

W. H. HOVEY.

2 Sheets—Sheet 2.

Car-Axle Box.

No. 7,819.

Patented Dec. 10, 1850.

Fig. 3.

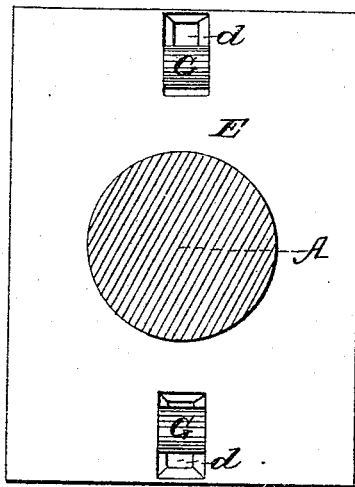


Fig. 5.

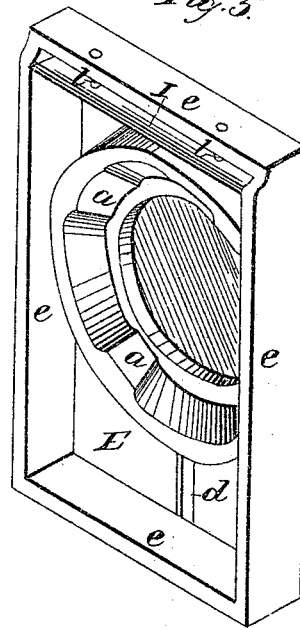


Fig. 4.

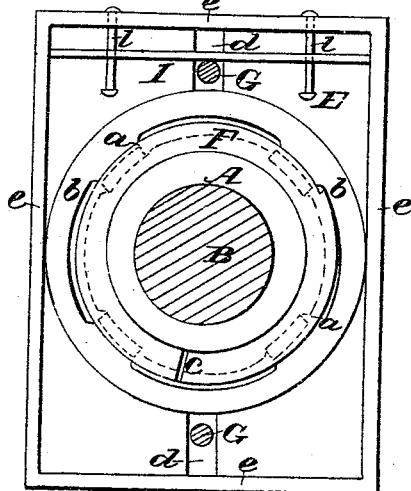
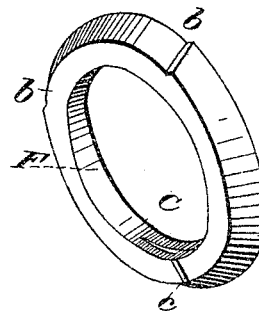


Fig. 6.

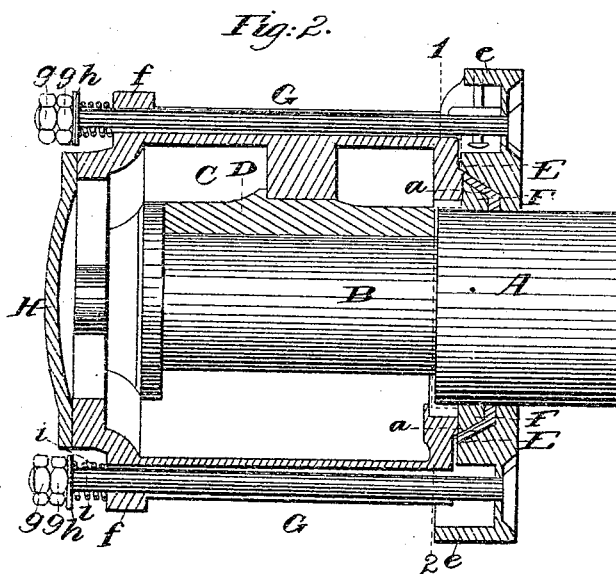
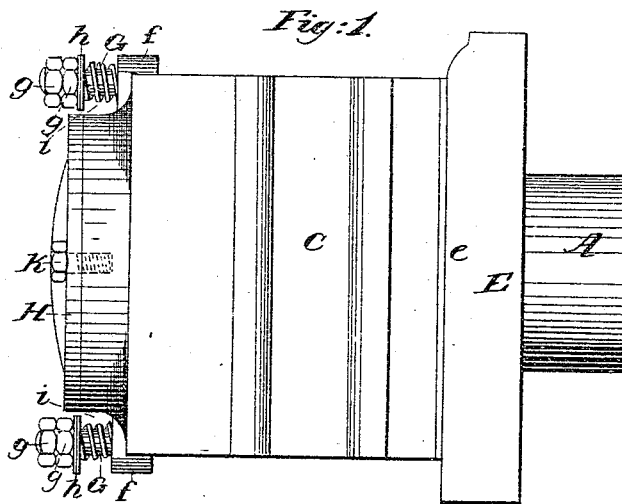


Car-Axle Box.

2 Sheets—Sheet 1.

No. 7,819.

Patented Dec. 10, 1850.



UNITED STATES PATENT OFFICE.

WM. H. HOVEY, OF HARTFORD, CONNECTICUT.

BEARING FOR AXLES AND SHAFTS.

Specification of Letters Patent No. 7,819, dated December 10, 1850.

To all whom it may concern:

Be it known that I, WILLIAM H. HOVEY, of the city and county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Journal-Boxes for Rail-Car and other Axles which are also Applicable to the Shafts of Machinery, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a side elevation of one of the journal boxes; as applied to a rail car axle. Fig. 2, is a longitudinal vertical section of the same through the center. Fig. 3, is a view of the back side of the box the axle being shown in section. Fig. 4, is a transverse vertical section through the line 1—2 of Fig. 2. Fig. 5, is a perspective view of the plate which covers the back side of the box. Fig. 6, is a perspective view of the packing ring.

Similar letters of reference indicate corresponding parts in each of the several figures.

The nature of my improvement consists, in the application, to the back end of the box, of a plate of metal, which fits over its sides and is capable of sliding up or down upon it; on the inner side of this plate is a conical recess which holds a conical metal packing ring, and, by means of the bolts which hold the plate to the box, forces the face of the said packing ring up to the outside face of the box, and causes it to embrace the axle, so that the lubricating material in the box is confined therein, and dust, dirt, &c., excluded from the journal.

To enable others skilled in the art to make and use my invention I will proceed to describe fully its construction and operation.

A, (Figs. 1, 2, 3, and 4) represents the end of a rail car axle.

B, is its journal.

C is the journal box, which is of cast iron, and differs but little from the ordinary journal boxes.

D, Fig. 2, is a step which fits in the box and to the journal in the usual manner.

E, is a cast iron plate, having a rim (e), (e), (e), (e), all around it, which fits over the side edges of the back end of the box and is capable of sliding freely thereon, space being left at the top and bottom for

play; in the center of the plate there is a circular aperture through which the axle passes, and around this aperture on the inner side of the plate is a hollow conical seat a, a, which has recesses in its face so as to leave but small bearing surfaces for the packing ring.

F (Figs. 2, 4, and 6) is the conical packing ring which may be of brass or composition or any kind of metal, it is fitted in the seat a, a, and has two projections or stops b, b, which enter the recesses in the seat a, a, and prevent its turning with the axle to which it fits accurately, it is cut on both sides and slit at (c), (c), (Fig. 6) to admit of its being drawn closely around the axle as it wears; its broad face bears on and fits closely to the outer face of the back end of the box, which has a plane surface, and has an opening through it larger than the axle.

The plate E, is secured to the box by bolts G, G, which pass through slots d, d, near its top and bottom parts in which their heads are countersunk, and lie in recesses one in the top and the other in the bottom of the box, passing through ears (f, f) in the front, and having nuts g, g, and washers h, h, upon them.

Spiral springs i, i, are placed between the washers and the front of the box, for the purpose of allowing for the expansion or contraction of the metal by change of temperature, and also for regulating the pressure of the plate E, upon the packing ring (F).

H, is the cap which covers the front opening through which the grease or lubricating material is introduced, it is secured by screws (k), or other convenient means.

I, (Figs. 2, 4, and 5) is a light metal plate hung upon upon pins l, l, secured in the top of the rim of the plate E, and is capable of sliding up and down upon them; it is intended to rest with its front edge upon the top of the box and is for the purpose of keeping dust, dirt, &c., from within the plate.

The advantage of the plate E, is that it contracts the packing ring tight to the axle and forces it up close to the face of the box, so as to make the box perfectly tight, while at the same time it adjusts itself by sliding, to the wearing down of the step, and consequent sinking of the box, and will allow of any necessary play; its pressure upon the

packing ring can be regulated with great nicety by the nuts *g, g*; the flanges of the box also keep the dirt from the ring F.

Having thus fully described my invention I will proceed to state what I claim as new and desire to secure by Letters Patent.

The combination of the sliding plate E, having a conical seat *a*, and the conical pack-

ing ring F, applied and secured to the journal box of a car or other axle or of a machine shaft in the manner substantially as herein described, for the purposes set forth. 10

WM. H. HOVEY.

Witnesses:

G. HOWELL OLMSTED,
RICHD. G. DRAKE.