G. T. RAOUL.

Car Axle-Box.

No. 163,409. Patented May 18, 1875.

Fig. 1.

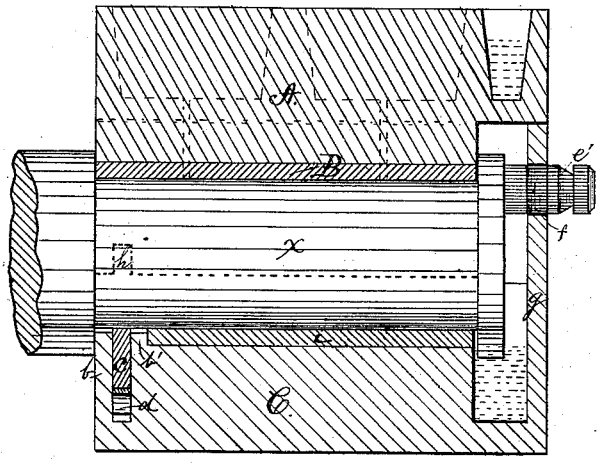
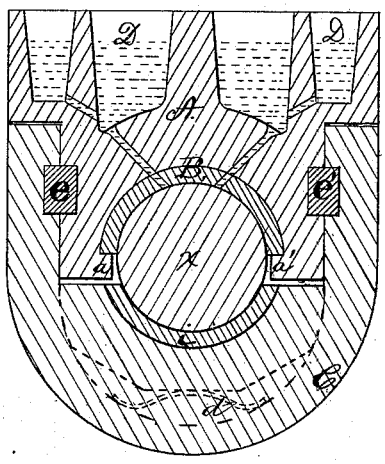


Fig. 2.



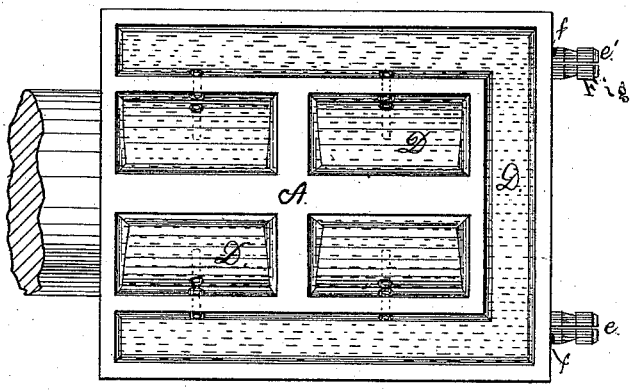


Fig. 3.

WITNESSES.

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GASTON T. RAOUL, OF TANGIPAHOA, LOUISIANA.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **163,409**, dated May 18, 1875; application filed February 9, 1875.

To all whom it may concern:

Be it known that I, GASTON T. RAOUL, a resident of the parish of Tangipahoa and State of Louisiana, have invented a certain new and useful Improvement in Journal-Boxes for Car-Axles; and I do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawing making a part of this specification.

My invention consists of an improved metallic journal bearing and casing for railroad-car axles. The inner side of the bearing is protected from the journal by an adjustable lining, while the upper side of the said bearing is provided with a basin or reservoir for containing the lubricator, which finds its way to the journal when the latter is in motion, and at no other time, through small perforations made in the bearing and lining. This reservoir or basin may, if desired, be made to extend a suitable distance over each end of the journal-bearing.

The metallic casing or housing is fitted to the lower and outer side of the bearing, in which position it is held by means of two keys or pins passing lengthwise through key-seats cut in the outer sides of the bearing, and on the inner sides of the housing. This housing is furnished with a leather or other equivalent lining or pad, which is made to fit up snugly against the lower side of the journal by drawing up the housing over the sides of the bearing section, to which it is secured by means of two keys, as before mentioned. The front or outer end of the housing is entirely closed by a flange cast upon and forming a part of the housing, which is made to extend up snugly to the lower side of the oil-basin, so as to prevent the escape and waste of the lubricant at this point; but my invention will be better understood by referring to the drawing, on which—

Figure 1 is a longitudinal sectional view of my invention. Fig. 2 represents a cross-section, and Fig. 3 a plan or top view, of same.

The interior edges of the bearing-section A are provided with lateral lips *a a'*, in order to form a recess for the reception of the adjustable lining B, and thereby prevent its revolving with the axle-journal *x*. The outer end of the bearing, being free from any obstruction, admits of an easy removal of the lining whenever it becomes worn by use, and of the insertion of a new lining in its stead. The said lining B may be made of metal or of any other suitable material. The thickness of the lining at its lower edges should exceed, by about one-eighth of an inch, the projection of the lips *a a'*, which should of themselves be a scant one-eighth of an inch in depth, in order that they may not be subject to any wear by coming in contact with the journal. The journal-bearing should project slightly beyond the housing at its rear or inner end, in order that it may receive the shock against the shoulder on the axle in the swinging lateral motion of the car. This bearing should be made of cast-steel, as it is intended for long duration. The inner end of the housing C is provided with two flanges, *b b'*, with a space between them of about three-sixteenths of an inch. The tops of these flanges are hollowed out in the center to conform to the lower side of the journal, which they nearly or quite touch. In order to prevent any waste of oil or other lubricating material at this end of the housing, a piece of heavy leather, *c*, is inserted in the groove formed by the flanges *b b'*. This leather is rounded out at top to fit up tightly around the lower side of the journal, in which position it is supported and continually held by an elliptic spring, as shown at *d*. The bearing-section A and housing C are, as before stated, securely held together by means of two keys, *e e'*. The said keys are provided, near their outer ends, with notches or catches *f*, which, springing over the edges of the opening in the outer flange *g*, through which they are inserted, prevent their being jarred out of their seats by the motion of the train. A gain or slot is cut on either side of the inner end of the bearing A, as shown by dotted lines at *h*, so as to admit of the leather flange *c* being continually kept in position up against the journal by the action of the spring *d*, as the bearing or lining is worn by use. The leather flange *c* not only effectually prevents the waste of the lubricant at this point, but forces the waste or drainage from the oil-basin into the bottom of the housing, where it is again brought into use by the action of the journal upon it.

The basin or oil-receptacle is entirely covered by the ordinary wedge, and the journal so completely incased by the housing and bearing as to exclude every particle of dust or sand from coming in contact with the journal or any portion of the oil, which, being automatically supplied to the journal, renders it almost impossible for the bearing or journal to become heated.

The oil-boxes now in general use on car-journals may be so changed as to leave off the flanges on the inside, and both ends left entirely open, in order to facilitate any examination of the journal or lubricator that may be employed, the said box not being used in any connection with the oiling of the journal.

The journals of the axles may be used as they commonly are—perfectly straight; but I would prefer to have them of an increased diameter toward their centers of about one-eighth of an inch.

I am aware that detachable linings of brass or babbitt-metal, in combination with oil or grease reservoirs, have been used. Therefore these or analogous features I do not claim, irrespective of the combination and arrangement, as hereinbefore described, and hereinafter recited; but

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

1. The bearing A, in combination with the removable lining B and basin D, as described, and for the purpose set forth.

2. The housing C, having flanges *g* and *b b'*, in combination with pad *i*, leather flange *c*, and spring *d*, as described, and for the purpose set forth.

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Witnesses:
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