

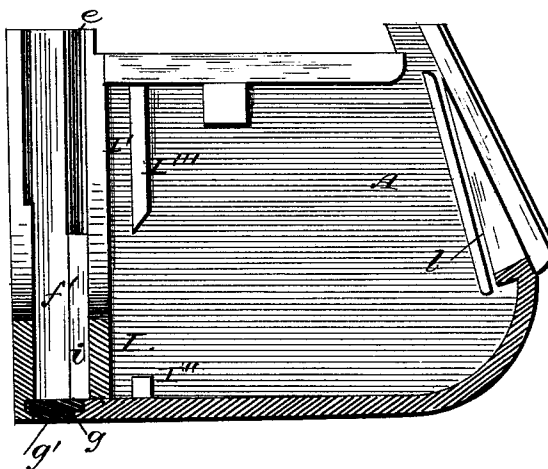
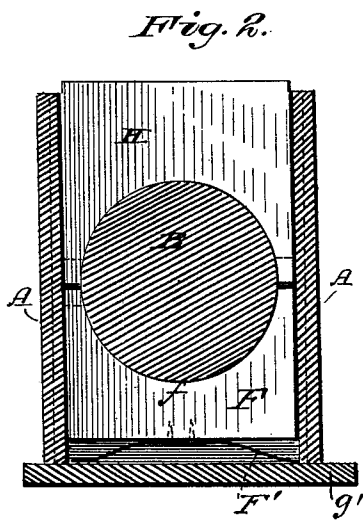
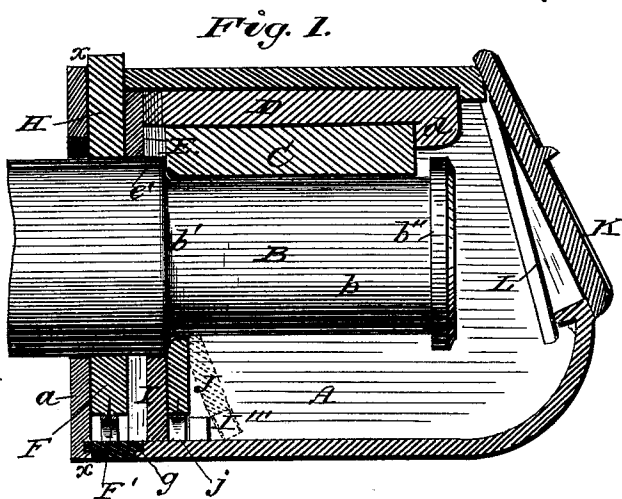
(No Model.)

2 Sheets—Sheet 1.

G. J. HOLTON.
Car Axle Box.

No. 233,152.

Patented Oct. 12, 1880.



WITNESSES
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P. Dietrich

INVENTOR
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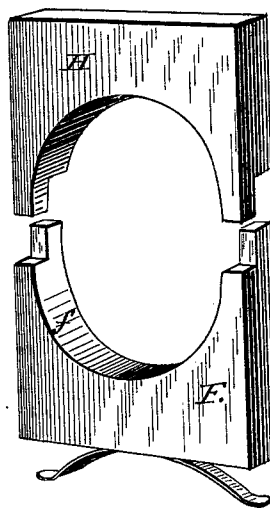
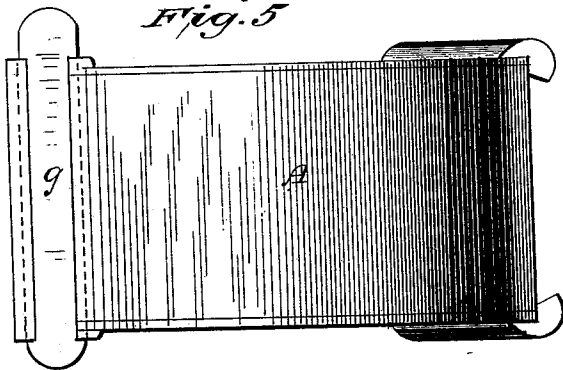
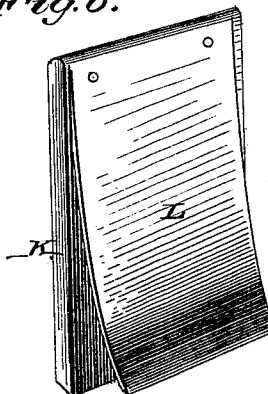
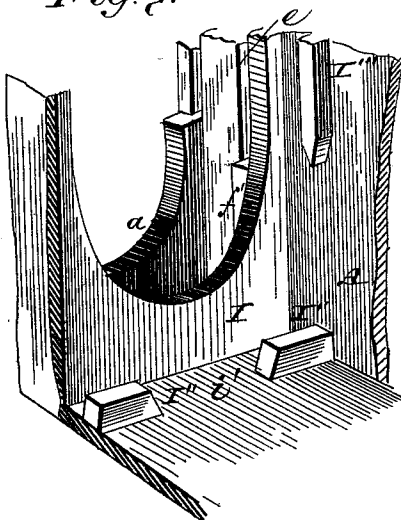
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2 Sheets—Sheet 2.

G. J. HOLTON.
Car Axle Box.

No. 233,152.

Patented Oct. 12, 1880.



WITNESSES
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UNITED STATES PATENT OFFICE.

GEORGE J. HOLTON, OF GALESBURG, ASSIGNOR OF ONE-HALF OF HIS
RIGHT TO JOHN N. SHEHI, OF MONMOUTH, ILLINOIS.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 233,152, dated October 12, 1880.

Application filed April 5, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. HOLTON, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Car-Axle Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it

10 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, in which—

15 Figure 1 is a vertical longitudinal sectional elevation of a car-axle box embodying my invention. Fig. 2 is a transverse sectional elevation. Fig. 3 is an elevation of the inner side of one side of the box. Fig. 4 is a perspective, showing only the lower part of the box, the upper part and axle-journal removed. Fig. 5 is a bottom plan of the box, seen from below. Fig. 6 is a perspective of the cap or cover. Fig. 7 is a perspective of the packing-

20 plates.

My invention relates to car-axle boxes in which means are provided for excluding dust, saving lubricant, and for holding the sliding cap or cover open, closed, or partly open; and the invention consists, first, in a novel combination of parts adapted to prevent the lubricant-vehicle coming against the upper and lower sliding plates; second, in a novel combination of parts adapted to hold the brass

30 and also the lubricant-vehicle away from the upper sliding plate; third, in combination with a car-axle box and its sliding cap or cover, a plate attached to the cover and adapted to shield the cap or cover and carry oil thrown against it back into the chamber of the box.

The invention further consists in constructions and combinations hereinafter referred to, and set forth in the claims hereto annexed.

Referring to the drawings by letters, the same letter indicating the same part in the different figures, letter A represents a railway-car axle-box constructed in an ordinary manner, except as hereinafter described. B is one end of a car-axle, with the ordinary journal *b*, shoulder *b'*, and collar *b''*; and C is an ordinary bearing

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or brass held against movement lengthwise in one direction by a ledge, *d*, on a plate, D, and in the opposite direction by a plate, E, which is fitted in grooves *e* in the sides of the box A, and has a semicircular groove, *e'*, in its lower side, adapted to rest a short distance above the shoulder *b'* of the axle.

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F is a plate with a semicircular groove, *f*, in its upper side, and its vertical sides fitted between the wall *a* of the box A, and a shoulder, *f'*, formed by cutting away a portion of the box A, so that the plate F may slide freely up and down. F' is a spring located beneath the plate F, so as to press it upward against the shoulder *b'*. A slot, *g*, extends transversely across the bottom of the box A, through which the plate F and spring F' may be inserted or withdrawn. The slot *g* is dovetail-shaped in its cross-section, and is closed by a slide, *g'*, on which the spring F' rests when in place.

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H is a plate, with its lower side grooved to fit the shoulder *b'*, and is seated between the wall *a* of the box and the plate E, so that it may slide up and down. The plate H may be inserted and removed through a slot, *a'*, in the box A, and is held to the journal *b'* by gravity. The ends *h* of the plates F and H are rabbeted so as to break joint between them, as shown at Fig. 7.

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I is a partition extending across the bottom of the chamber in the box A, and located a short distance interior to the plate F, and so as to leave a small chamber, *i*, between them.

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J is a sliding plate, similar in form to the plate F, with a spring, *j*, beneath it. The plate J rests against the partition I and ledge I' on one side and against a ledge, I'', and ledge I''' on its other side. The ledge I''' only extends part way down from the top of the box, so that by pressing the plate J downward its top may be turned outward to remove it, as shown by dotted lines at Fig. 1. The plate J is located so that its upper grooved side is a short distance below the journal *b* and its lower part a short distance from the partition I, and serves as a shield to prevent the cotton or lubricant-vehicle coming in contact with the plate F. Any lubricant that is forced over between the plate J and journal *b* will pass down between the plate J and partition I and

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find its way back into the chamber A' through a groove or notch, *i'*, in the ledge I'.

With the plates F and H secured as hereinbefore described, they may be made of wood without danger of breaking by the longitudinal movements of the axle, and I prefer wood to any other material for the purpose. The plate E not only serves as an end support for the brass C and guide and guard for the plate H, but also serves to hold the cotton or other vehicle containing the lubricant away from the plate H. The plates H and F will exclude very nearly all dust, and any small portion that may pass them will be moistened and fall into the chamber *i*, from which it may be removed as occasion requires.

K is an ordinary axle-box cap or cover of the class which is fixed in place and opened by sliding in grooves in the side walls of the box.

L is a spring-plate, attached at its upper end to the interior side of the cap K, and its lower portion inclined away from the cap, as shown in the drawings. The sides of the plate L slide in grooves *l* in the walls of the axle-box as the cap K is slid into place, and the plate slightly curved, as shown in the drawings, will cause it to bind in the grooves *l* sufficiently to hold the cap closed, and also to hold it when partly opened, so as to nearly entirely uncover the opening, which it covers when closed. The lower end of the plate L should preferably rest against the end wall of the axle-box. Any lubricant which is thrown by the motion of the car or otherwise against the plate L will run down and drip from its lower end into the axle-box chamber, and all lubricant be thus prevented from coming in contact

with and wasting at the sides or ends of the cap K. The plate L may be made without any spring and formed and attached in various ways, either to the cap or to the box, and may be used without the grooves *l*.

I claim as new—

1. In combination with the axle-box, axle, sliding plates F H, and partition I, the sliding and vertically-yielding plate J and plate E, adapted to prevent the lubricant-vehicle coming against the plates F H, substantially as and for the purpose specified.

2. The combination, with the axle-box, axle, brass C, and plate H, of the plate D, having ledge *d*, and the plate E, adapted to hold the brass C and also the lubricant-vehicle away from plate H, substantially as described, and for the purpose specified.

3. In combination with a car-axle box and its sliding cap or cover, a plate attached to the cover and adapted to shield the cap or cover and carry oil thrown against it back into the chamber of the box, substantially as and for the purpose specified.

4. In combination with a car-axle box and its sliding cap or cover, a spring-plate attached to the cap or cover and adapted to shield the cap or cover and slide in grooves in the side or walls of the axle-box, and hold the cap or cover closed, open, or partly open, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE J. HOLTON.

Witnesses:

H. A. ALLEN,

P. R. RICHARDS.