

(No Model.)

J. H. WATT.
CAR AXLE MOUNTING.

No. 501,389.

Patented July 11, 1893.

Fig. 1.

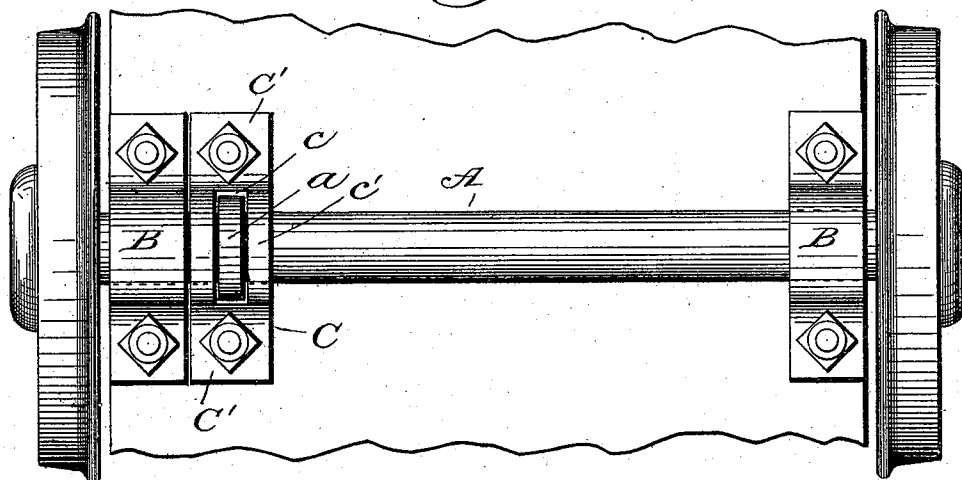


Fig. 2.

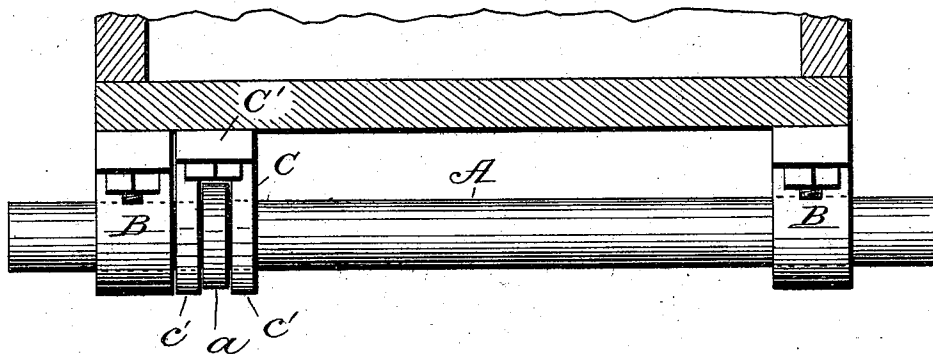
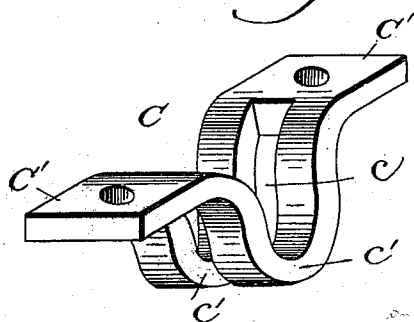


Fig. 3.



Witnesses:
Wm. A. Schoenborn.
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Inventor:
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by
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UNITED STATES PATENT OFFICE.

JAMES H. WATT, OF BARNESVILLE, OHIO, ASSIGNOR TO THE WATT MINING CAR WHEEL COMPANY, OF SAME PLACE.

CAR-AXLE MOUNTING.

SPECIFICATION forming part of Letters Patent No. 501,389, dated July 11, 1893.

Application filed February 17, 1893. Serial No. 462,752. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. WATT, of Barnesville, in the county of Belmont and State of Ohio, have invented certain new and useful Improvements in Car-Axle Mountings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of the present invention is to simplify and cheapen, at the same time improving, the construction and mountings for axles for mine-car trucks, and other like vehicles in which stout metallic axles are required and designed for heavy work.

The invention therefore consists in the employment of a cylindrical continuous solid or non-sectional axle having a single annular collar, with a stationary slotted box or keeper adapted to embrace the axle and collar, and whereby the axle is allowed to rotate freely, if desired, in its bearings, but is kept from longitudinal play therein. The slotted box may also serve as an additional support for the axle between the journal boxes proper. By this construction the axle may be made of rolled bars, and the collar shrunk or otherwise rigidly secured thereon, thereby greatly lessening the cost of production by dispensing with the necessity of forging bearings, spindles, &c., as in the case with the ordinary forms of angular boxes; and likewise relieving the wheel-hub fastenings, in a great measure, of endwise thrust of the shaft.

Referring to the drawings:—Figure 1 represents a bottom plan view of an axle and mountings, constructed in accordance with my invention. Fig. 2 is a side view thereof. Fig. 3 is a detail perspective view of the keeper detached.

Referring to the drawings by letters:—A designates a cylindrical axle journaled near its ends in boxes B, B, of any suitable construction and preferably free to revolve therein. At a suitable point on the axle is forged, shrunk or otherwise rigidly secured, a collar *a*.

C represents the keeper partly embracing

the axle and having a central longitudinal slot or recess *c* to accommodate the collar *a*. The parts *c'* of the keeper at each side of the collar fit closely thereagainst and also to the axle, as shown, so that lateral movement of the collar and axle will be prevented by the keeper when secured in place. As shown, the keeper is provided with perforated ears *C'* at its ends by which it is secured to the bottom of the car to which the boxes B, B, are also attached.

By this construction of axle mountings the draft strain is greatly lessened, as the trucks can be moved much more easily when the axles are loose and revoluble, than when they are fixed; and the cost is greatly lessened owing to the doing away with forgings as above noted.

Obviously the construction of the slotted box and arrangement of parts might be varied, and yet the beneficial effects of my invention produced. Therefore I do not limit myself to the precise construction and location of parts herein shown and described.

I am aware that sectional axles have been provided with flanges or enlargements on the meeting ends of their sections, which meeting ends are confined in a boxing intermediate the wheels as shown in patent to Murray, No. 355,463, dated January 4, 1887, and in patent to Hadley, No. 127,868, dated June 11, 1872, and I disclaim such constructions.

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

1. The combination with a car body or frame, a non-sectional car axle having a single collar rigidly secured thereto intermediate the journal boxes; the journal boxes and wheels; of a keeper loosely receiving said collar made of one piece and secured to the body whereby longitudinal movement of the axle and consequent thrust thereof against the boxes is prevented, substantially as described.

2. The combination of the car body, the journal boxes attached thereto, the axle journaled in said boxes having a collar intermediate the boxes; with a one-piece keeper lying across the axle and bent thereunder so as not to interfere therewith and secured at its

ends to the body at opposite sides of the axle, and longitudinally slotted in its bent portion to accommodate the collar on the axle, whereby longitudinal movement of the axle is prevented, substantially as described.

3. The combination of the axle A and its collar *a*, with the keeper C made in one piece curved at center to fit under the axle and having an open slot in its curved portion to

accommodate the collar, all constructed substantially as and for the purpose specified. 10

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES H. WATT.

Witnesses:

SAML. B. PIPER,
C. J. HOWARD.