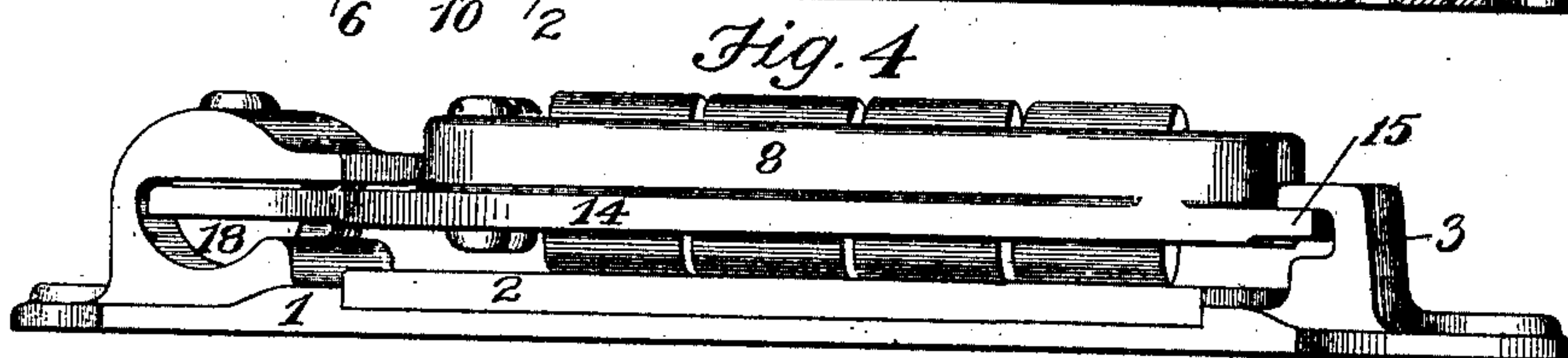
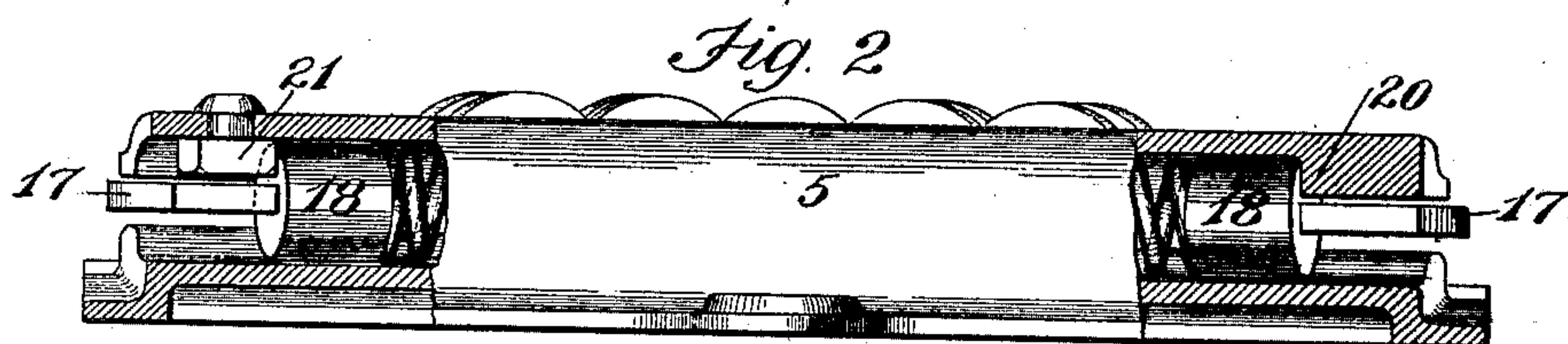
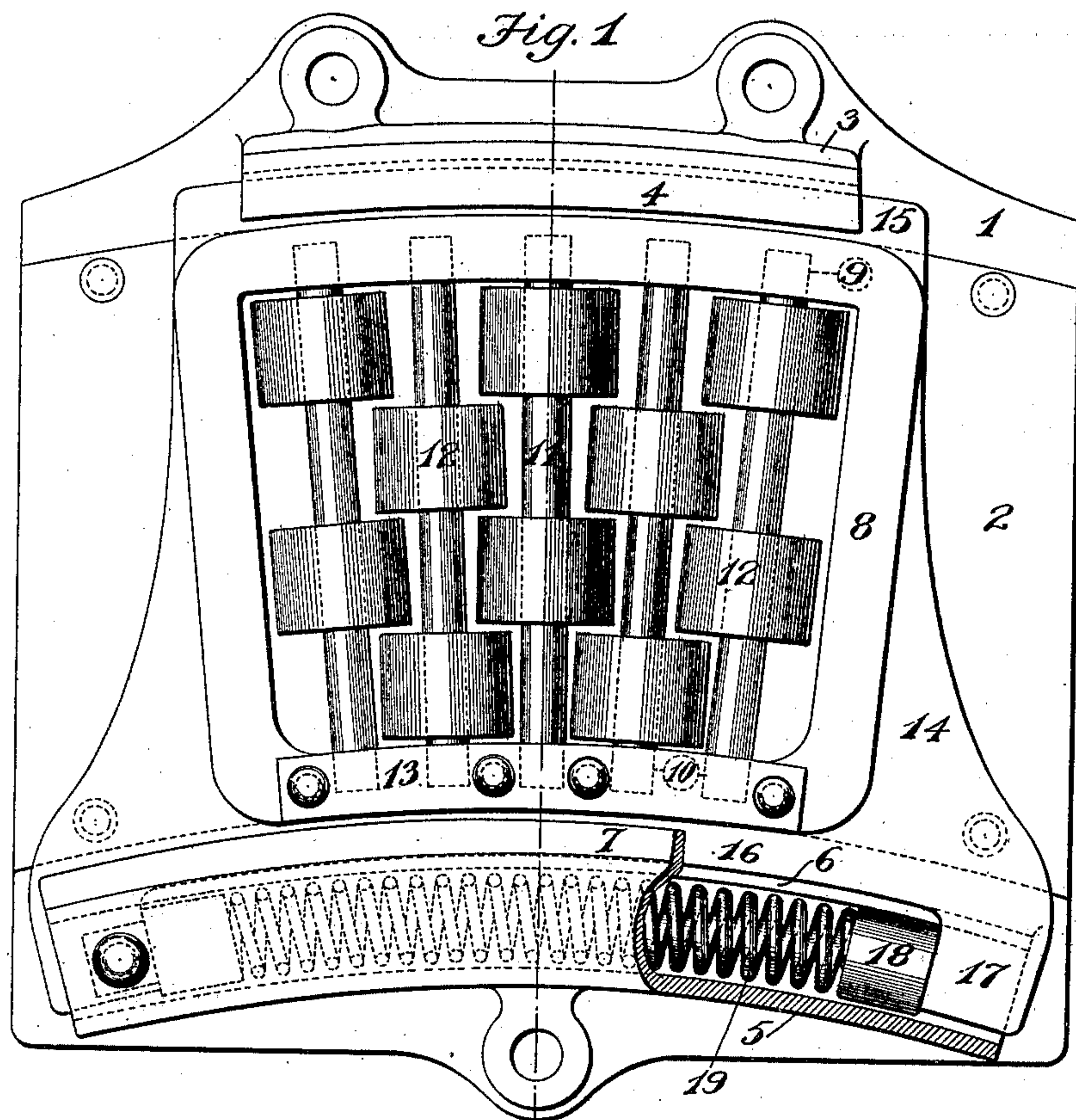


No. 695,849.

Patented Mar. 18, 1902.

J. C. WANDS.
ROLLER SIDE BEARING.
(Application filed Nov. 8, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN C. WANDS, OF ST. LOUIS, MISSOURI.

ROLLER SIDE BEARING.

SPECIFICATION forming part of Letters Patent No. 695,849, dated March 18, 1902.

Application filed November 8, 1901. Serial No. 81,584. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WANDS, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Roller Side Bearings, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view, partly in horizontal section, of my improved roller side bearing. Fig. 2 is a side elevational view, partly in section. Fig. 3 is a vertical cross-sectional view on line 3 3, Fig. 1; and Fig. 4 is a side elevational view.

This invention relates to a new and useful improvement in side bearings designed particularly for use in connection with railway rolling-stock. The side bearing shown in the accompanying drawings is of that type known as "roller" side bearing, and in practice is arranged near the ends of a truck-bolster and on each side of the center plate or bearing, said truck-bolster side bearings coöperating with the side bearings arranged on the body-transom, which transom forms the support for one end of the car-body.

The objects of this present invention are to simplify the construction of roller side bearings and to provide resilient means whereby the antifriction device is returned to a normal or central position after each operation and independently of the movement of the top side bearing.

My invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings, 1 indicates what I will designate as the "base-plate" of my improved side bearing, said base-plate carrying a track-plate 2, which track-plate is preferably made up of hard metal and removable, so as to be renewed when worn.

3 indicates a wall rising from one side, preferably the outer, of the base-plate, said wall having an overhang 4. 5 indicates a spring-housing rising from the opposite or inner side of the base-plate, said housing be-

ing formed with a slot 6, preferably, throughout its length, said slot opening inwardly, and said housing also having an overhang 7 extending inwardly from the lower edge of its top wall.

8 indicates a frame provided with sockets 9 in one wall and recesses 10 in the opposite wall. These sockets and recesses are alined, so as to receive spindles 11, which are journaled therein, said spindles carrying rollers 12. Rollers 12 overlap each other and are staggered and nested, as shown, being preferably loose on their respective spindles, whereby they may rotate independently of each other. A plate 13 is secured to the frame 8 to hold the spindles in proper position in the recesses 10.

14 indicates a web or fin extending from the frame 8, one portion of said fin, as indicated at 15, projecting under the overhang 4, and another portion of said fin, as indicated at 16, projecting under the overhang 7.

17 indicates abutments projecting into the spring-housing at each end of the fin 15. These abutments 17 are designed to operate through the slot 6.

18 indicates spring-followers arranged in the spring-housing, between which is confined a coiled spring 19. A fixed stop or abutment 20 is arranged at one end of the spring-housing, and a removable stop or abutment 21 is arranged at the opposite end of the spring-housing, with which abutments or stops are designed to coöperate the spring-followers. The inner walls of the abutments 17 in the normal position of the parts are substantially in the vertical plane of the inner faces of the abutments 20 and 21, as shown in Fig. 2.

In assembling the bearing the track-plate 2 is preferably riveted in position. The frame 8, carrying the antifriction-rollers, is assembled, the rollers being strung on their respective spindles, and the spindles inserted in the sockets 9, which, as shown in Fig. 3, are enlarged at their bottom walls to permit of the tilting of the spindles and the subsequent dropping of the spindles in position in the recesses 10. The plate 13 is now riveted in position. The antifriction-rollers being assembled in the frame, the frame is now in readiness to be introduced into position, and

to accomplish this the spring 19 is compressed between its followers and the followers inserted between the projections 17. The stop 21 is of course not in position and enables the roller-frame to be inserted at one side of the bearing, so that the spring and its followers will be properly housed. After these parts are in position the stop 21 is secured in place.

10 It will be observed that the antifriction device is guided in such manner that it will move on an arc of a circle described from the king-pin of the truck and that the independent rotation of the several rollers will permit
15 of this movement, the rollers rotating according to the arc of their path of movement as determined by the radius of that arc. The liability of these sectional rollers to wear is thus reduced to a minimum and flat faces
20 are avoided because there is little inducement for frictional contact.

The roller as an entirety can be assembled in the shop in readiness for application. The parts are easily assembled and dismantled,
25 so that repairs and renewals may be quickly made. The base-plate and its integral walls are preferably made of malleable iron, while the track-plate is made of harder metal. The frame may also be made of malleable iron
30 and the rollers of harder metal.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown
35 and described without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a side bearing for cars, the combination with an antifriction device having lateral fins, and curved guideways cooperating with said fins, one of said guideways forming
45 a spring-housing; substantially as described.

2. In a side bearing for cars, the combination with an antifriction device having lateral guiding projections, of a spring-housing in which said projections operate, and a spring
50 in said housing; substantially as described.

3. In a side bearing for cars, the combination with an antifriction device having lateral projections, of a spring-housing forming a guideway with which said projections cooperate, followers in said housing, and a centering-spring cooperating with said followers;
55 substantially as described.

4. In a side bearing for cars, the combination with an antifriction device, of guideways therefor, and a single centering-spring for the antifriction device arranged in one of said guideways; substantially as described.

5. In a side bearing for cars, the combination with an antifriction device having guiding-fins, of curved guideways cooperating with said fins, one of said guideways forming
65 a spring-housing, and a spring in said hous-

ing which cooperates with said guiding-fins; substantially as described.

6. In a side bearing for cars, the combination with an antifriction device provided with projections, of a spring-housing into which said projections extend, a spring in said housings for cooperating with said projections, and fixed abutments in said housing one of
75 said abutments being removable; substantially as described.

7. In a side bearing for cars, the combination with an antifriction device, of a centering-spring therefor arranged to one side and
80 in horizontal plane of said antifriction device, and a housing for said spring; substantially as described.

8. In a side bearing for cars, the combination with an antifriction device, of a slotted
85 spring-housing, projections extending from said antifriction device through the slot into said housing, and a spring in said housing cooperating with said projections; substantially as described.

9. In a side bearing for cars, the combination with an antifriction device, of a spring-housing formed with a slot in its inner wall, projections at the corners of the antifriction device which extend through the slot into the
95 housing, a spring in said housing cooperating with said projections, and fixed stops in said housing for cooperating with said spring; substantially as described.

10. In a side bearing for cars, the combination with an antifriction device, of a spring-housing formed with a slot in its inner wall, projections at the corners of the antifriction device which extend through the slot into the
100 housing, a spring in said housing cooperating with said projections, and fixed stops in said housing for cooperating with said spring, one of said stops being removable; substantially as described.

11. In a side bearing for cars, the combination with an antifriction device, of a slotted
110 spring-housing, a spring in said housing for centering the antifriction device, and an overhanging lip extending over the spring-housing to guide the antifriction device in its movement; substantially as described.

12. In a side bearing for cars, the combination with a base-plate having an overhanging guiding wall at one side and a spring-housing at the opposite side, the inner wall of said
120 spring-housing being slotted, of fixed abutments in said spring-housing, spring-followers, a spring, and an antifriction device provided with projections which pass through the slot and cooperate with the spring-followers; substantially as described.

13. In a side bearing for cars, the combination with a frame formed with vertically-enlarged sockets in one side and recesses in the opposite side, of spindles arranged in said
130 sockets and recesses, a removable plate fitting over said recesses, and sectional rollers loosely arranged on said spindles; substantially as described.

14. In a side bearing for cars, the combination with a frame, of spindles loosely journaled therein, sectional rollers loosely mounted on said spindles, guiding-fins 15 and 16 on
5 said frame, projections 17, and a centering-spring coöperating with said projections 17; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 6th day of November, 1901.

JOHN C. WANDS.

Witnesses:

GEORGE BAKEWELL,
G. A. PENNINGTON.