I. H. RANDALL.
Car Axle Box.

No. 201,944. **Patented April 2, 1878.**

Fig. 1.

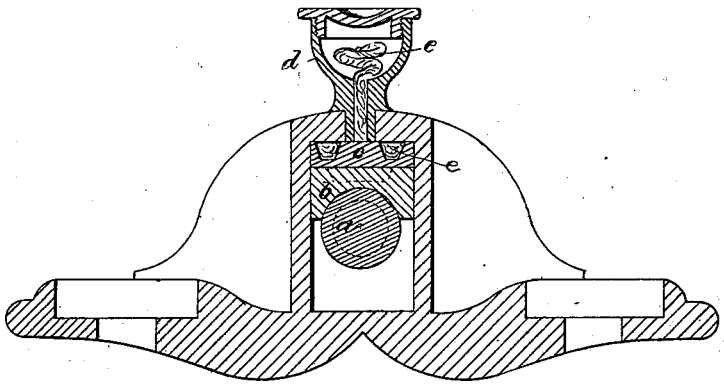


Fig. 4.

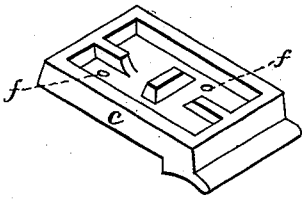


Fig. 3.

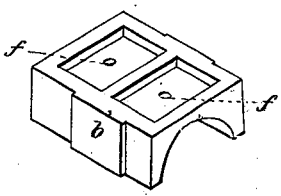
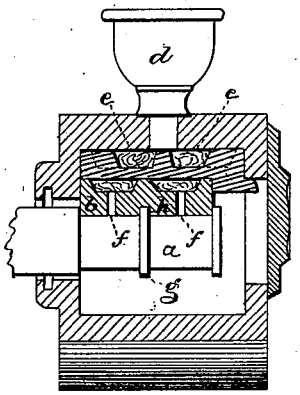


Fig. 2.



Witnesses.
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W. E. Richards

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UNITED STATES PATENT OFFICE.

ISAAC H. RANDALL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **201,944**, dated April 2, 1878; application filed October 6, 1877.

To all whom it may concern:

Be it known that I, ISAAC H. RANDALL, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful Improvement in Car-Axle Boxes, which improvement is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 shows a vertical cross-section of the car-axle box and axle. Fig. 2 shows a vertical longitudinal section of the axle-box. Fig. 3 shows the bearing-saddle of the box, and Fig. 4 shows the upper lubricating-box and filter.

The objects of my invention are, first, to provide a more convenient and economical manner of lubricating the bearing of the saddle of the box upon the journal of the axle; and, second, to prevent any sidewise sliding motion of the saddle of the box upon the journal of the axle.

In the drawings, *a* is the journal of the axle. *b* is the bearing-saddle of the box. *c* is the upper lubricating-box and filter. *d* is a tank for oil. *e* is a wick; *f*, holes in the bearing-saddle, to admit the passage of oil through it to the journal of the axle. *g* is a rib on the journal of the axle, which fits into a corresponding groove, *h*, in the inner side of the bearing-saddle of the box.

The oil-tank *d* contains the oil for lubricating the journal of the axle and the inner side of the bearing-saddle of the box. The passage from it, which should be about one-quarter inch in diameter, is filled with a wick compressed to a degree of solidity that will admit a flow of oil just sufficient to properly lubricate the journal of the axle and the bearing-saddle. A portion of the wick is coiled in the bottom of the tank, and a portion of it is coiled in a cavity in the upper side of the upper lubricating-box *c*. The oil, after being conducted by the wick to the cavity in the upper side of the box *c*, flows through the holes *f* to the surface of the journal *a*; and if the wick is properly adjusted there will be no waste of oil. Should more oil pass through than is necessary for lubrication of the journal, it will pass to the bottom of the box, from which it can be recovered and used again. Thus the loss of a considerable portion of the oil used in the ordinary way of oiling car-axle boxes is avoided.

The rib *g* on the journal of the axle *a*, working in the groove in the inner side of the bearing-saddle, renders a lateral or sidewise sliding motion of the journal *a* in the bearing-saddle, or a similar motion of the bearing-saddle on the journal *a*, impossible, and prevents the wearing away of the shoulders on the journal and the ends of the bearing-saddle, which occurs with the journal of the axle and the bearing-saddles as heretofore made.

I claim—

In a car-axle box, in combination with the outer shell, the perforated bearing-saddle in one or two parts, having a transverse groove on its inner bearing side to receive a corresponding rib on the journal, upon which the bearing-saddle rests, about midway between the shoulders at each end of the journal-bearing, and an oil-passage from an oil-tank located on or in the box above the bearing-saddle, so filled with wick or other porous substance that the downward flow of oil will be regulated by it with precision, and an oil-tank, all arranged substantially as and for the purpose specified.

ISAAC H. RANDALL.

Witnesses:

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