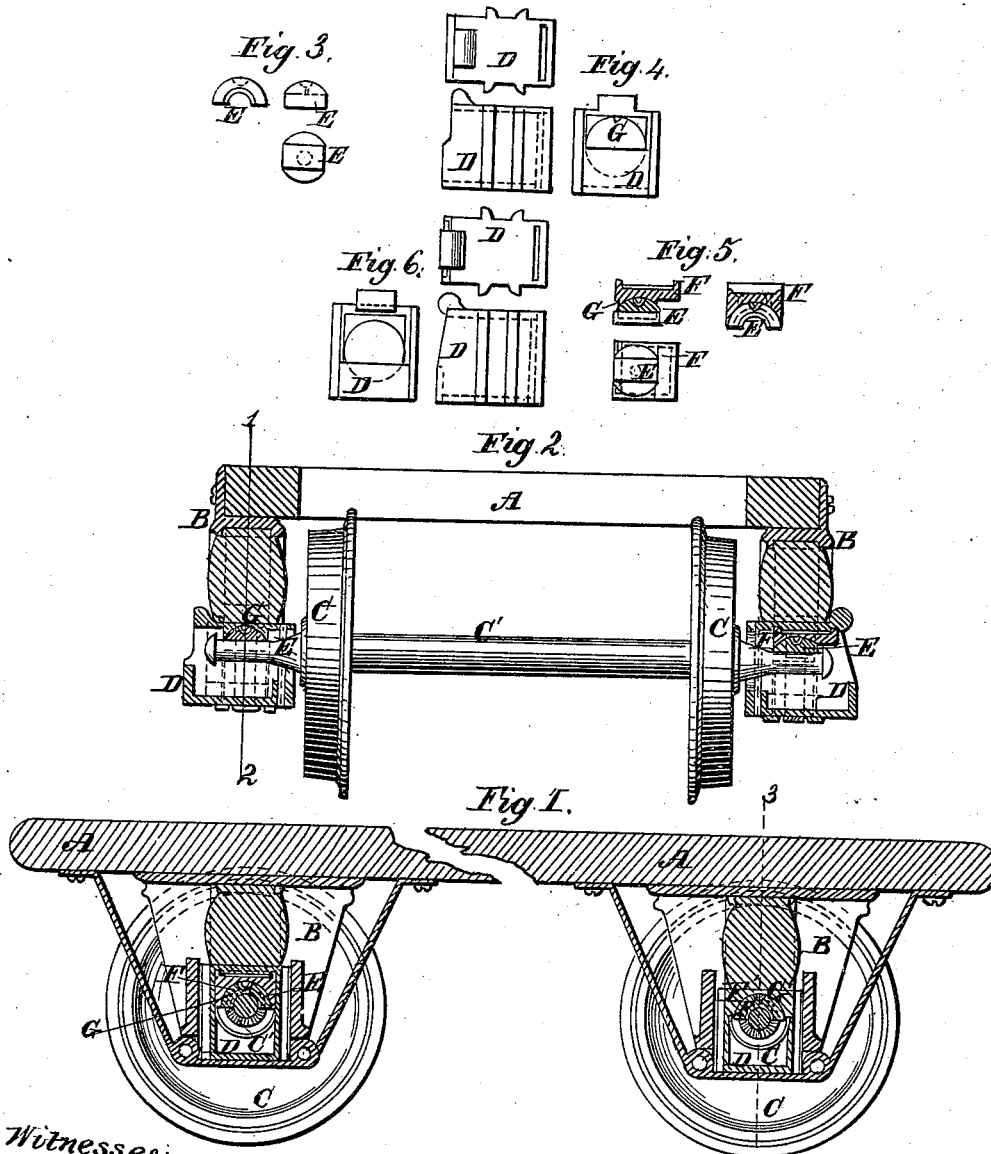


A. B. NIMBS.
Car-Axle Box.

No. 50,771.

Patented Oct. 31, 1865.



Witnesses:

B. H. Muehle
G. Bunkhardt.

Inventor.

A. B. Nimbs
per E. B. W. L. Forbush atty

UNITED STATES PATENT OFFICE.

A. B. NIMBS, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF AND JOHN G. CLIFFORD, OF SAME PLACE.

IMPROVED RAILROAD JOURNAL-BOX.

Specification forming part of Letters Patent No. 50,771, dated October 31, 1865.

To all whom it may concern:

Be it known that I, A. B. NIMBS, of the city of Buffalo, county of Erie, and State of New York, (assignor to myself and John C. Clifford,) have invented a new and Improved Journal-Box for Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a sectional side elevation of a car-truck, the section being taken on line 1 2 of Fig. II, and showing the journal-boxes and housings in cross-section. Fig. II is a sectional end elevation of same, the section cutting the boxes and housings longitudinally on line 3 4 of Fig. I; Fig. III, details of convex journal-box in end and side elevation and plan; Fig. IV, details of housing, with concave box-seat shown in end and side elevation and plan; Fig. V, details of convex journal-box and removable plano-concave box-seat in cross and longitudinal section and plan; Fig. VI, details of housing for reception of plano-concave box-seat in end and side elevation and plan.

The nature of this invention consists in making the exterior of the journal-box or bearing-brass convex or spherical and forming a concave seat for the same in the top of the housing or in a removable seat-piece, so as to prevent the vibrations of the housing occasioned by the sudden and unequal movements of the truck-frame and jaws in passing over imperfect track from throwing the journal-box out of line with the axle, and thus relieve it from the excessive wear and friction attending the journal-box in common use.

Letters of like name and kind refer to like parts in each of the figures.

My invention relating simply to the journal-box and its reception by the housing, a brief reference to the other parts of the truck, which may be of any common and well-known construction, is deemed sufficient.

A represents the truck-frame; B, the jaws; C C, car-wheels; C', axles.

D represents the housing, with one exception of common construction, and held by and working in the jaws in a common manner.

E represents the journal-box upon which the axle C' has its bearing, which bearing is straight, as in the common journal-box. The exterior of the journal-box is made convex or spherical, and has a corresponding concave seat formed in the top of the housing, as shown at E', or in a removable plano-concave seat-piece, F. The first plan is adapted for new housings and the second for the application of my invention to old housings, the seat-piece occupying the position of the old journal-box in the housing. I thus in effect combine the simplicity of a straight journal with the flexibility and freedom from binding and consequent friction of a ball or spherical journal.

It is well understood that the sudden and unequal depressions and movements of the truck-frame in passing over uneven track cause the housing to vibrate or assume varying angles to the shaft, and that the journal-boxes in common use having plane seats against the top of the housing move therewith and assume positions out of line with the axle-bearing, and thus cause excessive friction and wear on the boxes and journals. An inspection of old or worn-out journals and boxes prove this disalignment conclusively, as in almost every instance the journal is found to have worn convex and the box concave. My invention permits the housing to assume these angular positions without throwing the box out of line with its axle-bearing by allowing it to rock upon the convex exterior of the box, and consequently all undue friction and uneven wear of the bearing is prevented.

To prevent the box from turning with the axle, which might possibly occur, the box-seat has a point or stud, G, projecting into a countersunk hole in the box enough larger than the stud to permit any required movement, but preventing the box from turning too far. This might also be effected by flanges projecting under the edges of the box or in any other simple and convenient manner.

The removable seat-piece may be chambered

on its upper side for the reception of waste and oil, and proper oil-holes be drilled through to lubricate the box-seat, if thought necessary.

This invention, though simple, is of great importance as affecting the durability and freedom from friction of an all-important part of the running-gear of railroad-cars.

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

1. A journal-box for railroad-car-truck axles, made convex or spherical on its upper side, in combination with a corresponding concave seat formed in the housing, for the purpose and substantially as set forth.

2. A journal-box, made convex or spherical on its upper side and a removable seat-piece, F, with a concave seat formed therein, in combination with a housing for railroad-car trucks, substantially as described.

3. Projecting a nib, G, from a concave seat formed in the housing D or in a removable seat-piece, F, in combination with a journal-box made convex on its upper side, for the purposes and substantially as described.

A. B. NIMBS.

Witnesses:

B. H. MUEHLE,
G. BROCKHARDT.