patented to me in point of simplicity, efficiency, strength, and durability and at the same time provide means whereby the difficulty above mentioned and heretofore experienced may be entirely overcome and avoided.

My invention consists in the means I employ to accomplish this object or result—that is to say, it consists in providing the bottom plate upon which the rockers bear or roll with a rounded or convex tread and the rockers with correspondingly curved or concave bearing-faces, so that sand and dust cannot lodge upon the convex face of the tread, the side guides being also provided with openings for the escape of sand or dirt.

My invention also consists in the novel construction of parts and devices and in the novel combination of parts and devices herein shown or described.

In the accompanying drawings, forming a part of this specification, Figure 1 is an end elevation of my rocker side bearing as applied to a railway-car. Fig. 2 is a plan view showing the bottom plate and the rockers thereon. Fig. 3 is a central vertical longitudinal section of the rocker side bearing, partly in ele-

vation. Fig. 4 is a cross-section on line 4 4 of Fig. 3, and Fig. 5 is a detail perspective view of the bottom plate of the rocker.

In the drawings like letters of reference indicate like parts in all the figures.

In the drawings, A represents the body-bolster, and A' the truck-bolster, of a railway-car.

B is the bottom plate of the side bearing, the same or its tread being curved on the arc of a circle whose center is the king-bolt on which the bolster turns. This bottom plate is secured to the truck-bolster A' by bolts b. The bottom plate is provided with a rounded or convex tread or bearing-face B' and with side guides B² B² and with a central stop or cross-web B³. The side guides or flanges B² have openings b' through the same adjacent to the cross-web B³ for the escape of sand and dirt and to prevent the same collecting or lodging on the convex and curved tread B' of the bottom plate.

D is the reciprocating top plate of the side bearing, the same being furnished with side guides or flanges d, which overlap the side guides or flanges B² on the bottom plate.

F F are a pair of gravity or automatically returning rockers interposed between the curved top plate D and the curved bottom plate B. The rockers F each have a large curved lower bearing-face f and a smaller curved upper bearing-face f' for the top D and bottom B to ride and bear against. The lower curved bearing-face f of each of the rockers F is concave to fit and correspond to the rounded or convex tread B' of the bottom plate, and the outer end f² of each rocker is somewhat larger in diameter than the inner end f³ thereof (in respect to the king-bolt)—that is to say, disregarding the concavity in the bearing-face of the rockers the same are somewhat tapering or conical to compensate for the curvature of the tread B' about the king-bolt as a center or the arc in which the rockers travels.

The upper or reciprocating top plate D is furnished with a curved seat or bearing to receive the smaller upper bearing-face f' of the rocker. The curved bearing-faces f and f' have a common center f⁴, and being thus concentric the rocking movement of the rockers has no tendency to raise or lower the top

plate and the load thereon in respect to the bottom plate. The side guides or flanges d of the top plate are provided with recesses d^3 to receive the projecting ends or studs f^5 of the rockers and by which the reciprocating top plate is connected to the gravity-rockers F F, and thus caused to return to position when the rockers return to their central or normal position. The side guides or flanges d project down over the ends of the rocker-studs f^5 , thus completely housing the same and excluding admission of sand and dirt. The cross-web or stop B^3 on the bottom plate is furnished with strengthening flanges or ribs b^4 , and the top plate D is also provided with cross-webs or flanges d^4 , which serve to strengthen the same and also to partially inclose and protect the rockers. The curved and convex tread or bearing-face B' of the bottom plate B is preferably furnished with rounded teeth or projections b^5 , which engage corresponding cavities or recesses f^6 in the concave bearing-face f of the rocker F.

As the rockers have large lower bearing-faces f and comparatively small curved upper bearing-faces f' , the rockers naturally return to their central or normal position, as shown in Fig. 3, by their own gravity, and as the projecting ends f^5 of the rockers have a connection with the reciprocating top plate D by reason of the recesses d^3 in the flanges d thereof the reciprocating top plate is thus also automatically returned by the gravity-rockers as soon as the side bearing is relieved from weight or pressure. The rounded or convex tread B' on the bottom plate, in connection with the concave periphery or bearing-face of the rockers F, also serves as a guide for the rockers and to insure a central and proper bearing of the rockers on the bottom plate. To prevent sand or dirt collecting, an opening b^6 is provided through the cross-web B^3 at the base thereof.

I claim—

1. In a side bearing for railway-cars, the combination with a bottom plate secured to the truck-bolster and having a rounded or convex tread or bearing-face, of a reciprocating top plate, and a pair of automatic gravity returning rockers interposed between said bottom plate and said reciprocating top plate, said rockers having concave bearing-faces to fit the convex tread of the bottom plate, said reciprocating top plate having a connection with said rockers to cause its return to central position when the side bearing is relieved from pressure or weight, substantially as specified.

2. In a side bearing, the combination with a bottom plate, of a reciprocating top plate, a pair of automatic returning gravity-rockers between the top and bottom plates, said top plate having side guides or flanges furnished with recesses to receive the projecting ends of the rockers, and said bottom plate having

a convex tread, and the rockers having concave bearing-faces, substantially as specified.

3. In a side bearing, the combination with a bottom plate having a rounded or convex tread, of a top plate and a pair of interposed rockers each having a small upper bearing-face and a large lower concave bearing-face, the convex tread of the bottom plate preventing sand and dirt collecting thereon, substantially as specified.

4. In a side bearing, the combination with a bottom plate and a top plate having inter-fitting side guides or flanges, of a pair of interposed rockers having concave bearing-faces, the bottom plate having a rounded or convex tread, and the side flanges or guides on the bottom plate having openings for escape of sand or dirt, substantially as specified.

5. In a side bearing, the combination with a curved bottom plate and a curved top plate, and a pair of interposed tapering rockers furnished with concave lower bearing-faces, and said bottom plate having a convex tread, substantially as specified.

6. In a side bearing, the combination with a curved bottom plate having a convex tread, of a reciprocating curved top plate, a pair of automatically - returning tapering gravity-rockers between the top and bottom plates having lower concave bearing-faces, substantially as specified.

7. In a side bearing, the combination with a curved bottom plate having a convex tread, of a reciprocating curved top plate, a pair of automatically - returning tapering gravity-rockers between the top and bottom plates having lower concave bearing-faces, said top plate having side guides or flanges inclosing and engaging the projecting upper ends of the rockers, and said bottom plate having side guides or flanges furnished with openings for escape of sand or dirt, substantially as specified.

8. In a side bearing the combination with a bottom plate, of a reciprocating top plate, a pair of automatically - returning gravity-rockers between the top and bottom plates, said top plate having side guides or flanges overlapping and inclosing the upper projecting ends of the rockers, substantially as specified.

9. In a side bearing, the combination with a bottom plate, of a top plate and a pair of rockers between the top and bottom plates, said top plate having side guides or flanges overlapping and inclosing the upper projecting ends of the rockers, and provided with recesses to receive such projecting ends of the rockers, substantially as specified.

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