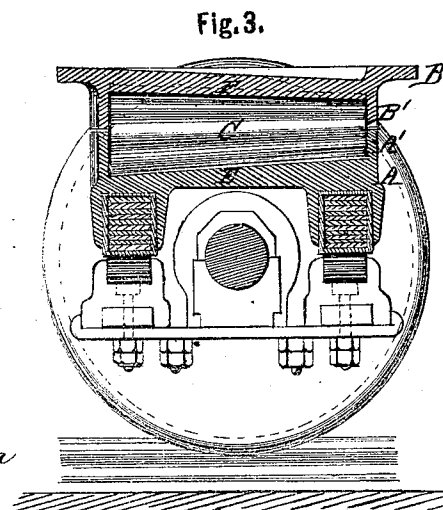
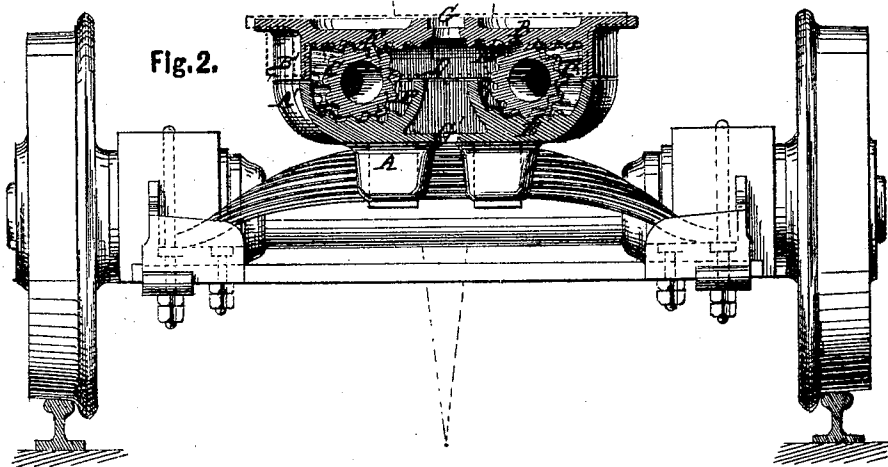
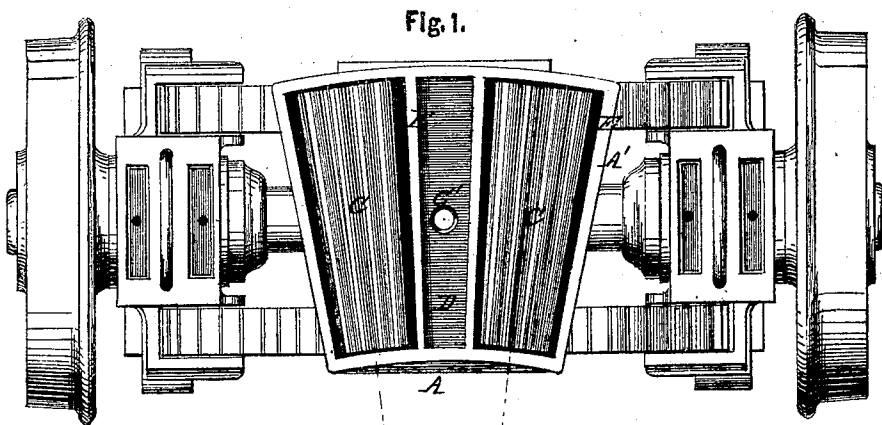


R. B. JEWELL.

Improvement in Railway-Trucks.

No. 129,139.

Patented July 16, 1872.



Witnesses.

Gas. L. Quinn

Walter Allen

Inventor.

Robt B Jewell

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UNITED STATES PATENT OFFICE.

ROBERT B. JEWELL, OF DUNKIRK, NEW YORK.

IMPROVEMENT IN RAILWAY TRUCKS.

Specification forming part of Letters Patent No. 129,139, dated July 16, 1872.

Specification describing an Improved "Lateral and Radial Motion Device for Railway Trucks," invented by ROBERT B. JEWELL, of Dunkirk, in the county of Chautauqua, New York.

This invention relates to a "lateral-motion center-pin," for which United States patent No. 119,150 was issued to me September 19, 1871. The characteristic feature of said device is corrugated supporting-rollers in a suitably shaped recess between the two parts of the divided center-pin. The present improvement consists primarily in constructing the said rollers of conical form, so that the corrugations of the same shall radiate from a given center of motion outside of the truck, which, in a locomotive, would be between the pilot-truck and the drivers. The truck is thus fitted to move radially as well as laterally in running curves, and without additional mechanism and with reduced friction. The advantages of this "radial" movement are that the wheels are kept parallel to the rails or very nearly so, and the wear of wheels and rails and danger of jumping the track are thus greatly reduced, and that the necessity for circular motion on the center of the truck is obviated. The improved device is primarily intended for the pilot-trucks of locomotives, whether of two or four wheels, but is also applicable to the trucks of tenders and of cars.

In the drawing, the device is shown applied to a two-wheel pilot-truck. Figure 1 is a plan of the device with the cap removed. Fig. 2 is a central vertical section transversely of the rollers, showing the cap and rollers in normal position in full lines, and in dotted outline the same at one extreme of movement, as in passing a curve. Fig. 3 is a vertical section in a plane coincident with the axis of one of the rollers.

A B represent two parallel plates; A' B', the two parts of a horizontally-divided box, formed on the same jointly; and C C, a pair of corrugated rollers within this box, and separating its parts. D represents the cavity of the box A' B'; E E, corrugated concaves in the base A' to receive the rollers C; and F F, corrugations or racks on the under side of the cap B' to engage with the same. G G' represent perforations to receive a central vertical bolt to serve as a bond.

The truck shown forms no part of the invention, and requires no particular description.

In use, the device forms the central and sole or main bearing of the head of a locomotive or of the end of a tender or car on its truck, as illustrated by the drawing. The plates A and B are attached respectively to the truck, as shown, and to the base or body frame, and may be of any suitable form. The rollers C C are conical, their corrugations radiating from a point outside of the truck, so that the latter in its movement relatively to the head of the locomotive or the end of the tender or car shall be kept as nearly as possible transverse to the track and radial to the curve, and the wheels, consequently, parallel with the rails. The cavity D, the double inclines or concaves E, for retarding the lateral movement and returning and steadying the head, and the corrugations or racks F on the under side of the cap to engage with the rolls, are all made to conform to the shape of the latter, the ends being struck from the center, from which the rolls radiate. From the exterior of the box all superfluous metal is omitted, leaving the walls of about uniform thickness; and the rollers C are made hollow to render the appliance as light as practicable. The "center-pin" previously employed is dispensed with.

The several parts may be cast of complete form, and the device readily adapted and applied to any truck. The rollers being inclosed are protected from dust, and may be lubricated so as to work smoothly.

I do not claim, broadly, applying a "radial-motion" device to a railway truck for the purposes set forth, but am aware that the idea in itself is old and has been variously carried out.

What I claim as new herein is—

The corrugated rollers C, in combination with the concaves E and racks F, and the plates A and B, when said rollers are constructed of conical form, the corrugations radiating from a given center outside the truck, substantially as shown and described, for the purposes specified.

R. B. JEWELL.

Witnesses:

WM. H. WYMAN,
HENRY LANGE.