T. A. BISSELL.

CAR-AXLE BOXES.

No. 194,213. Patented Aug. 14, 1877.

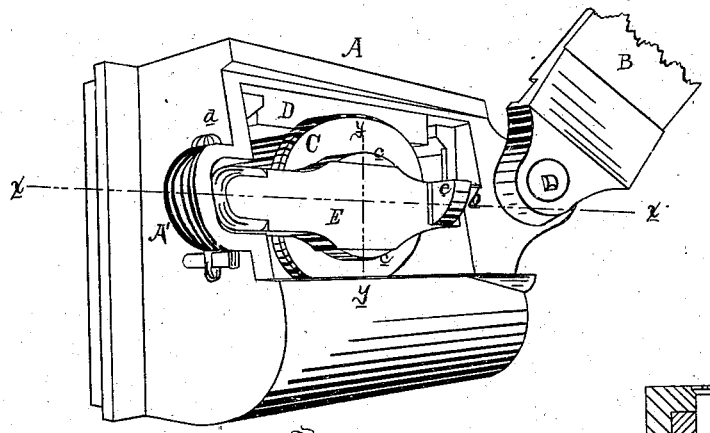

Fig. 1.

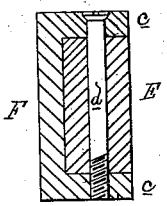

Fig. 3.

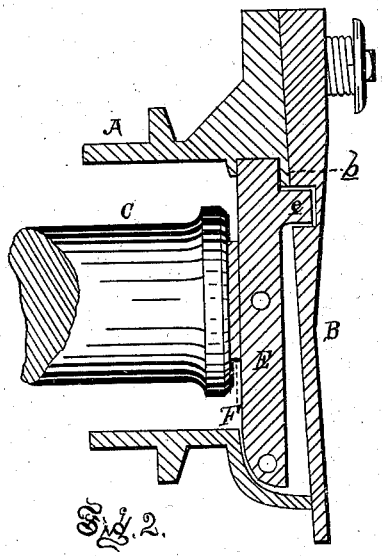

Fig. 2.

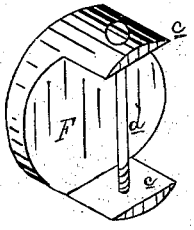

Fig. 4.

Witnesses:
H. L. Aulls.
H. F. Eberts

Inventor:
Thos. A. Bissell
per attorney
Wm. H. Magee

UNITED STATES PATENT OFFICE.

THOMAS A. BISSELL, OF DETROIT, MICHIGAN.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **194,213**, dated August 14, 1877; application filed February 20, 1877.

To all whom it may concern:

Be it known that I, THOMAS A. BISSELL, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Car-Axle Boxes, of which the following is a specification:

In operating railway rolling-stock it is necessary to provide some means for limiting the end play or lateral movement of the axle-journals of the wheels in their boxes. This is usually done by forging a collar on the axle at the neck of the journal, but the abrasive action of the collar upon the end of the brass soon renders the latter useless, in many instances before the brass is appreciably worn away by the rotation of the journal. Another means that has been tried to a small extent is to drop a stop-bar into beckets cast in the front of the box, the bar being faced with brass where the end of the axle would abut against it; but in removing the bar to repack the box the workmen would frequently forget to replace it before closing the box door, and it would then be lost. Being removable, it offered an inducement for junk thieves to steal it for the brass which it contained.

The object I have in view is to provide a stop-bar that cannot easily be detached from the box either by accident or design; and to this end it consists, mainly, in the peculiar construction of the stop-bar and box to which it is hinged; also, in the construction and manner of securing the brass facing to the bar, as more fully hereinafter set forth.

Figure 1 is a perspective view of the axle-box, showing the door open and the bar in position. Fig. 2 is a horizontal section at *x x* with the door closed. Fig. 3 is a cross-section of the stop-bar at *y y*. Fig. 4 is a detached perspective view of the end brass.

In the drawing, A represents the box, provided with a door, B, of any desired construction. C is the axle-journal, and D its brass. E is a stop-bar, hinged by a bolt, *a*, in a pocket, A′, cast in one side of the box. The bar is made to have a little vertical play on its hinge-bolt, so as to lift and drop like a latch behind a lug, *b*, cast on the other side of the box, which prevents it from swinging outward.

On the middle of the bar is slipped a pair of lugs, *c c*, cast on the back of a brass disk, F, which forms an end-bearing for the center of the axle-journals. It is held in position by a bolt, *d*, passing through the upper lug and bar, and is tapped into the lower one, so that by removing the bolt *d* the brass may be replaced by another when worn out.

The bar is permanently secured to the box by keying the bolt *a* with a split key through its lower end.

To hold the bar down it may be cast with a lug, *e*, at one end, which may enter a socket in the door when the latter is closed, as shown, or a lug may be cast on the door for that purpose.

By slightly beveling the latch end of the stop-bar, it can be readily unlatched against any end pressure of the axle.

What I claim as my invention is—

1. The latch stop-bar E, hinged to a car-axle box, substantially as and for the purpose set forth.

2. The combination, with the hinged stop-bar E, of the end-bearing F, removably secured to the said stop-bar by means of its lugs *c c* and the bolt *d*, substantially as described and shown.

3. The combination, in an axle-box, of the hinged stop-bar E, having lug *e*, and the door B, substantially as described and shown.

THOMAS A. BISSELL.

Witnesses:
H. F. EBERTS,
H. S. SPRAGUE.