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Patented Nov. 5, 1901.

S. NORTHROP & A. G. STEINBRENNER.  
SIDE BEARING FOR RAILWAY CARS.

(Application filed Mar. 23, 1901.)

(No Model.)

Fig. I.

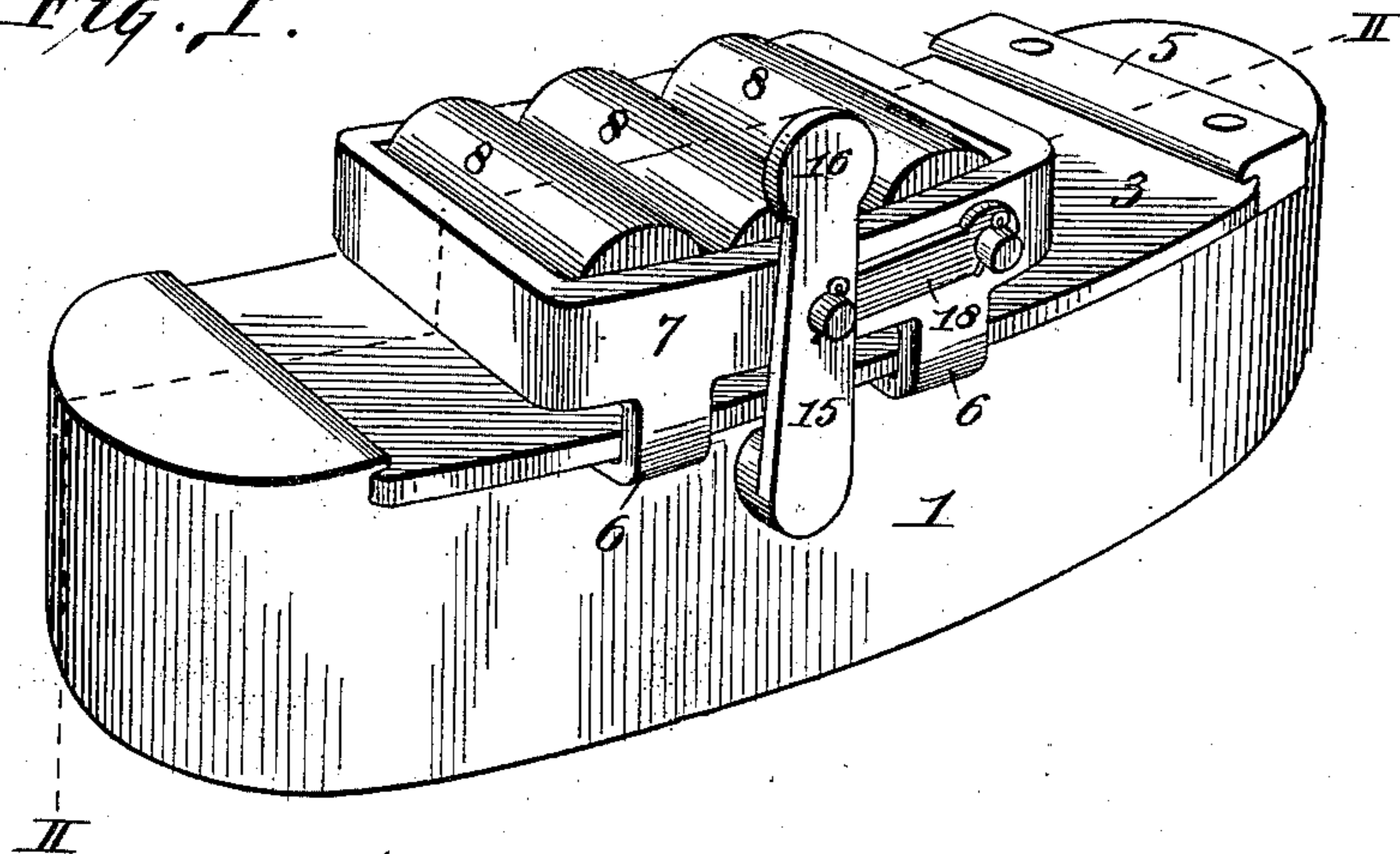


Fig. II. III.

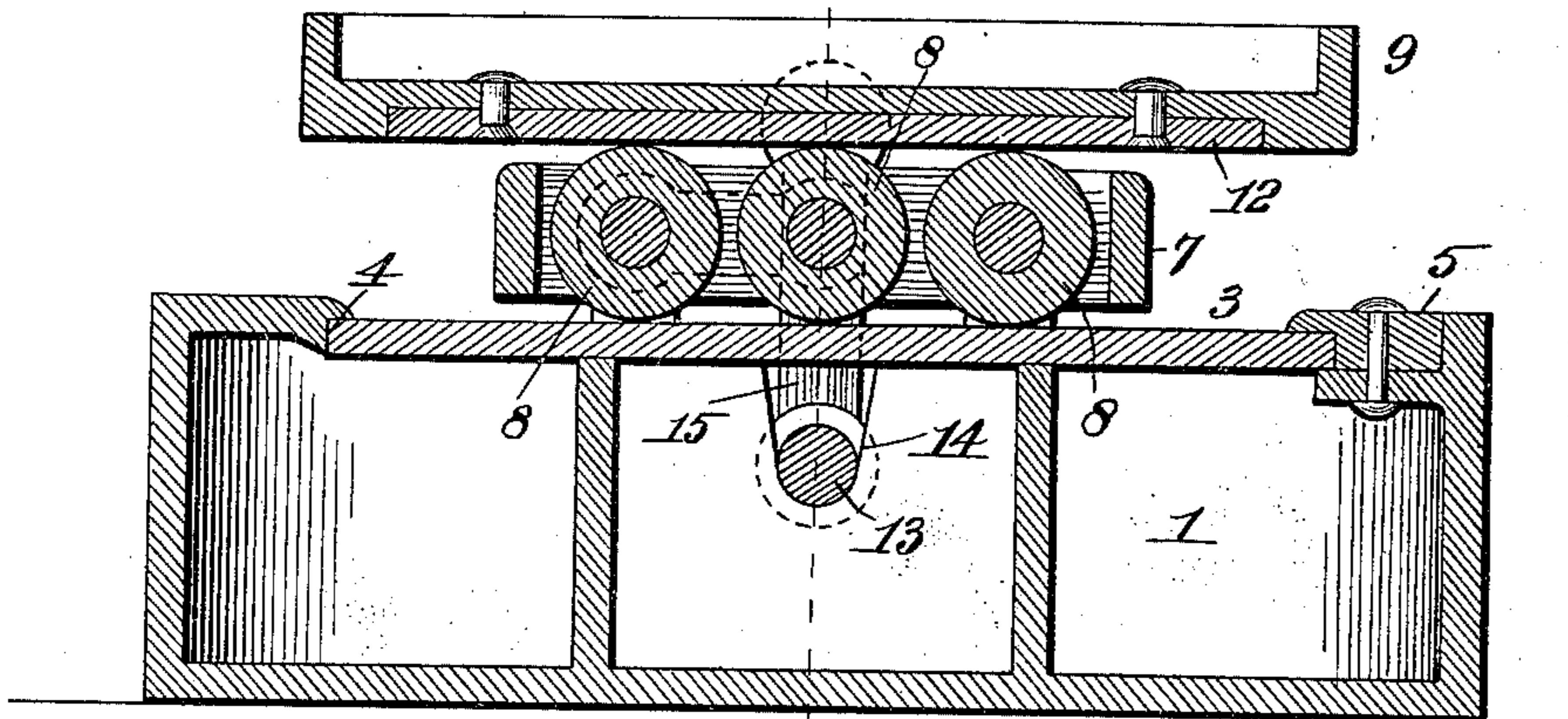


Fig. III.

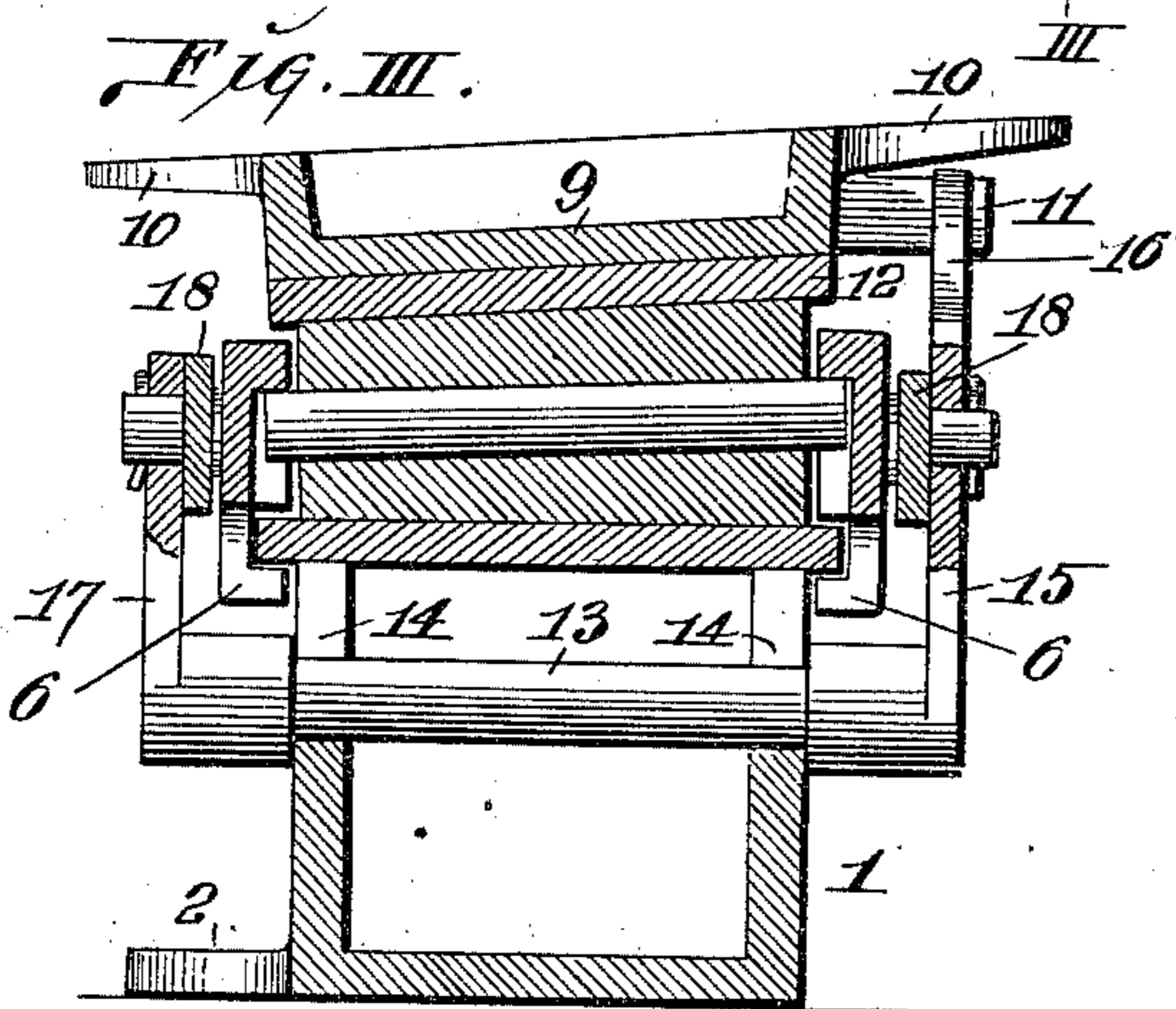


Fig. IV.

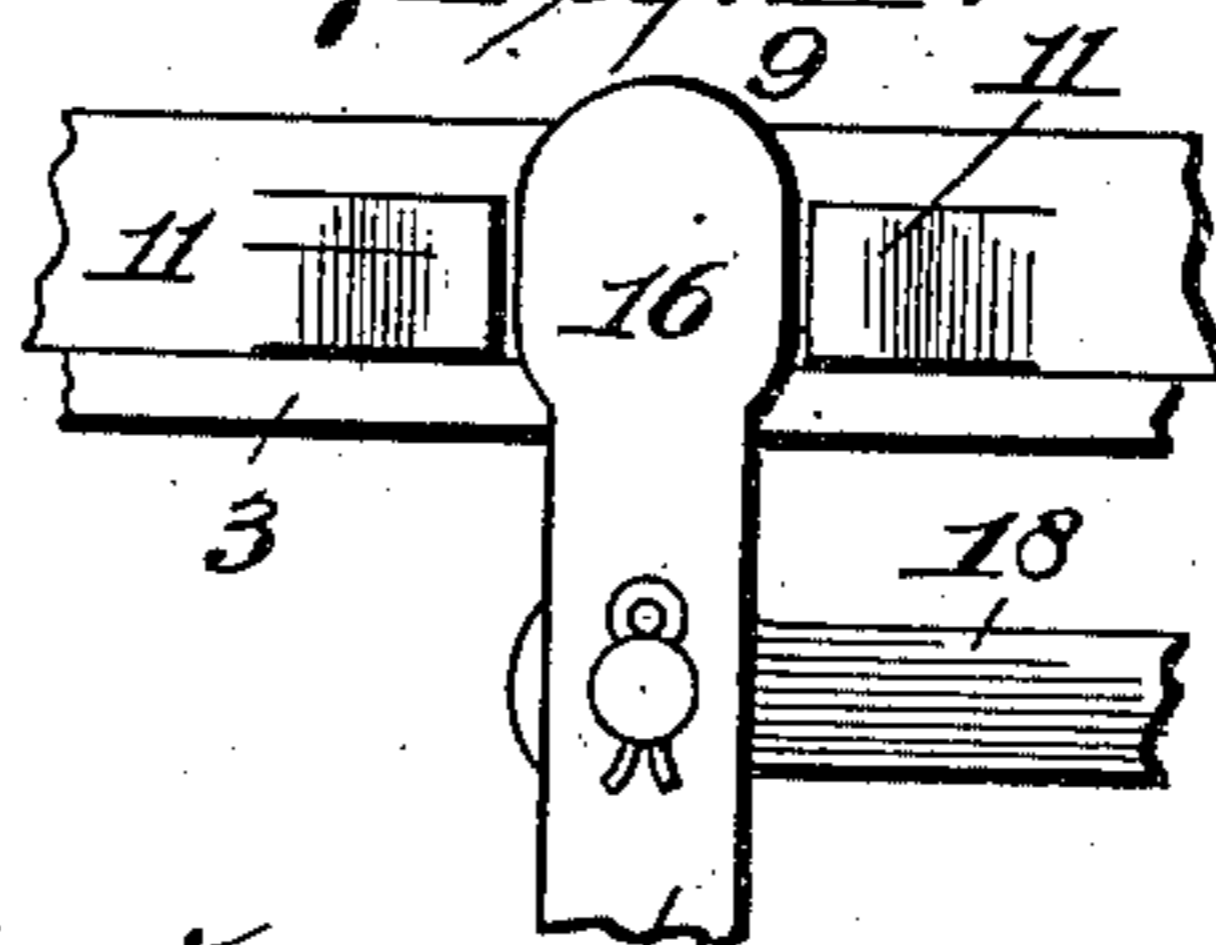
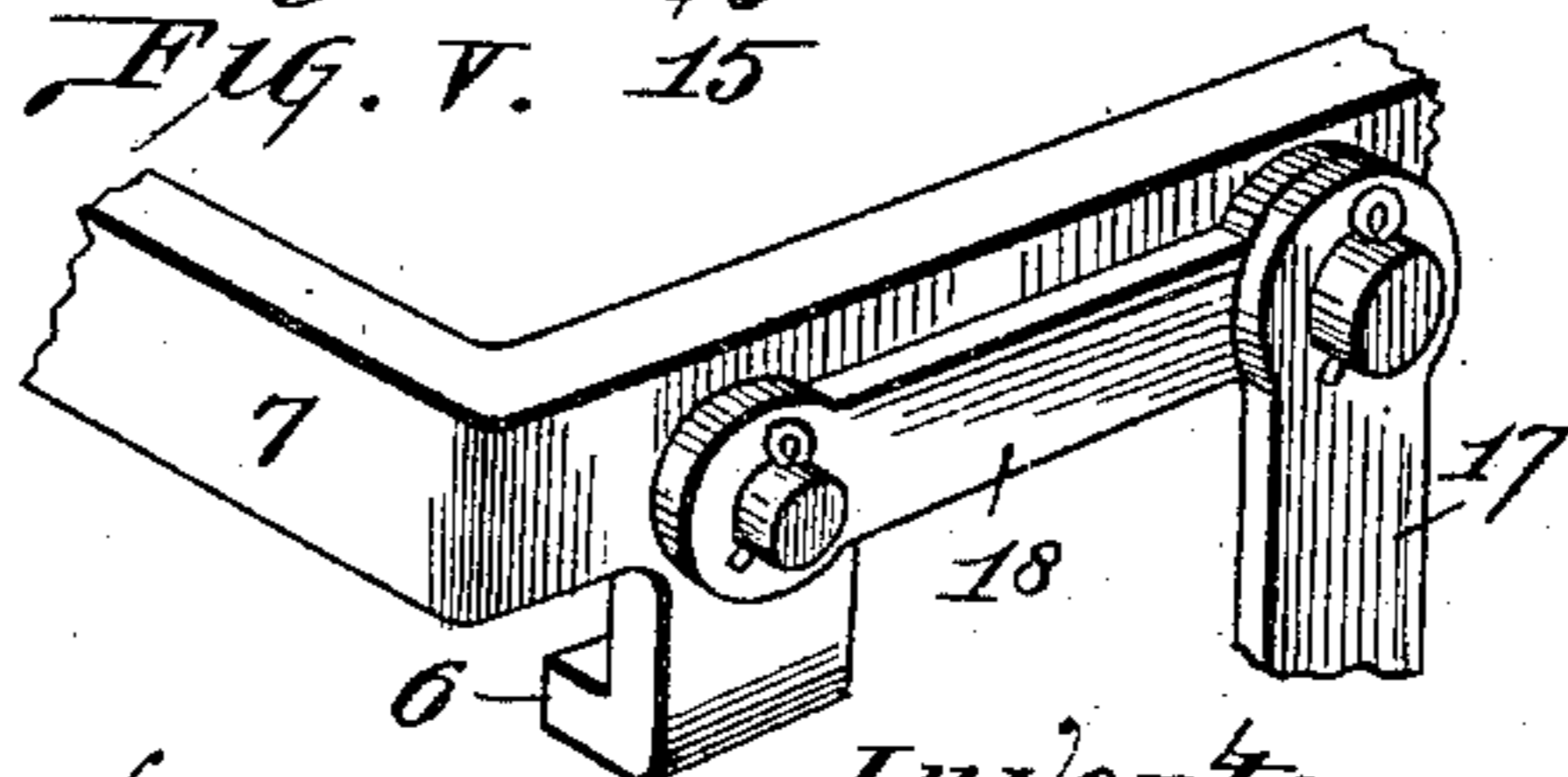


Fig. V.



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# UNITED STATES PATENT OFFICE.

SANDFORD NORTHROP AND ANDREW G. STEINBRENNER, OF ST. LOUIS,  
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## SIDE BEARING FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 686,118, dated November 5, 1901.

Application filed March 23, 1901. Serial No. 52,575. (No model.)

*To all whom it may concern:*

Be it known that we, SANDFORD NORTHROP and ANDREW G. STEINBRENNER, citizens of the United States, and residents of the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Side Bearings for Railway-Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to that class of bearings used to support the body-bolsters of railway-cars in such manner as to reduce the frictional bearing between said bolsters and the parts by which they are supported and on which they ride.

The invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of our bearing looking at the outer face thereof. Fig. II is a longitudinal sectional view taken on the line II II, Fig. I. Fig. III is a cross-sectional view taken on the line III III, Fig. II. Fig. IV is a detail view illustrating the engagement of the outer rock-shaft rocker-arm with the bolster-receiving plate. Fig. V is a detail perspective view of the connection between the inner rock-shaft rocker-arm and the roller-carriage.

1 designates the body of the bearing, preferably of box form, which is designed to be applied to the truck-bolster by suitable means, such as bolts passed through ears 2, that project from the inner face of the body 1.

3 designates a hardened bearing-plate mounted on top of the body 1, one end of said plate being seated beneath an overhanging shoulder 4, integral with the body 1, the opposite end of the plate being retained in position by a cross-strip 5, that is riveted or otherwise suitably affixed to the body 1. The bearing-plate 3 is of sufficient width to project beyond the side faces of the body 1, so that the edges of the plate will overhang beyond the sides of said body to receive the engagement of retaining-ears 6 pendent from the roller-receiving carriage 7 in order that

said carriage may be held from displacement in its movement above the body 1.

8 designates the bearing-rollers, positioned within the carriage 7 so as to rotate freely therein on the bearing-plate 3.

9 designates a bolster-receiving plate that receives the body-bolster of the car, which bolster may be suitably secured to said plate, such as by bolts passed through ears 10. (See Fig. III.) Fixed to the under side of the plate 9 is a hardened-metal bearing-plate 12, that is adapted to ride on the rollers 8, as seen in Figs. II and III.

13 designates a rock-shaft mounted in sockets 14, contained by the side walls of the body 1. Fixed to one end of the rock-shaft 13 is a rocker-arm 15, that is provided with an extension-head 16, that projects upwardly beyond the carriage 7 into a position between two lugs 11, projecting from the outer face of the bolster-receiving plate 9, such engagement between the rocker-arms 15 and bolster-receiving plate 9 providing for the movement of said parts in unison with each other. On the other end of the rock-shaft 13 is a rocker-arm 17. The rocker-arms 15 and 17 are preferably both provided with connection to the carriage 7 by means of links 18, one end of one of said links being pivotally joined to the rocker-arm 15 and the opposite end being pivotally joined to the carriage and the other link being similarly connected to the rocker-arm 17 and the carriage.

It will be seen from the foregoing that any movement of the body-bolster is communicated to the bolster-receiving plate 9, and the movement of said plate in turn acts to move the carriage 7 by reason of the engagement between said plate 9 and the rocker-arm 15 and the connection by the links 18 from the rocker-arms 15 and 17 to the carriage 7. The carriage is therefore always retained centralized beneath the bolster and the plate 9, that receives said bolster, so that the rollers 8 are in correct position to receive the weight from the bolster to which they are subjected.

While we have described the rock-shaft as being carried by the truck-bolster and having engagement through an arm with the

body-bolster, yet it is evident that the parts might be inverted or turned upside down, so that the body-bolster would carry the shaft and the arm having engagement with the truck-bolster.

The leading feature of our invention is that involved in a carriage provided with rollers and which is interposed between the truck and body-bolsters in combination with a rock-shaft carried by one of the bolsters and having an arm which has engagement with the other bolster, said arm being pivotally connected to the carriage, so that as the truck pivots on its center bearing the carriage will be caused to move without any frictional binding between the arm of the rock-shaft and the carriage.

It will be seen by referring to Fig. IV that the head 16 of the rocker-arm 15 extends above the lugs 11, carried by the bolster-receiving plate 9, the said head being thus extended to a sufficient height to render it impossible for the head to become disengaged from the bolster-receiving plate in any vibration or movement of the plate and the bolster thereon.

We claim as our invention—

1. In a side bearing, the combination of a body carried by the truck-bolster, the carriage movably mounted on said body, a rock-

shaft journaled in said body, a rocker-arm carried by said rock-shaft and engaging a plate carried by the body-bolster, and a link connecting said rocker-arm to said carriage, substantially as described.

2. In a side bearing, the combination of a body, a carriage movably mounted on said body, a rock-shaft journaled in said body, rocker-arms carried by said rock-shaft, links connecting said rocker-arms to said carriage, one of said links having an extension-head, and a bolster-receiving plate surmounting said carriage and provided with lugs between which the extension-head of said rocker-arm is arranged to operate, substantially as described.

3. In a side bearing, the combination of a carriage provided with rollers and interposed between the truck and body-bolsters of a railway-car, a rock-shaft carried by one of said bolsters and having an arm that has engagement with the other bolster, and a link pivotally connecting said arm to said carriage, substantially as set forth.

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In presence of—

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