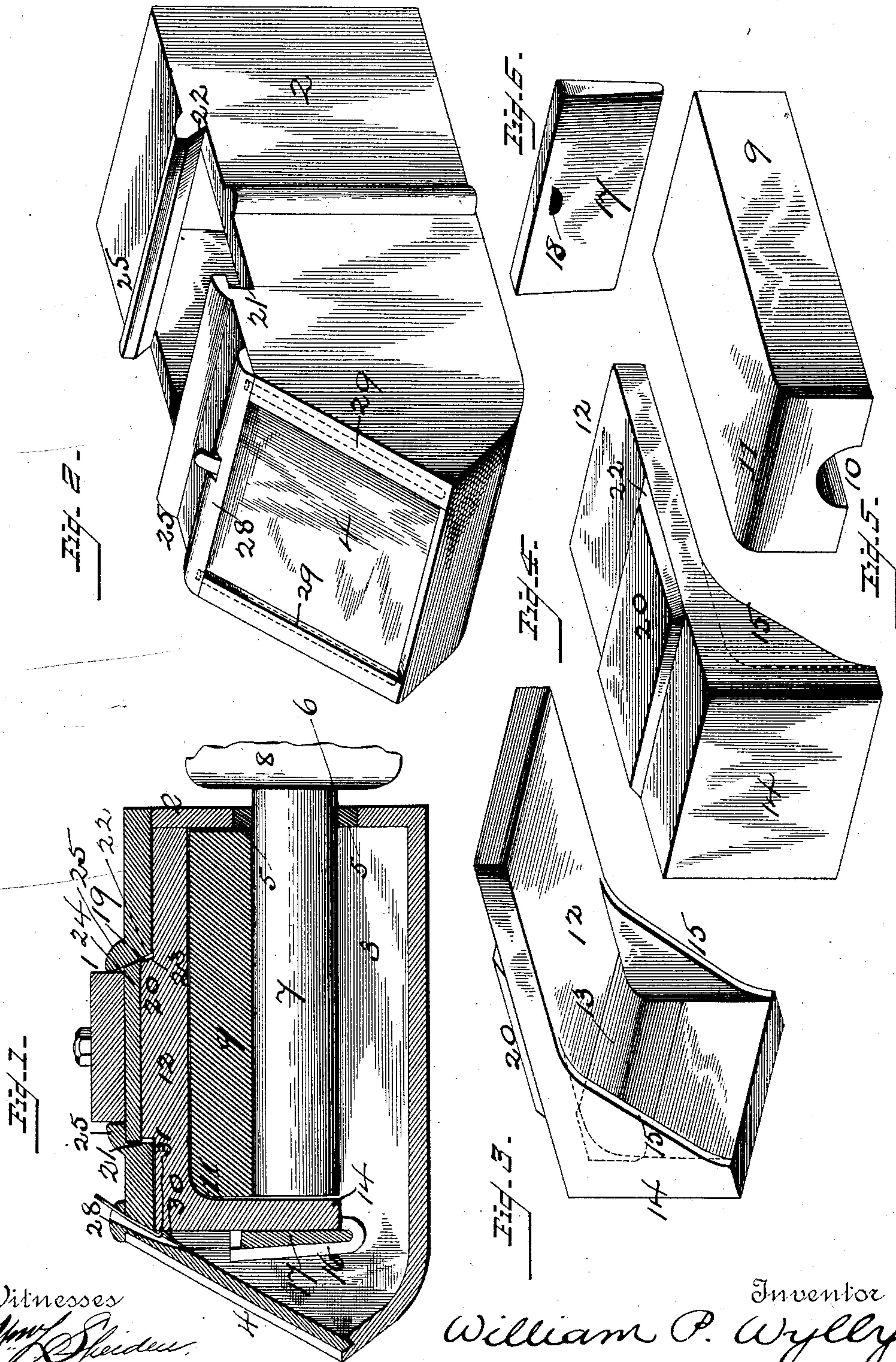


(No Model.)

W. P. WYLLY.  
CAR AXLE BOX.

No. 363,782.

Patented May 24, 1887.



Witnesses  
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Inventor  
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# UNITED STATES PATENT OFFICE.

WILLIAM P. WYLLY, OF PATTERSON, GEORGIA.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 363,782, dated May 24, 1887.

Application filed May 5, 1886. Serial No. 201,202. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM P. WYLLY, a citizen of the United States, residing at Patterson, in the county of Pierce and State of Georgia, 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 appertains to make and use the same.

This invention relates to improvements in the construction of collarless axle-boxes. The box or shell is formed with the metal of which it is composed extending across each end. The top of the case or box has a hole therein and lugs or shoulders to receive the car-truck frame. The movable or sliding top or lid has an upwardly-extending flange or shoulder, which fits within the hole in the top of the box or case, and a depending flange which is strengthened and held in place by side wings and a bevel-shaped block or spring sliding in suitable ways in the side of the box. The door slides in ways in the end of the box, and is provided with a spring-catch to hold the same and the sliding top in place, and an intumed lip, which rests upon the top of the box and covers the end thereof, so as to exclude dust, &c.

In the accompanying drawings, Figure 1 represents a longitudinal section of my improved oil-box, showing the axle in position therein. Fig. 2 represents a perspective view of the exterior of the box. Fig. 3 represents an under perspective view, and Fig. 4 an upper perspective view, of the sliding top of my improved box. Fig. 5 represents a perspective view of the brass or axle-bearing. Fig. 6 represents a perspective view of a tapering or wedge-shaped spring or block for securing and strengthening the sliding top.

1 represents the truck-frame, 2 the metal shell or casing of the oil-box, and 3 the space within which the cotton-waste or other lubricant is contained. The metal composing this improved box, it will be observed, extends entirely across both the front and the rear of the box and entirely covers those parts, except at those portions thereof where the axle passes through, and where the sliding door 4 is, sufficient opening only being left or formed in the rear end of the box to permit of the axle passing therethrough, a suitable packing, 5, for the

axle being, if preferred, contained within the rear opening, 6, and in the front end to permit of free access to the interior of the box at that part upon the sliding door 4 being raised. By thus constructing the box increased strength and durability are thereby imparted thereto.

7 represents the collarless journal or axle, and 8 the hub of the wheel. 9 represents the brass or bearing, which may be of any suitable shape or configuration to suit the shape of the box. I prefer, however, to construct it with curved under surface, 10, to receive the axle and with the top edge, 11, which abuts against the movable top or slide 12, rounded, as shown, so as to admit of the employment of a fillet or strengthening bead, 13, on the inner upper side of the lip or flange 14 of the sliding top 12; but the top edge, 11, of the brass may be formed square, if desired, in which case the inner face of the fillet or strengthening-bead 13 would be correspondingly shaped. The movable top or slide has at its forward end a depending lip or flange, 14, which extends vertically and transversely across and abuts against the axle and its brass or bearing, so as to receive any impact or longitudinal thrust of the axle, wings or webs 15 being formed on either side of the sliding top 12 to strengthen the flange or lip 14 against the lateral thrust of the axle. These wings are wide enough apart to admit of the brass or bearing resting snugly between them.

16 represents vertical wedge-shaped grooves or ribs formed in or on the inner side faces of the box 2 to receive a wedge or V shaped spring or block, 17, the inner face of which, when in position, as indicated in Fig. 1 of the drawings, abuts against the outer face of the flange 14 of the movable cover or slide 12, said block or spring thereby serving as an auxiliary for strengthening said flange.

18 represents a finger-hole formed in said wedge shaped block or spring to facilitate its removal when it is desired to remove the sliding top.

19 represents an opening in the top of the box, within the inner or lower portion of which fits a shoulder or flange, 20, extending upwardly from the top face of the sliding top 12. The front edge or shoulder, 21, of the opening 19 in the top of the box and the front



edge of the shoulder 20 are both straight, or nearly so—they may be slightly beveled—while the rear edge, 22, of said opening and the rear edge, 23, of the shoulder 20 are each of obtuse-angled or beveled shape. By thus constructing the movable or sliding top with upwardly-projecting flange or shoulder 20 and the top of the box with a recess or slot, 19, to receive the same, the slide is securely held against the longitudinal thrust of the axle. By forming said recess or opening 19 and shoulder 20 with straight, or nearly straight, edges, said shoulder snugly fits against the front edge of said opening, and the thrust of the axle is thereby successfully resisted. By forming the rear edges, 22 23, of said opening and shoulder of bevel or angular form, they will fit together and exclude dust, and a loose piece, 24, can be easily fitted in position above the shoulder, as shown, so as to assist in excluding the entrance of dust into the box through the top opening.

25 represents shoulders on the top of the box adjacent to the opening 19 therein and on either side of the truck-frame, which shoulders form a recess, within which the truck-frame rests, so as to keep the same permanently and securely in line. I prefer to make the front edge of the shoulder 20 square, with rounded or curved corners, so as to insure its easily drawing from sand, and with not only its rear edge, but also its side edges, of bevel shape, so as to insure a good fit with the beveled edges of the opening 19 in the box-top and exclude dust.

4 represents the door of the box, which at its upper end has an inturned lip or flange, 28, which, when said door is in position, overlaps the top of the box, as shown in Fig. 1 of the drawings, and thereby excludes the entrance of dust and air to said box and renders said box as nearly air-tight as possible.

29 represents guide grooves or recesses formed in the metal constituting the front of the box, in which the door slides, ribs or lugs being formed on the inner face of the door, which enter and engage with said grooves or recesses 29, the door being by this arrangement guided and steadied in its sliding movements, retained in proper position, and the passage of dust and air between the edges of the door to the interior of the box prevented when said door is closed.

30 represents a spring-catch for securing the door and top, said catch being secured at its lower end to the inner face of the door, and having a hook or shoulder, 31, which engages with a recess in the front end of the movable top or slide 12, the upper end of said spring-catch extending outward and upward through a slot in the inturned lip or flange 28. When it is desired to slide the door 4 upward and open or to move the sliding top, the upper end of the spring-catch is drawn outwardly toward the door, whereupon the hook or shoulder 31 is released from engagement with the sliding top 12.

I am aware that it has been proposed to construct an axle-box with a recess in its under top face; an axle-bearing resting within said recess and having at one end a depending flange or projection, and a bar inserted within grooved lugs on the side of the box and resting against the depending projection on the bearing; that it has also been proposed to construct an axle-box with an axle-bearing having a recess in its upper face, an iron shoe with a dependent webbed flange at its front end, provided with a brass stop-plate connected to said flange by a lug passing into an eye therein, said shoe having a depression fitting the recess in the axle-bearing, and a lug or rib on the under side of the top of the box to fit the recess in the upper face of the iron shoe; and that it has further been proposed to construct an axle-box with an axle-bearing having a depending flange, and an upper or outer bearing having a similar depending flange fitting over the flange on the axle bearing, said upper bearing having vertical recesses in which fit lugs on the sides of the box. In each of such proposed constructions, however, no provision is made for adjustably securing either the axle brass or bearing or the sliding cover in position, or for providing for the taking up of the wear, in use, of the parts. I am not, however, aware of any car-axle box, other than that of my invention described herein, where the box is provided with a top opening, a sliding cover having an upwardly-extending flange or shoulder adapted to snugly fit within said opening, exclude the entrance of dust, &c., thereat, and rigidly hold said cover from movement during use, and having a depending lip or flange at its front end, and a rounded front bearing-surface to receive the front end of the axle brass or bearing, and a wedge-shaped block supported in wedge-shaped ways in the sides of the box, whereby the sliding cover and axle can be firmly held in the desired position, and tightened up as the several parts become worn in use and their oscillation longitudinally in either direction prevented.

Having thus described my invention, what I claim is—

1. A car-axle box having a suitable brass or bearing for the axle, a sliding top or cover having a depending flange, wedge-shaped grooves or ways in the inner faces of the box, and a wedge-shaped spring or block fitting within said ways and in contact with said flange, as and for the purpose set forth.

2. A car-axle box having vertical wedge-shaped grooves or ways, an axle brass or bearing, a sliding cover or top having at its front end a depending flange provided with side wings between which the axle-bearing rests, and a vertically-slidable wedge-shaped spring or block having bearing within said grooves or ways and against the outer face of the depending flange on said cover.

3. The combination, in a car-axle box, of a box having a slot or opening in its top, and a



sliding cover having an upwardly-extending flange or shoulder fitting within said opening to resist the thrust of the axle, substantially as set forth.

5 4. The combination, in a car-axle box, of a box having a slot or opening in its top and wedge-shaped vertical grooves or ribs on its inner side faces, an axle brass or bearing, a  
10 sliding lip having an upwardly-extending shoulder adapted to fit within the opening in the box top, a depending flange having side-strengthening wings at its front end, and a wedge-shaped block or spring fitting within  
15 the grooves or ways in the sides of the box and being held thereby in frictional contact with the outer face of the depending flange, substantially as and for the purposes set forth.

5 5. In a car-axle box, a sliding top having a depending flange, side-strengthening wings,  
20 and a strengthening fillet or bead on the inner upper side of said flange, and an axle-bearing fitting between said wings and against said flange-strengthening fillet or bead, substantially as set forth.

25 6. In a car-axle box, a shell or case having a top opening having straight or nearly straight front edges and angular or bevel-shaped rear edges, and a sliding top having an upwardly-extending flange or shoulder having front and  
30 rear edges corresponding in shape with the front and rear edges surrounding the opening in the box for the purpose of securing a snug fit between those parts, preventing the entrance of dust through said opening, and resisting  
35 the thrust of the axle, and a sliding door having at its upper end an inwardly-extending

flange or lip which overlaps the box and is of equal or substantially equal width to the width of the door for the purpose of excluding the entrance of dust and air to the box  
40 through the door-opening in the end of the box, substantially as set forth.

7. In a car-axle box, the combination, with a shell or casing having an opening in its top, of a movable top or slide having on its top face  
45 an upwardly-extending shoulder or flange to fit within said opening, a depending lip or flange at its forward end, a rounded bearing-surface on its under and front face to receive the axle-brass, and depending side wings, and  
50 an axle brass or bearing having a rounded top front edge to fit the rounded bearing-surface of the slide, substantially as set forth.

8. In a car-axle box, a shell or case having a top opening having straight or nearly straight  
55 front edges and angular or bevel-shaped rear edges, and a sliding top having an upwardly-extending flange or shoulder having front and rear edges corresponding in shape with the front and rear edges surrounding the opening  
60 in the top of the shell for the purpose of securing a snug fit between those parts, preventing the entrance of dust within the shell, and resisting the thrust of the axle, substantially  
65 as set forth.

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

WILLIAM P. WYLLY.

Witnesses:

C. F. GRAVES,  
A. I. MILLER.