

No. 694,346.

Patented Mar. 4, 1902.

W. N. BEST.
COACH EQUALIZING SUSPENDER.

(Application filed Mar. 13, 1901.)

(No. Model.)

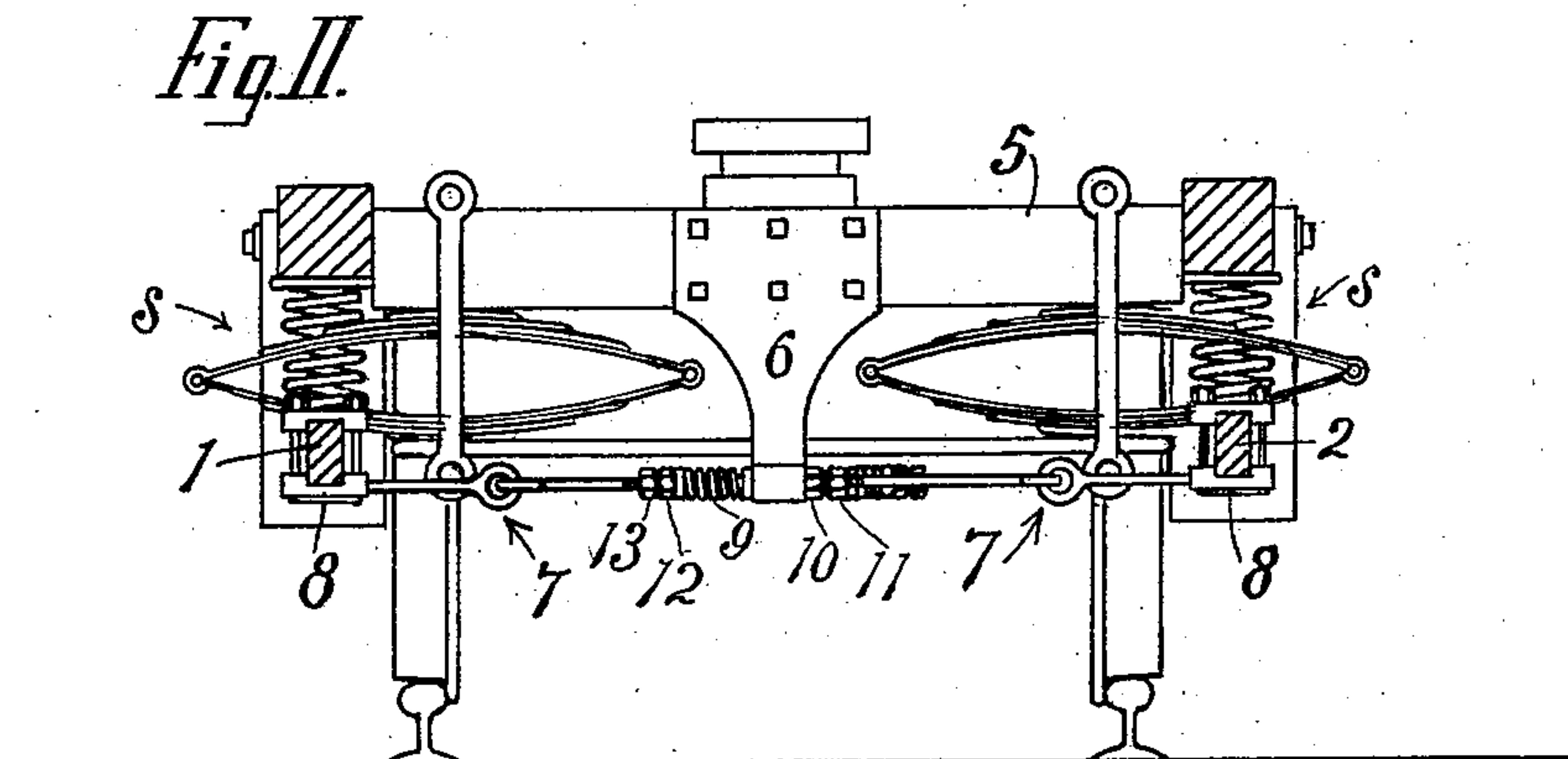
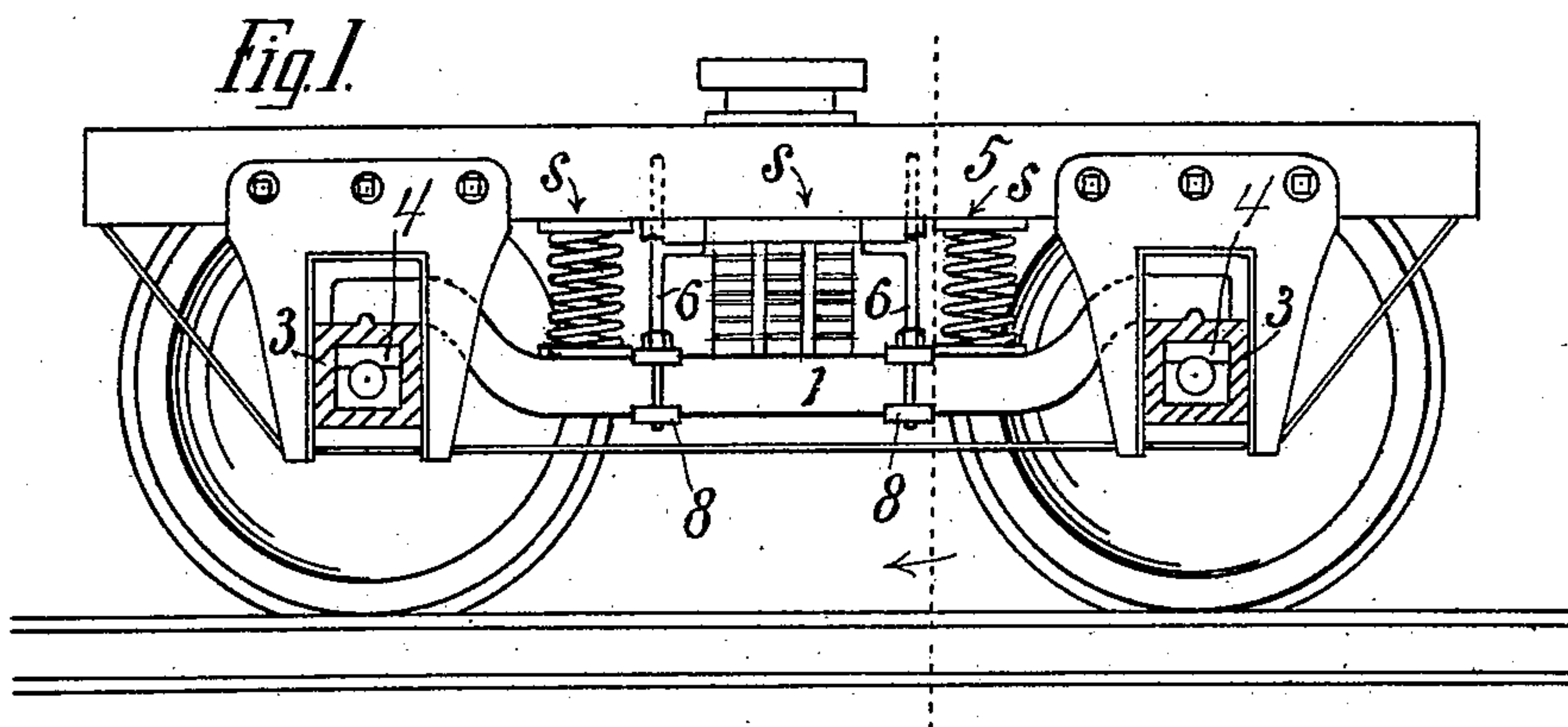


Fig. III.

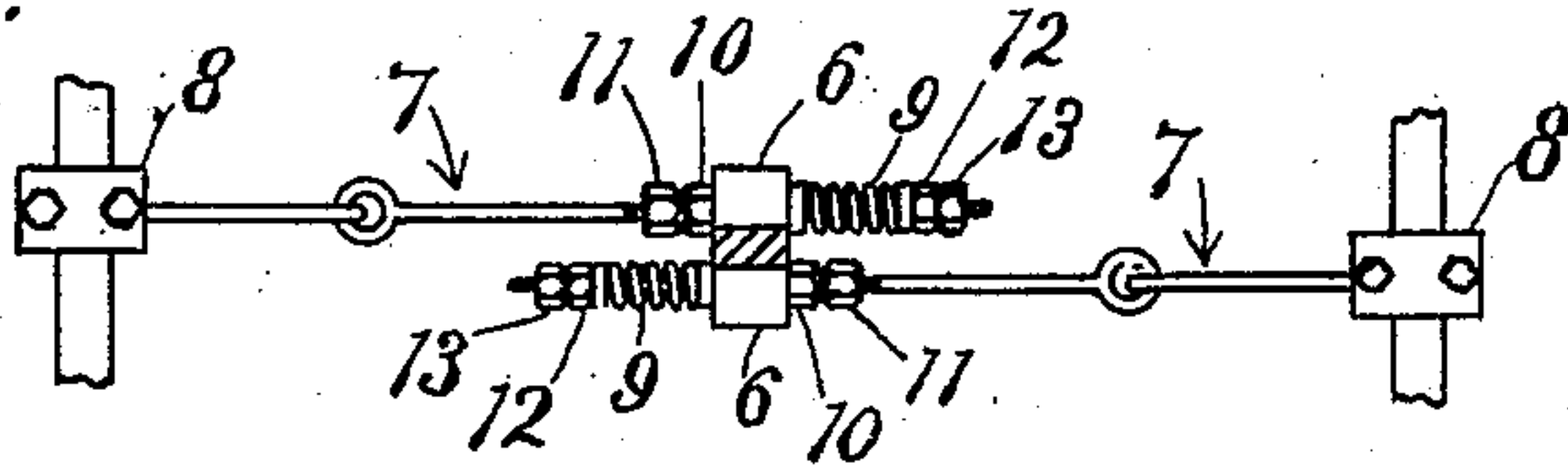


Fig. V.

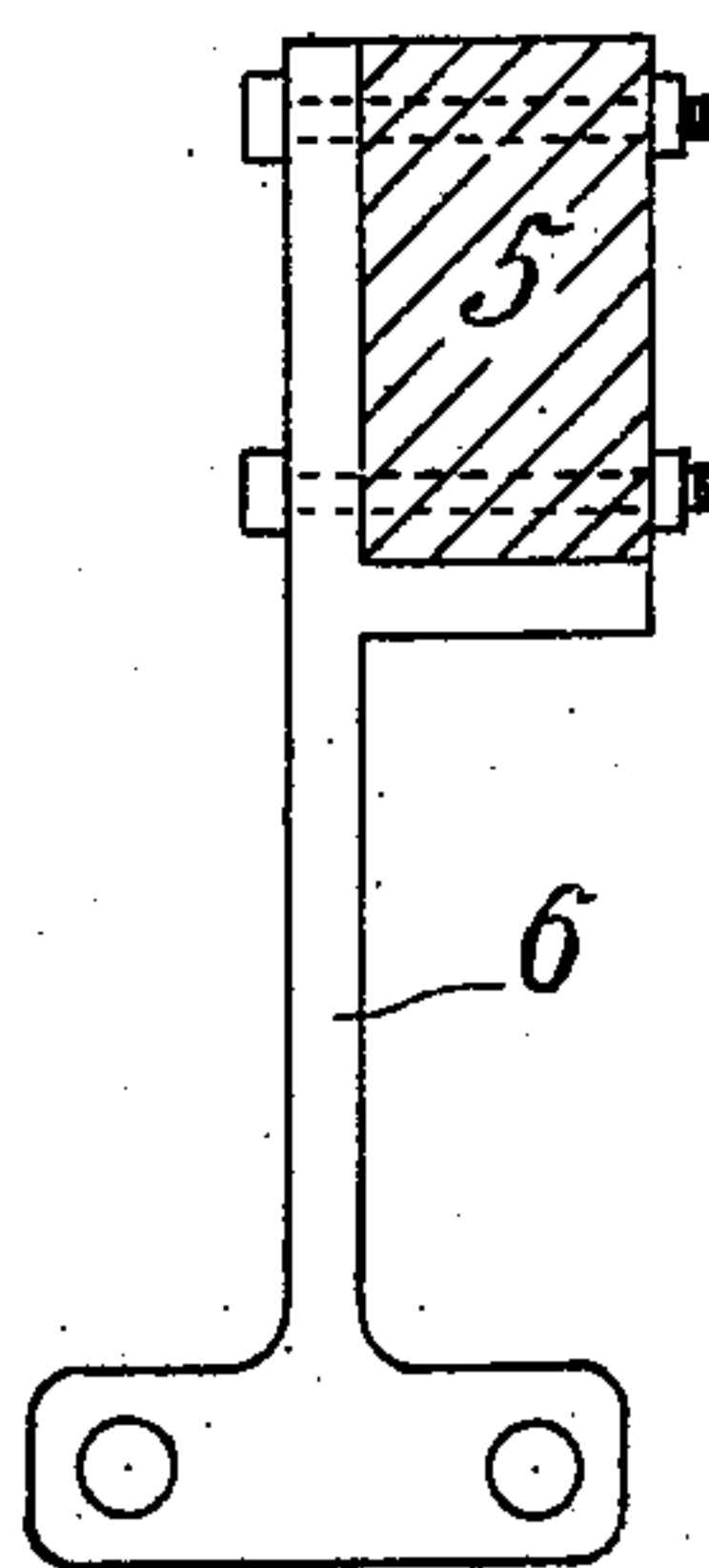
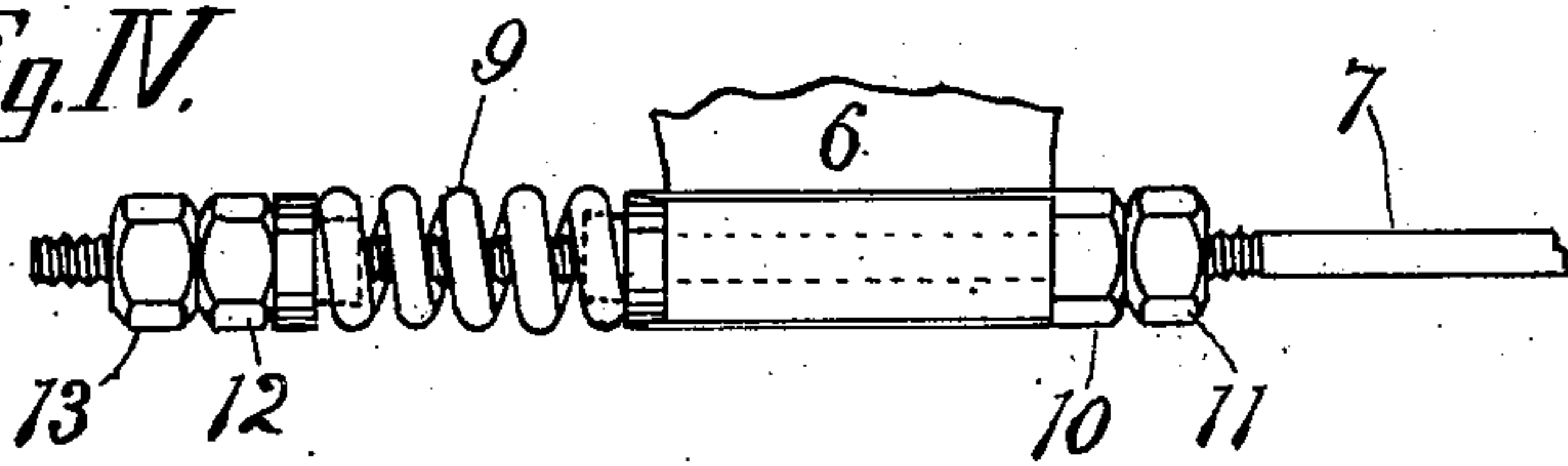


Fig. IV.



Witnesses,
C. C. Holly.
J. Townsend.

Inventor,
William Newton Best
J. Townsend Bros.
his attys.

UNITED STATES PATENT OFFICE.

WILLIAM NEWTON BEST, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO CHARLES HERBERT SILLIMAN, OF FORT WORTH, TEXAS.

COACH-EQUALIZING SUSPENDER.

SPECIFICATION forming part of Letters Patent No. 694,346, dated March 4, 1902.

Application filed March 13, 1901. Serial No. 51,020. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NEWTON BEST, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Coach-Equalizing Suspender, of which the following is a specification.

The object of this invention is to prevent the unequal wearing of the brasses and journals of a railway-coach truck.

In actual practice at the present time the journals and brasses wear more on the inside of the journal than on the outside. This is caused by the uneven distribution of the weight upon the bearing by the peculiar construction of the equalizers and the momentum of the car-body in going around a curve. The weight of the car is borne by the equalizing-bars, and the weight is transmitted from these bars through the boxes to the brasses which rest upon the journals. It is necessary that the equalizing-bars hang normally perpendicular to the journals in order to give a perfectly horizontal surface to the ends of the equalizers, which rest upon the metal boxes. Owing to the variation of the strain upon the equalizers they necessarily swing from the perpendicular in going around a curve. The result of the forces at work in railway-cars as ordinarily constructed is such that the bearings wear at the inside of the journal until the wheels have to be removed and the axles put into the lathe and the journals turned down, causing great waste of the metal of the axle and also of the journal-brasses, as well as loss of time and labor and loss by short life of the axle. It is a well-known fact that heretofore and up to the present time nine-tenths of the hot boxes and delays of trains caused thereby are the result of the unequal wearing on account of the journals being worn tapering because of the unequal distribution of weight to which I refer.

Attempts have been made to remedy the difficulty by tying the equalizing-bars together; but owing to the nature of the cases such attempts have failed to solve the problem.

The object of my invention is to do away with these difficulties, objections, and expenses and the danger of accident resulting

from tapering journals caused by unequal distribution of weight.

The principle of this invention is to provide an adjustment which will normally hold the equalizers, so as to properly distribute the weight, but which will yield to any great abnormal strains which occur in the different positions of the truck in its operation over the road and will again return the equalizing-bars to true position when the great abnormal strain has ceased.

The accompanying drawings illustrate my invention.

Figure I is a side elevation of a car-truck provided with my invention. Fig. II is a sectional elevation on line II II, Fig. I. Fig. III is a fragmental sectional plan on line III III, Fig. II, showing one of the two pairs of resilient connections which tie the two equalizing-bars to the truck-frame. Fig. IV is a fragmental detail of the spring and adjustments for the resilient connection. Fig. V is a detail view showing the support with a portion of the truck-frame.

12 indicate the equalizing-bars, resting upon the boxes 3, which rest upon the brasses 4. 5 indicates the frame of the truck. Resilient connections are provided to connect between said equalizing-bars, respectively, and a support for normally holding the equalizing-bars respectively perpendicular relative to the journals, but which will allow them to yield and spread apart under abnormal pressure. In practice each pair of equalizing-bars will be provided on the opposite sides of the middle of the bars with a resilient connection supported by the frame of the truck. These connections may be of any desired construction, and in the drawings I have shown the form which I deem preferable.

6 indicates the supporting-hangers, carried by the truck-frames.

7 indicates a jointed rod connected at one end by a clip 8 with an equalizing-bar and passing through the support 6 and through a spiral spring 9.

10 indicates an adjusting-nut, and 11 a lock-nut for the same on one side of the support 6, and 12 indicates an adjusting-nut, and 13 a lock-nut for the same on the other side of the support 6. The spring 9 is interposed

between the adjusting-nut 12 and the support 6 on the side of the support opposite the equalizing-bar, with which the jointed rod is connected. By these means a resilient connection is provided between the equalizing-bar and the supporting-frame of the car-truck, the tension of which connection can be accurately adjusted so as to normally hold the equalizing-bars in true position independently of each other. Since two connections are provided for each equalizing-bar, the opposite ends of each bar can yield and move and will be returned to true position by their respective resilient connections independently of each other. This is an important advantage, for the reason that in order to preserve a true bearing the tension of the connection for each end of each bar should be independently adjusted.

The support 6 is practically independent of the equalizing-bars by reason of the car-springs *s*, which carry them.

It is to be understood that in the case of a three-wheeled truck, or in case of a truck in which the equalizing-bars are similar to the Pullman-truck equalizing-bars, a single connection for each equalizing-bar may be used instead of the two connections which I have shown in the drawings, and such construction is embraced within my invention. I prefer to use the two connections for each equalizing-bar where this is practicable.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A coach-equalizer suspender comprising a pair of equalizing-bars; a support carried by a portion of the car-truck; and resilient connections between said equalizing-bars respectively and said support for normally holding the equalizing-bars in true position, but which will allow them to yield under abnormal pressure.

2. In a car-truck, the combination with the brasses and the equalizing-bars; of independent resilient connections connecting said bars respectively with a support carried by the car-truck to normally hold the equalizing-bars in true position and to allow the bars to spread apart under abnormal pressure.

3. In a car-truck, the combination with an equalizing-bar; of a support carried by the truck; a jointed rod connected at one end with the equalizing-bar and passing through the support at the other end; nuts on the opposite sides of the support to adjust the position of the rod relative to said support; and a spring between the support and the nuts on the side of the support opposite the equalizing-bar.

4. In a car-truck, the combination with an equalizing-bar; of a support carried by the

truck and located at one side of the bar; and resilient connection between said bar and said support to normally yieldingly hold the equalizing-bar in true position perpendicularly and to allow the bar to oscillate.

5. In a car-truck, the combination with an equalizing-bar; of a support carried by the truck and located at one side of the bar; resilient connection between the bar and the support to normally yieldingly hold the equalizing-bar in true position perpendicularly and to allow the bar to oscillate; and means for adjusting the tension of such resilient connection.

6. In a car-truck, the combination with the equalizing-bars; of independent resilient connections for said bars respectively connecting said bars independently with the frame of the truck and arranged at the side of the bars to normally hold the bars in true position perpendicularly and to allow the bars to oscillate; and means for adjusting the tension of said resilient connections independently of each other.

7. In a car-truck provided with equalizing-bars which respectively extend along the opposite sides of the truck; resilient connections for said bars extending transversely of the truck whereby said bars will yield laterally under abnormal strain and be automatically adjusted to their normal positions when the abnormal strain is relieved.

8. In a car-truck provided with equalizing-bars; resilient connections for said bars connected with said bars respectively between the ends thereof and extending laterally of said bars whereby said bars will yield under abnormal strain and be automatically adjusted to their normal positions when the abnormal strain is relieved; and means for supporting said connections between said bars.

9. In a car-truck provided with equalizing-bars; resilient connections for said bars, means for supporting said connections between said bars, and means for adjusting the tension of said connections.

10. In a car-truck provided with equalizing-bars; resilient connections for said bars extending laterally of said bars, and hangers for supporting said connections between said bars, said connections being attached to said bars and to said hangers.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, at Los Angeles, California, this 5th day of March, 1901.

WILLIAM NEWTON BEST.

Witnesses:

JAMES R. TOWNSEND,
JULIA TOWNSEND.