

(No Model.)

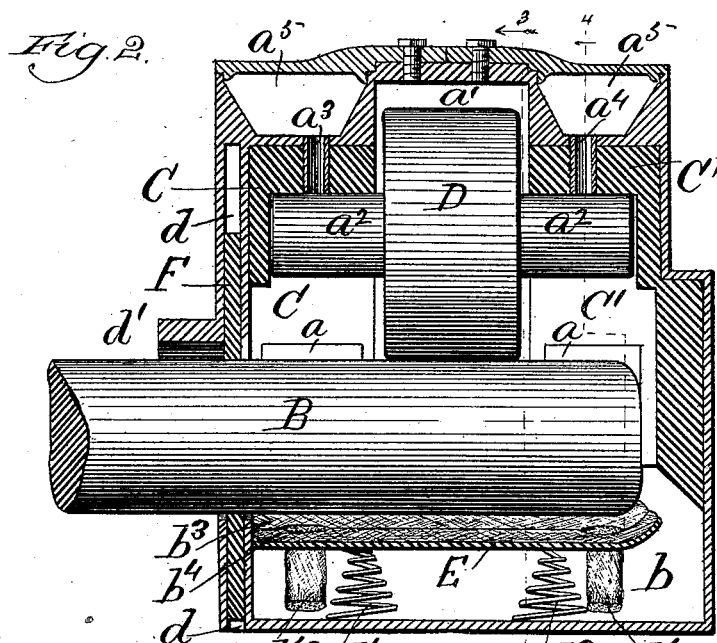
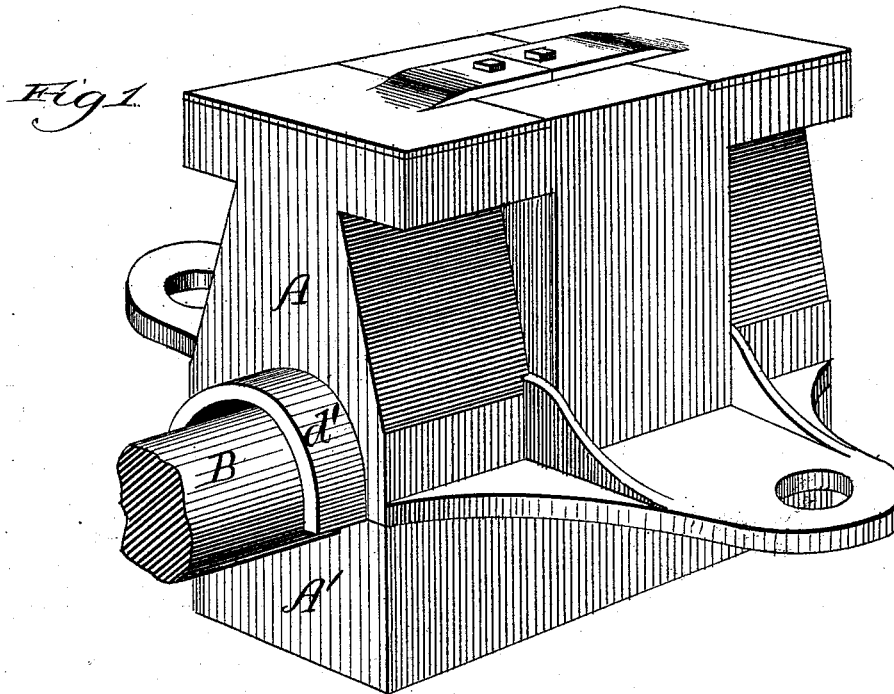
2 Sheets—Sheet 1.

A. C. HÉBERT.

CAR AXLE BOX.

No. 347,599.

Patented Aug. 17, 1886.



Witnesses: *Chas. E. Gaylord*
J. H. Donaldson

Inventor:
A. C. Hébert.
By L. B. Coupland & Co.
Attys

(No Model.)

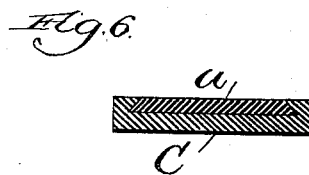
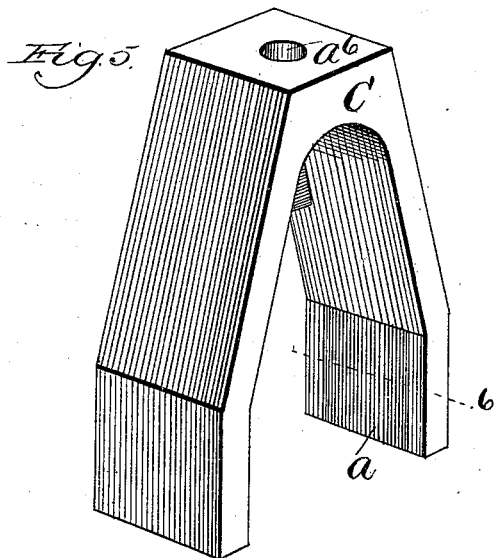
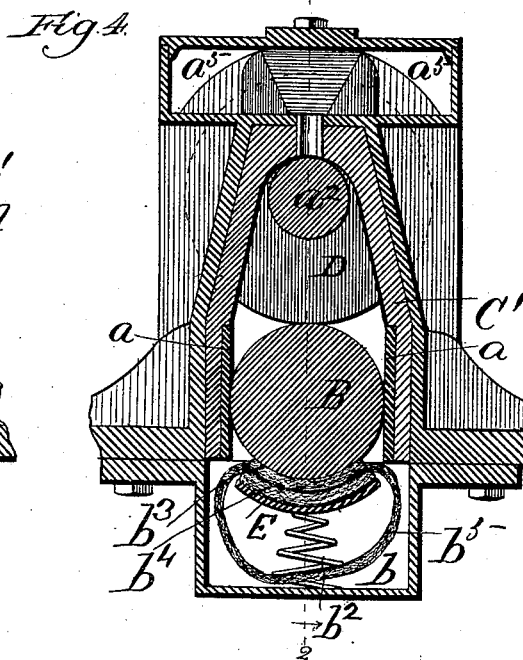
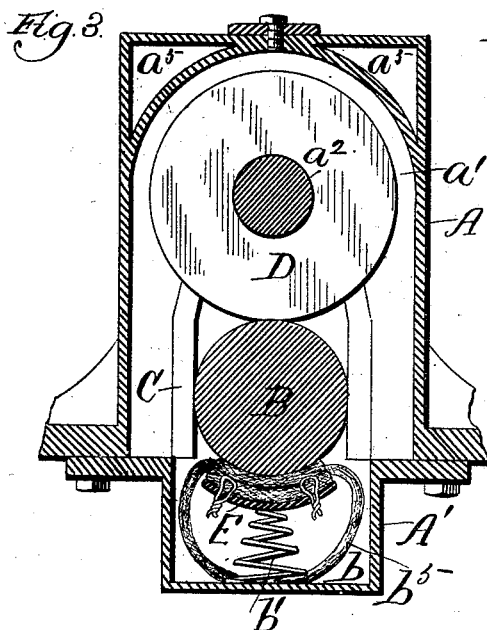
2 Sheets—Sheet 2.

A. C. HÉBERT.

CAR AXLE BOX.

No. 347,599.

Patented Aug. 17, 1886.



Witnesses:
E. S. Gaylord.
J. P. Donahue.

Inventor:
A. C. Hébert.
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Attest

UNITED STATES PATENT OFFICE.

ANTOINE C. HÉBERT, OF CHICAGO, ILLINOIS.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 347,599, dated August 17, 1886.

Application filed March 23, 1886. Serial No. 196,218. (No model.)

To all whom it may concern:

Be it known that I, ANTOINE C. HÉBERT, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in a Car-Axle Box, of which the following is a full, clear, and exact description, that will enable others to make and to use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to improvements in that class of axle-boxes or journal-bearings that are more particularly intended for use on street-cars; and the same consists in certain novel features in the construction, combination, and arrangement of the several parts, as will be hereinafter set forth in detail.

Figure 1 is a view in perspective; Fig. 2, a vertical longitudinal section of the box proper in the plane 2; Fig. 4, the axle and friction-roller, being shown in full. Fig. 3 is a vertical transverse section in the angular plane 3, Fig. 2; Fig. 4, a vertical transverse section in the angular plane 4, Fig. 2, looking in the direction indicated by the arrows. Fig. 5 is a perspective of the inside or back bearing-brass; and Fig. 6, a transverse section of the same in the plane 6, Fig. 5, showing the brass provided with a bearing-surface of phosphor-bronze.

Referring to the drawings, A represents the upper part of the journal-box, A' the lower part, and B the axle.

The back bearing-brass, C, is of the form shown in Fig. 5, and bears against the axle on the two sides, as shown in Figs. 3 and 4. The bearing-surface proper of this brass, having frictional contact with the axle, consists of a piece of phosphor-bronze, *a*, let into the brass in the manner shown in Fig. 6. This provides a bearing-surface of great durability, and greatly lessens the cost of repairs. The front brass, C', will be constructed in the same manner, and is of the form shown in Fig. 2.

The loose single friction-roller D is located in the cavity *a'* in the upper part of the box, and between the journal-brasses C C', as shown in Fig. 2. This roller is provided with a journal-bearing in the upper closed ends of the brasses, and just a little play is left between

the ends of the journal-shaft *a* and the brasses, so as to provide for a slight lateral adjustment or movement of the friction-roller and prevent these parts from binding or cramping. The roller D rests upon and has frictional contact with the upper side of the axle, thus providing a rolling bearing for said axle and greatly lessening the friction in the journal-box.

The friction-roller bearings are lubricated through the tubes *a'' a'*, which communicate with the oil-pockets *a''* in the top of the box. These oil-tubes pass down through perforations *a''* in the bearing-brasses, the lubricant from the pockets dripping into the oil-chamber *b* underneath the axle, as shown in Figs. 2, 3, and 4.

E is a semicircular metallic plate supported on the springs *b' b''*; and *b' b''* are two layers of felt or similar material interposed between said plate and the under side of the axle, said springs serving to keep the felt up to a close bearing against the axle, so as to keep the same in a constant state of lubrication. The oil is supplied to the layers of felt by capillary attraction through the medium of the wicking *b''*, leading up from the bottom of the oil-chamber.

F is a dust-guard consisting of a rectangular piece of leather fitting into the recess *d*, (see Fig. 2,) and is provided with a circular opening for the passage of the axle, and fitting close to the same, so as to prevent dust and dirt from entering the journal-box. The upper part of the inner end of the box is provided with the hood-like projection *d'*, which prevents dirt or mud from lodging on the axle close to the journal-box. The box will be secured to and supported in proper relation to the car by means of a suitable pedestal. This construction provides a journal-box that greatly reduces the friction of the rolling parts, is strong and durable, is easy of access for repairs, and the frictional surfaces are constantly lubricated.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an axle-box, the combination, with the upper part of said box, provided with oil-pockets, of a friction-roller, the bearing-

brasses C C', provided with a wearing-surface of phosphor-bronze, and the axle B, substantially as described.

2. In a car-axle box, the combination, with
5 the upper part of said box, provided with oil-pockets and tubes leading to the parts to be lubricated, of a friction-roller bearing-brasses, as described, the car-axle, the lower part of

the journal-box, containing an oil-chamber, and the means described for lubricating said axle from the under side, substantially as set forth.

ANTOINE C. HÉBERT.

Witnesses:

L. B. COUPLAND,
J. P. DONALSON.