

(No Model.)

A. G. PAUL, Jr.
Car Axle Box.

No. 242,841.

Patented June 14, 1881.

Fig. 1.

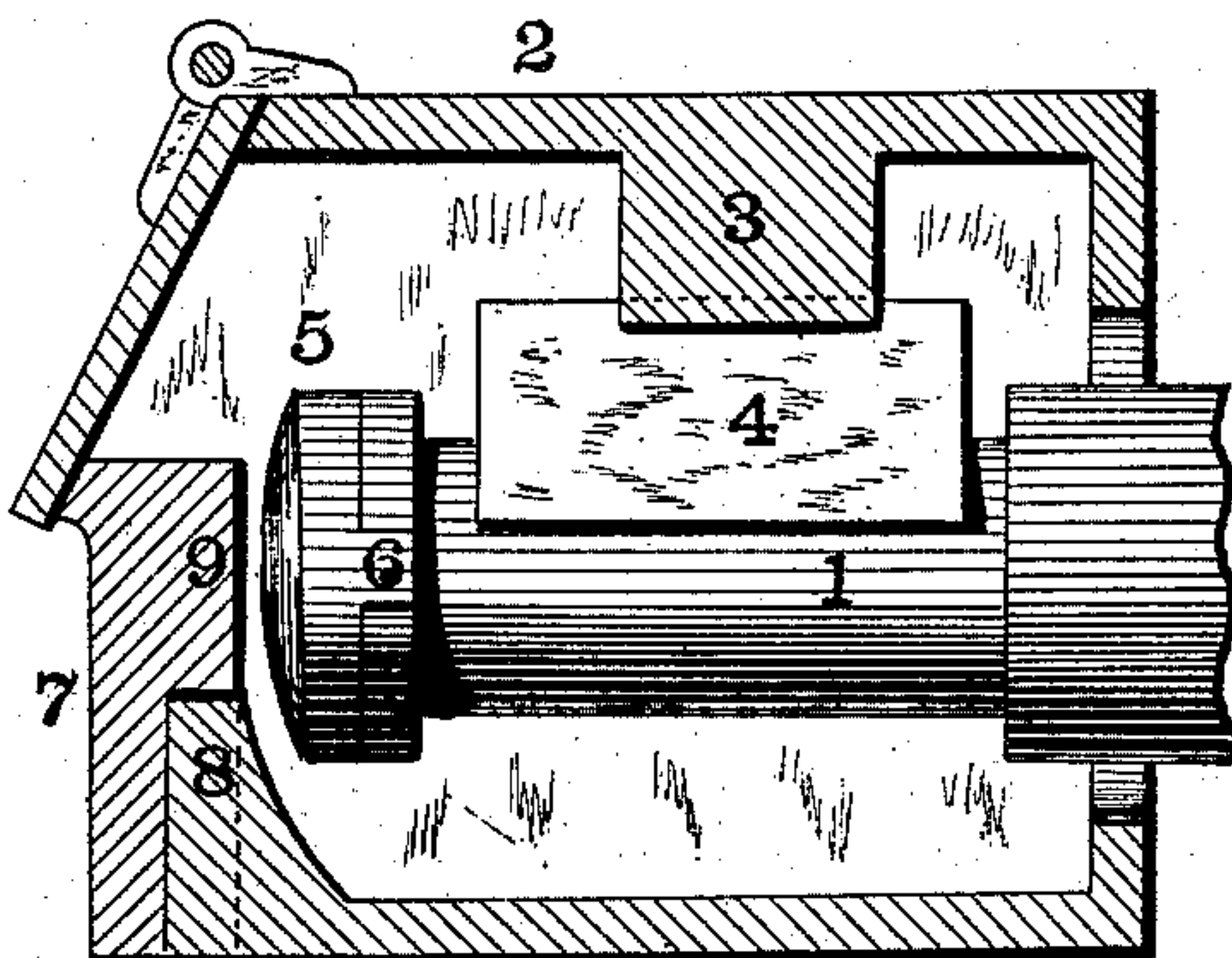
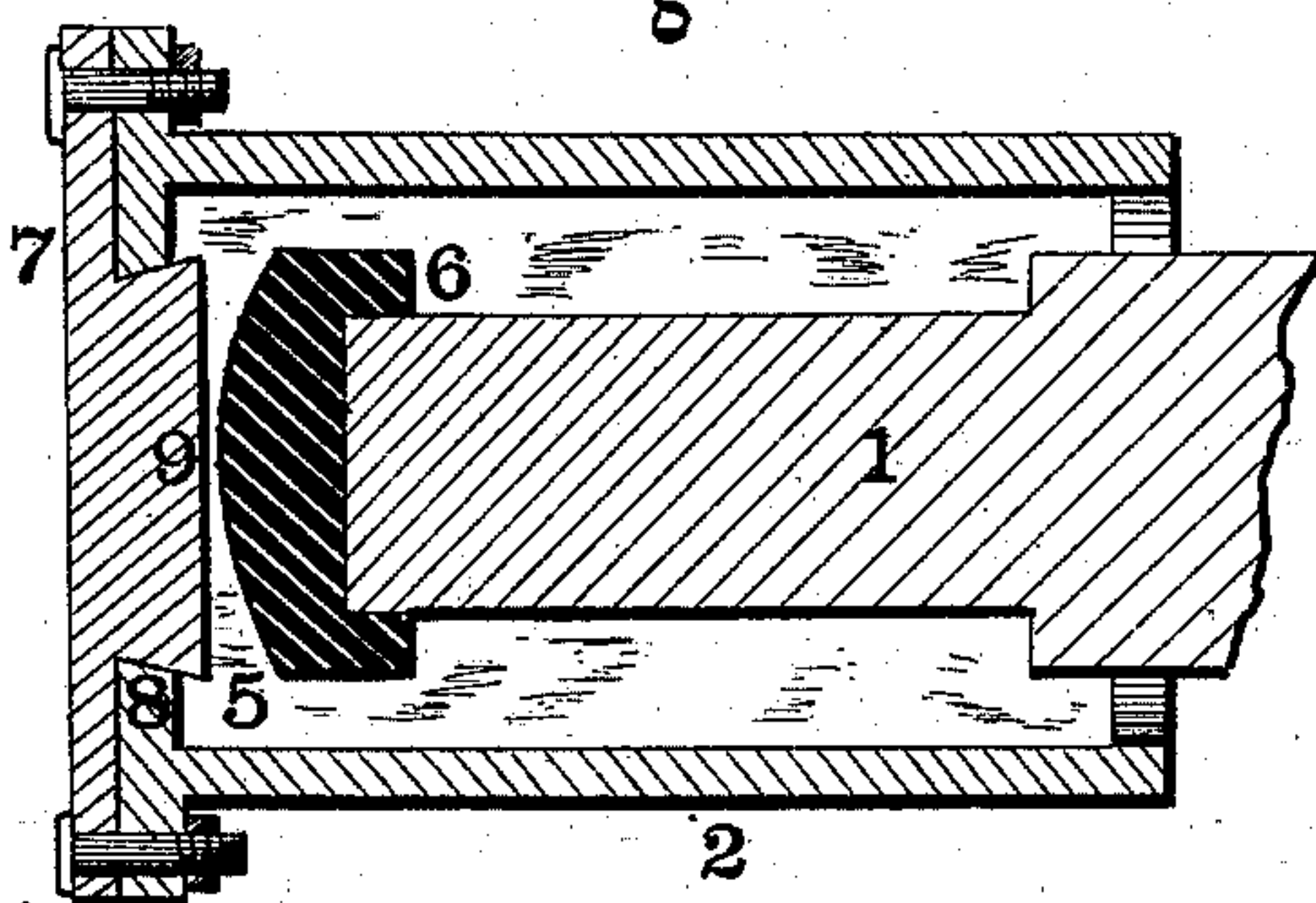


Fig. 2.



WITNESSES

Wm. Loughridge

W. A. Bertram

INVENTOR

A. G. Paul, Jr.

BY

A. D. Williams

ATTORNEY.

UNITED STATES PATENT OFFICE.

ANTHONY G. PAUL, JR., OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-THIRD TO JAMES B. ARTHUR, OF SAME PLACE.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 242,841, dated June 14, 1881.

Application filed March 24, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY G. PAUL, Jr., of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Car-Axle Boxes; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical sectional view of the box, the axle and brass being shown in elevation; and Fig. 2 is a central horizontal sectional view of the device.

My invention relates to axle-boxes for railway-cars; and it has for its object to provide an end bearing for the axle, designed to limit the longitudinal motion of the same and obviate the wear of the shoulders of the axle and brass which has heretofore resulted from the usual construction and arrangement of these parts.

In the accompanying drawings, 1 is the axle, and 2 the box, the latter being provided with the usual hinged cover and boss 3, that secures the brass 4. The construction of the entire device, as shown, except in regard to certain particulars, hereinafter more particularly pointed out, is of the usual standard Baltimore & Ohio pattern. The flange on the end of the axle is slotted on either side, and in these slots fit the lugs 6 of the end bearings, 5. The front, 8, of the box is covered by a plate, 7, having a dovetail boss, 9, which slides in correspondingly-formed guides in the front of the box, as shown, and is secured to the box by bolts and nuts at either side. The face of the bearings 5 is made convex, by preference hemispherical, and brings up, when the axle moves longitudinally with reference to the car, against the inner face of the boss 9. The distance between

the ends of the axle-bearings and the bosses 9 at either side is less than that which separates the shoulders of the axle and the brasses, so that the cutting of the shoulders, which sooner or later resulted from the usual construction of parts, is wholly obviated by my improvement. The end-thrust of the axle against the boss, which invariably occurs on one end of the axle in rounding a curve, is resisted by the dovetail conformation of the boss to the front of the box, and by the bolt-fastenings at either side, so that breakage is practically out of the question. The liability of its occurrence is manifestly much less than with the usual form of box, as in the latter the resistance—namely, that of the brasses on the shoulders of the axle—is above the line of thrust, whereas with my device it is opposite the same.

The bearing 5 may be readily removed for renewal, it being only necessary to unbolt the face 7 and slide it out of its guides, when the end of the axle is exposed. The improvement possesses one feature of paramount importance. It involves no revolution of the construction of the box, but is readily applicable to those in ordinary use.

Having thus described my invention, what I claim is—

1. In combination with the axle having slots in its terminal collar, the removable bearing 5, having lugs 6, and the boss 9, as set forth.

2. In combination with the axle having slotted terminal collar, and bearing 5, provided with lugs 6, the box having front plate, 7, and dovetail boss 9, bolted to the box, as set forth.

ANTHONY G. PAUL, JR.

Witnesses:

MURRAY HANSON,
CHAS. R. DITMAN.