JOHN B. SUTHERLAND.

Improvement in Railway Axle-Boxes.

No. 114,877. Patented May 16, 1871.

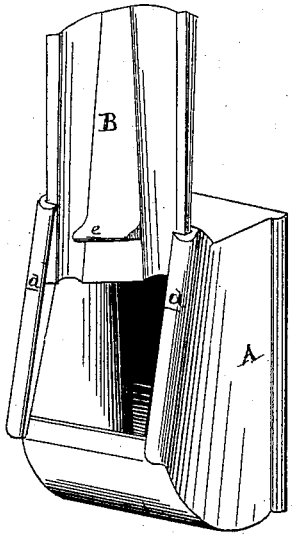

Fig. 1.

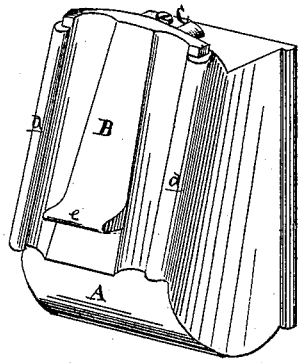

Fig. 2.

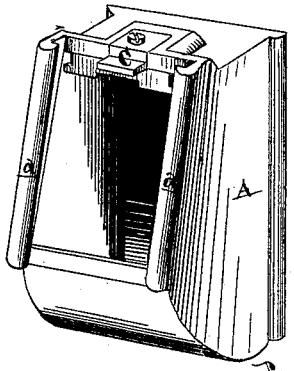

Fig. 3

Fig. 4

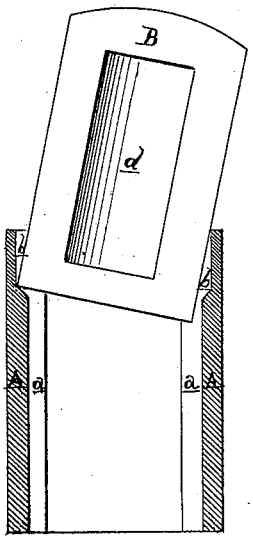

Fig. 5

ATTEST
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UNITED STATES PATENT OFFICE.

JOHN B. SUTHERLAND, OF DETROIT, MICHIGAN.

IMPROVEMENT IN RAILWAY AXLE-BOXES.

Specification forming part of Letters Patent No. **114,877**, dated May 16, 1871.

To all whom it may concern:

Be it known that I, JOHN B. SUTHERLAND, of Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Railway Axle-Boxes; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a perspective view of my improved box with the door raised. Fig. 2 is a similar view of the same closed. Fig. 3 shows the box with the door removed. Fig. 4 is a side elevation of the door with its recess in outline; and Fig. 5 is a rear elevation of the door raised, with the slides in section.

Like letters refer to like parts in each figure.

This invention has for its object the construction of railway axle-boxes in such a manner that their doors or covers cannot be removed from them while being opened for filling or packing the boxes, and that when the doors are closed the entrance of dust will be effectually precluded.

The invention consists in providing the inclined face of the box with a flange or guide at each side of the opening, wedging as it descends, in which flanges a door or cover is inserted, wedging at the edges to correspond with the guides, so that when it is dropped to close it will present no openings for the entrance of dust to the interior of the box; also, in providing one or both of the guides with a lateral recess near the top, into which the lower corner of the door is inserted to hold it up when necessary, and in providing the rear face of the door with a vertical recess, into which is inserted a stud, projecting from and secured to the top of the box in such a manner that the door can never be entirely withdrawn from the guides without removing said stud.

In the drawing, A represents a cast-iron axle-box, having its face or end inclined inward toward the top.

At either side of the opening, in the face thereof, is molded a flange or guide, *a*, beveled or wedging from top to bottom. Near the top of the guide is a recess or offset, *b*, Fig. 5. B is the cover or door, fitting the width of the guides, and having its side edges beveled to conform with the divergence of the guides, as shown at *c*, Fig. 4. The door is cast with a vertical recess or groove, *d*, in its rear face, and with a lug, *e*, on its outer face, for convenience in raising it.

After the door has been inserted between the guides a stud, C, is bolted or otherwise secured to the top of the box in such a way that it will project into the groove *d*, which is not continuous throughout the height of the door, but terminates near the bottom thereof. When it is necessary to get access to the interior of the box, the attendant lifts the door as high as the stud C will permit, when, by tilting it sidewise, one of the bottom corners will engage with the adjacent offset *b*, and thus sustain the door. To close the box, drop the door, which will wedge itself between the guides, and thus prevent the entrance of dust.

Box-doors, as heretofore constructed, are frequently left open, and more frequently lost by the jarring of the truck. This box is open to neither of these objections, for even if the door be left elevated it will soon jar out of the offset when the train is in motion, and the stud prevents it from being detached from the box unless the stud be first removed from the box.

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

In an axle-box, the door B, provided with beveled sides *c* and groove *d*, in combination with the wedge-shaped guide *a*, provided with offset *b* and the stop C, all constructed, arranged, and operating substantially as described and shown.

JOHN B. SUTHERLAND.

Witnesses:
MARTHA STEWART,
FREDERICK EBERTS.