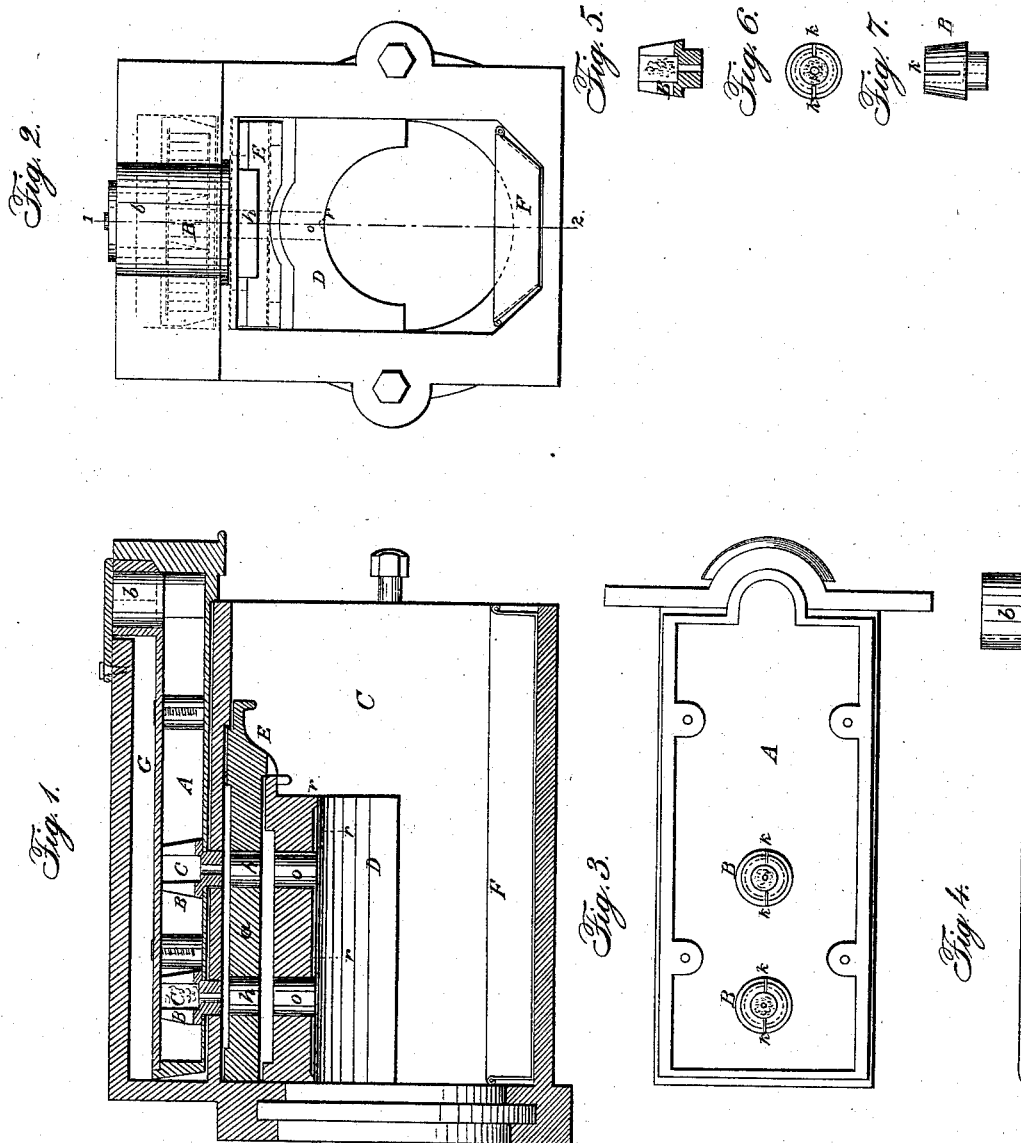


W. F. RIPPON.

Car-Axle Box.

No. 54,775.

Patented May 15, 1866.



Witnesses:

*John B. Thurston*  
*George B. Barriss*

Inventor:

*William F. Rippon*

# UNITED STATES PATENT OFFICE.

WILLIAM F. RIPPON, OF PROVIDENCE, RHODE ISLAND.

## IMPROVED AXLE-BOX.

Specification forming part of Letters Patent No. 54,775, dated May 15, 1896.

### *To all whom it may concern:*

Be it known that I, WILLIAM F. RIPPON, of the city and county of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Self-Lubricating Journal-Bearings; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

Figure 1 is a longitudinal and vertical section of a journal-box for a railway-carriage with my improvement, the same being in a plane upon the line 1 2 of Fig. 3. Fig. 2 is a front elevation. Fig. 3 is a top view of the oil-reservoir and its filtering-tubes. Fig. 4 is a side view of the cover of the reservoir. Figs. 5, 6, and 7 are detailed parts to be referred to.

In the accompanying drawings the improvement is represented as applied to the journal-box of a railway-carriage. It is not, however, limited to such use, but can with equal advantage be applied to any journal-bearing.

C is the usual case fitted to the truck of the car and containing the half-box D, which rests upon the axle.

As shown in Figs. 1 and 2, I construct the upper part of the case so as to form a chamber, G, for the reception of the oil-reservoir A. This reservoir consists of a rectangular shallow pan, Figs. 1 and 3, provided with a movable cover, Fig. 4, which is intended to be secured so as to exclude all dust. This reservoir has also one or more filtering-tubes, B B, which connect the oil-reservoir with the journal. These tubes are to be filled with some fibrous material as an absorbent to effect the gradual delivery of the oil to the bearing and to filter it.

To prevent the displacement of the reservoir, in this instance, the lower portion of the filtering-tube is made long enough to enter the holes in the partition *a*, upon which the reservoir rests, so that the reservoir can only be withdrawn by raising it vertically to a height sufficient to permit the bottom of the filtering-tube to clear the upper surface of the partition. This reservoir A is filled by pouring a quan-

tity of oil into the same through the orifice *b*, which is, when not open for this purpose, to be closed with a plug or otherwise made tight. The oil passes through the slits *k k* in the filtering-tubes into the cavity C, where the absorbent is contained, and is filtered through the same and delivered, through the ducts *h h* in the packing-plate E, to the orifice *o*, leading to the channel *r*, Figs. 1 and 2, in the top of the journal-box, from whence it is distributed over the axle.

The functions of the fibrous material in the cavity C are, first, to strain from the oil all impurities, and, secondly, to increase or diminish the quantity which shall flow to the bearing, and which increase or diminution of flow can be regulated by loosening the absorbent or packing it more closely, as the one result or the other is desired. The drippings, if any, from the shaft will be collected in the pan F, the contents of which can be returned to the reservoir and be used again.

Although my improvement is represented as applied to the lubrication of a car-axle, it is evident that the same principle can be employed for lubricating any bearings, for the invention consists in the use of an oil-reservoir and filter combined, so located with reference to the bearing that the oil or lubricant shall flow by its gravity to the bearing, but be filtered during its passage.

Experience in the use of the improvement has demonstrated that it effects a great economy in the consumption of oil over any apparatus before employed for a similar purpose, and prevents also the presence of much of the dust and fine grit which otherwise will be carried to the bearing.

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

The independent oil-reservoir A, provided with a filter, B, as described, in combination with the journal-bearing D, substantially as specified.

WILLIAM F. RIPPON.

Witnesses:

JOHN D. THURSTON,  
GEORGE B. BARROWS.