JOHN H. DINSMORE.

Improvement in Railway-Car Axles.

No. 127,857. Patented June 11, 1872.

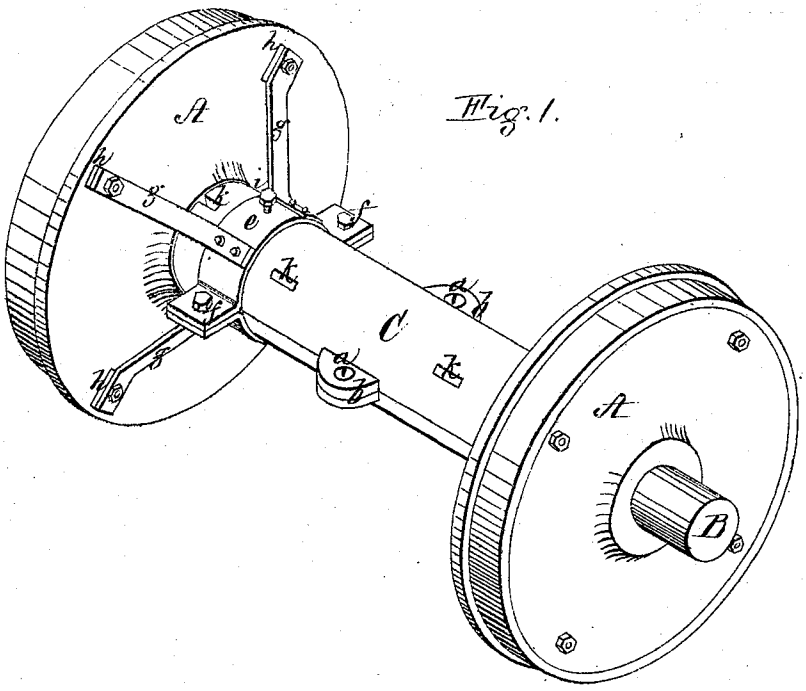


Fig. 1.

Fig. 2.

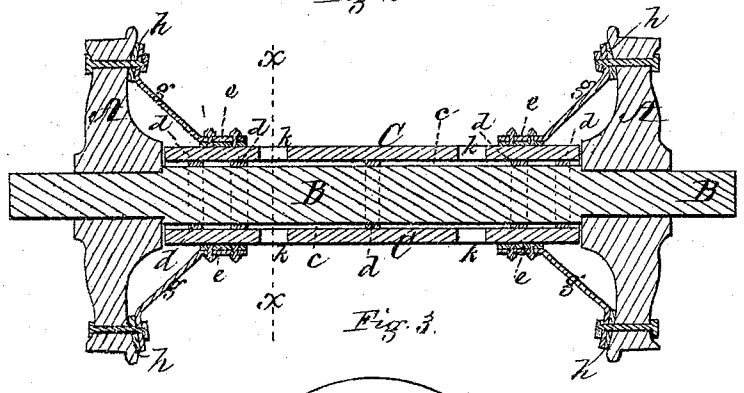
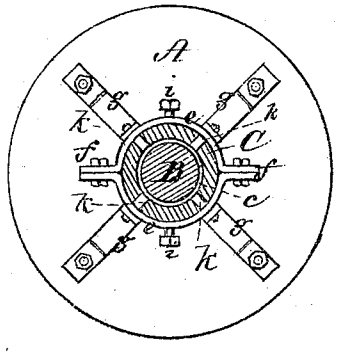


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. DINSMORE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN RAILWAY CAR-AXLES.

Specification forming part of Letters Patent No. 127,857, dated June 11, 1872.

To all whom it may concern:

Be it known that I, JOHN H. DINSMORE, of Boston, in the county of Suffolk and State of Massachusetts, have invented an improved device for the prevention of accidents resulting from the breakage of railroad car-axles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of a pair of railroad car-wheels and their axle, having my improvement applied thereto. Fig. 2 is a longitudinal vertical section through the center of the same. Fig. 3 is a transverse vertical section on the line *x x* of Fig. 2.

My present invention relates to an improvement in the device for which Letters Patent of the United States were granted to myself and Hiram Fuller, August 11, 1868, in which the axle was surrounded by a stationary sleeve, which, in the event of the breaking of the axle, served to support it and prevented the wheels from leaving the track. This device was, however, expensive and somewhat difficult to apply to ordinary cars; and the object of my present invention is to furnish a more simple, cheaper, and effective means for preventing accidents resulting from the breaking of railroad car-axles than that above referred to; and consists in surrounding the axle with a slotted sleeve, which revolves therewith, the sleeve having an elastic packing between it and the axle, and being connected with the wheels by arms or braces, which in case of the breakage of the axle serve to sustain the wheels in a vertical position and prevent them from leaving the track.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A A represent a pair of railroad car-wheels, connected together by an ordinary axle, D, which is surrounded by a sleeve, C, divided longitudinally into two portions, connected by screws *a*, passing through lugs *b*. The interior diameter of the sleeve C is somewhat larger than the diameter of the axle B, so as to leave a space, *c*, between the two, in which are placed a series of elastic bands, *d*, which afford a bearing for the sleeve and serve to prevent any jar or concussion upon the axle from being communicated thereto. The two portions of the sleeve C are bound firmly together at each end by a wrought-iron clamp or band, *e*, the two halves of which are secured together by screws *f*. To these clamps *e* are riveted a series of wrought-iron braces or arms, *g*, the opposite ends of which are bolted to the inner sides of the wheels A A, pieces *h* of rubber being interposed between the ends of the braces and the wheels to render these connections slightly elastic, and prevent the jar of the wheels from being communicated to the sleeve C. The clamps *e* are prevented from sliding longitudinally upon the sleeve by set-screws *i;* but, if preferred, the clamps may be set into recesses or grooves formed in the sleeve to receive them.

From the foregoing it will be seen that the wheels are firmly connected by the braces *g* with the sleeve C, which revolve therewith, and with the axle, and in case of the breakage of the axle at any point between the wheels, it is supported and prevented from dropping by this sleeve; and the wheels are held up in their proper vertical position by the braces *g*, and prevented from leaving the track, whereby all danger of accident from this cause is avoided. The braces or arms *g* relieve the axle of a portion of the lateral strain to which it is subjected during the oscillation of the car, and by thus reducing the strain upon the axle the liability of its breaking is greatly lessened. The sleeve C is provided with elongated openings or slots *k* to allow of the axle being inspected to ascertain if it is cracked or broken.

The above-described device is simple, strong, and effective, and can be applied at a moderate cost to any pair of wheels having an axle with outside bearings.

If the sleeve C is made of wrought-iron the braces *g* may be riveted directly thereto, in which case the clamps *e* will not be required,

the ends of the sleeve being held together by screws and lugs similar to those *a b* above described.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the slotted sleeve C and the elastic packing *d* with the axle B, substantially as and for the purpose set forth.

Witness my hand this 23d day of March, 1872.

JOHN H. DINSMORE.

In presence of—

P. E. TESCHEMACHER,

N. W. STEARNS.