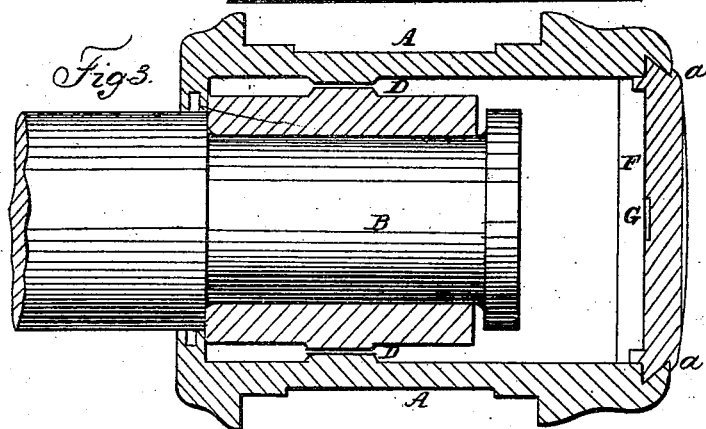
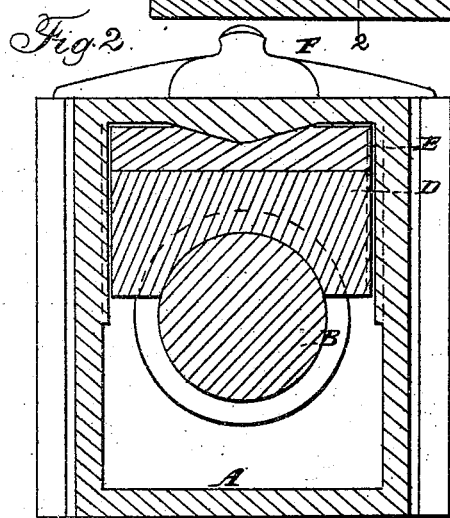
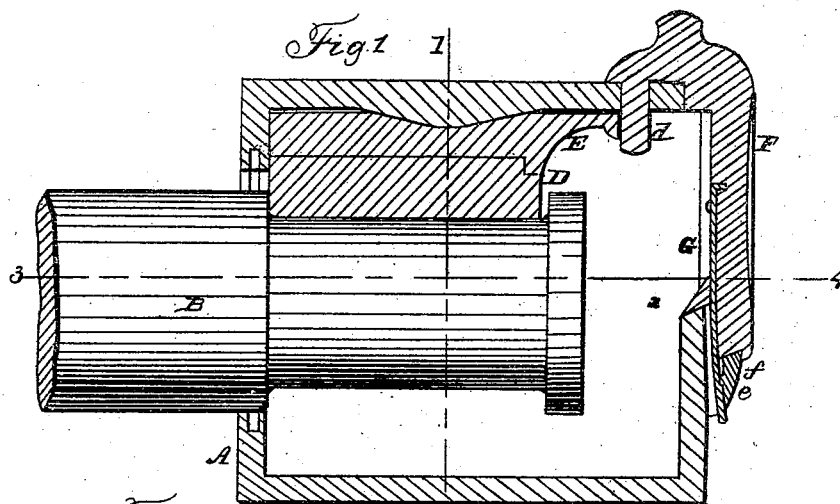


J. CHRISTY.
Car-Axle Box.

No. 52,029.

Patented Jan. 16, 1866.



UNITED STATES PATENT OFFICE.

JAMES CHRISTY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED AXLE-BOX.

Specification forming part of Letters Patent No. 52,029, dated January 16, 1866.

To all whom it may concern:

Be it known that I, JAMES CHRISTY, of Philadelphia, Pennsylvania, have invented certain Improvements in Axle-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improvement consists in the use of a stop or projection fitting into an opening in the top of the box, and arranged in respect to the key substantially as described hereinafter, so as to effectually prevent the displacement of the key and bearing.

My invention further consists in the combination of a lid peculiarly adapted to the box and combined with the said stop or projection, as described hereinafter; also of a device for retaining the lid and projection in their place.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a vertical section of my improved axle-box; Fig. 2, a transverse vertical section, and Fig. 3 a sectional plan on the line 1 2, Fig. 1.

Similar letters refer to similar parts throughout the several views.

A is the box, and B part of the axle, D being the brass bearing, and E the key, situated between the bearing and the top of the box.

F is the lid, which, instead of being secured to the box by screws, as usual, has V-shaped ribs *a* at the edges adapted to similar-shaped grooves in the inside and near the front of the box, the lid being arranged to slide downward from the top of the box, and its lower beveled edge resting on a beveled projection, *e*. The lid is held in its proper vertical position by a spring-catch, G, the upper end of which is secured to the inside of the lid, the lower end of the catch passing through the projection *e*, and the spring having a shoulder bearing against a lug, *f*, from which the spring can be readily set free by pushing it back when the lid has to be detached from the box. The lid is provided with a projection or stop, *d*, which fits snugly in and passes through a slot in the top of the box, as seen in Fig. 1, this projec-

tion tending to maintain the key E in its proper horizontal position.

In ordinary axle-boxes the key E is retained in its place by a rib cast on the inside at the top of the box, and this rib is made very thin, as the key and bearing have to be removed after a very slight elevation of the box. Owing to the constant end strains imparted to the bearing, this rib is apt to become worn, and is frequently reduced to a condition unable to resist the force imparted by the end play of the axle. The result of this is the displacement of the key and bearing, and frequently the forcing of the lid from the box.

The projection or stop *d* of the lid F in my improved box affords an effective bar against the displacement of the key, which cannot be forced forward by the end play of the axle without breaking the projection or front of the box, or both.

The lids of axle-boxes are usually secured by set-screws, which are dispensed with in my improvement by causing the lid to be fitted to the box in the manner described, and by the use of the spring-catch G, which effectually prevents the rising of the lid from its position, a slight pressure against the lower end of the spring, however, permitting the lid to be elevated when necessary.

It will be obvious to those familiar with the construction of axle-boxes that a stop or projection, *d*, may be fitted into the top of the box, and there held independently of the lid, for the purpose set forth. I prefer, however, to make the projection *d* part of the lid in the manner described.

I claim as my invention and desire to secure by Letters Patent—

1. The stop or projection *d*, fitting into an opening in the top of the box, and arranged in respect to the key E substantially as and for the purpose herein set forth.

2. The combination of the lid F, fitted to the front of the box and combined with the projection or stop *d*, substantially as described.

3. The combination of the lid F, spring-catch G, and projection *e* on the box.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAS. CHRISTY.

Witnesses:

CHARLES E. FOSTER,
JOHN WHITE.