No. 734,862. PATENTED JULY 28, 1903.

G. L. HARVEY.

SIDE BEARING.

APPLICATION FILED MAR. 7, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. I.

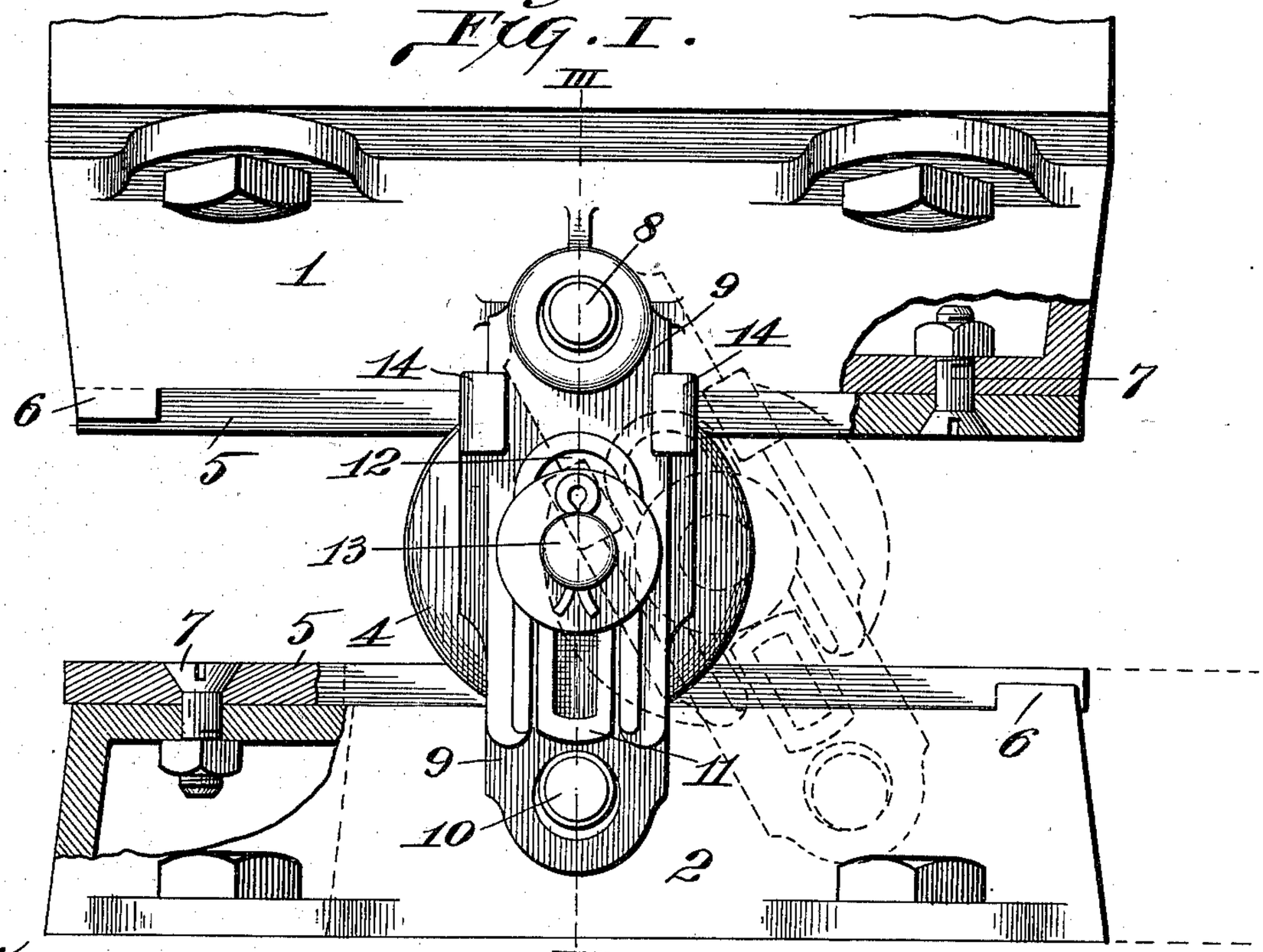
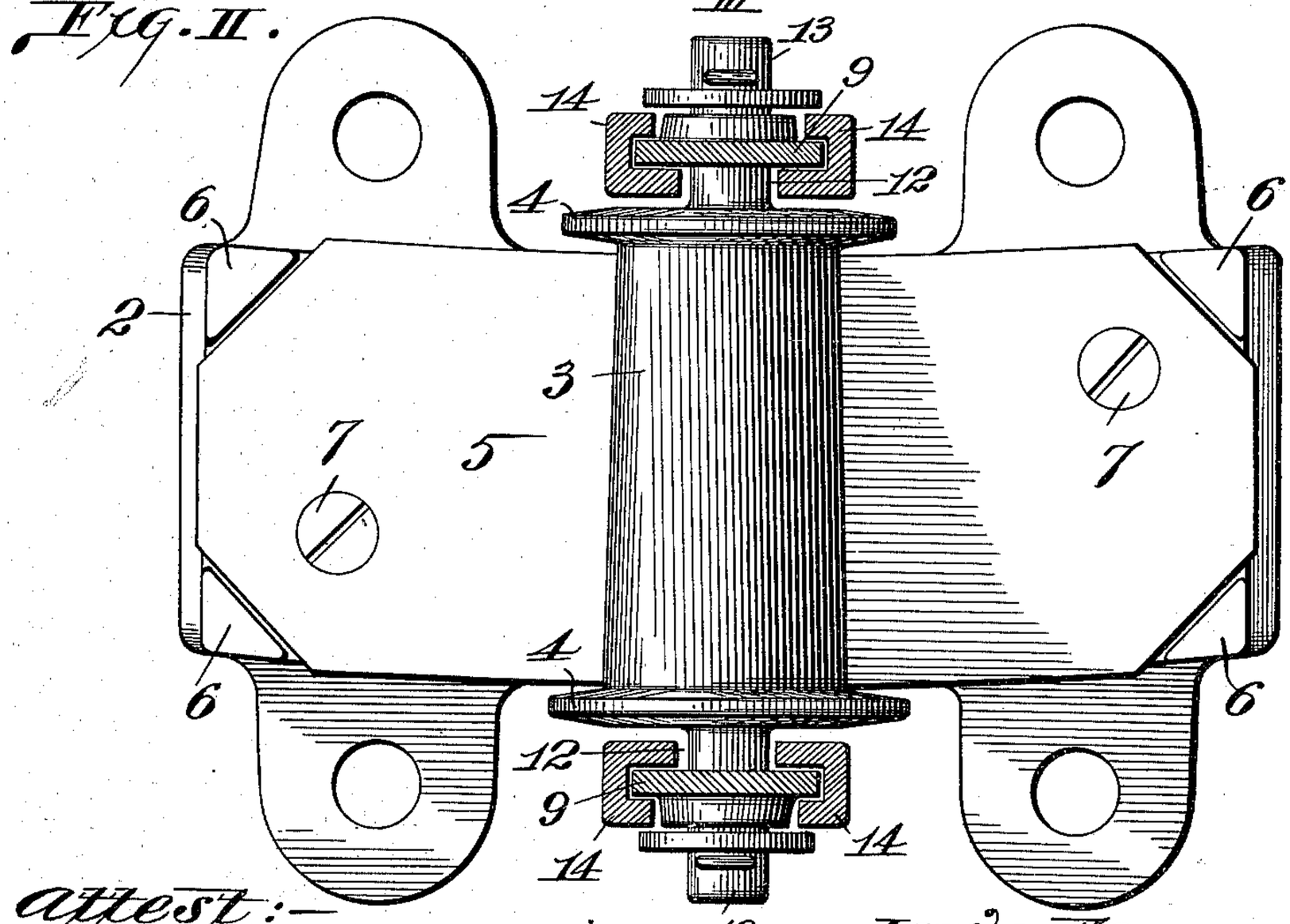


Fig. II.



Attest:—
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E. S. Knight

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. III.

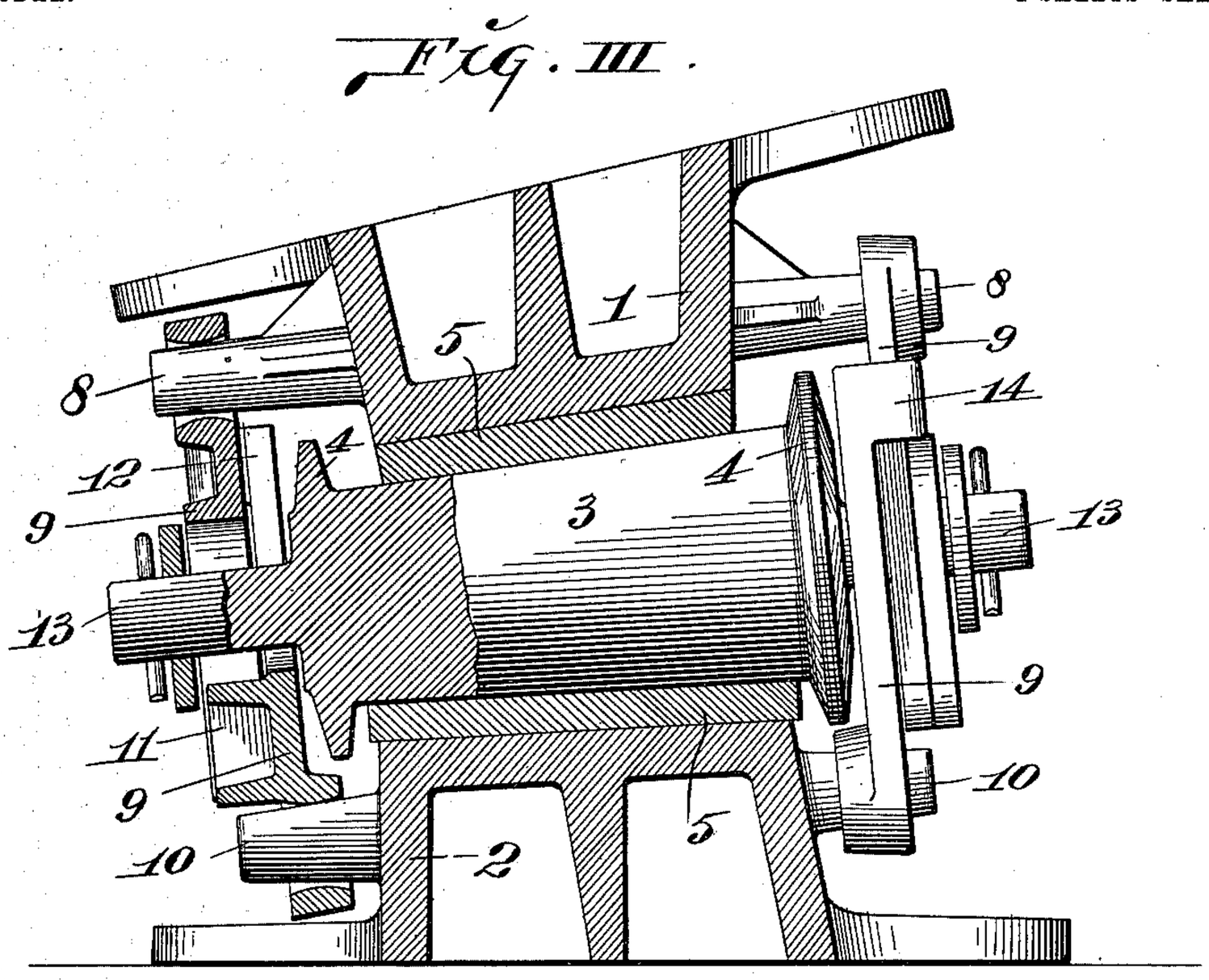
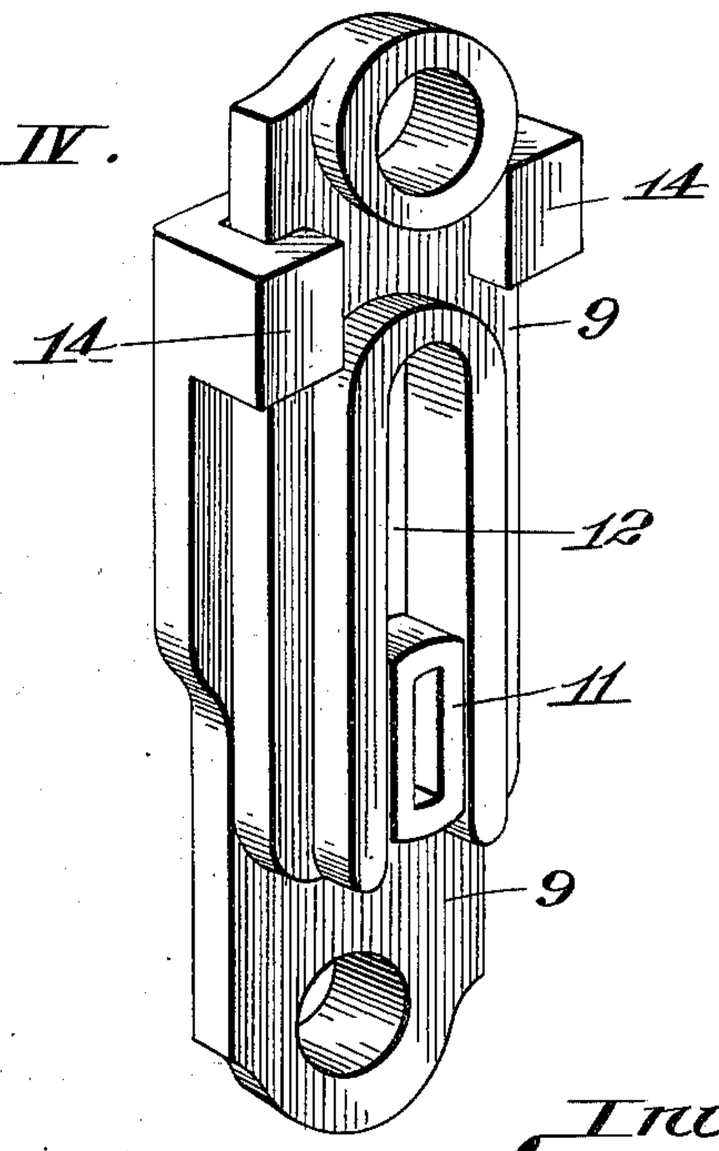


Fig. IV.



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No. 734,862. Patented July 28, 1903.

UNITED STATES PATENT OFFICE.

GEORGE L. HARVEY, OF CHICAGO, ILLINOIS.

SIDE BEARING.

SPECIFICATION forming part of Letters Patent No. 734,862, dated July 28, 1903.

Application filed March 7, 1903. Serial No. 146,653. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. HARVEY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Side Bearings, 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 an improved side bearing for railway-cars; and the invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a side view, part in section, of my improved side bearing. Fig. II is a top view of the lower bearing-plates and the roller, the telescoping levers being shown in section. Fig. III is a vertical transverse section taken on line III III, Fig. I, one of the telscoping levers being shown in elevation. Fig. IV is a perspective view of one of the levers.

Referring to the drawings, 1 represents the upper bearing-plate adapted to be secured to the upper or body bolster of a railway-car, and 2 is a lower bearing-plate adapted to be secured to the truck-bolster of the car. Between these bearing-plates is located a roller 3, that has end flanges 4, adapted to come against the lower bearing-plate and prevent too much lateral movement of the roller. The plates 1 and 2 bear against the roller 3, and I prefer to form these plates with hardened inserts 5 to take the wear of the roller. The inserts are held firmly in place by corner projections 6 on the bearing-plates that receive the cut-off corners of the inserts, as shown in Fig. II, and hold the inserts from being moved by the roller. The inserts are held to the bearing-plates by screws 7.

Projecting from the sides of the upper bearing-plate is a pair of stems 8, that pass through perforations in the upper ends of divided telescoping levers 9, and projecting from the sides of the lower bearing-plate are a pair of stems 10, that pass through perforations in the lower ends of the levers. The stems 8 and 10 are made somewhat tapering, being smallest at their outer ends, and the openings in the levers that receive these stems are made conical or largest at their outer ends, so that in case of any angular motion of the stems in rounding a curve there will be no binding effect between the stems and the levers, but the latter will be allowed to play in the openings and will not become broken or bent out of shape.

The lower part or member of each lever 9 has a boss 11 on its outer face and the upper part of each of these members has a slot 12 to receive the trunnion 13 on the end of the roller 3. The upper end of this member of the lever is formed with L-shaped lugs 14, that embrace the edges of the upper member of the lever. The upper member of each lever is bifurcated to straddle the boss 11 and the trunnion of the roller, so that the two parts of the lever will shorten up and lengthen out as the car rounds a curve, while the trunnions 13 will at the same time have the necessary play or movement in the slots of the two members of the levers. By the use of telescoping, contracting, and elongating levers comparatively short levers can be used, and this is important, inasmuch as the distance between the upper and lower bolsters that must accommodate the levers is quite limited.

As shown in Fig. III, the upper bearing-plate is somewhat narrower than the other and narrower than the length of the roller between its flanges. This is important, as provision is thus made for the longitudinal movement of the bolsters with relation to each other, (a condition that must be allowed for in car construction.) The flanges on the roller thus do not interfere with the endwise movement of the bolsters, while they by coming against the lower bearing-plate prevent too much endwise movement of the roller.

It is apparent that the narrow bearing-plate may be either the upper or the lower one.

The construction as a whole is inexpensive, durable, and effective in its operation.

I claim as my invention—

1. In a side bearing, the combination of upper and lower bolster-carried members, one of which is narrower than the other, an anti-friction-roller interposed between said members, and means for controlling the end thrust of said roller, substantially as and for the purpose set forth.

2. In a side bearing, the combination of upper and lower bolster-carried members, one

of which is narrower than the other, an anti-friction-roller interposed between said members, means for controlling the end thrust of said roller, and extensible levers pivoted to said bolster-carried members and engaged by said roller, substantially as set forth.

3. In a side bearing, the combination of upper and lower bolster-carried members, and extensible levers pivoted to said members; said levers comprising a part having a boss and provided with a slot, and a second part having a fork straddling said boss and registering with the slot in the first-named part, and a roller between said bolster-carried members, substantially as set forth.

4. In a side bearing, the combination of upper and lower bearing-plates, a roller located between the plates and having end flanges to limit its lateral movement, and telescoping levers pivotally connected to the bearing-plates and to the roller, substantially as set forth.

5. In a side bearing, the combination of upper and lower bearing-plates, a roller located between the plates, telescoping levers pivotally connected to the roller and pivotally connected to the bearing-plates by means of tapering stems formed on the plates and which fit in openings formed in the ends of the levers, substantially as set forth.

6. In a side bearing, the combination of upper and lower bearing-plates, a roller fitting between the plates, and telescoping levers pivotally connected to the roller and pivotally connected to the bearing-plates by means of stems on the plates fitting in conical openings in the levers, substantially as set forth.

7. In a side bearing, the combination of upper and lower bearing-plates, a roller located between the plates, and telescoping levers pivotally connected to the roller and pivotally connected to the bearing-plates by means of tapering stems formed on the plates and which fit in conical openings formed in the levers, substantially as set forth.

8. In a side bearing, the combination of upper and lower bearing-plates, a roller fitting between the plates, and telescoping levers pivotally connected to the bearing-plates and to the rollers, and which consist of a lower member having a boss and with L-shaped lugs embracing the upper member of the lever, and the upper member of the lever being bifurcated to straddle said boss, substantially as set forth.

9. In a side bearing, the combination of upper and lower bearing-plates, a roller located between the plates, telescoping levers pivotally connected to the roller and pivotally connected to the bearing-plates by means of stems formed on the plates and which fit in openings formed in the ends of the levers, substantially as set forth.

10. In a side bearing, the combination of upper and lower bearing-plates, a flanged roller located between the bearing-plates and levers connected to said roller and bearing-plates; one of said bearing-plates being narrower than the other, substantially as set forth.

11. In a side bearing, the combination of upper and lower bearing-plates, a flanged roller located between the plates, and means for connecting the roller to the bearing-plates, one of said bearing-plates being narrower than the other, substantially as set forth.

12. In a side bearing, the combination of upper and lower bearing-plates, a flanged roller located between the plates, and telescoping levers pivotally connected to the roller and to the bearing-plates, substantially as set forth.

GEORGE L. HARVEY.

In presence of—
HOWARD SHAW,
G. W. E. FIELD.