No. 808,684. PATENTED JAN. 2, 1906.

# W. F. RICHARDS.

## CAR AXLE BOX.

APPLICATION FILED APR. 14, 1900.

2 SHEETS—SHEET 1.

Fig. 1.

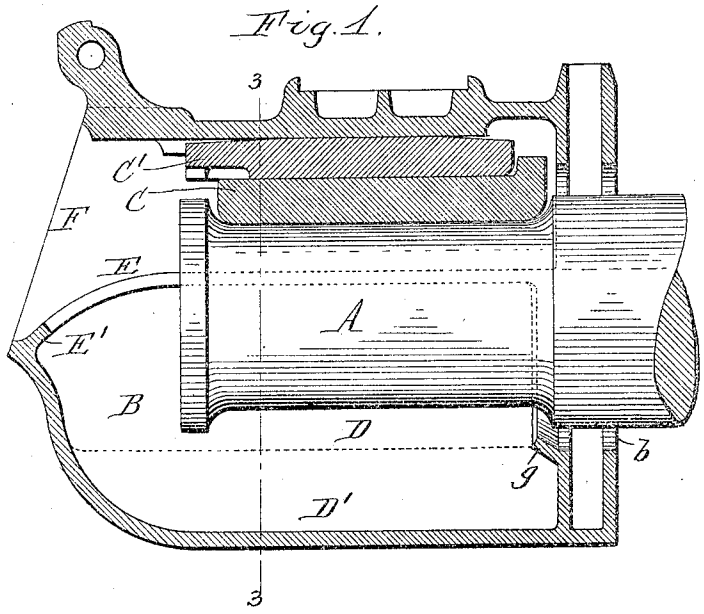
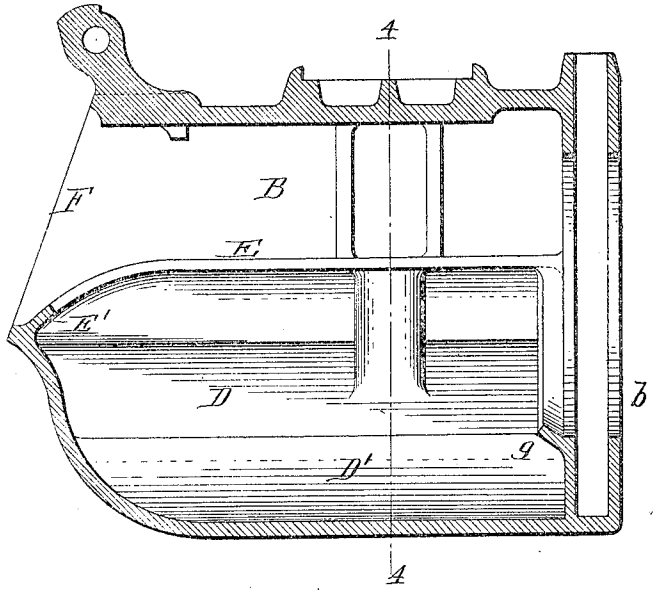



Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

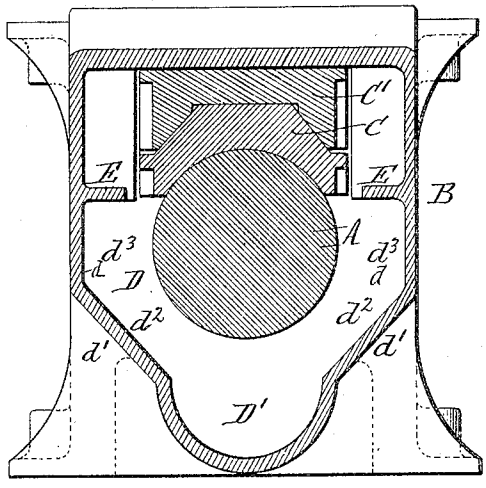
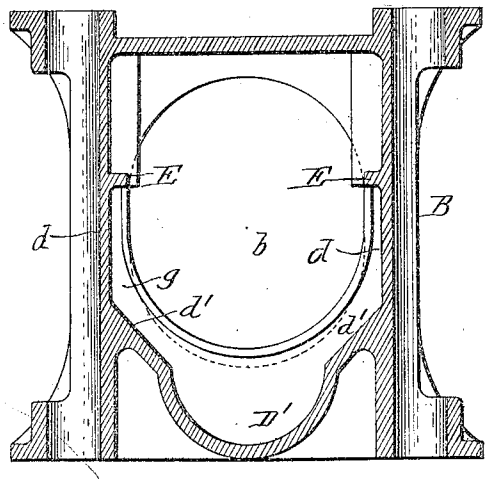



Fig. 4.

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# UNITED STATES PATENT OFFICE.

WILLARD F. RICHARDS, OF BUFFALO, NEW YORK, ASSIGNOR TO THE GOULD COUPLER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF WEST VIRGINIA.

## CAR-AXLE BOX.

No. 808,684. Specification of Letters Patent. Patented Jan. 2, 1906.

Application filed April 14, 1900. Serial No. 12,882.

*To all whom it may concern:*

Be it known that I, WILLARD F. RICHARDS, a citizen of the United States, and a resident of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Car-Axle Boxes, of which the following is a specification.

This invention relates to the construction of the oil and packing chamber of car-axle boxes.

My invention has for its object to so construct the box that the saturated waste or packing is at all times held in intimate contact with the journal and to effect this result without increasing the cost of the journal-box.

In the accompanying drawings, consisting of two sheets, Figure 1 is a longitudinal section of my improved journal-box applied to a car-axle. Fig. 2 is a similar view of the box detached from the axle. Fig. 3 is a cross-section in line 3 3, Fig. 1. Fig. 4 is a similar section in line 4 4, Fig. 2.

Like letters of reference refer to like parts in the several figures.

A is the journal, which extends into the cavity of the journal-box B through the usual opening *b*, formed in the rear wall of the box. C is the usual brass or bearing, and C′ the wedge or key arranged between the same and the top of the box. D is the chamber, which contains the waste or packing and the oil. This journal-box is provided centrally of its bottom with a longitudinal trough-shaped portion extending substantially from end to end of the bottom and forming an oil well or receptacle D, substantially upright side wall portions *d*, Figs. 2 and 3, and opposite inclined wall portions *d′*, which converge downwardly from their juncture with the upright side wall portions *d* to the central trough-shaped bottom portion, as shown in Figs. 3 and 4. These downwardly-converging portions approach the journal so closely as to form between the same and the journal contracted passages $d^2$, which are narrower than the spaces $d^3$ between the journal and the side walls of the box. By this construction the hammering or jarring received by the journal-box causes the waste or packing to be wedged between the lower side portions of the journal and the sloping bottom portions of the box, thereby keeping the packing at all times in contact with the journal and properly lubricating the same. The sloping bottom portions *d′*, by which this advantage is obtained, are formed integral with the journal-box, and the improvement therefore does not increase the cost of the box.

E represents horizontal retaining webs or flanges which extend inwardly from the side walls of the journal-box at a point opposite the top of the journal, and E′ is a similar flange which extends across the lower edge of the filling-opening F in the front wall of the box. These flanges keep the waste down in place in the box and prevent the same from being carried around by the journal. They also serve as gages or stops for the train attendants in packing the boxes.

*g* is a semicircular guard-flange which extends inwardly from the rear wall of the journal-box and which is arranged along the edge of the opening *b* in said wall and terminates at the side flanges E. This flange prevents the packing from passing out through this opening.

I claim as my invention—

1. A railway-car journal-box of standard type, provided with substantially upright side wall portions, a bottom forming an oil well or receptacle, and downwardly-converging side wall portions which join the bottom and upright portions of the side walls and are so disposed as to form spaces between the sides of the box and the journal which extend substantially the length of the box and decrease in width toward the oil well, whereby the lubricating-packing is wedged between the journal and the converging portions of the walls of the box by the jarring of the latter, substantially as set forth.

2. A railway-car journal-box of standard type, having an integral bottom forming an oil well or receptacle, and integral side walls having substantially upright upper portions and downwardly-converging lower portions which join the bottom and are so disposed as to form spaces between themselves and the journal which extend substantially the length of the box and are narrower than the spaces between the journal and the upright upper portions of the side walls of the box, whereby the lubricating-packing is wedged between the journal and the converging portions of the walls of the box by the jarring of the latter, substantially as set forth.

3. A railway-car journal-box of standard type, having an integral bottom forming an oil well or receptacle, and integral side walls having substantially upright upper portions and downwardly-converging lower portions which join the bottom and are so disposed as to form spaces between themselves and the journal which extend substantially the length of the box and are narrower than the spaces between the journal and the upright upper portions of the side walls of the box, and integral flanges projecting inwardly from the side walls of the box above said converging portions, substantially as set forth.

4. A journal-box provided in its front wall with a filling-opening, and in its rear wall with an opening for the passage of the journal, and having an inwardly-extending guard-flange arranged at the lower edge of said filling-opening, an internal semicircular guard-flange arranged at the lower and side edges of rear opening of the journal-box, and horizontal inwardly-extending flanges formed integral with the side walls of the box and arranged about on a level with the upper ends of said semicircular guard-flange, substantially as set forth.

5. The combination with a journal-box and a journal therein, of waste-supporting means at each side of the journal, said supporting means extending from the sides of the box downwardly and toward each other, the lower longitudinal edges of said supporting means being spaced apart and at least below the center of revolution of the journal and being the portions of said means nearest to the journal, and the uppermost portions of said supporting means being at a higher elevation than the bottom of the journal and lower than the axis of the journal.

6. A journal-box adapted to receive a horizontal journal, said box having waste-supporting means arranged at each side of the journal-receiving portion, said supporting means converging downwardly of the box and having such location that their lowermost portions will lie at least below the center of revolution of the journal and closest to the journal when the latter is in position, while their uppermost portions will lie farthest from and above the bottom of the journal and below the axis of the journal when the latter is in position.

Witness my hand this 11th day of April, 1900.

WILLARD F. RICHARDS.

Witnesses:
JNO. J. BONNER,
CYESTA HORNBECK.