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MEANS FOR LUBRICATING AXLE BOXES AND THE LIKE.
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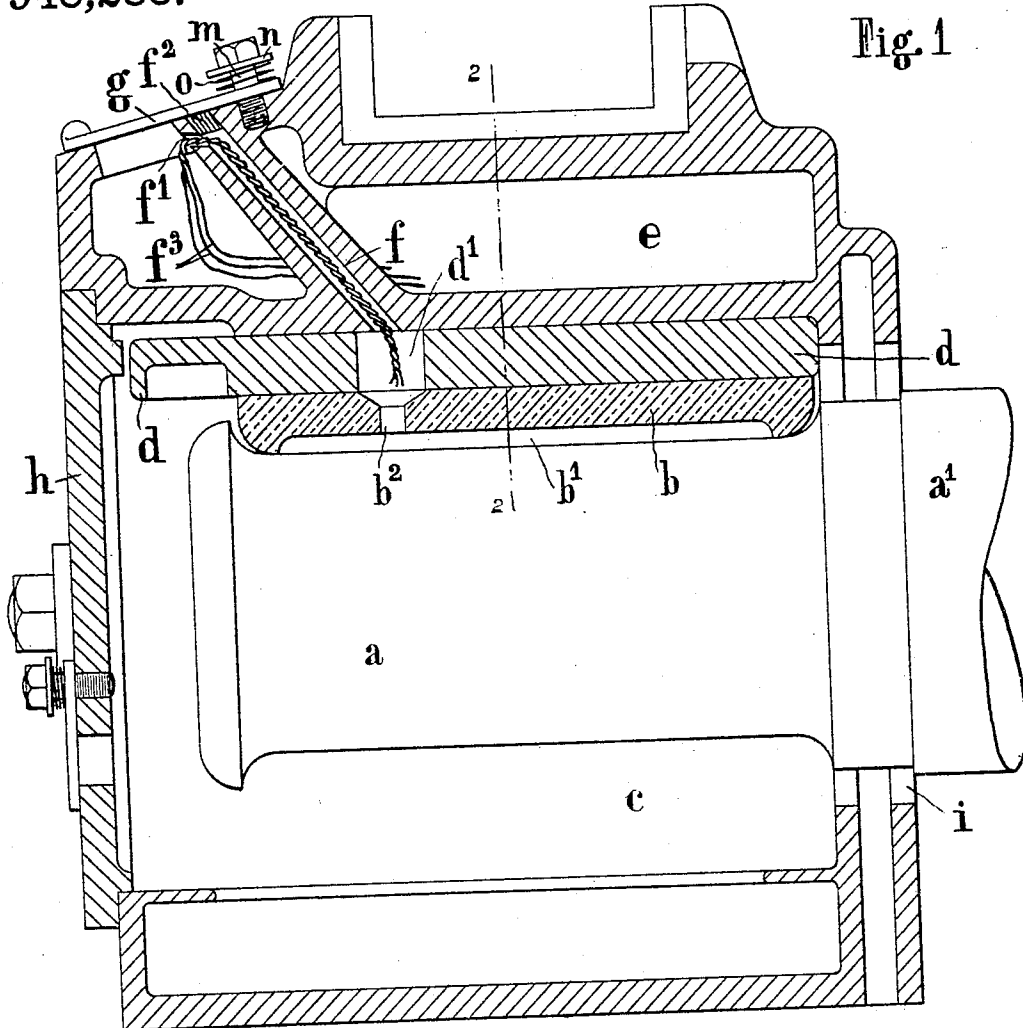


Fig. 2

Witnesses:
A. C. Ernst
E. S. Parry

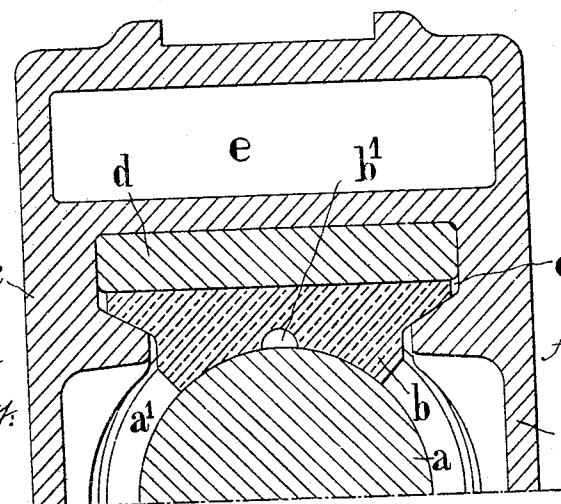
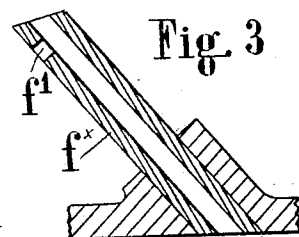


Fig. 3



Inventor:

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By J. Walter Fowler
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UNITED STATES PATENT OFFICE.

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MEANS FOR LUBRICATING AXLE-BOXES AND THE LIKE.

948,283.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed March 21, 1908. Serial No. 422,331.

To all whom it may concern:

Be it known that I, ALBERT JAMES SMITH, a subject of the King of England, and residing at 63 Splott road, Cardiff, Glamorganshire, England, ironfounder, have invented a certain new and useful Improvement in Means for Lubricating Axle-Boxes and the Like, of which the following is a full, clear, and exact description.

10 This invention relates to the lubrication of axle boxes and the like, and is especially applicable to the axle boxes of railway wagons and other vehicles, trams, corves and the like.

15 The invention is of the type in which an oil chamber is arranged above the bearing and extends from front to rear of the box, the oil being siphoned down to the journal by means of wicks carried by an inclined 20 tube.

According to the present invention the outer end of the tube is covered by the lid through which access is had to the interior of the oil chamber, the tube being inclined 25 from the middle portion of the chamber outwardly to the filling hole. This tube may be cast with the chamber or I may screw or otherwise fix a suitable pipe in the desired position; or, again, the casting of the chamber 30 may be effected around, for example, a wrought iron pipe and this is sometimes the most convenient form of construction.

Access to the pipe is obtained by unbolting and taking off or otherwise removing the 35 cover to the opening of the oil chamber, this cover being placed similarly to ordinary grease-box covers. The top of the pipe is made open or closed but when made open the top is made level with the main opening 40 to the oil chamber. Thus the lid covers the pipe when the former is closed. When the top is to be closed independently of the lid, I may effect this by inserting a plug of wood or the like at the top end of the pipe.

45 A small hole is provided near the top of the pipe through which to pass the wicks or the like, this being the only means of escape for the oil from the chamber, and since the pipe extends up to the lid and the hole in the 50 pipe is made at or near the top of the pipe, the oil is prevented from wasting down the said hole when for instance the axle box is inclined as in tipping wagons. I thus provide an oil tight, dust proof, reservoir oil 55 chamber which is both practical for all

kinds of wagons (including tipping wagons) and cheapens the cost of manufacture. Moreover, by the particular construction and combination of parts, the lubrication of the axle is effected in an efficient manner 60 without liability of the parts and passages to become choked or put out of order.

Upon the accompanying drawings I have illustrated the application of the invention to an axle box for a railway wagon. 65

Figure 1 is a vertical section upon the center line of the journal. Fig. 2 is a part vertical section on line 2—2 of Fig. 1. Fig. 3 is a section of the wrought iron pipe in position. 70

The journal *a* of the axle *a*¹ runs on a brass *b* which is secured in the axle box *c* by a steel wedge or slipper *d*. The oil chamber *e* is situated above this wedge or slipper and extends from the front of the 75 axle box to the extreme rear end of the journal. An oilway *b*¹ is formed in the brass *b* and fed through an oil hole *b*² which registers with a hole *d*¹ in the wedge or slipper. 80

The chamber *e* is provided with a tube *f*, inclined at a suitable angle so that its lower end communicates with the oil-holes *d*¹ and *b*² and its upper end comes immediately under the cover *g* which incloses the oil 85 chamber. At or near the top of the oil-tube a hole *f*¹ is formed, and through this a number of wicks, *f*², strands or the like are passed to siphon the oil from the chamber *e* down the tube to the holes *d*¹ and *b*² and so 90 lubricate the journal by means of the oilway *b*¹.

The upper end of the oil-tube is made flush with the seating of the cover *g* so that the closing of the lid covers and seals the 95 oil-tube. If desired the tube may be closed by a plug of wood or the like *f*² as shown in the drawings. The tube *f* may be cast integral with the axle box but it may also be inserted in the core to the casting of the 100 oil chamber, and the casting thus secures it in position; this arrangement is shown as at *f*³ in Fig. 3.

The oil chamber *e* is shown cast in one piece with the axle box *c* and the front of 105 the latter is provided with a lid or door *h*, bolted or otherwise secured in place. The rear of the box is open or cut away as at *i* to allow the insertion of the axle *a*¹.

As will be seen from Fig. 2, the wedge or 110

slipper d is seated in recesses c^1 formed in the interior of the box c and the bush or brass b is also maintained in the recesses c' below the wedge or slipper d and rests upon
5 the axle journal a .

The upper oil hole d^1 is preferably of larger size than the hole b^2 but these two holes may be of any convenient sizes, being arranged in continuation of the tube-bore f .

10 While I have shown the lid g fastened in place by a stud m with washer n and a coiled spring o arranged between the washer and the lid, I may use any other convenient fastening for the lid g .

15 Having thus described my invention what I claim as such and desire to secure by Letters Patent is:—

1. Means for lubricating axle boxes and the like, said means comprising an oil
20 chamber having an opening at the top and outer end thereof, a lid adapted to close said opening, a tube rigid with the chamber and inclined upwardly and outwardly therefrom from a point near the center of the
25 chamber, said tube being open at the lower end and having its upper end in contact with said lid, a plug closing the upper end of the tube, said tube having a second opening in its under side near the top, and a wick
30 extending from the part to be lubricated up through said tube and through the second opening and into the chamber containing the lubricant.

2. An axle box having in combination an
35 oil chamber with an opening in the upper and outer end leading thereto, a lid for

closing said opening, a tube integral with the box and extending from an intermediate portion thereof at an angle upwardly and outwardly having its upper end in contact
40 with said lid, a plug closing the upper end of the tube, said tube having an opening in its underside near the top, and a wick extending through the tube and through the second named opening having one of its
45 ends dipping into the oil in the chamber and the other terminating proximate to the part to be lubricated.

3. The combination with an axle journal, of an axle box having an oil chamber with an
50 opening in the upper and outer end leading thereto, a lid for closing said opening, a tube rigid with the box and extending from an intermediate portion thereof at an angle upwardly and outwardly so that its upper end
55 will rest against said lid, said tube having an opening in its underside near the top, a wick extending through the tube and through the second named opening having one of its ends dipping into the oil in the chamber and the
60 other end terminating proximate to the part to be lubricated, a wedge or slipper seated in said box, and a brass mounted on the axle journal, said wedge or slipper and brass having passages for the oil supplied from
65 the wick.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ALBERT JAMES SMITH.

Witnesses:

MARIA BAYES,

VICTOR F. FEENY.