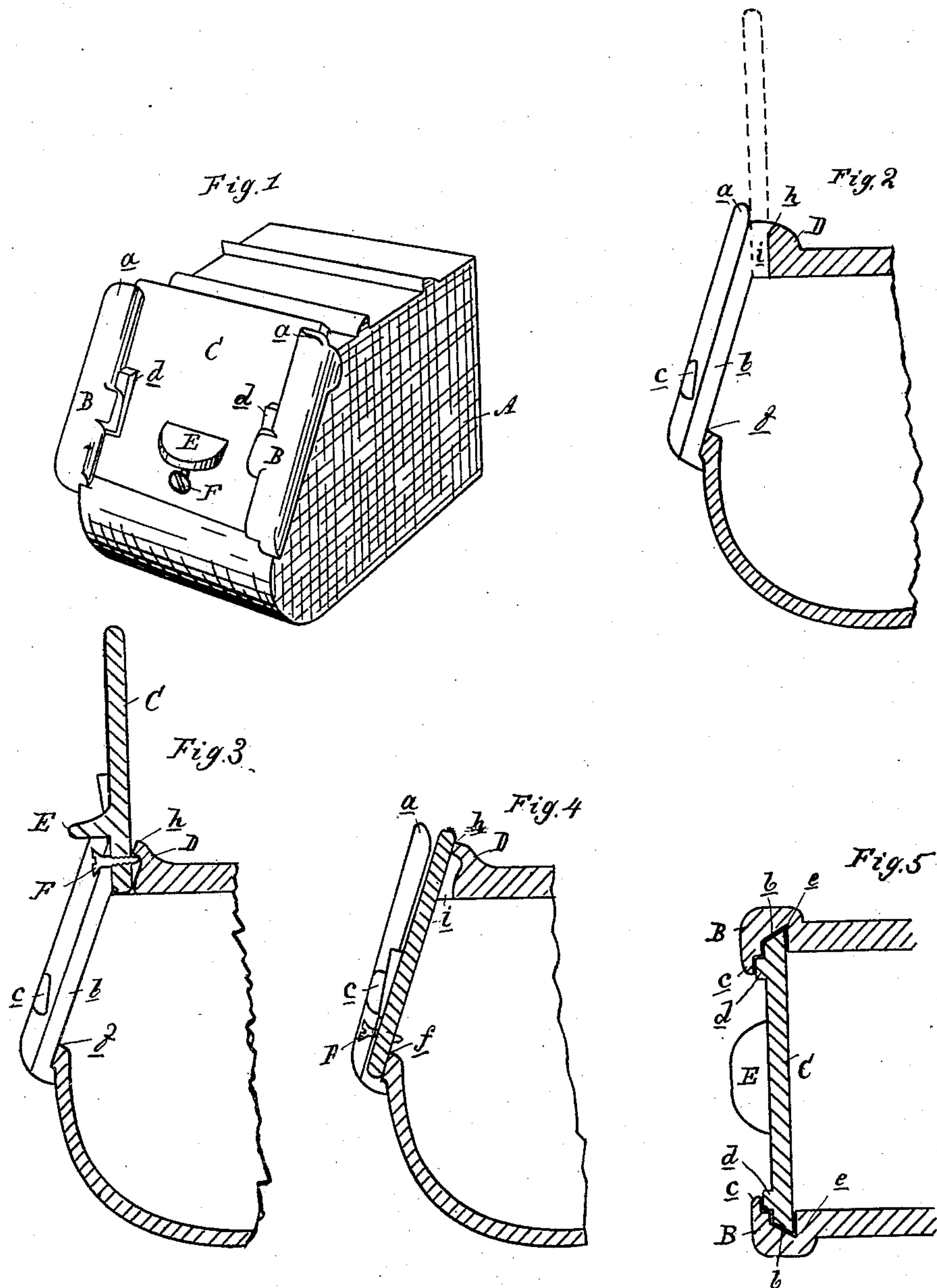


(No Model.)

R. HUNTER.  
CAR AXLE BOX.

No. 318,187.

Patented May 19, 1885.



Attest:  
John Schuman.  
J. Sprague

Inventor:  
Robert Hunter.  
by his Atty  
Thos. J. Sprague



# UNITED STATES PATENT OFFICE.

ROBERT HUNTER, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-FOURTH TO THOS. DAVIS, OF SAME PLACE.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 318,187, dated May 19, 1885.

Application filed March 25, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT HUNTER, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Car-Axle Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in car-axle boxes by means of which the cover thereof is made more easily adjustable to its various requirements than are those now in ordinary and common use; and the novelty consists in the construction, arrangement, and adaptation of parts, as will be more fully hereinafter set forth, and specifically pointed out in the claims.

Figure 1 is a perspective view of my improved box. Fig. 2 is a side elevation with the entire side of the box removed. Fig. 3 is a longitudinal vertical central section through the same, showing the cover removed and standing in a vertical position. Fig. 4 is a like view to Fig. 3, showing the cover closed. Fig. 5 is a longitudinal central cross-section of the same.

In the drawings, A represents a car-axle box having the usual end opening, upon each side of which and cast integral with the box are the ribs B, the upper ends, *a*, of which project above the top plane of the box, as shown. In the rear face of these ribs there are formed channels *b*, within which the cover C slides. Upon the edges of the ribs B are formed the ears *c*, and upon the front of the cover are formed the wedge stops *d*, which, when the cover is closed, engage with the rear faces of the ears *c*, to force the rear face of the cover C into the grooves formed in the ribs B, and these grooves are of the form shown in Fig. 5, and the edges of the cover are formed of a corresponding shape, in order to fit such grooves and to form sharpened edges *e*, which, fitting into the corresponding shape of the groove under the crowding force of the wedge stops *d*, not only prevent the cover from rattling, but make it dust-tight upon its two edges. The lower part of the mouth or opening into the box is formed by an inclined plane, *f*, co-

incident with the plane of the rear portion of the grooves *b*, and the top of the box is cast with a rib projection, D, the upper front edge of which terminates in an inclined plane, *h*, upon the same plane with the incline *f* and the rear face of the grooves *b*, affording bearing-points upon which the rear and flat side of the cover rest when closed, and the contact is made dust-tight by means of the wedge-shaped stops *d* engaging with the ears *c*, so that when the cover is closed it is dust-tight on both edges and at top and bottom. The top of the grooves *b* are enlarged on a vertical line to the rear, as shown at *i*, to form a ledge upon which the lower edge of the cover is designed to rest when it is desired to disclose the opening into the box, the grooves being so arranged that the movement of the cover is upon the inclined plane formed by such grooves until the lower edge of the cover reaches the top of the mouth of the box, when by pressing in the lower edge of such cover it will rest upon the ledge formed by the enlargement in the groove, as shown in Fig. 3, and lean against the projections *a* of the ribs above the top plane of the box.

E is a projection cast upon the front of the box, and is designed to form the means by which the operator will force the cover upward in its grooves and into its vertical seat, as described. F is a set-screw, which may be of any desired form, projecting through the cover C, near its lower edge, and its projection on the inside of the cover when the latter is raised to its vertical position engages under the ledge or projection D, as shown in Fig. 3, to prevent the cover being accidentally thrown out and lost, and it also serves, when after long use the wedges *d* and stops *c* have been worn, to prevent the cover from sliding downwardly out of the grooves, by its contact with the lower wall of the mouth, as shown in Fig. 4.

It will be seen that by the use of a car-axle box and cover thus constructed I secure economy in construction, a perfectly fitting cover, a noiseless or non-rattling cover when closed, and a cover that may be removed by the removal of the set-screw at any time without the necessity of removing any other parts or of



jacking up the car, as must be done with many of the covers now in use.

I am aware of Patent No. 301,656, of 1884, in which projecting devices were employed to prevent the disengagement of the cover, and no means were provided to prevent the lid from rattling.

I am also aware of Patent No. 250,194, of 1881, in which cumbersome projections were employed to keep the lid from disengaging and to hold it up when elevated. In this device the wedge faces were made a part of the guideways. In my device the wedge faces of the box are outside of and separate from the groove, and a simple screw in the center prevents the disengagement of the lid. My lid may fit neatly within the grooves, while in the patent last mentioned a large space is left between the lid and the side of the groove upon either side of the cams.

I avoid the necessity of the cross stop-rod and its holding-lugs and the engaging-lugs of the patents mentioned.

What I claim as my invention is—

1. In an axle-box in which the lid is operated between close-fitting grooves in the box and kept into engagement therewith by a central screw, as F, the wedge ears *c*, formed on the box outside the groove, and the lid having wedge ears *d*, formed to engage therewith, all combined and operating as and for the purposes set forth.

2. In a car-axle box, the combination, with the box A, provided with rib projection D, and cast integral therewith the channeled side ribs, B, the ends *a* of which project above the top plane of said box, of the cover C, provided with a projection, E, and a vertical slot beneath said projection, and the set-screw F, working in said slot, and adapted to engage the projection D on said box when the cover is raised, substantially as and for the purpose specified.

ROBERT HUNTER.

Witnesses:

H. S. SPRAGUE,  
E. J. SCULLY.