2 Sheets-Sheet 1.

W. Sherburne,

Axle Box.

No. 79,867. Patented July 14, 1868.

Fig. 1.

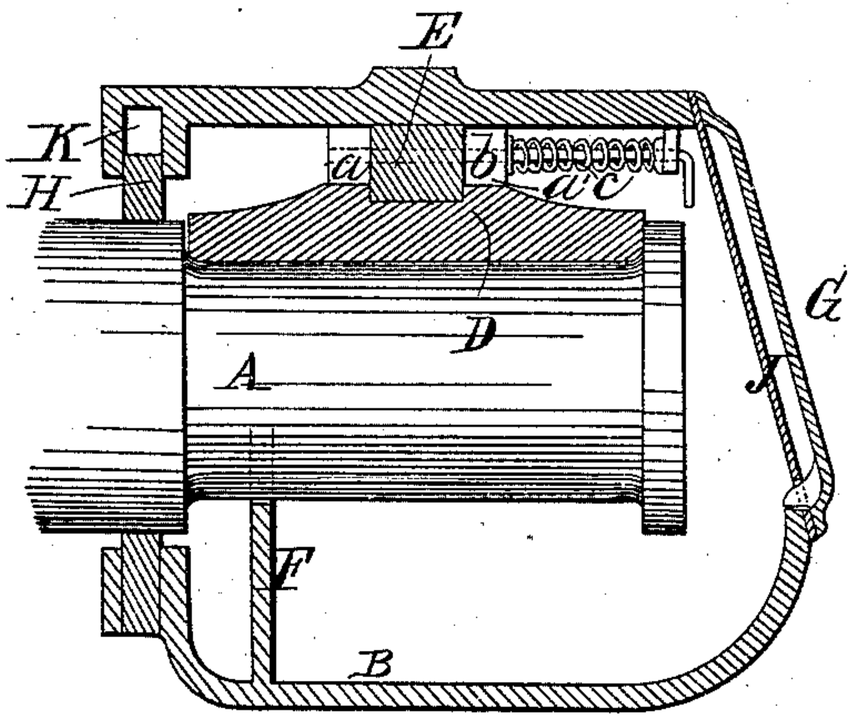


Fig. 3.

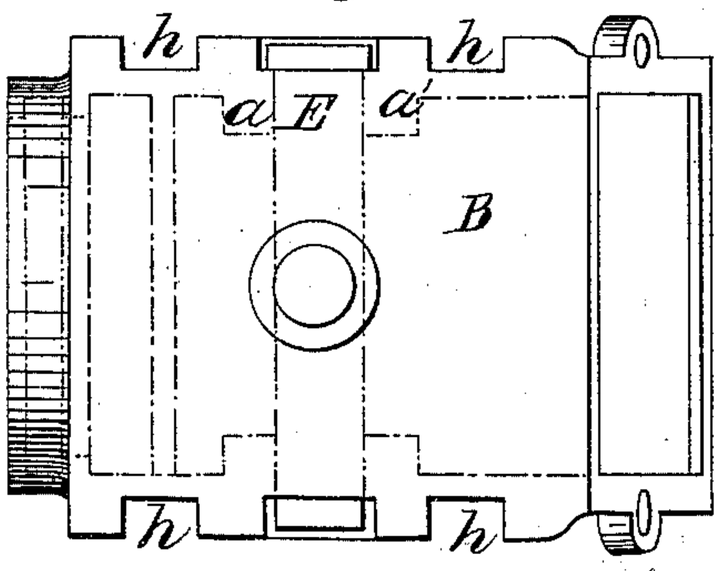


Fig. 5.

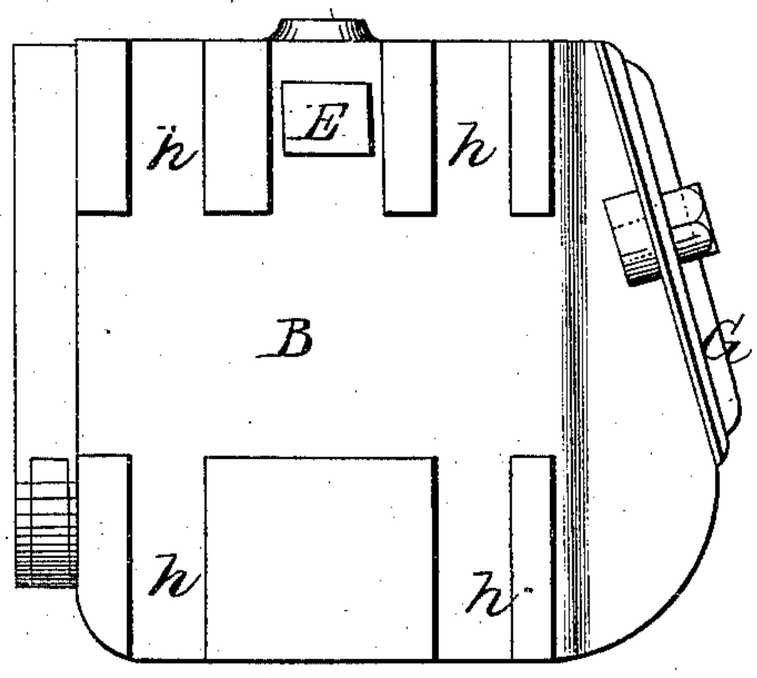


Fig. 2.

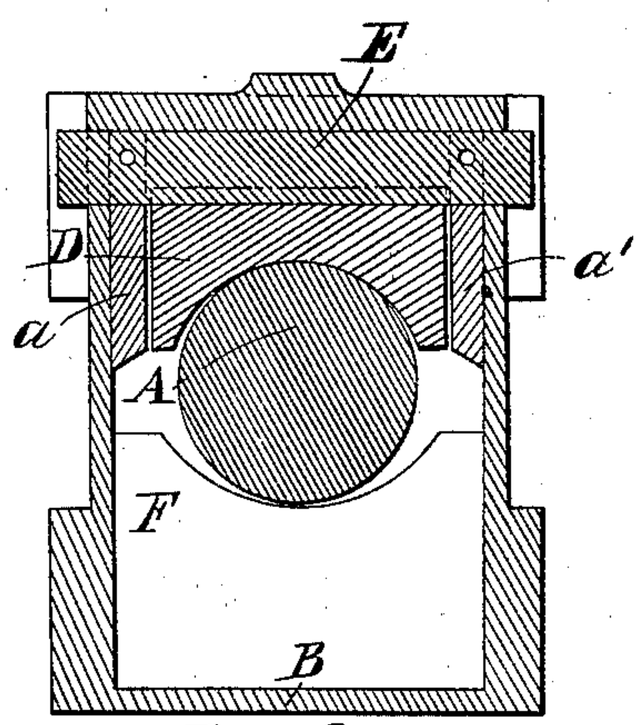


Fig. 4.

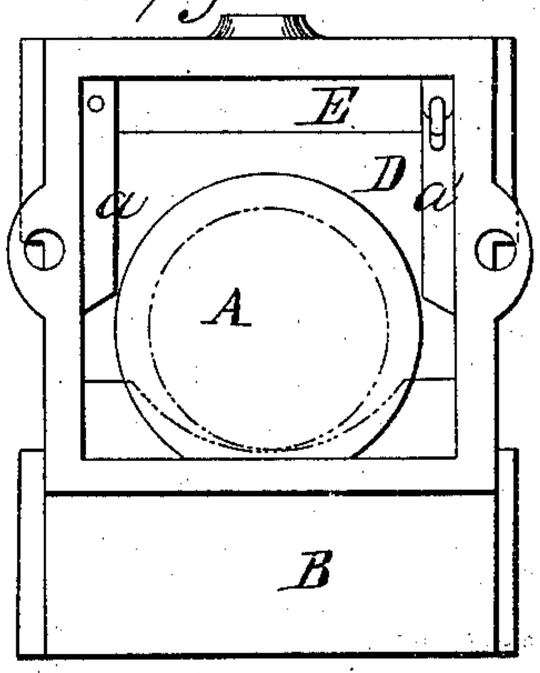
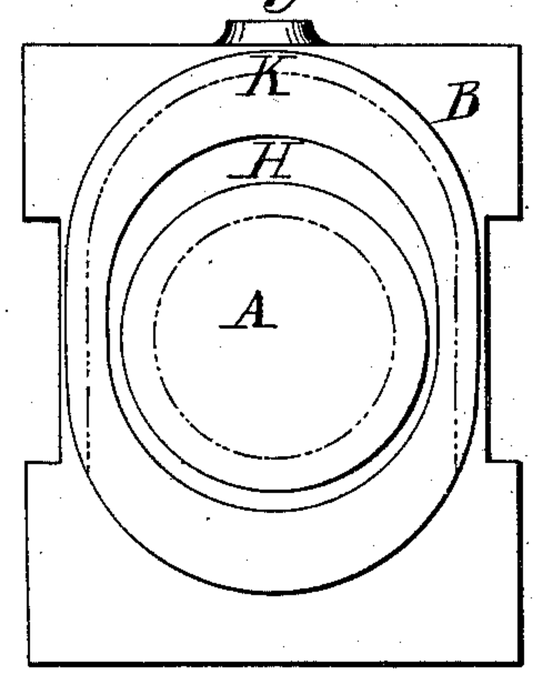


Fig. 6.



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W. Sherburne, 2 Sheets-Sheet 2

Axle Box.

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Fig. 7.

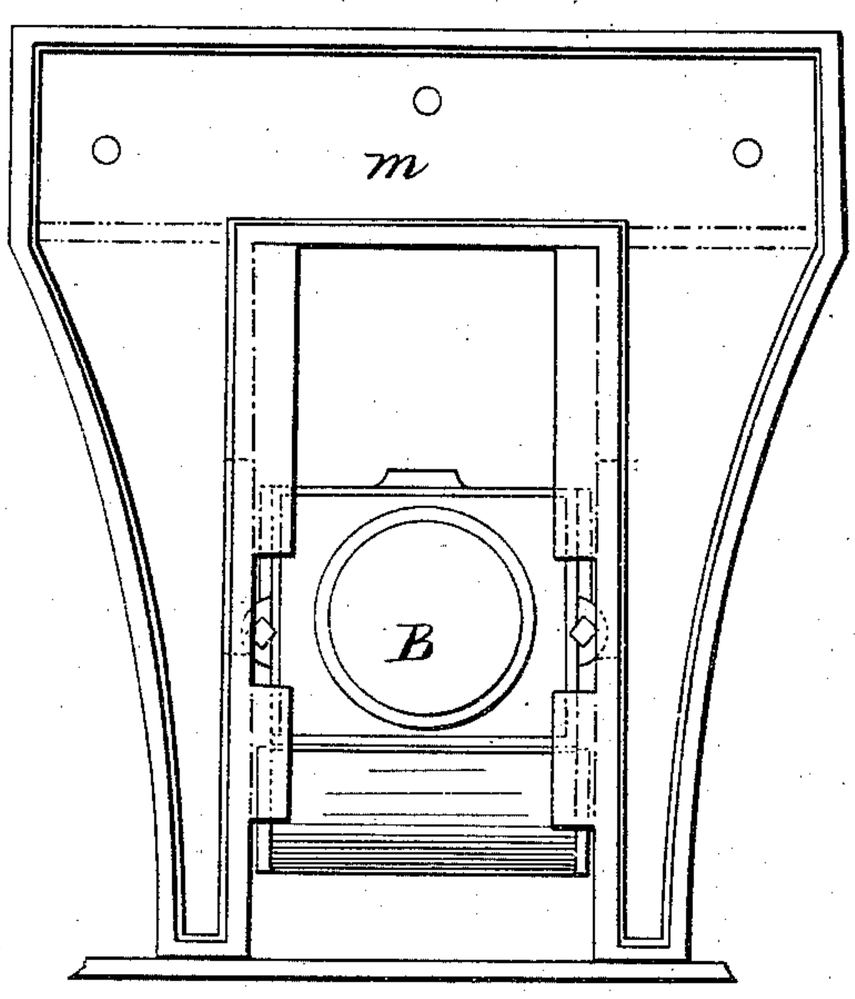
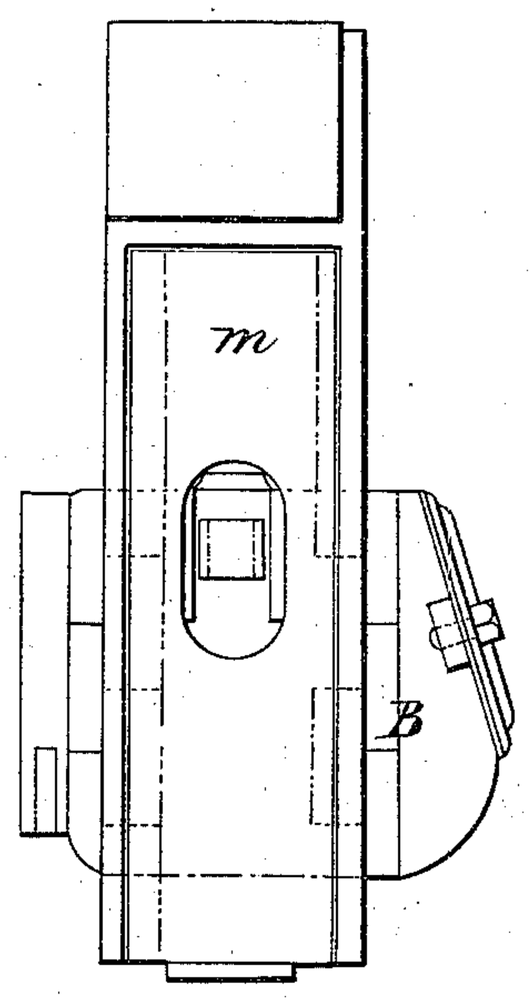


Fig. 8.



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United States Patent Office.

WILLIAM SHERBURNE, OF CHARLESTOWN, MASSACHUSETTS.

Letters Patent No. 79,867, *dated July* 14, 1868.

IMPROVED JOURNAL-BOX.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM SHERBURNE, of Charlestown, in the county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Oil-Boxes for Journals of Axles for Railroad-Cars, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of the oil-box, &c.

Figure 2 is a transverse vertical section.

Figure 3 is a plan of the same.

Figure 4 represents an elevation of front end.

Figure 5 represents a side elevation.

Figure 6 is an elevation of rear end.

Figure 7 is a front elevation of jaw and oil-box.

Figure 8 is a side elevation of the same.

The same letters refer to the same parts in the several figures.

The object of my invention consists in so constructing a journal or oil-box as to prevent as much as practicable all loss of oil, to protect the journal from dust, and to admit the bearing to be readily removed from the journal of the axle, for the inspection of the journal, or for the renewal of the bearing, while the oil-box remains in its place on the car.

Furthermore, in the combination of the oil-box with the axle and jaw, so as to have the oil-box easily removed from the axle and jaw, for the purpose of renewing the packing in the rear end, or of replacing it by a new box, or of fitting on a new spring.

My invention consists in inserting a bolt through the sides, and between the top of the oil-box and the upper side of bearing, which, for this purpose, is provided with a groove, extending across the whole width of the bearing, and in securing said bolt in its place in such a manner that it cannot be thrown out by the constant shocks and joltings of the car. Thus the bearing will be kept firmly in its place on the journal, and in the centre of the box, and therefore these parts are not subjected to disarrangement and breakage, or to unnecessary wear, in consequence of the constant jolts, lateral shocks, concussions, and jars, to which railroad-axle boxes are exposed; thus they become more secure, and do not require the constant care and attention which are necessary with other boxes.

My invention also consists in the manner in which the box is made detachable from the jaw. The guides of the jaw, which fit snugly in the opposite grooves of the oil-box, have two recesses cut transversely into them. These two recesses and the intervening part of the guides correspond in height to two projections which form the grooves on the box, and into which the guides fit, and an intervening space on the box where those projections are discontinued, so that when the box is put in a position where the cuts in the guides of the jaw come opposite to the grooves of the box, the latter can be readily taken off, but when the oil-box is placed on the journal, and in working condition, it will play between the guides of the jaw in a vertical direction only. The sides of the jaw are provided with an oval aperture, for the purpose of getting access to the bolt in the box.

To enable others skilled to make and use my invention, I will proceed to describe the same with reference to the drawings.

On plate 1, figs. 1, 2, 3, 4, 5, and 6, A is the journal of the axle; B, the oil or journal-box; D, the bearing on the upper part of journal A, and is provided with a recess, extending across its width, and into which the bolt E fits snugly. The sides of the box B have projections *a a'*, between and against which the bearing D is fitted. The partition F, the concave upper edge of which nearly touches the journal A, forms, with that part of the box between it and the lower edge of head-plate G, the oil-chamber, which contains cotton-waste, &c., saturated with oil. The lower edge of the opening for the head-plate G is in the same horizontal plane with the lower portion of the concave edge of the partition F, and thus the overflow of the oil will be prevented

while oiling. The head-plate G is secured to the box B, and is packed with the leather, J, or equivalents, and at the rear end of the box B, a plate or ring, H, of hard wood, or other suitable material, fitted around the axle, is playing in the recess or chamber *k*, and thus all dust is prevented from entering the inside of the box. The shape of this plate or ring H is in conformity with that of the chamber *k*, and may be inserted by leaving the lower side of the chamber open. The bolt E, made of wrought iron or other suitable material, passes through the sides and projections *a a'* of the oil-box, and being on one end provided with a head, will allow the pin *b*, pressed forward by the spring *c*, to enter an aperture through the bolt as soon as the head of the bolt strikes the box. The spring *c* and pin *b* effectually prevent the bolt from being thrown out. *h h* are the grooves, into which the guides *i i* of the jaw *m* fit. *l*, in fig. 8, shows the oval aperture in the sides of the jaw *m*, to get access to the bolt.

The operation for taking out the bearing is as follows: Prop the box B, so as to counteract the pressure of the spring on top of box; then pull the pin *b* until it clears the bolt E; draw said bolt E from the box B, and remove the bearing D from the journal A. All this will be accomplished without disturbing the relative position of the jaw *m*, axle A, or box B. There is no canting of the box B required, as must be done with other boxes; consequently the box can be fitted more tightly between the guides of the jaw, and the wear and tear of these parts diminished; also, a portion of the oil will thus be saved, which unavoidably must be lost by the canting of the box, and thus the oil is allowed to come in closer contact with the journal, and keep it better lubricated.

Figs. 7 and 8 show the position of the box on the jaw when the car is in running condition.

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

1. The bolt E, constructed as and for the purposes above described.

2. The bolt E, in combination with the jaw *m* and oil-box B, substantially and for the purpose above specified.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

WM. SHERBURNE.

Witnesses:

M. S. G. WILDE,

S. R. MORELEY.