

**No. 646,986.**

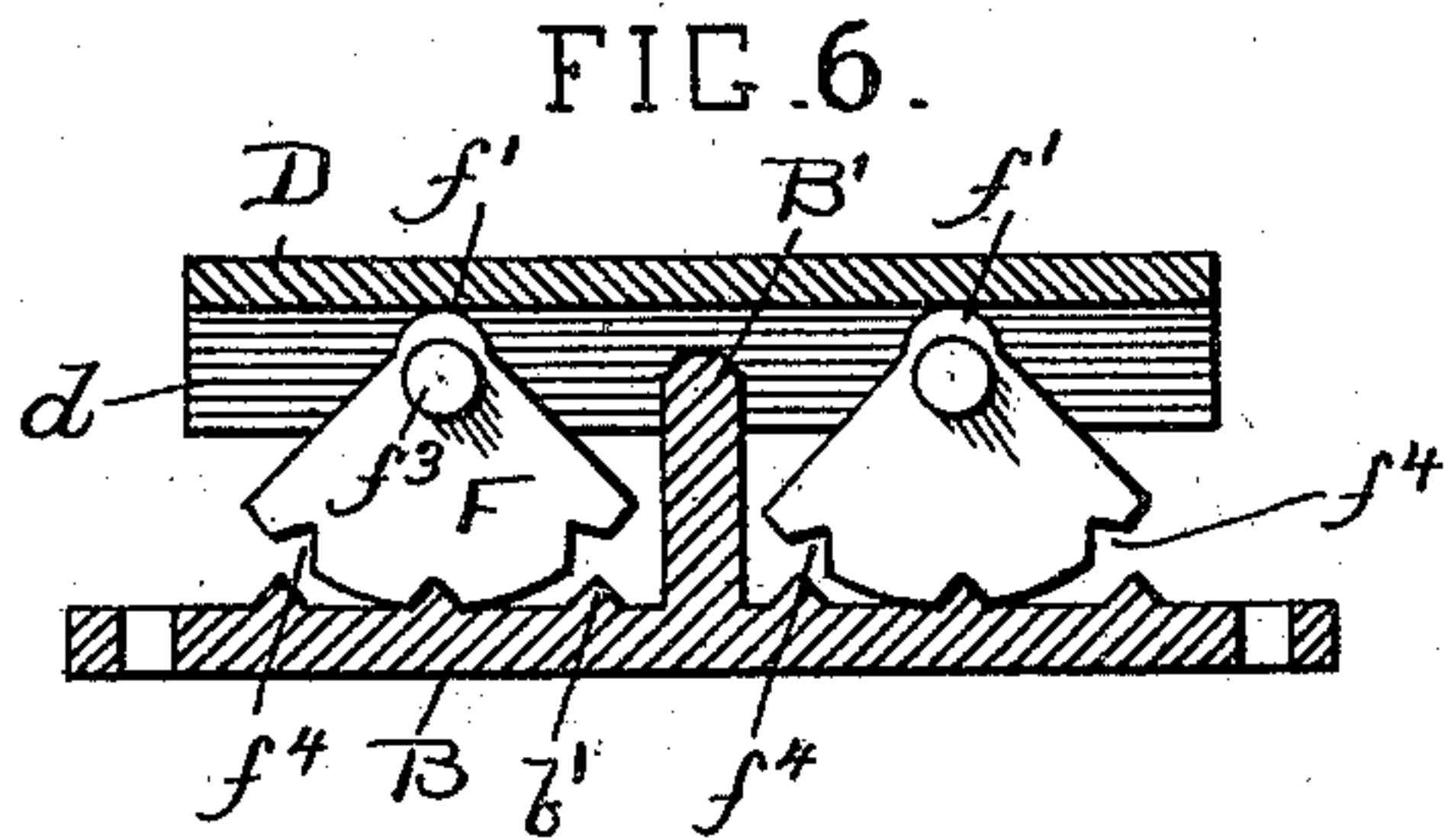
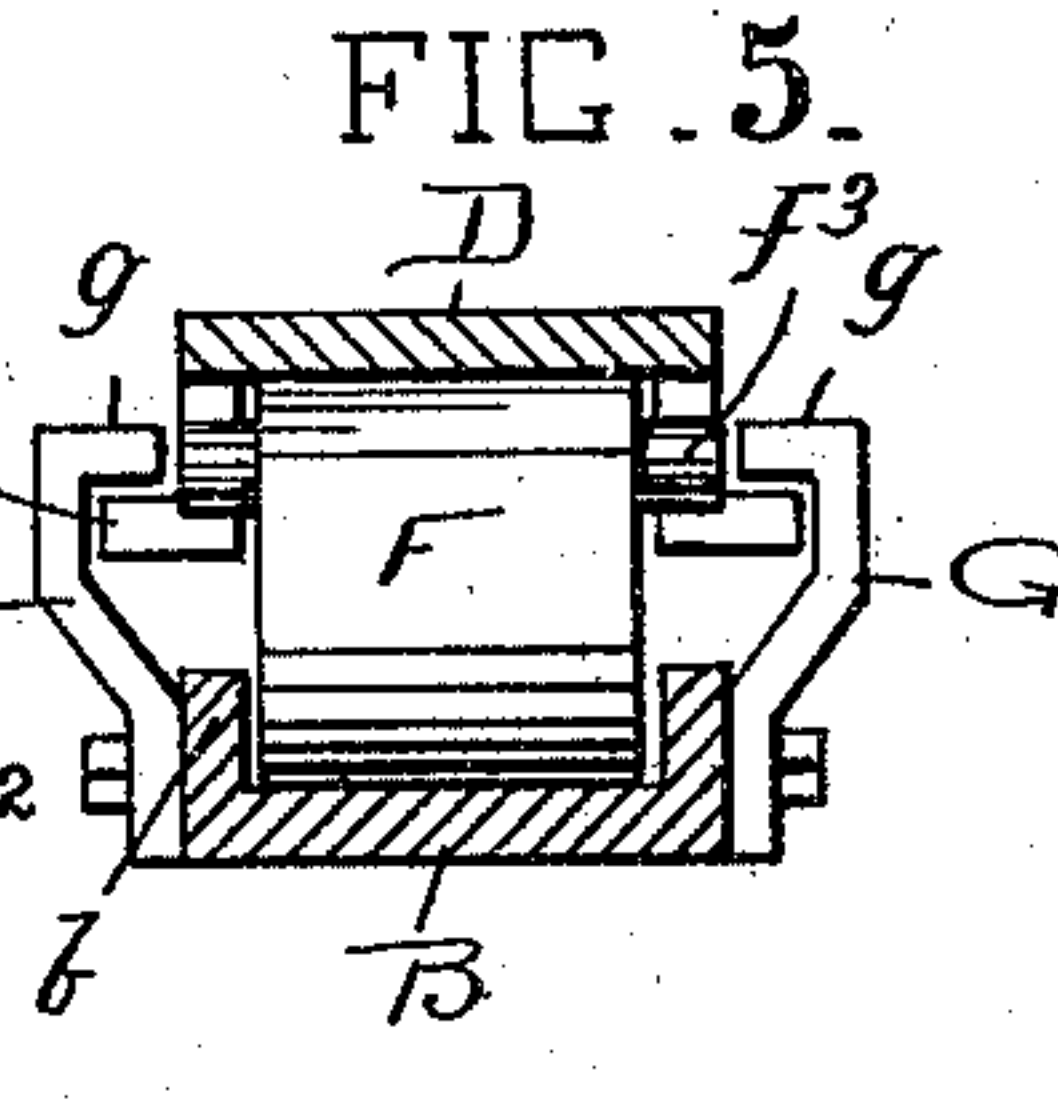
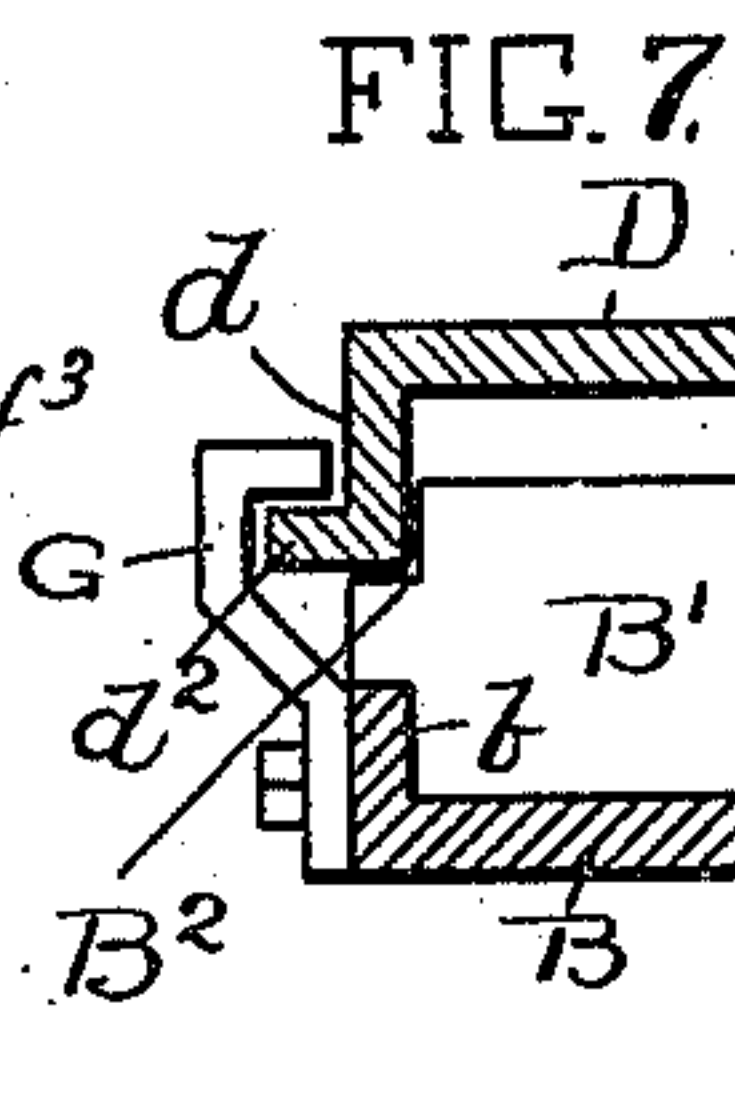
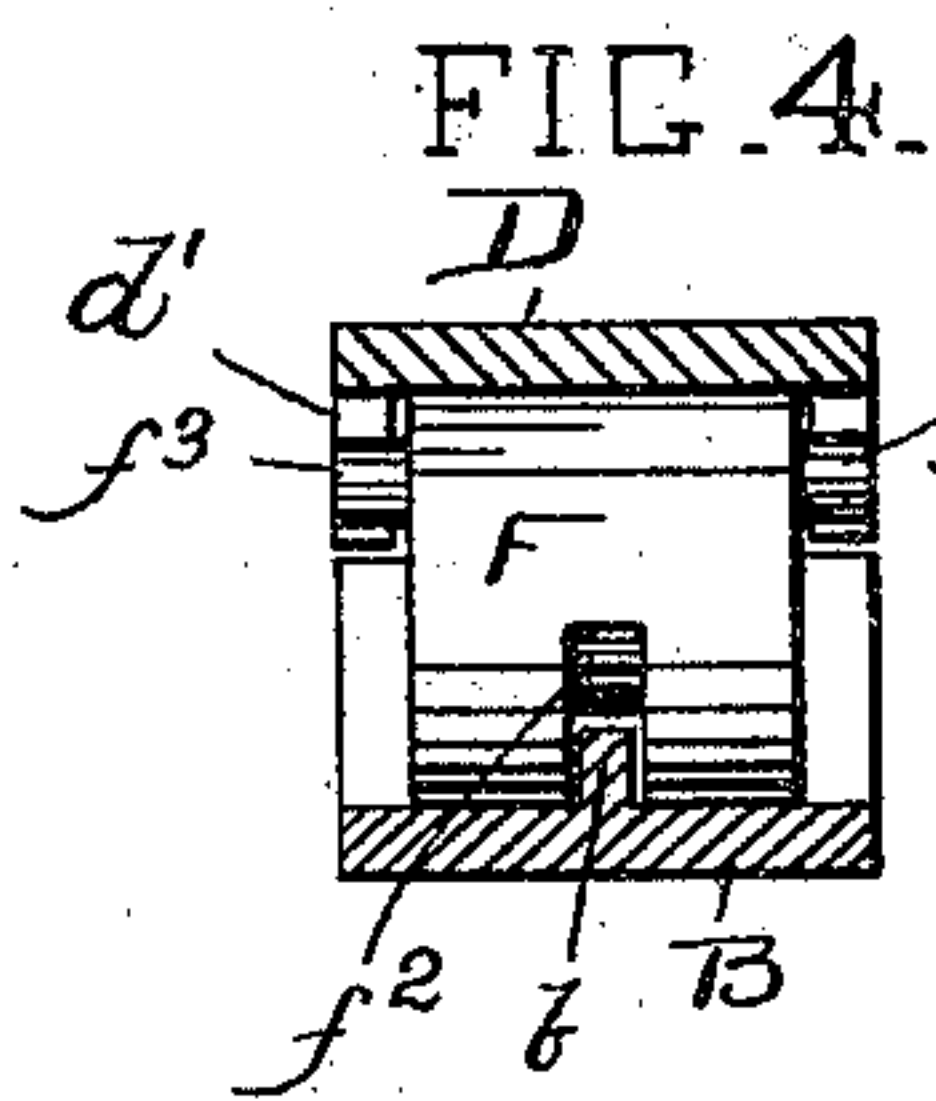
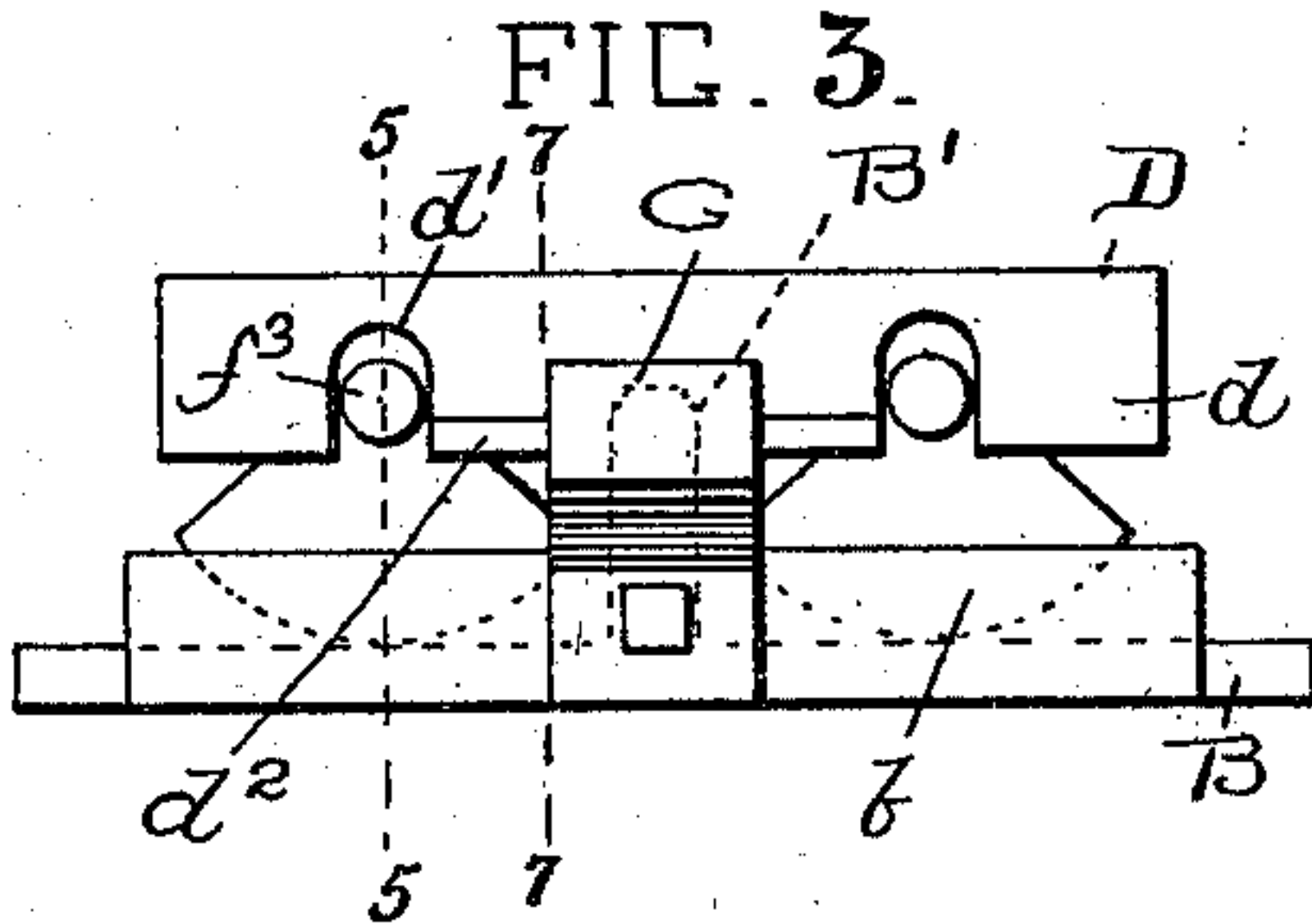
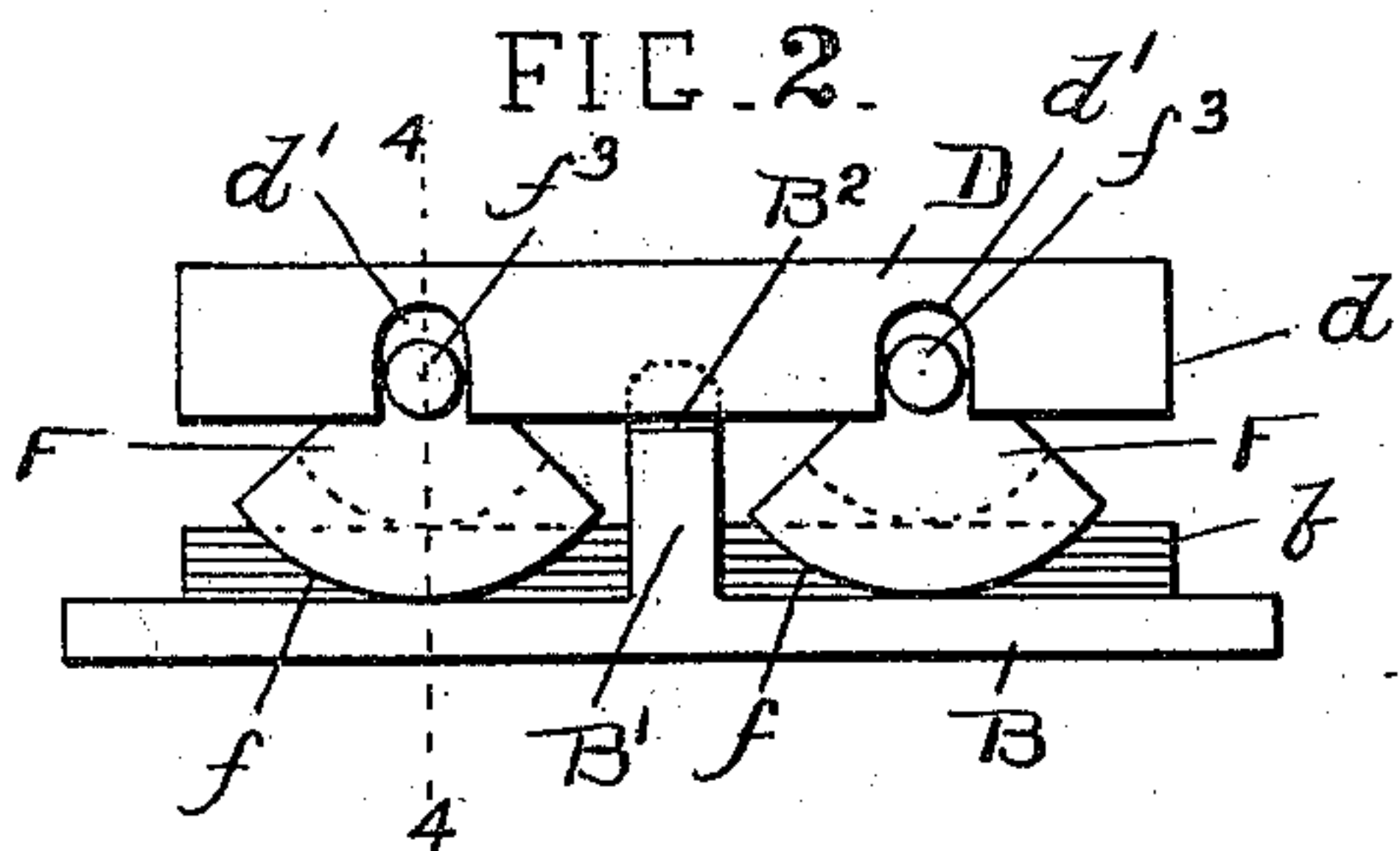
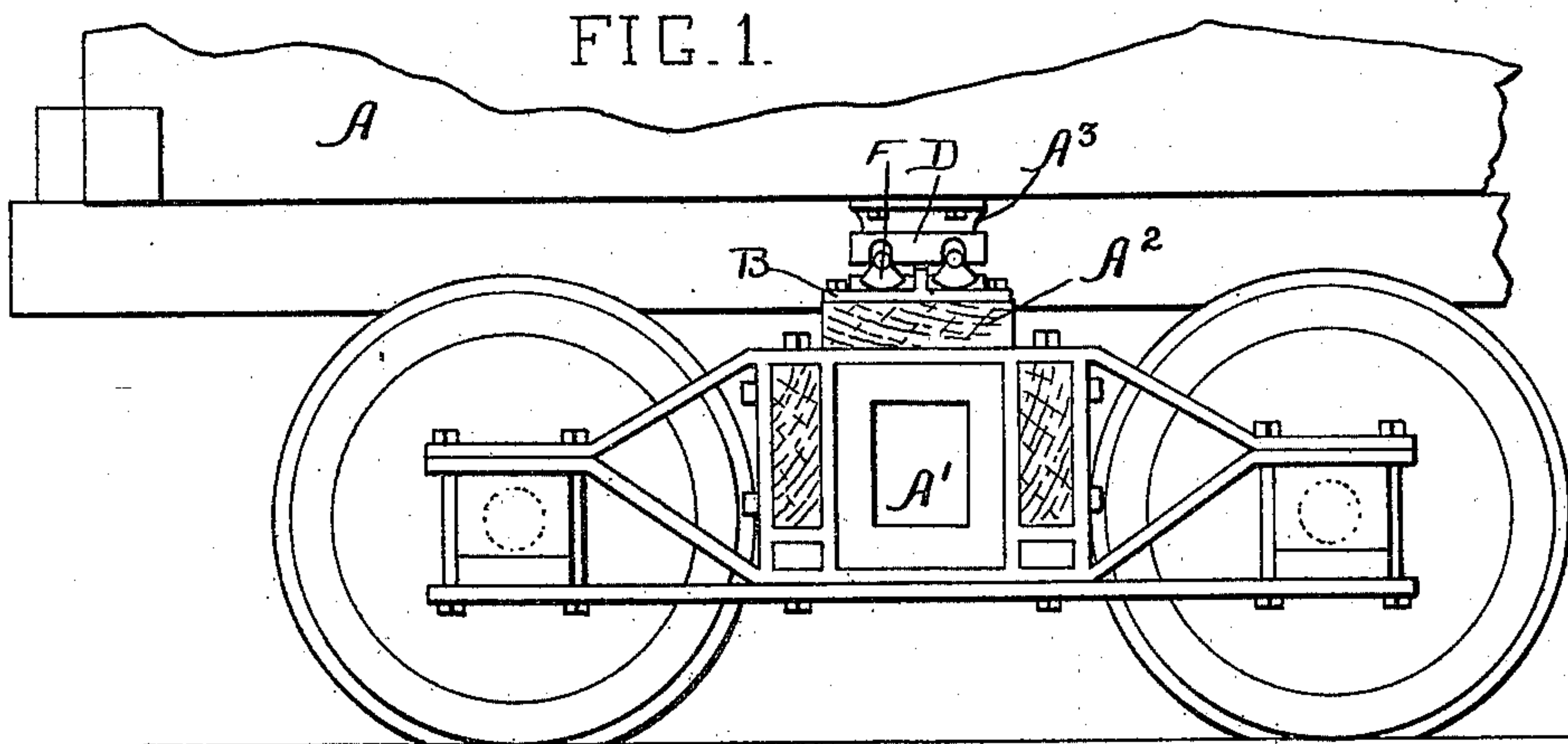
**Patented Apr. 10, 1900.**

**J. J. HENNESSEY.**

## SIDE BEARING FOR RAILROAD CARS.

(Application filed Dec. 23, 1889.)

(No Model.)



WITNESSES:

F. B. Townsend

S. W. Munday

*INVENTOR.*

JOHN J. HENNESSEY

BY

BY  
Munday, Warts & Adcock.  
ATTORNEYS.

HIS ATTORNEYS,



# UNITED STATES PATENT OFFICE.

JOHN J. HENNESSEY, OF MILWAUKEE, WISCONSIN.

## SIDE BEARING FOR RAILROAD-CARS.

SPECIFICATION forming part of Letters Patent No. 646,986, dated April 10, 1900.

Application filed December 23, 1899. Serial No. 741,355. (No model.)

*To all whom it may concern:*

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

My invention relates to improvements in rocker side bearings for railway-cars.

The object of my invention is to provide a rocker side bearing of a strong, efficient, and durable construction and composed of few parts, so that it may at once sustain the necessary heavy weight or load to which side bearings are subjected and permit the car body and truck to vibrate or turn in respect to each other freely and without friction when the car is passing around curves and the parts of which will again automatically assume their normal position when the rocker side bearing is relieved from pressure or load.

My invention consists in the means I have devised for practically accomplishing this important result—that is to say, it consists in the combination, with the bottom plate adapted to be secured to the truck-bolster, of a reciprocating top plate, upon which the body-bolster rests or bears, and a pair of gravity or self-returning rockers interposed between the bottom plate and the reciprocating top plate and which operate by their own gravity or weight to rock back or return to their normal position the moment the pressure on the side bearing is relieved. To cause the reciprocating top to return to its normal position with the pair of automatic gravity-rockers, the rockers have near their upper portion a connection with said reciprocating top plate. This connection between each rocker and the reciprocating top plate preferably consists in a stud or trunnion at the ends of the rocker engaging vertical slots in depending flanges or guides on the top plate. This connection also serves or may serve to aid in keeping the rockers in place between the bottom and top plates of the side bearing. The top plate and the bottom plate are provided with guides which engage the rockers to keep the parts in operative position in respect to each other. These guides

preferably consist of flanges on the top and bottom plates. These guides or flanges may be central flanges or lateral flanges—that is to say, lateral flanges which fit outside of or against the ends of the rockers or intermediate or central flanges which fit in slots in the rockers. I provide the bottom plate with a transverse stop for the rockers, which fits between the rockers and serves also as a guide for the reciprocating top. I also prefer to provide my improved side bearing with guides connecting the reciprocating top and bottom plate independently of the rockers and the stop to better insure the parts being kept in operative position. The guides between the reciprocating top and bottom plate may preferably consist of flanges on the top plate engaging guide-straps secured to the bottom plate.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described, and specified in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a portion of a car body and truck provided with my invention. Fig. 2 is a side elevation showing the bottom plate, reciprocating top plate, and the pair of gravity-rockers. Fig. 3 is a similar view showing the guides between the reciprocating top plate and bottom plate. Fig. 4 is a vertical section on line 4 4 of Fig. 2. Fig. 5 is a vertical section on line 5 5 of Fig. 3, and Fig. 6 is a vertical longitudinal section showing a slightly-modified form of the gravity-rockers. In Figs. 2 and 4 the bottom plate of the side bearing is represented as being provided with a single central flange or guide to engage the gravity-rockers, and in Figs. 3 and 5 the bottom plate is represented as having a pair of lateral flanges or guides to keep the rockers in place. Fig. 7 is a section on line 7 7 of Fig. 3.

In said drawings, A represents the body of a car, A' the truck, A<sup>2</sup> the truck-bolster, and A<sup>3</sup> the body-bolster, these parts being of any ordinary or suitable construction.

B is the bottom plate of the side bearing, the same being bolted or otherwise secured to the truck-bolster A<sup>2</sup>.



D is the reciprocating top plate of the side bearing, upon which the body-bolster  $A^3$  rests or bears when pressure or weight comes upon the side bearing.

5 F F are a pair of automatic gravity-returning rockers interposed between the reciprocating top D and the bottom plate B of the side bearing. These gravity-rockers F F are preferably of a sector shape, about as illustrated in the drawings, having curved lower  
10 faces  $f$  and curved upper faces  $f'$ , the lower ends or faces of the rockers being much larger than their upper ends or faces, so that each rocker will naturally or by its own gravity  
15 assume its central or normal position when the side bearing is relieved from weight or pressure. To keep these gravity-rockers in position between the top and bottom plates, the bottom plate is provided with one or more  
20 upright flanges or guides  $b$  and the top plate is provided with one or more, preferably two, depending flanges or guides  $d$ . As illustrated in Figs. 2 and 4, the bottom plate is furnished with a single central upright flange or guide  
25  $b$ , the same fitting in slots or grooves  $f^2$ , with which the rockers F are provided for this purpose. As illustrated in Figs. 2 and 5, the bottom plate B is provided with a pair of lateral flanges or guides  $b$ , similar to the lateral  
30 flanges or guides  $d$  on the top plate.

To cause the reciprocating top plate D to be automatically returned to its normal position by action of the gravity-rockers F F themselves when the side bearing is relieved from  
35 weight or pressure, I provide a connection between the reciprocating top plate and the rockers. This connection preferably consists of studs, trunnions, or projections  $f^3$  at each side of each rocker, near the upper end or  
40 face thereof, which fit in corresponding slots  $d'$ , formed in the depending flanges or guides  $d$  of the top plate. This makes a loose free connection between the gravity-rockers and the reciprocating top plate, the slots  $d'$  being  
45 made deep enough vertically to prevent any weight or pressure coming upon the studs, trunnions, or projections  $f^3$ .

While the guides or flanges  $b$   $d$  on the bottom and top plates B D themselves form a  
50 connection through the intermediate rockers F between the bottom and top plates, tending to keep the top plate in proper relation to the bottom plate, I prefer to provide my side bearing with an additional guide for this purpose. This additional or supplemental guide  
55 may be of any suitable construction. It preferably consists of a pair of side flanges  $d^2$ , formed on the top plate D, and guide-straps G, bolted or otherwise secured to the bottom  
60 plate B, the guide-straps having overhanging lips or flanges  $g$ , fitting over the side flanges  $d^2$  on the reciprocating top plate. This prevents any possibility of the reciprocating top plate becoming displaced by jolting or tilting  
65 of the car-body to one side.

As illustrated in Fig. 6, the rockers F are

furnished with one or more notches  $f^4$  and the bottom plate with one or more transverse ribs or teeth  $b'$ , which may aid in keeping the  
70 rockers in position.

The bottom plate is preferably provided with a transverse projection or stop B' between the rockers to limit their movement, and this transverse rib or stop B' is notched at its upper end at B<sup>2</sup> to fit between the flanges  
75  $d$   $d$  of the reciprocating top plate to form an inner guide between the reciprocating top D and bottom plate B. The outer supplemental guide G coöperates with this inner stop and guide when both are used.  
80

In operation when weight or pressure is exerted upon the side bearing and the car body and truck vibrate or turn in respect to each other the rockers between the reciprocating top plate and the bottom plate prevent friction  
85 between the body-bolster and the truck-bolster, my rocker side bearings thus permitting the cars to pass around curves without strain or any tendency to throw the car from the track. The rockers permit the car body and  
90 truck to vibrate and turn in respect to each other with perfect freedom, and as the gravity-rockers will automatically or by their own gravity return to their normal position the moment the pressure or weight is relieved from  
95 the side bearing, and thus cause the reciprocating top plate to be also carried back to its normal or central position all the parts of my rocker side bearing will always automatically keep in proper relation to each other and to  
100 the bolsters for operation, and at the same time my rocker side bearing is of an exceedingly simple and strong construction and is composed of such few parts and these of such plain and simple forms that the bearing possesses  
105 great strength and is capable of sustaining any weight or load that may be put upon it and there is no danger of any of the parts of the bearings breaking or getting out of order.

I claim—

1. In a side bearing for railway-cars the combination with the bottom plate of a reciprocating top plate and a pair of automatic gravity - returning rockers, interposed between the bottom plate and said reciprocating top plate, and having a connection with  
115 said reciprocating top plate to cause it also to return to its central or normal position when the side bearing is relieved from pressure or weight, substantially as specified.  
120

2. 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, the said top and bottom plates having guides or  
125 flanges engaging the rockers, substantially as specified.

3. In a side bearing the combination with a bottom plate of a top plate, and a pair of automatically-returning gravity-rockers interposed between said plates, each of said  
130 rockers having a large lower end or face and



a small upper end or face to cause the rocker to assume a central or normal position by its own gravity, substantially as specified.

4. In a side bearing the combination with  
5 the bottom plate of a reciprocating top plate and a pair of automatically-returning gravity-rockers interposed between said plates each having a large lower end and a small upper end to cause said rockers to assume a central  
10 or normal position by their own gravity and a connection between said rockers, and said reciprocating top plate substantially as specified.

5. The combination in a side bearing with  
15 the bottom plate of a reciprocating top plate, a pair of rockers interposed between said plates and a transverse stop between said rockers, substantially as specified.

6. In a side bearing, the combination with  
20 the bottom plate and top plate furnished with depending flanges or guides coöperating with the rockers for keeping the rockers laterally in position, a pair of interposed rockers and a guide secured to or formed integrally with  
25 the bottom plate and engaging the top plate, substantially as specified.

7. The combination in a side bearing with  
a bottom plate of a top plate having depending flanges or guides, a pair of interposed  
30 rockers, and a transverse stop or guide on the bottom plate, engaging the top plate, and supplemental guide-straps secured to the bottom plate and engaging the reciprocating top plate, substantially as specified.

8. In a side bearing, the combination with 35  
a bottom plate and a top plate, of a pair of interposed automatically-returning gravity-rockers having small upper ends and large lower ends to cause the rockers to return to their central normal position by gravity, sub- 40  
stantially as specified.

9. In a side bearing, the combination with  
a bottom plate and a top plate, of a pair of interposed automatically-returning gravity-rockers having small upper ends and large 45  
lower ends to cause the rockers to return to their central normal position by gravity, and a connection between said rockers and the top plate, substantially as specified.

10. In a side bearing, the combination with 50  
a bottom plate and a top plate, of a pair of interposed automatically-returning gravity-rockers having small upper ends and large lower ends to cause the rockers to return to their central normal position by gravity, and 55  
a stop between said rockers, substantially as specified.

11. The combination in a side bearing, of a  
bottom plate with a top plate furnished with depending guide-flanges, a pair of rockers, 60  
and a stop on the bottom plate between the rockers, and furnished with guide-notches to receive the guide-flanges on the top plate, substantially as specified.

JOHN J. HENNESSEY.

Witnesses:

EDMUND ADCOCK,  
H. M. MUNDAY.