

(No Model.)

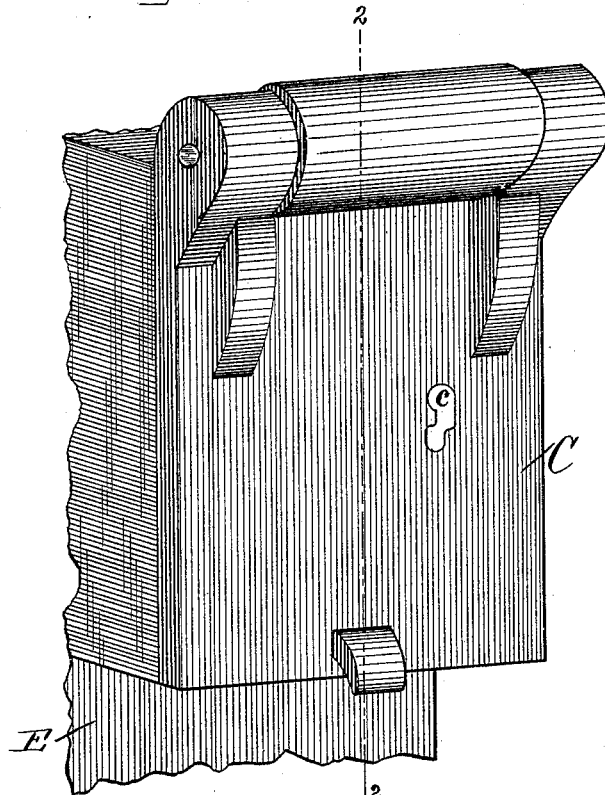
2 Sheets—Sheet 1.

W. M. SHIPP, Jr.  
CAR AXLE BOX.

No. 419,799.

Patented Jan. 21, 1890.

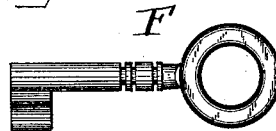
*Fig. 1.*



*Fig. 7.*



*Fig. 6.*



*Witnesses*

*Edw. F. Simpson, Jr.*  
*Arthur C. Clarke.*

*Inventor:*

*Wm. M. Shipp, Jr.*  
*J. S. Tipton.*

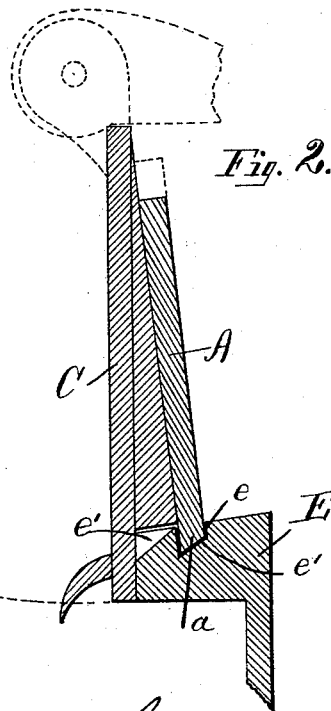
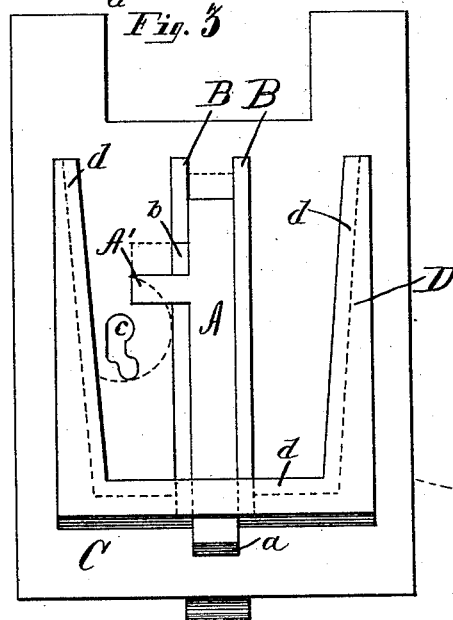
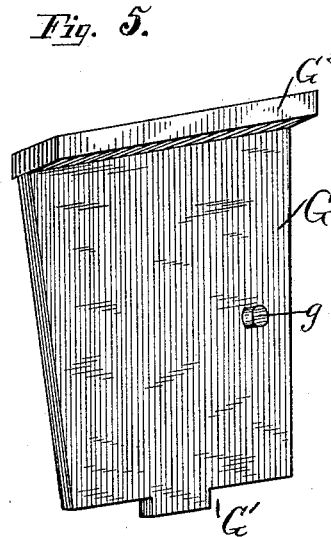
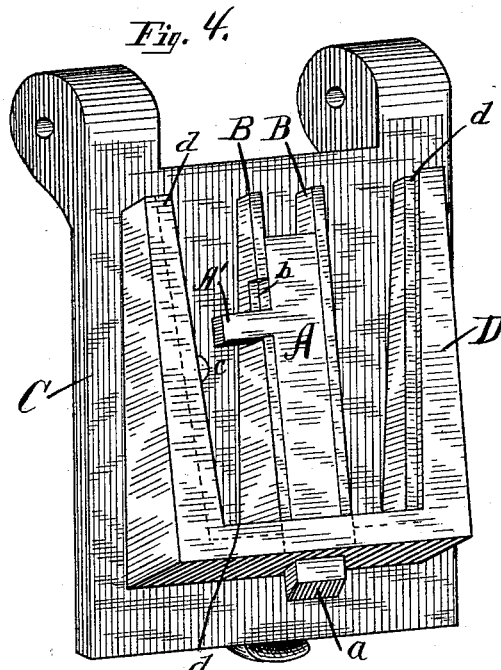
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2 Sheets—Sheet 2.

W. M. SHIPP, Jr.  
CAR AXLE BOX.

No. 419,799.

Patented Jan. 21, 1890.



W. H. Fessenden  
Edw. P. Simpson, Jr.  
Arthur C. Clarke.

Inventor  
Wm. M. Shipp, Jr.  
By Atty J. D. Peyton.

# UNITED STATES PATENT OFFICE.

WILLIAM M. SHIPP, JR., OF MIDWAY, KENTUCKY.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 419,799, dated January 21, 1890.

Application filed October 10, 1889. Serial No. 326,580. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. SHIPP, JR., of Midway, in the county of Woodford and State of Kentucky, have invented a certain new and useful Improvement in Car-Axle Boxes, of which the following is a specification.

My invention relates to the class of car-axle boxes which surround car-axle bearings and contain lubricating material therefor, and are provided with lids or covers adapted, when closed, to be firmly secured against accidental displacement.

My object is to provide a lid or cover which may be hinged or jointed to any well-known form of axle-box with protected locking mechanism, hereinafter more fully described, which is adapted to automatically lock the lid when said lid is closed, and which cannot be opened without the employment of a suitable key.

In the accompanying drawings, Figure 1 is a view in perspective of a portion of an axle-box with my improved lid or cover applied thereto, and Fig. 2 is a section thereof on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the rear or inner side of the lid or cover, disclosing the locking device thereof, the lock-protecting plate being removed; and Fig. 4 is a view of similar parts in perspective. Fig. 5 is a view in perspective of a plate for protecting the locking device. Figs. 6 and 7 are side and end views, respectively, of a key for unlocking the lid.

Any suitable lock more or less complex may be employed to fasten the lid; but for illustration of my invention I have shown a simple form of lock, to which, however, I do not wish to be understood as limiting myself, as other forms of locks may be used without departure from the spirit of my invention.

The locking mechanism shown in the drawings consists in a vertically or substantially vertically movable bolt A, sliding between guides B B upon the rear face or inner side of the hinged or pivoted lid C. A frame or wall D on the inner face of the lid surrounds the guides and bolt on opposite sides and lower end thereof, and the bolt projects downward through and extends beyond an opening in the lower portion of the frame or wall D and enters a slot *e* in the lower flange E

of the axle-box to lock the lid. The lower extremity *a* of the locking-bolt A is beveled or tapered, in order to ride over the beveled portion *e'* of the flange E, whereby, when the lid is closed, the bolt, having easily passed over said beveled portion *e'*, drops by force of gravity into the slot *e* and automatically locks the lid. From one side of the bolt, and preferably near its upper end, a lug A', movable in a slot *b* in one of the guides B, extends into the pathway of a bit or web of a key F, the pin of which passes through a key-hole opening *c* in the lid C. The bolt is raised to unlock the lid by means of the key-web coming in contact with the lug A' on bolt A.

The side and bottom walls of the frame D are grooved, as at *d d d*, and are tapered to form a wedge-shaped opening to receive and hold the correspondingly-wedge-shaped plate G, which slides in said grooves *d d d*. This plate G is preferably made of malleable iron, and, being wedge-shaped, jams in the grooves *d d d*, and is thus held firmly in place to protect the lock mechanism from the grease in the axle-box. It also affords a bearing to keep the bolt A in the guides B B, and may be removed for inspection of the locking device. From the bottom of the plate projects a tongue G', which fits into an opening in the bottom wall of the frame D, the better to secure said plate in place and protect the opening through which the bolt passes from the entrance of grease, &c., though this tongue may be dispensed with, if desired. The upper end of said plate is inwardly-flanged, the flange G<sup>2</sup> serving to cover the upper open end of the plate-supporting frame D, thus completely inclosing the lock mechanism. A stud or lug *g*, on which the key F turns, projects from the plate G coincident with the key-hole *c* in the lid C. The plate G and its supporting-frame D need not necessarily be wedge-shaped, as any other suitable form would answer; but I prefer this form as being best adapted for the purpose.

The key-hole opening *c* in the lid C may be provided with a suitable spring-plate or dust-guard and an opening through which lubricating material may be injected into the axle-box, and which is properly protected from the

entrance of dust, &c., may be made in some suitable portion of the box, whereby opening of the lid when lubricating material is supplied to said box is obviated; but I have  
5 shown neither of these devices, as they form no part of my invention.

It will be seen that by my improvements I provide, in connection with simply-constructed and inexpensive locking mechanism carried  
10 by the lid, a removable protecting-plate for such mechanism, also carried by the lid and engaging with it only, and that my improvements are adapted to be readily applied to old forms of axle-boxes.

15 I claim as my invention—

1. The combination of the axle-box, the lid hinged thereto and having the guides, one of which is provided with the slot, the gravity locking-bolt sliding between the guides

and provided with the lug movable in said slot and adapted to be operated upon by a key, and the removable protecting-plate carried by the lid, substantially as and for the purpose set forth.

2. The combination of the axle-box, the hinged lid provided with the bolt-guides and the grooved frame, the sliding bolt, and the removable protecting-plate carried by and engaging only with the lid by fitting the grooves in the frame thereof, substantially  
25 as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my name.

WILLIAM M. SHIPP, JR.

Witnesses:

MILTON G. GASTINEAU,  
TROY H. PARRISH.