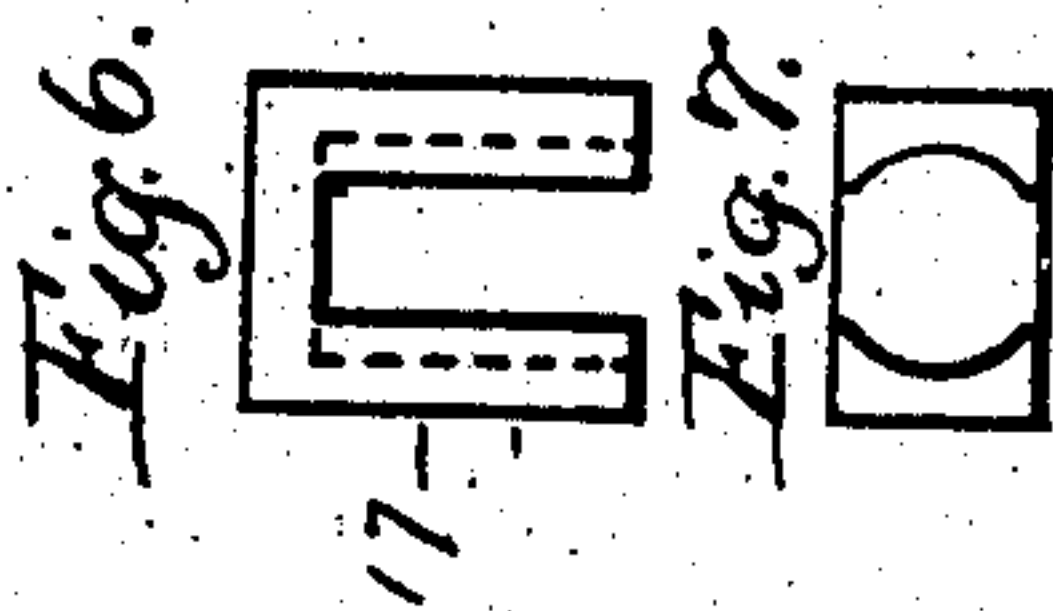
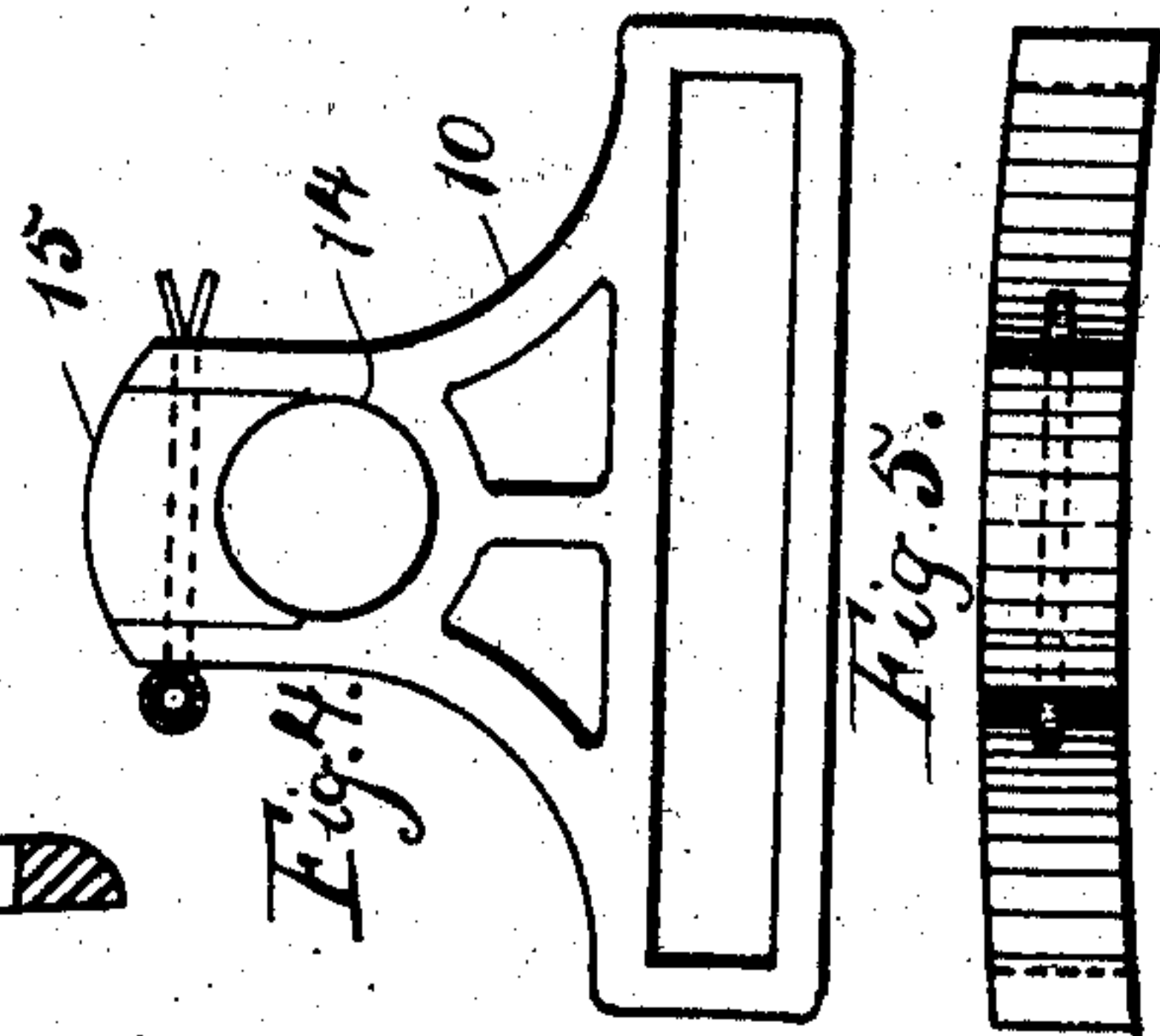
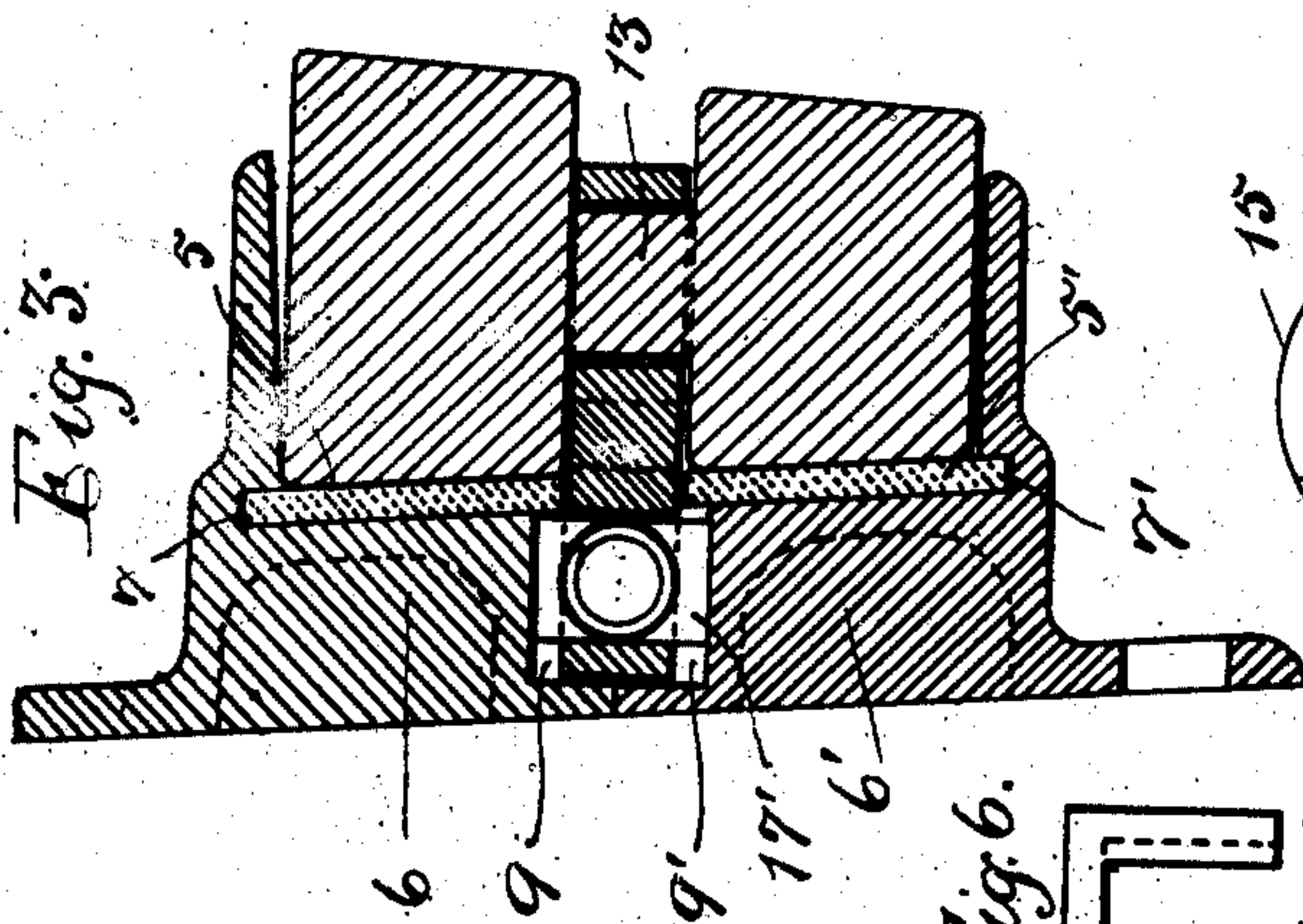
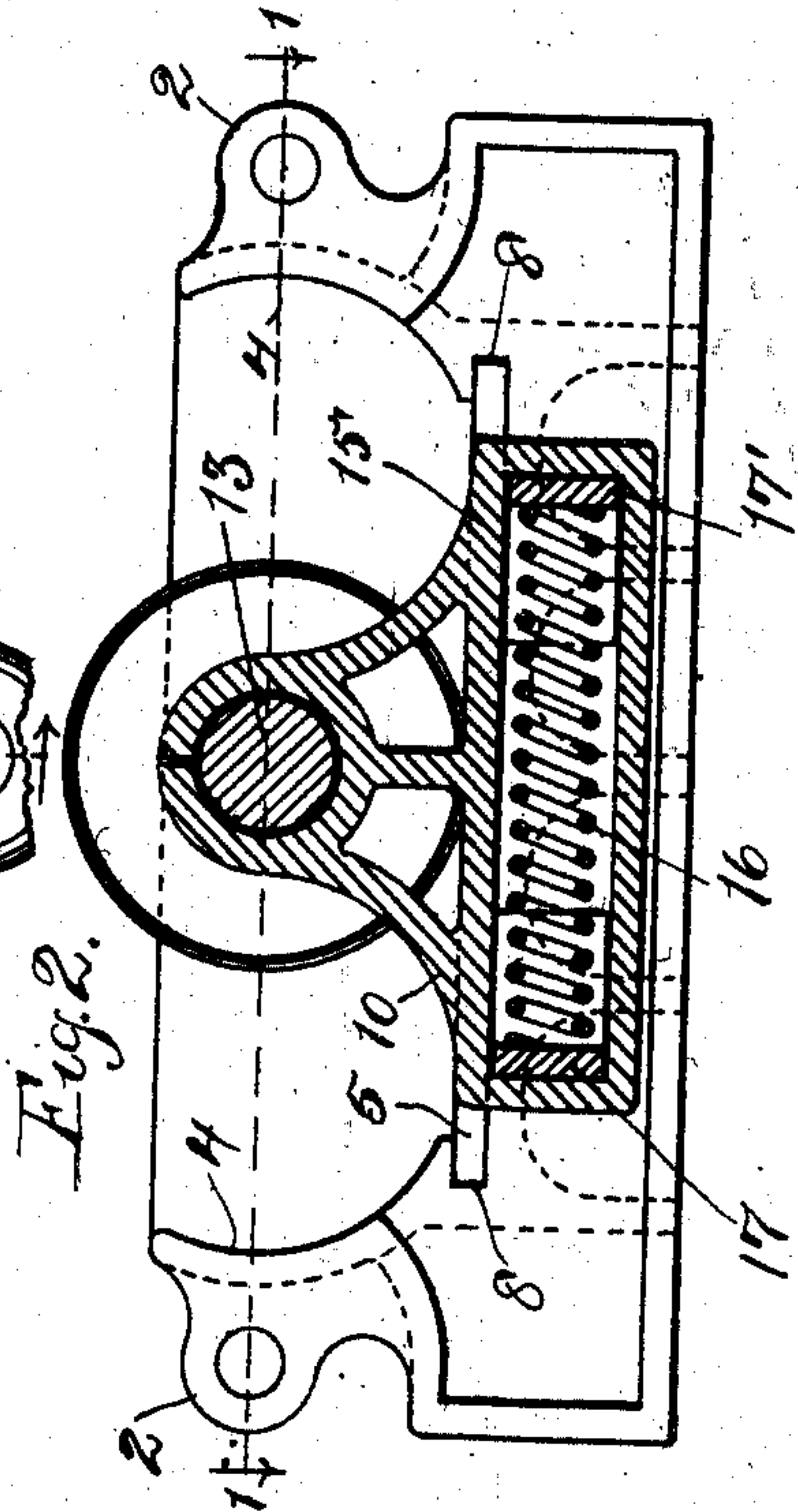
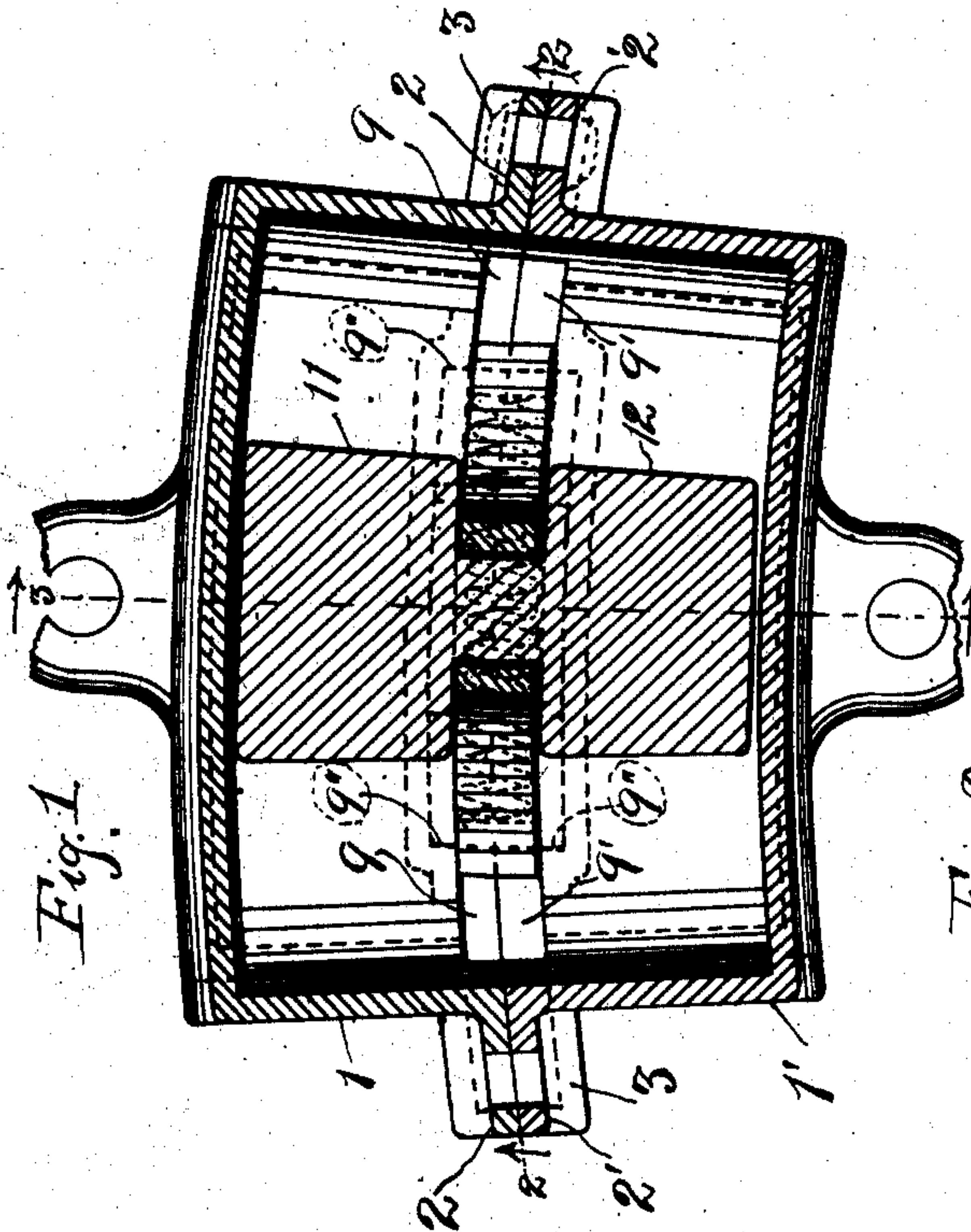


No. 846,609.

PATENTED MAR. 12, 1907.

H. M. PERRY.  
SIDE BEARING FOR CARS.  
APPLICATION FILED DEC. 18, 1906.



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# UNITED STATES PATENT OFFICE.

HUBERT M. PERRY, OF CHICAGO, ILLINOIS, ASSIGNOR TO HENRY D. LAUGHLIN, OF CHICAGO, ILLINOIS.

## SIDE BEARING FOR CARS.

No. 846,609.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed December 18, 1906. Serial No. 348,414.

*To all whom it may concern:*

Be it known that I, HUBERT M. PERRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Side Bearings for Cars, of which the following is a specification.

This invention relates to improvements in side bearings for cars, and refers more specifically to a side bearing of that type in which one or more antifriction-rollers are mounted to traverse ways in a casing-frame, which latter is in turn secured either to the body of the car or truck bolster in such manner that the periphery of the roller or rollers are adapted for engagement with the opposed member of the car structure.

Among the salient objects of the invention are to provide a construction in which a centering-frame is mounted upon and arranged to reciprocate with the roller or rollers and serves to constitute a caging for a spring which is compressed by the reciprocatory movements of the frame; to provide in a device characterized as above a simple construction in which a single spring is made to serve as the means of centering the rollers from both directions; to provide a side bearing the casing-frame of which is constructed in two parts separable from each other in a longitudinal and vertically-disposed plane or line of separation, thereby facilitating the construction of the parts, the assembling of the same, and rendering them more readily accessible in case it be desired to take the bearing members apart; to provide a construction in which the disposition of the spring with reference to the parts acted upon is such as to secure or approximately secure equilibrium of action; to provide a construction in which the ways upon which the rollers travel are formed by wear-plates so arranged that they may be assembled and secured in position with minimum trouble and cost, and in general to provide a simplified and improved construction of the character referred to.

To the above ends the invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims.

In the accompanying drawing, Figure 1 is a horizontal sectional view taken on line 1 1 of Fig. 2 and looking downwardly. Fig. 2 is a

longitudinal sectional view taken on line 2 2 of Fig. 1. Fig. 3 is a transverse sectional view on line 3 3 of Fig. 1. Figs. 4 and 5 are details in side elevation and plan, respectively, of the centering-frame. Figs. 6 and 7 are side and end elevations of one of the movable spring-abutments.

Referring to the drawing, 1 and 1' designate the two main castings, which together constitute the casing-frame of the device. These members are constructed to fit together along a central longitudinal and vertically-disposed line which is curved to conform to an arc having its radius from the center of the car-bolster, so that the casing-frame divides in the center plane of the mechanism contained therein. Each member is at each end provided with outstanding flanges, as 2 and 2', arranged to register with each other and perforated to receive uniting-rivets. (Indicated in dotted lines at 3.) The casing-frame members are so shaped that when united they form an open-top box-like casing the upper portion of which has interiorly-curved end walls 4 and the bottom of which is formed by two horizontally-disposed wear-plates 5 and 5', constituting ways upon which the antifriction-rollers travel. These wear-plates are mounted to rest upon the base portions 6 and 6' of the main castings and have their peripheral edges let into grooves formed in the respective casing members, as indicated at 7 and 7'. The wear-plates probably lie in the same horizontal plane and extend the full length of the roller-box, the end margins of the plates being also let into the grooves formed in the corresponding parts of the casing members, as indicated at 8, Fig. 2.

Between the meeting faces of the two main castings the parts thereof which lie below the wear-plates are formed longitudinally-disposed registering recesses, as 9 and 9', Fig. 1, which together form a groove or way within which extends and reciprocates the lower portion of a centering-frame 10. The end portions of this groove or way are narrower than the central portion thereof, as indicated in dotted lines in Fig. 1, abrupt abutment-shoulders 9'' being formed at the ends of the wider portion thereof.

11 and 12 respectively designate the two antifriction-rollers, which rollers are of frusto-conical shape, being tapered to correspond



to radii from the bolster-axis and arranged within the casing-frame with their axes in alinement and united with each other by means of a trunnion of reduced axis member 13. Preferably the rollers 11 and 12 and the trunnion connection therebetween are formed integrally with each other; but they may of course be separately formed and the trunnion member inserted axially through the rollers. The centering-frame 10 is of such width and thickness as to fit easily but closely within the space between the proximate ends of the two rollers, and its upper portion is apertured and constitutes a journal portion 14, which fits upon the trunnions of the rollers. This journal portion may be made with a removable journal-block 15, keyed in position, as indicated in Fig. 4, or the frame may be made of material such as malleable iron or steel susceptible of being bent and the sides of the journal portion bent over to embrace the trunnion, as indicated in Fig. 2. The lower portion 15' of the centering-frame constitutes a spring-cage, and to this end takes the form of an open-sided rectangular elongated box within which is seated the centering-spring 16. The width or thickness of the lower part of the centering-frame is less than the combined width of the central main portions of said longitudinal recesses 9 and 9' (see Figs. 1 and 3,) and the proximate edges of the wear-plates are constructed to approach closely the sides of the centering-frame, so as to guide or confine the latter and overhang the recesses 9 9', as shown clearly in Fig. 3. In each end of the cage is mounted a movable abutment, as 17 17', which is preferably socketed to receive the corresponding end of the centering-spring, and in the central or normal position of the parts these abutments rest against the respective end walls of the cage. One of said abutment members is shown in detail, Figs. 6 and 7, and as will be there seen each abutment is of a width corresponding substantially to the full width of the wider portion of the groove or way formed by the recesses 9 9' (see Fig. 3) and is free to reciprocate longitudinally therein. In the centered position of the parts the outer or remote ends of these abutments rest against or closely approach the shoulders 9". Whenever the rollers and connected centering-frame are reciprocated in either direction, however, that one of the abutments at the rear (considered with reference to the direction of movement of the roller) is carried forwardly with the centering-frame, thereby compressing the spring against the opposite abutment, which at this time is held immovable by engagement with the opposed shoulders 9". Vice versa, when the rollers are moved in the opposite direction the previously-movable abutment becomes stationary and the other abutment serves to compress the spring, thus insuring return or centering

action of the spring upon the rollers in both directions.

I claim as my invention—

1. A side bearing comprising a casing-frame, an antifriction-roller mounted to roll upon a way in said frame, an axially-disposed trunnion upon said roller a centering-frame connected with the trunnion of said roller and constructed to form a spring-cage, a coiled spring arranged within said cage, and movable abutments engaging the ends of the spring and cooperating with the centering-frame and with stops on the casing-frame.

2. A side bearing comprising a casing-frame, a pair of axially-alined antifriction-rollers mounted to roll upon ways in said frame, a trunnion connection between said rollers, a centering-frame journaled on said trunnion and provided with a cage portion, a centering-spring within said cage, movable abutments in the ends of said cage, and projecting outside the latter, there being stop-shoulders on the casing-frame, limiting the movement of the respective abutments in one direction.

3. A side bearing comprising a casing-frame, a pair of axially-alined antifriction-rollers mounted to roll upon ways in said frame, a trunnion connection between the rollers, a centering-frame journaled on said trunnion, extending laterally therefrom and provided with a cage portion located chiefly below the ways upon which said rollers travel, and between the latter, guides confining said centering-frame to a to-and-fro movement with the rollers, a centering-spring arranged within said cage and extending from end to end thereof, movable abutments arranged one in each end of said cage, there being lateral projections upon each abutment, cooperating stop-shoulders formed in the respective casing-frame members, and guides upon said casing-frame members, arranged to confine said movable abutments to to-and-fro movements with the centering-frame.

4. A side bearing comprising a main casing-frame, formed of two separately-formed members, rigidly united with each other along a joint extending longitudinally and vertically throughout the length of the casing there being registering external flanges at the respective ends of said casing members, rivets or bolts extending through said flanges and rigidly uniting said members, an antifriction-roller and spring centering mechanism arranged within said casing, and confining and retaining guides in said casing, within which said centering mechanism operates, and whereby the parts are held in assembled and cooperative relation by the union of the two casing members.

5. A side bearing comprising a main casing-frame, formed of two separately-formed members, rigidly united with each other



along a joint extending longitudinally and vertically throughout the length of the casing, one or more wear-plates seated in the interior of said casing and forming a bottom or way upon which an antifriction-roller may travel, the lateral and end margins of said wear plate or plates being let into grooves formed in the casing members and secured therein by the union of said casing members, and one or more antifriction-rollers arranged within said casing and mounted to traverse said wear plate or plates.

6. A side bearing comprising a main casing-frame, formed of two separately-formed members, rigidly united with each other along a joint extending longitudinally and

vertically throughout the length of the casing, and provided with an internal way or roller-track, an antifriction-roller mounted to traverse said way and laterally-disposed guideways parallel with said roller-track, whereby, when the parts are assembled and the casing-frame members united, the operative parts are all thereby coöperatively confined and secured.

In testimony whereof I hereunto affix my hand and seal this 28th day of November, 1906.

HUBERT M. PERRY. [L. S.]

Witnesses:

ALBERT H. GRAVES,  
EMILIE ROSE