

W. E. WOODARD.
CAR TRUCK.
APPLICATION FILED MAY 10, 1909.

934,955.

Patented Sept. 21, 1909.

FIG. 1.

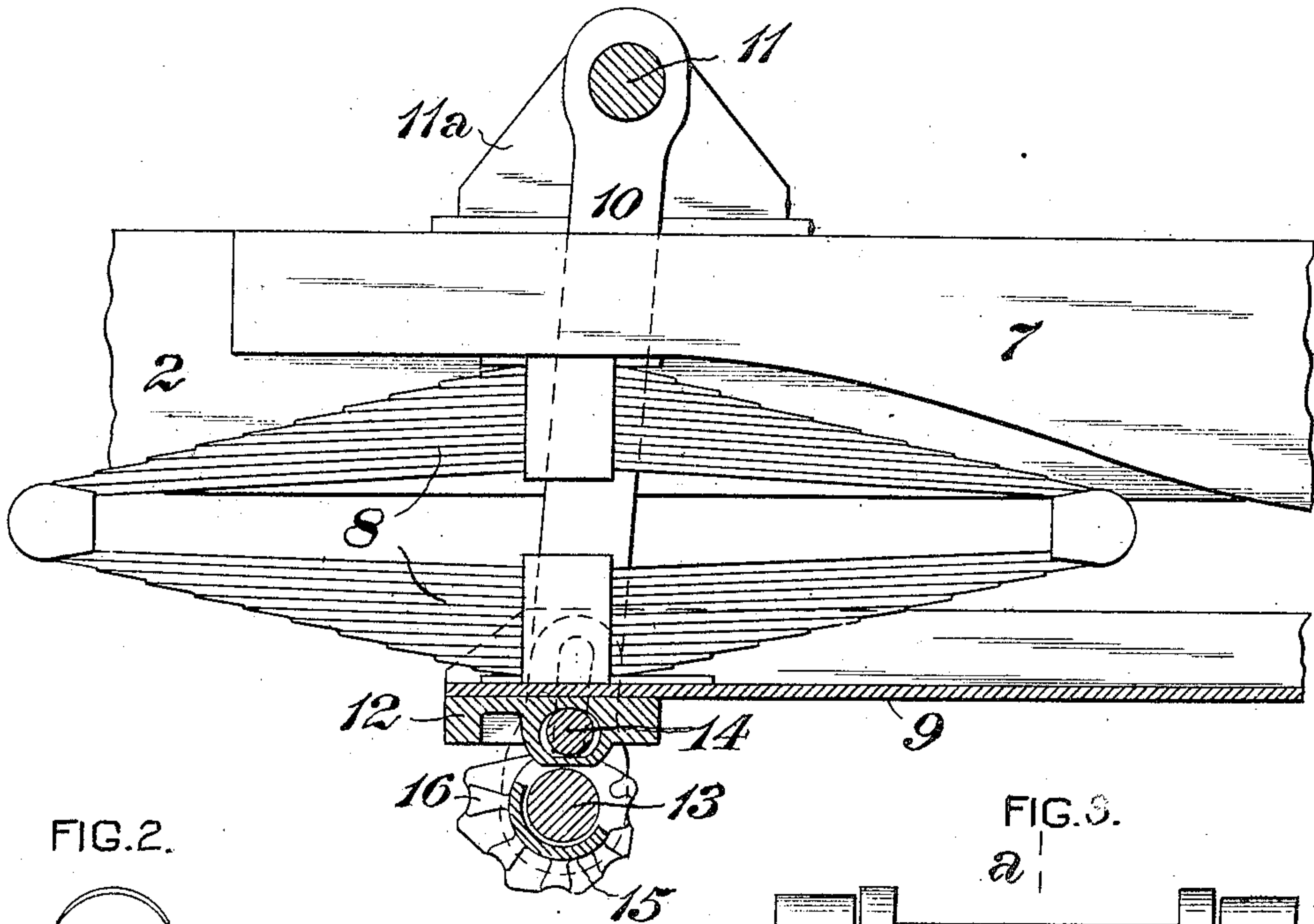


FIG. 2.

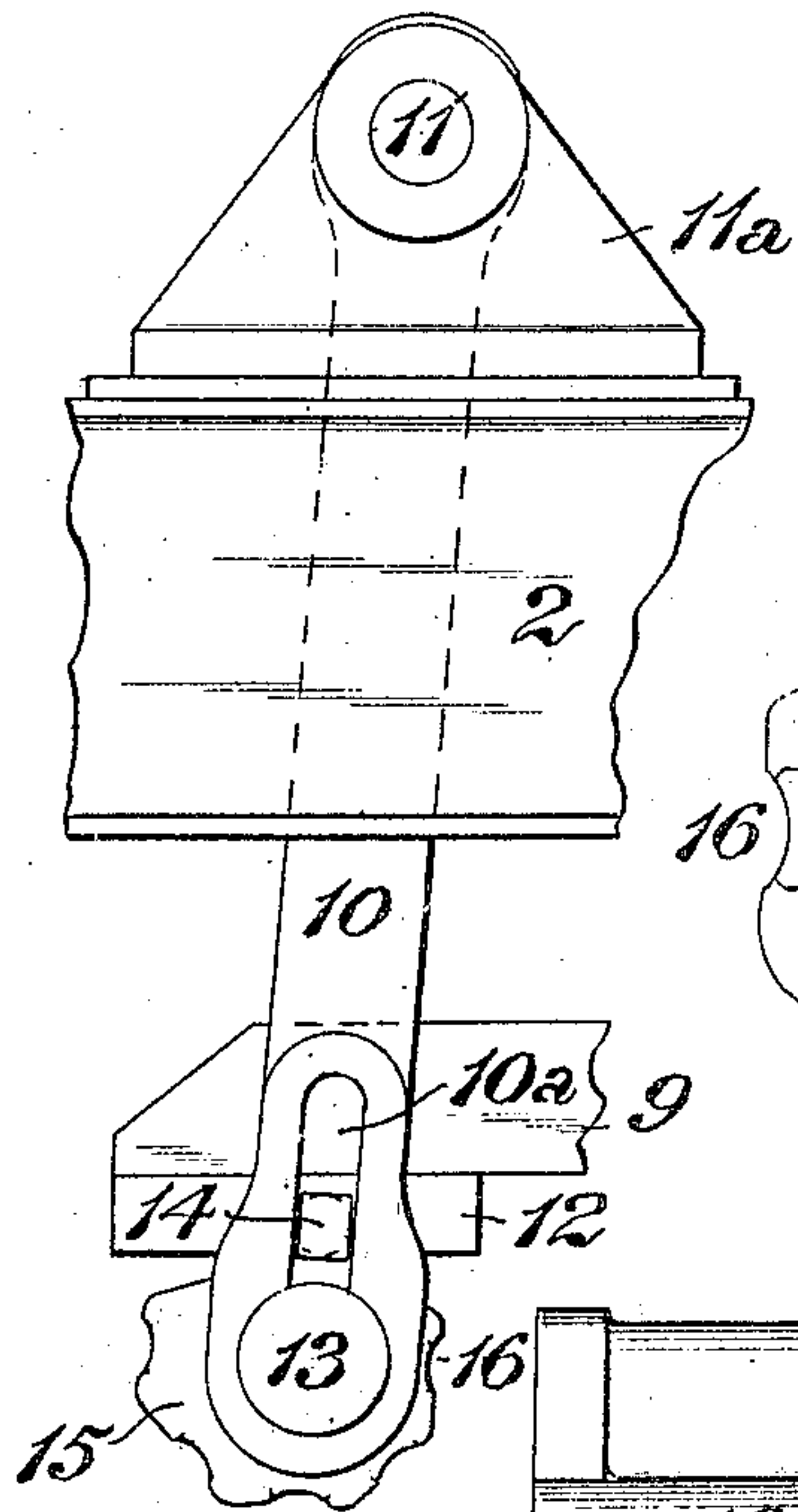


FIG. 4.

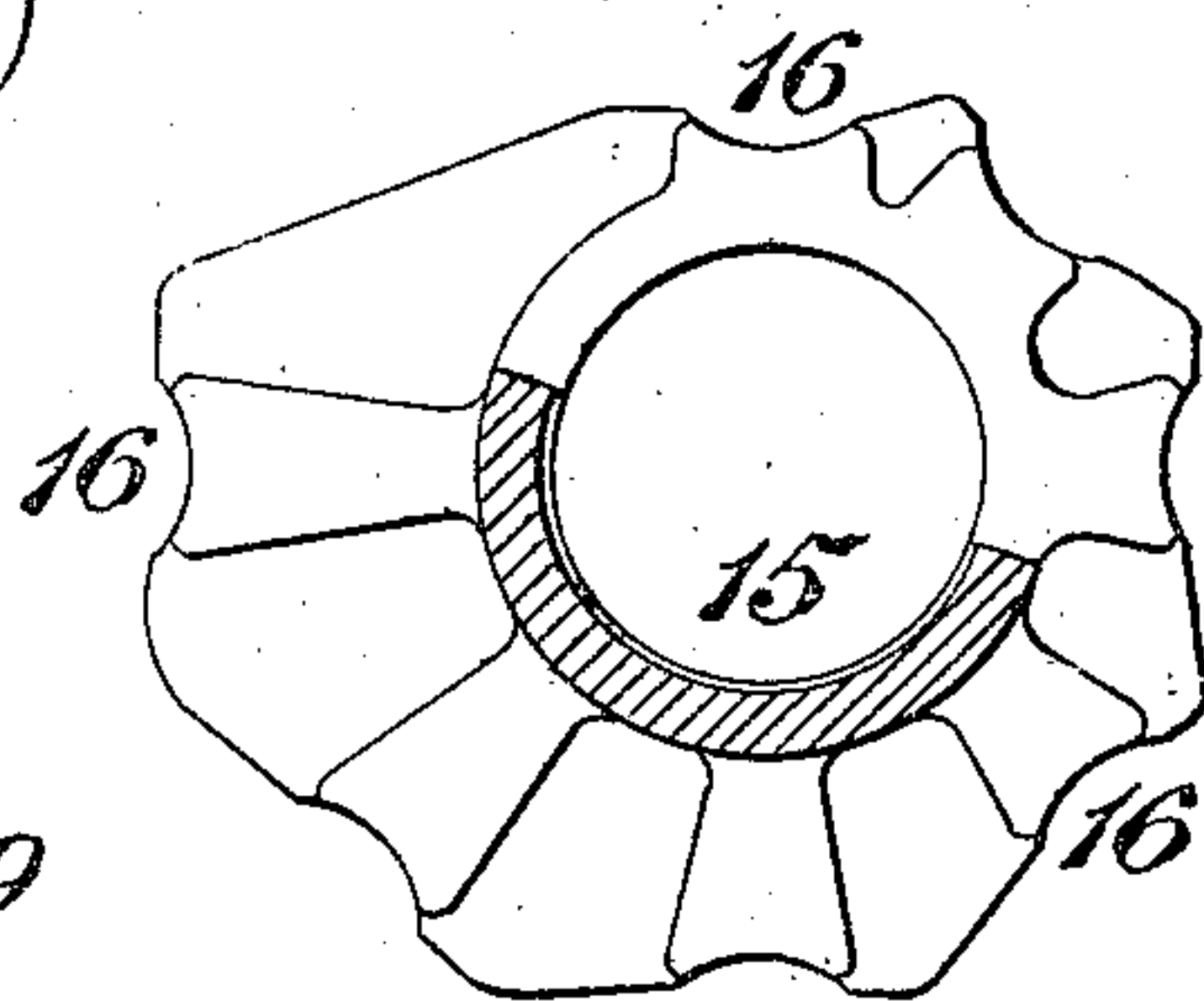


FIG. 5.

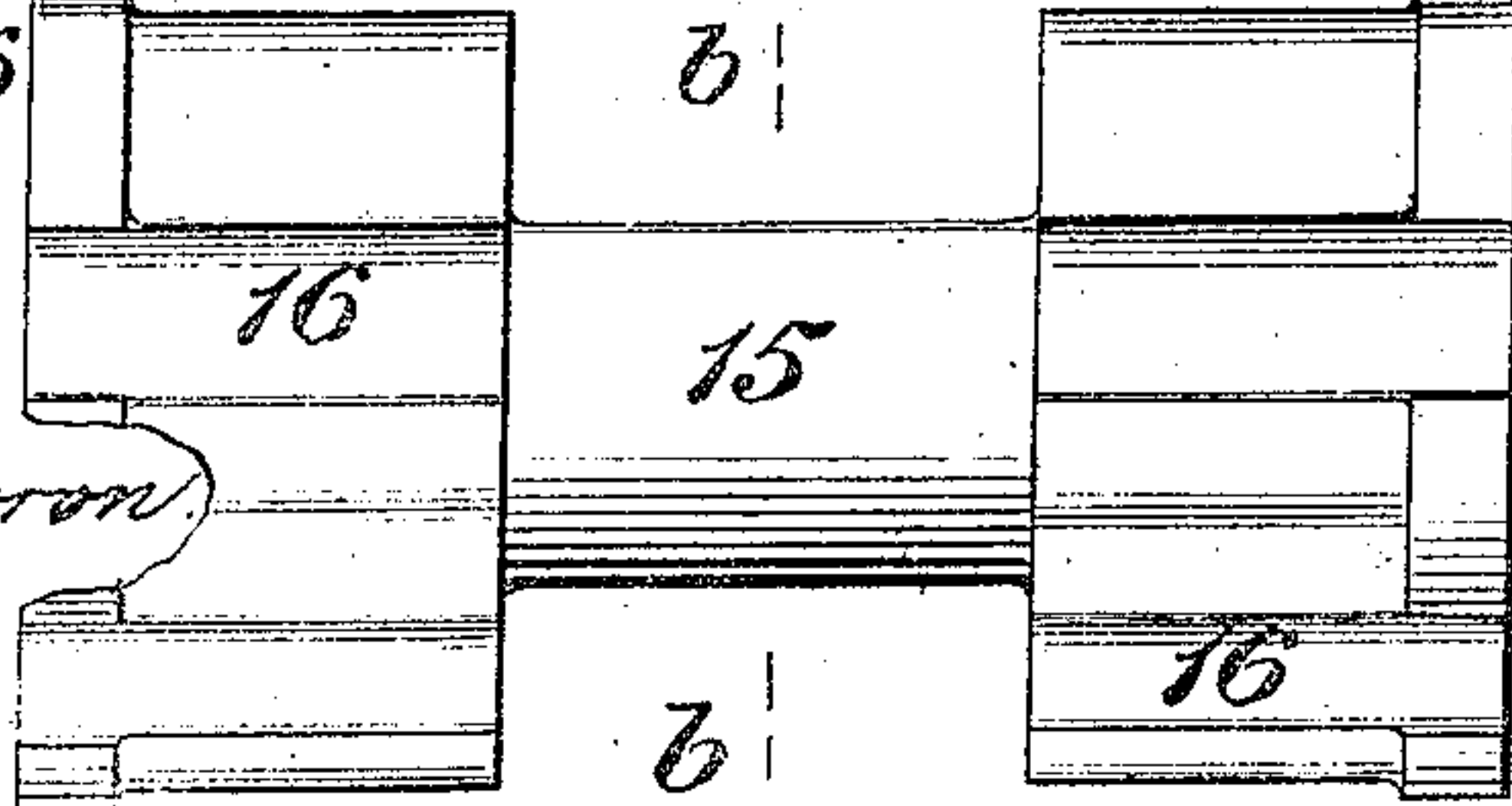
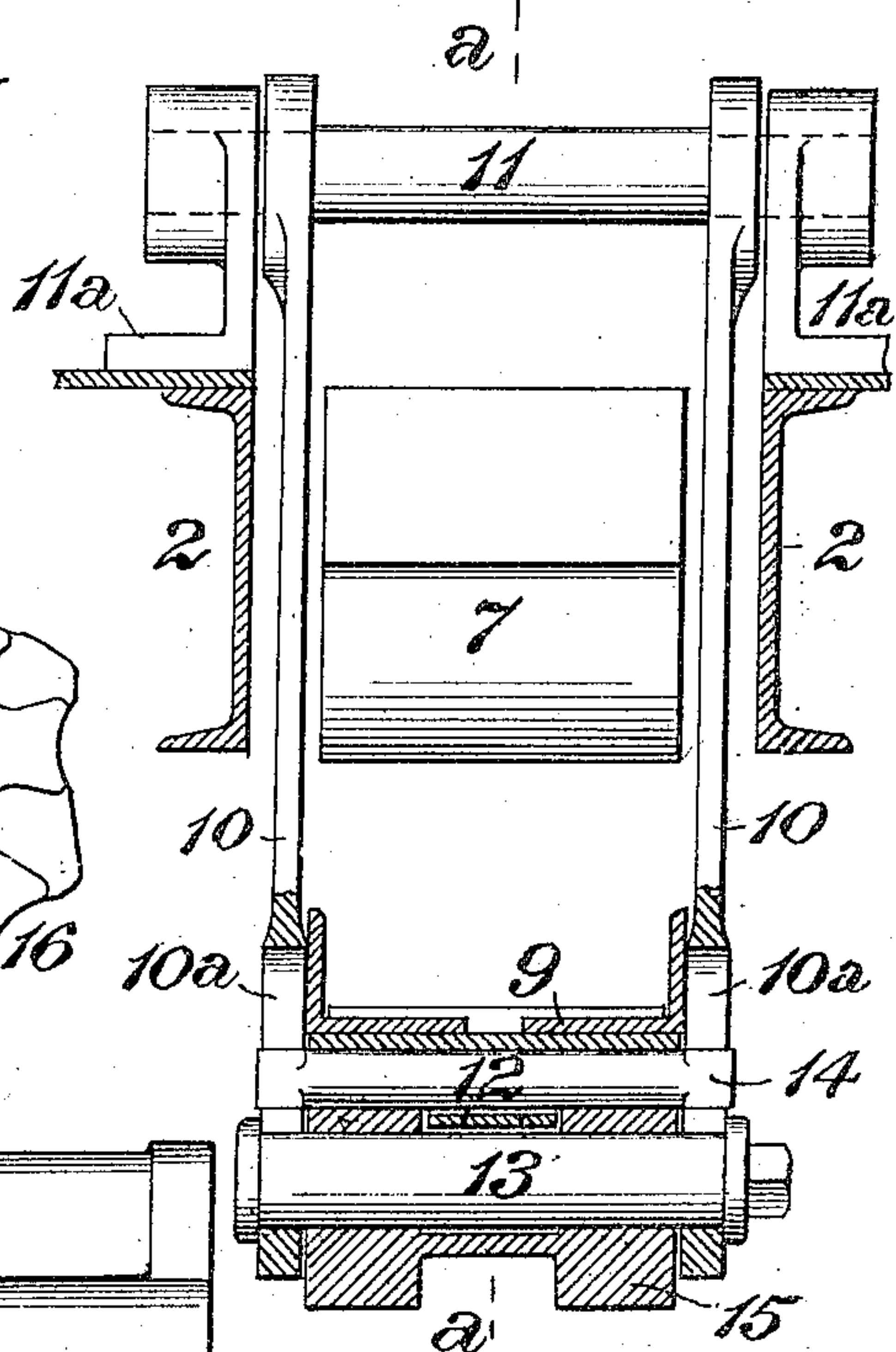


FIG. 3.



WITNESSES

James C. Herron
S. R. Bell.

INVENTOR

Wm E. Woodard,
by J. Andrew Bell,
Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM E. WOODARD, OF SCHENECTADY, NEW YORK, ASSIGNOR TO AMERICAN LOCOMOTIVE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

CAR-TRUCK.

934,955.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed May 10, 1909. Serial No. 495,083.

To all whom it may concern:

Be it known that I, WILLIAM E. WOODARD, of Schenectady, in the county of Schenectady and State of New York, have invented a certain new and useful Improvement in Car-Trucks, of which improvement the following is a specification.

My present invention relates to, and is a further improvement in, car trucks of the class or type set forth in Letters Patent of the United States No. 918,807, granted and issued to American Locomotive Company, as my assignee, under date of April 20, 1909, and its object is to provide means whereby the height of the truck bolster may be readily adjusted in order to bring the platforms of a car carried thereon to the level of station platforms or to vary the height of couplers or steps.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings: Figure 1 is a side view, partly in elevation and partly in section on the line *a a* of Fig. 3, of a portion of a truck bolster and spring plank with my improvement applied; Fig. 2, a partial side elevation of the same; Fig. 3, an end view, partly in section through the lower portions of the swing hangers and the adjacent members; Fig. 4, a view, partly in elevation and partly in transverse section on the line *b b* of Fig. 5, and on an enlarged scale, of the adjusting block; and, Fig. 5, a side view, in elevation, of the same.

My invention is herein exemplified as applied in connection with a swing or lateral motion truck bolster, 7, which is supported, through the intermediation of pairs of semi-elliptic bolster springs, 8, adjacent to its ends, on a spring plank, 9, suspended from the transoms, 2, of the truck frame, by pairs of swing hangers, 10, the upper ends of which are coupled to upper swing pivots, 11, journaled in bearings, 11^a, on the transoms. The lower ends of the swing hangers would be, in ordinary prior practice, coupled directly to lower spring hanger pivots on the spring plank.

In the practice of my invention, the lower swing hanger pivots, 13, are, as heretofore, pivotally connected to the lower ends of the swing hangers, but the connection of the pivots, 13, to the spring plank, is effected through the intermediation of interposed adjusting devices, as now to be described. Longitudinal slots, 10^a, are formed in the swing

hangers, extending upwardly from the holes through which the pivots, 13, pass, and bearing pins, 14, which pass through longitudinally slotted holes in seats, 12, fixed to the bottom of the spring plank, 9, at each of its ends, extend into the slots, 10^a. The end portions of the bearing pins are squared or flattened to fit in the slots, being thereby prevented from turning therein, and the pins are shouldered adjacent to said end portions, so as to prevent movement transversely to the swing hangers.

As the spring plank bears on the bearing pins, 14, the weight carried upon the spring plank and the bolster, 7, is transmitted to the swing hangers through said bearing pins, and accordingly, as the vertical distance between the axes of said pins and those of the lower swing hanger pivots, 13, is made greater or less, the spring plank and bolster will be correspondingly raised or lowered, as the case may be. In order to enable such variation of vertical distance to be readily made when desired, I provide a rotatable adjusting block, 15, through which the pressure of the weight acting on the bearing pins, 14, is transmitted to the lower swing hanger pivots, 13. The adjusting block, 15, comprises a segmental body, fitting freely around the lower portion of the pivot, 13, and two end portions or heads, each having a plurality of peripheral notches or recesses, 16, curved to receive the bearing pins, 14, which notches are disposed eccentrically to the axis of the block, that is to say, at gradually increasing distances therefrom, as clearly shown in Fig. 4. The adjusting block is fitted on the pivot, 13, and the bearing pin is inserted in the longitudinally coinciding pair of notches of the adjusting block which will be suited to interpose such distance between the axes of the pivot, 13 and bearing pin, 14, as will enable the spring plank to be set at the height desired.

When it is desired to vary the height of the bolster, car platform, or coupler, the spring plank is raised by means of jacks, correspondingly raising the bolster and car body, and releasing the weight on the adjusting blocks. As the spring plank is elevated, it carries with it the bearing pins 14, and when it has been brought to the proper height, the adjusting blocks are turned on the pivots, 13, and the bearing pins fitted in

the notches of the adjusting blocks which will enable the bearing pins to rest at this level. The adjusting blocks shown in the drawings are provided with seven sets of
 5 notches, which are designed to admit of a variation in height of the bolster of one and one half inches, by successive steps of one quarter inch each. A greater or less number of notches may, of course, be used.

10 It will be seen that any lateral motion of the bolster is transmitted to the swing hangers by the bearing pins, 14, and as the squared ends of the pins fit the slots of the hangers, there is no tendency of the adjusting
 15 blocks to be rotated or turned over by lateral thrust. The shape of the periphery of the adjusting block is such that should an incorrect adjustment be made, and the bearing pins be allowed to settle on the blocks at
 20 points other than the notches, the blocks will automatically slip around until the pins rest in the notches.

I claim as my invention and desire to secure by Letters Patent:

25 1. In a car truck, the combination of frame transoms, a swing or lateral motion bolster, swing hangers by which said bolster is suspended from the transoms, and rotatable adjusting blocks provided with eccentrically
 30 disposed end bearings and interposed between the swing hangers and the bolster.

2. In a car truck, the combination of frame transoms, a swing or lateral motion bolster, a spring plank on which said bolster is
 35 spring supported, swing hangers pivotally connected to the transoms, and rotatable adjusting blocks provided with eccentrically disposed end bearings and interposed between the swing hangers and the spring
 40 plank.

3. In a car truck, the combination of frame transoms, a swing or lateral bolster, a spring plank on which said bolster is spring supported, swing hangers pivotally connected
 45 to the transoms, a bearing pin supporting

the spring plank and fitting, with the capacity of relative adjustment, in the spring hangers, and an adjusting block, fitting rotatably in the swing hangers, and provided with eccentrically disposed end bearings
 50 which support the bearing pin.

4. In a car truck, the combination of frame transoms, a swing or lateral motion bolster, a spring plank on which said bolster is spring supported, swing hangers pivotally
 55 connected to the transoms and having longitudinal slots adjacent to their lower ends, a bearing pin supporting the spring plank and fitting in the slots of the swing hangers, a lower swing hanger pivot fitting in the swing
 60 hangers below the slots thereof, and an adjusting block rotatable about said pivot and provided with eccentrically disposed end bearings which support the bearing pin.

5. In a car truck, the combination of frame transoms, a swing or lateral motion bolster, a spring plank on which said bolster is spring supported, swing hangers pivotally
 65 connected to the transoms and having longitudinal slots adjacent to their lower ends, a bearing pin supporting the spring plank and fitting in the slots of the swing hangers, a lower swing hanger pivot fitting in the swing
 70 hangers below the slots thereof, and an adjusting block rotatable about said pivot, and having a plurality of peripheral notches, disposed at different distances from its axis, for the support of the bearing pin in different
 75 adjustments of the block.

6. An adjusting block for truck swing hangers, having a tubular body adapted to fit a swing hanger pivot, and a plurality of longitudinal peripheral slots, disposed at different distances from its axis, to receive a bearing pin.

WILLIAM E. WOODARD.

Witnesses:

CHARLES J. ROGERS,
 FRANK H. SAUTER.