M. P. HADLEY.

Improvement in Car-Axles.

No. 127,868. Patented June 11, 1872.

Fig 1

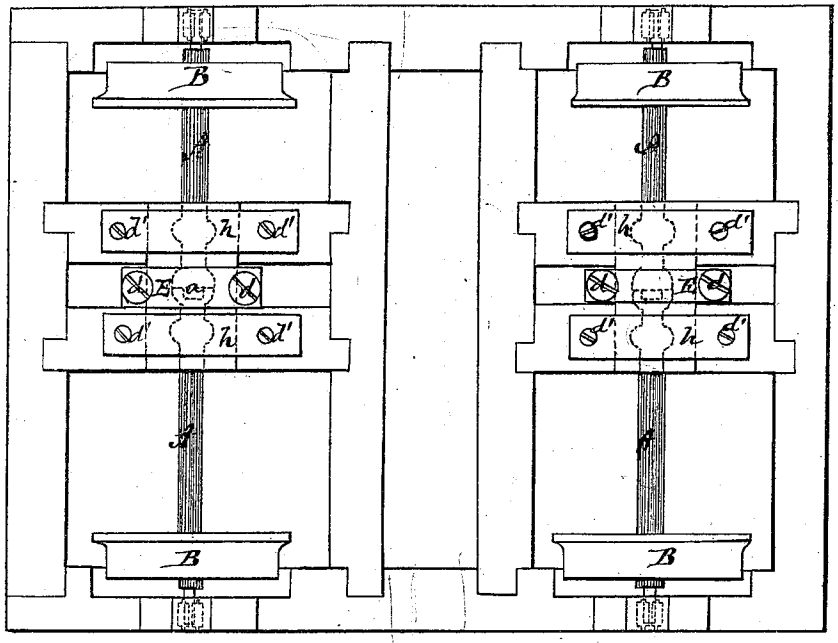


Fig 2

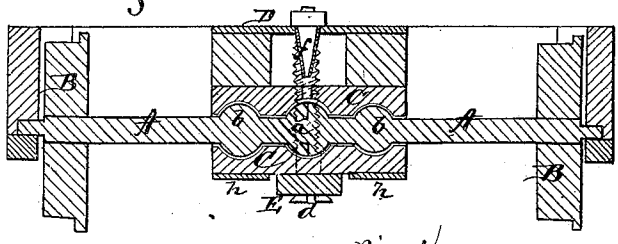


Fig 5

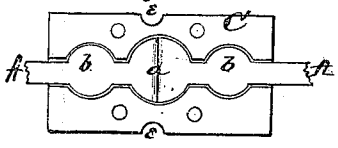


Fig 3

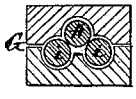
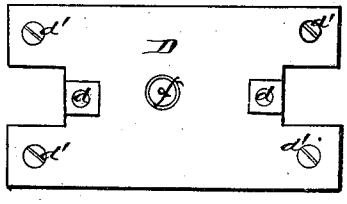


Fig 4



Witnesses.
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Inventor.
Moses P. Hadley
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UNITED STATES PATENT OFFICE.

MOSES P. HADLEY, OF BLUFFTON, WISCONSIN.

IMPROVEMENT IN CAR-AXLES.

Specification forming part of Letters Patent No. 127,868, dated June 11, 1872.

To all whom it may concern:

Be it known that I, MOSES P. HADLEY, of Bluffton, in the county of Green Lake and in the State of Wisconsin, have invented certain new and useful Improvements in Railroad Car-Truck; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of the axles of a railroad car-truck, and in that of the boxes in which said axles are held, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a bottom view of the entire railroad car-truck. Fig. 2 is a longitudinal vertical section through one of the axles. Fig. 3 is a cross-section through one of the journal-boxes at the ends of the axles. Fig. 4 is a view of the top-plate of one of the center boxes; and Fig. 5 is an interior view of one of the center boxes.

Each axle of my car-truck is made in two parts, A A, their inner ends connected by a ball-and-socket joint, *a*, and having upon their outer ends the wheels B B. Near the inner end of each axle part A is formed a ball, *b*, which are called and operate as governing balls. C represents the center box which incloses the ball-and-socket joint *a*, and extends far enough on each side to inclose also the balls *b b* on the axle. It is also provided with side grooves or holes *e e* cut so as to receive the screw-bolts *d d*, which pass through the binder E and plate D, thus holding the box firmly together. The journals at the ends of each axle run in boxes G G, which inclose rollers *i i*, upon which the journals rest. The plate D, over the center box C, is provided with a center hole and funnel, *f*, for lubricating the joint or coupling *a* within said box, the whole forming the most perfect combination for the running-gear of a railroad truck, for the reason that it is the strongest, the most flexible, will wear the longest, and stand the greatest strain without breaking of any device for running cars now in use. All the wheels run independent of each other, and therefore well adapted to running on roads built with short curves; the whole combination inclosed within a strong frame adapted to the use for which it is designed. The screw-bolts *d' d'* pass through the plate D and wood work, and through the iron straps *h h* on the opposite side that holds the center-box firmly to its place. By making these bolts screw-bolts their power is increased, as the screw is combined with that of the nut and bolt. The boxes G G, which inclose the rollers *i i*, are secured by screw-bolts and plates similar to those on the center box. The rollers *i i* lessen the friction and the wearing of the journals resting on said rollers, the rollers revolving with the journals.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The axles A A provided with governing balls *b b*, and connected by ball-and-socket joint *a*, in combination with center-box C and journal-boxes G G having friction-rollers *i i*, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 4th day of March, 1872.

MOSES P. HADLEY.

Witnesses:
C. L. EVERT,
H. C. MEALL.