A. R. TIFFANY.
Car-Axle-Box Lid.

No. 211,533. Patented Jan. 21, 1879.

Fig. 3.

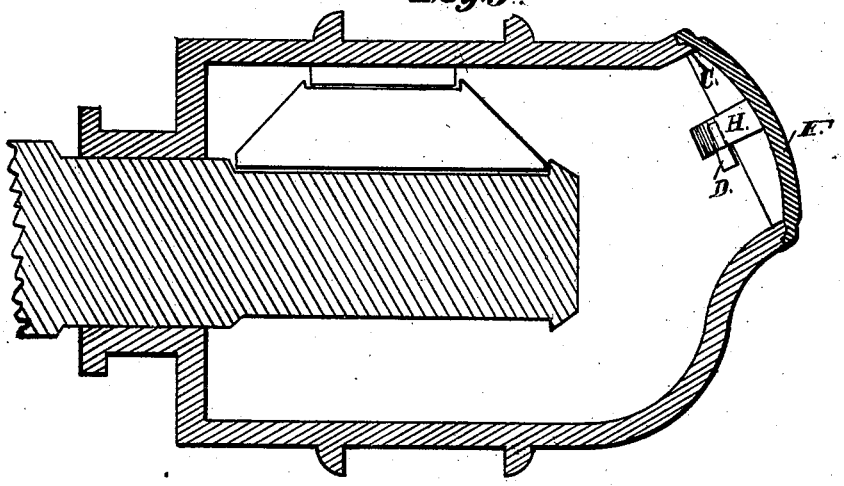


Fig. 1.

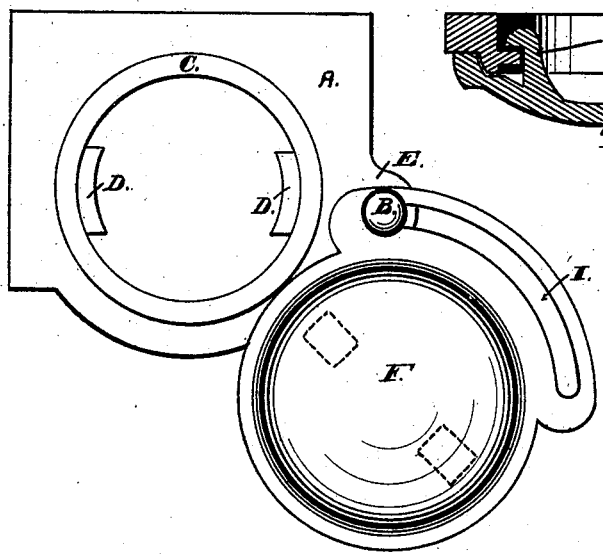
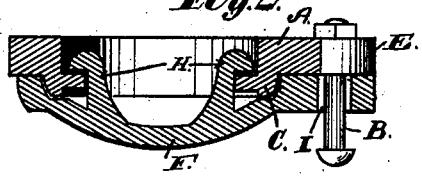


Fig. 2.



Witnesses;
Chas. M. Peck
John Burroughs

Inventor;
Albert R. Tiffany
by his Attys:
Peck & Ritchie

UNITED STATES PATENT OFFICE.

ALBERT R. TIFFANY, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN J. LELAND, OF SAME PLACE.

IMPROVEMENT IN CAR-AXLE-BOX LIDS.

Specification forming part of Letters Patent No. **211,533**, dated January 21, 1879; application filed September 4, 1878.

To all whom it may concern:

Be it known that I, ALBERT R. TIFFANY, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Covers for Car-Axle Boxes; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention is an improvement in axle-box covers for railway-cars; and the novelty consists in forming a hinged self-clamping screw-cover, simple in its structure, and always permanently attached to the box, so that while it may be turned aside to supply lubricating material to the box, it cannot be detached or mislaid, all as will be herein set forth.

In the accompanying drawings, Figure 1 is a front elevation of my improved device, swung open to give access to the axle-box. Fig. 2 is a horizontal central sectional view, showing the cover applied to close the box. Fig. 3 is a vertical central sectional view of the box, showing one of the fastenings.

A is the face-plate of the axle-box, forming its outer facing, with the usual circular opening of a size suitable to permit of easy access to the interior of the box, for the purpose of supplying oil and tow or removing the waste material. This plate is fastened securely and permanently to the box, of which it may form a part. At the lower right-hand corner of this plate is cast an ear, E, as shown, through which is passed the bolt B, screwed fast and immovable therein. This bolt should be so long that, when it is screwed down fast and the nut securing it is screwed up tight, it will project about an inch upon the outside of the plate A. Upon the end of this projecting portion of the bolt is a head, as shown.

Extending all around the opening in the plate A on its outside face is a raised rim or flange, C, the purpose of which is to meet the inside surface of the cover when the latter is closed down upon the box, in order to form a closer contact between them. Within the opening in the plate A, on the face of its periphery, and diametrically opposite each other, are cast the projecting pieces or detents D. These pieces are about an inch and a half long, and thick enough to be of the requisite strength. As shown in Fig. 1, the inner or bearing faces of these detents, next the car, are inclined at a moderate and equal pitch, one in one direction and the other in the opposite, as are the threads on the opposite sides of a screw.

The lid or cover F is a plate of metal, preferably dish-shaped or concavo-convex, large enough to cover the opening in the plate A and embrace the flaring rim C, its inner concave face being intended to close down over the latter and come in contact therewith. At the lower right-hand quarter of the plate F is an extension, in which is the segmental slot I, running nearly the whole length of said extension. This slot should be wider than the bolt B is thick, so as to be swung and to slide easily thereon, but too narrow to allow the head of the bolt to pass through. Projecting inwardly on the inner or concave face of the lid F, and diametrically opposite each other, are cast the lugs or catches H, turned outwardly and in opposite directions, and with notches in them, as shown in Fig. 2. The purpose of these lugs thus notched is to catch in and embrace the detents D on the plate A, and clamp the lid F down upon the axle-box, as will be hereinafter explained.

When it is desired to apply the lid to cover the box, it is swung up from the position shown in Fig. 1 upon the bolt B, as upon a hinge or pivot, until it is in position to cover the opening. It is then brought down upon the plate A in contact therewith, so that the lugs H project within the box. The lid in this position is given a sharp turn from left to right, which brings the ends of the lugs H under the detents D, causing them to embrace the latter, and thereby form a lock. Owing to the shape and position of the detents, they being opposite each other, and their bearing-surfaces being inclined at an equal pitch, but in opposite directions, the cover F is in effect screwed on.

When it is desired to remove the lid to get at the inside of the axle-box, it is turned from right to left, the force being most advantageously applied at the lower right-hand corner, at the end of the slot I. This action releases

the lugs H from the detents D, and allows the lid to be lifted off, and discloses the interior of the box. The lid is then allowed to swing down out of the way; but the head of the bolt B, being too large to slip through the slot I, prevents the lid from being altogether removed and misplaced or lost.

I do not wish to be limited to any special shape or size of axle-box, as the form of the box and cover may be indefinitely varied.

I am aware that it is not new to construct the cover of car-axle boxes so that by giving it a rotating motion it can be screwed down to close the box; and I am also aware that the lid has been so hung to the box as to swing around to close it without danger of being altogether detached or mislaid.

What I do claim is as follows:

In combination with a car-axle box having detents or shoulders at its opening, a cover hinged to said box by a bolt or stud passing through a segmental slot in the cover or extension thereof, and provided with catches, whereby the cover can be swung over the opening in the box and be clamped by turning it, and whereby when swung open for the purpose of gaining access to the box the cover will not be detached, substantially as specified.

Witness my hand this 26th day of August, A. D. 1878.

ALBERT R. TIFFANY.

Witnesses:
PATRICK H. GUNCKEL,
WM. RITCHIE.