(No Model.) 3 Sheets—Sheet 1.

J. J. ADLER.

BOGIE TRUCK FOR ROLLING STOCK.

No. 566,119. Patented Aug. 18, 1896.

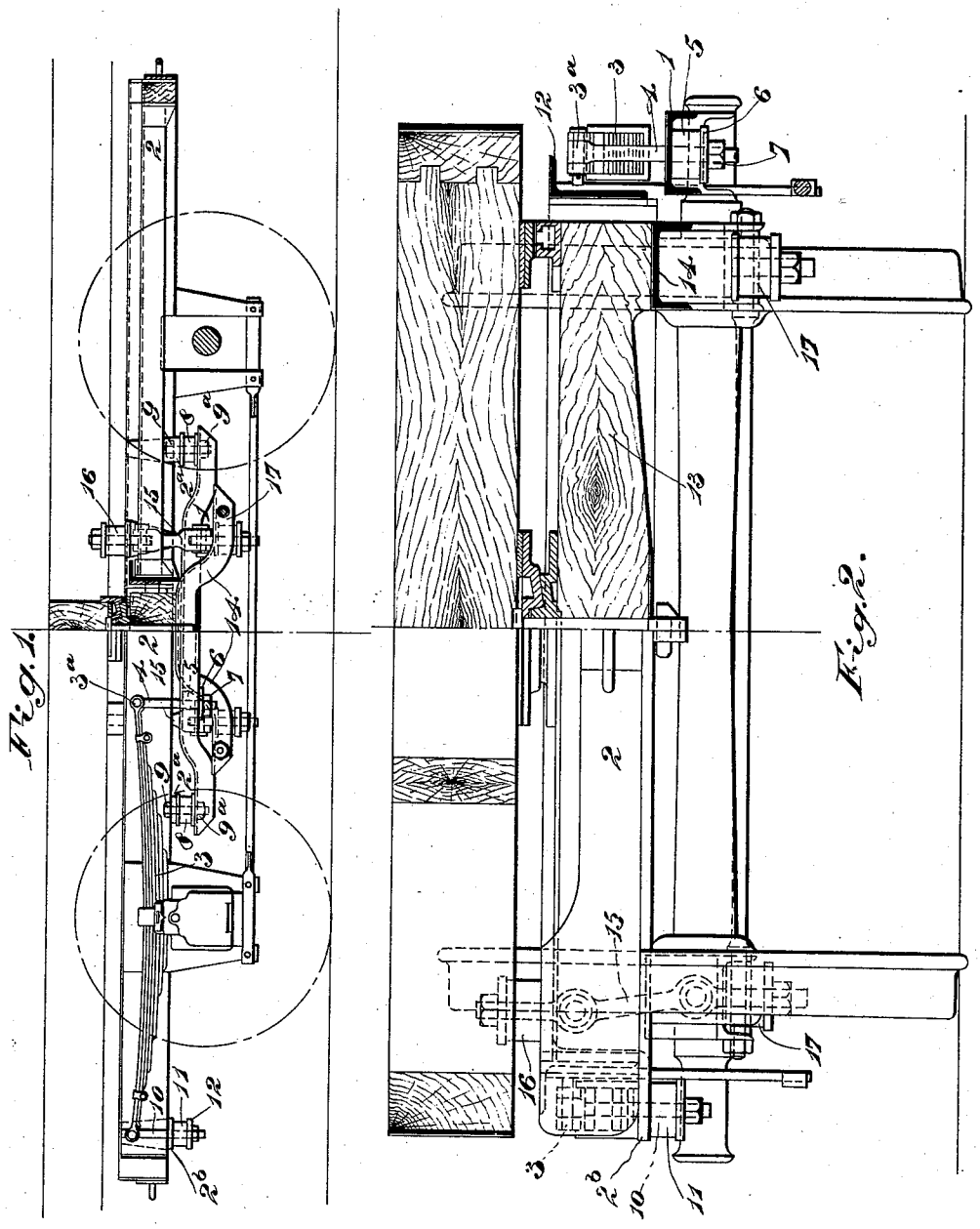


Fig. 1.

Fig. 2.

Witnesses.
Geo. E. Fuch.
James W. Evans.

Inventor.
J. J. Adler.
by Pallison & Leslie,
Attys

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

(No Model.) 3 Sheets—Sheet 2.

J. J. ADLER.

BOGIE TRUCK FOR ROLLING STOCK.

No. 566,119. Patented Aug. 18, 1896.

Fig. 3.

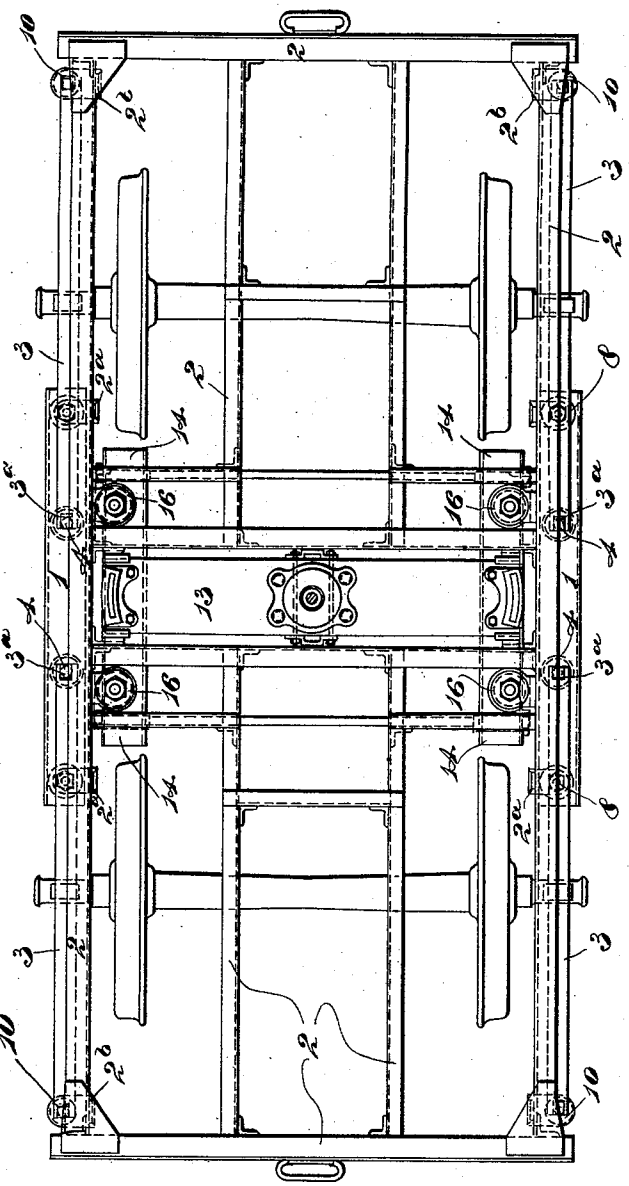
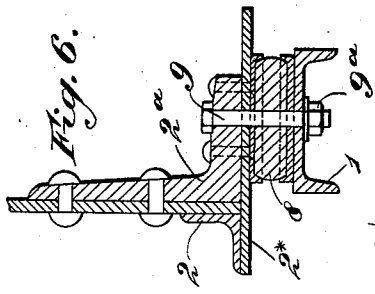


Fig. 6.



Witnesses.
Geo. E. Frech.
James W. Evans

Inventor
J. J. Adler,
by Pattison & Peslit.
Attys

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

(No Model.) 3 Sheets—Sheet 3.

J. J. ADLER.

BOGIE TRUCK FOR ROLLING STOCK.

No. 566,119. Patented Aug. 18, 1896.

Fig. 4.

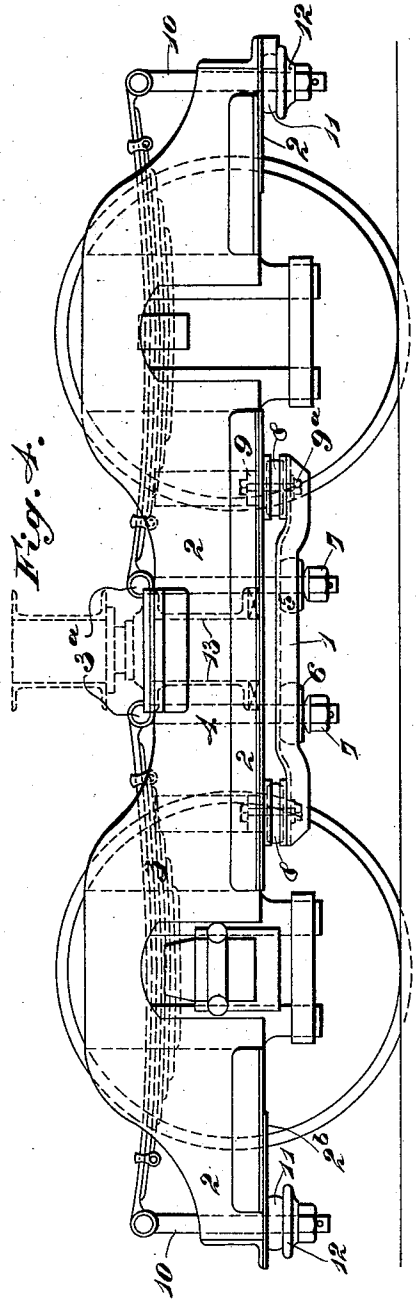
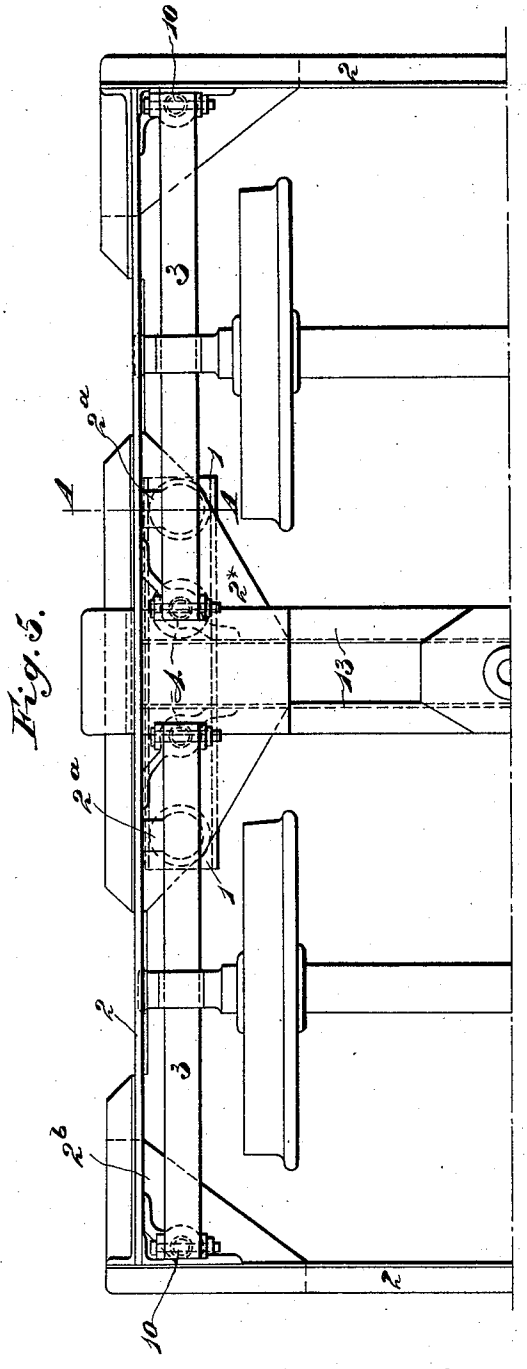


Fig. 5.



Witnesses.
Geo. E. Truch,
James W. Bevans

Inventor
J. J. Adler,
by Pattison & Neslett
Attys.

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

UNITED STATES PATENT OFFICE.

JOHN JULIUS ADLER, OF AJMEER, INDIA.

BOGIE-TRUCK FOR ROLLING-STOCK.

SPECIFICATION forming part of Letters Patent No. 566,119, dated August 18, 1896.

Application filed October 5, 1893. Serial No. 487,299. (No model.) Patented in England September 22, 1891, No. 16,083.

To all whom it may concern:

Be it known that I, JOHN JULIUS ADLER, a subject of the Queen of Great Britain and Ireland, residing at Ajmeer, Rajpootana, East India, have invented Improvements in or Relating to Bogie-Trucks for Rolling-Stock, (for which I have obtained a British Patent, dated September 22, 1891, No. 16,083,) of which the following is a specification.

This invention has for its object to prevent or lessen the peculiar and disagreeable vibration usually experienced when traveling in railway-carriages supported upon bogie-trucks and which is mainly due to shocks imparted to the bogie-frame from the wheels while running over points and other uneven portions of the rails. For this purpose there is interposed between each pair of the suspension-rods that are connected to the adjacent ends of the laminated bearing-springs at each side of the bogie-frame and the under side of such frame a beam which is suspended from the pair of suspension-rods and bears against the bogie-frame through the intervention of auxiliary springs that may advantageously be of india-rubber. The other ends of the laminated bearing-springs are or may be connected to the bogie-frame in the usual manner through auxiliary springs, which may also be of the kind mentioned.

As will be obvious, the invention can be applied to tramway-vehicles and to bogie-trucks having two or more pairs of running-wheels.

In the accompanying drawings, Figure 1 shows partly in side elevation and partly in longitudinal section, Fig. 2 partly in end elevation and partly in transverse section, (to a larger scale,) and Fig. 3 in plan, a bogie constructed according to this invention.

In Figs. 1 and 2 a part of the under frame of a vehicle that is partly supported by the bogie-truck is shown in section. Fig. 4 is a side elevation, and Fig. 5 a half-plan, showing a modified construction of bogie according to this invention. Fig. 6 is a cross-section on the lines A A of Fig. 5.

In Figs. 1, 2, and 3, 1 1 are beams arranged longitudinally at the sides of the bogie-frame 2 and each suspended from the adjacent ends 3^a of the laminated bearing-springs 3 by the suspension-rods 4. The connection between each of these rods and the corresponding beam may advantageously be effected through an india-rubber auxiliary bearing-spring 5, which is interposed between the under side of the beam and a plate 6, which is carried by a nut 7 on the rod and by means of which the connection can be suitably tightened.

8 8 are india-rubber springs, each interposed between one end of each beam 1 and a bracket 2^a, carried by the bogie-frame, to which bracket the end of the beam is secured by a bolt 9 and nut 9^a.

10 10 are links, one only of which is shown in Fig. 1, by which the other end of each of the laminated bearing-springs 3 is connected, through an india-rubber auxiliary bearing-spring 11 and plate 12, to a bracket 2^b, secured to the bogie-frame 2.

The bolster may be hung from or connected to the bogie-frame in any suitable or convenient manner.

In the construction shown in Figs. 1, 2, and 3 the bolster 13 is carried by longitudinal swing-beams 14, arranged one at each side of the center line of the bogie-frame and each of which is hung from the bogie-frame by suspension-links 15, each of which is connected with the bogie-frame and swing-beam through upper and lower india-rubber springs 16 and 17, respectively.

By the construction described all shocks are completely absorbed and prevented from being transmitted to the body of the vehicle resting on the bolster.

In the arrangement shown in Figs. 4, 5, and 6 the beams 1 and the metal bearing-springs 3, from the adjacent ends of which the said beams are suspended, are arranged inside the longitudinal frame-plates 2 of the bogie-truck, the ends of each beam being secured through the india-rubber bearing-springs 8 to a longitudinally-arranged plate 2* and brackets 2^a, fixed to the inner side of the corresponding frame-plate. The bolster 13 is in this example fixed to the bogie-frame.

What I claim is—

1. In a bogie-truck, the combination with the bogie-frame and metal bearing-springs therefor, of rigid longitudinally-arranged bearing-beams each directly carried by a pair of suspension-rods from the adjacent ends of a pair of said bearing-springs and having its

ends arranged to bear against the under side of said bogie-frame at two points located between the corresponding pair of wheels, substantially as herein described.

2. In a bogie-truck, the combination with the bogie-frame and metal bearing-springs therefor, of a rigid beam suspended directly from said springs and having its two ends connected to said frame and auxiliary bearing-springs arranged between said beam and the under sides of said bogie-frame, substantially as herein described.

3. In a bogie-truck, the combination with the bogie-frame and metal bearing-springs therefor, of longitudinally-arranged bearing-beams each carried by a pair of said metal bearing-springs and having its ends arranged to bear against the under side of and partly support said bogie-frame substantially as herein described.

4. In a bogie-truck, the combination with the bogie-frame and metal bearing-springs at the sides thereof, of longitudinally-arranged beams each suspended by a pair of rods from the adjacent ends of the pair of metal bearing-springs at the corresponding side of the truck, auxiliary bearing-springs arranged between said rods and the under side of each of said beams, and auxiliary bearing-springs arranged between said beams and the under side of said bogie-frame, substantially as herein described.

5. In a bogie-truck, the combination with the bogie-frame and main bearing-springs therefor, of a beam suspended by said springs and having its ends arranged to partly support said bogie-frame, and a bolster suspended from said bogie-frame substantially as herein described for the purpose specified.

6. A bogie-truck comprising a bogie-frame pairs of metal bearing-springs arranged at the respective sides of said bogie-frame, suspension-rods depending from the adjacent ends of each pair of said bearing-springs, a beam hung from each pair of said rods, auxiliary bearing-springs arranged between said rods and said beams, auxiliary bearing-springs arranged between said beams and the under side of said frame, suspension-rods depending from the outer ends of said bearing-springs, and auxiliary bearing-springs arranged between the rods and the under side of said frame substantially as herein described for the purpose specified.

7. A bogie-truck comprising a bogie-frame, bearing-springs at the respective sides thereof, longitudinally-arranged beams suspended from said springs and having their ends connected to and arranged to partly support said bogie-frame at points between the wheel-axles, swing-beams each suspended from said bogie-frame, and a bolster supported by said swing-beams substantially as herein described.

8. A bogie-truck comprising a bogie-frame, pairs of metal bearing-springs arranged at the respective sides thereof, longitudinally-arranged beams, pairs of suspension-rods depending from the adjacent ends of said bearing-springs and supporting said beams, auxiliary bearing-springs arranged between each of said beams and said suspension-rods, auxiliary bearing-springs arranged between each of said beams and the under side of said frame bolts connecting the ends of said beams to said frame through the corresponding auxiliary bearing-springs, suspension-rods depending from the outer ends of said bearing-springs, auxiliary bearing-springs arranged between each of these suspension-rods and the under side of said frame, links supported by said frame, swing-beams supported by said links, auxiliary bearing-springs arranged between each of said links and the said frame and swing-beams, and a bolster carried by said swing-beams substantially as herein described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN JULIUS ADLER.

Witnesses:
N. CONLEY,
GEO. BARTON.