K. S. AUSTIN.

Car-Axle Boxes.

No. 161,922. Patented April 13, 1875.

Fig. 1.

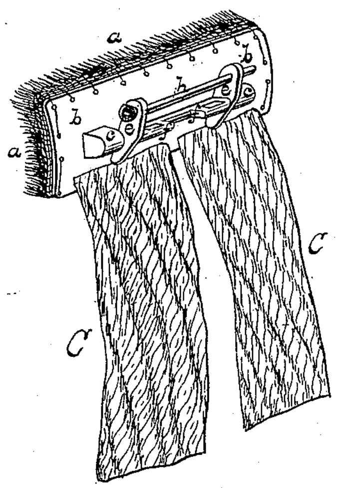


Fig. 2.

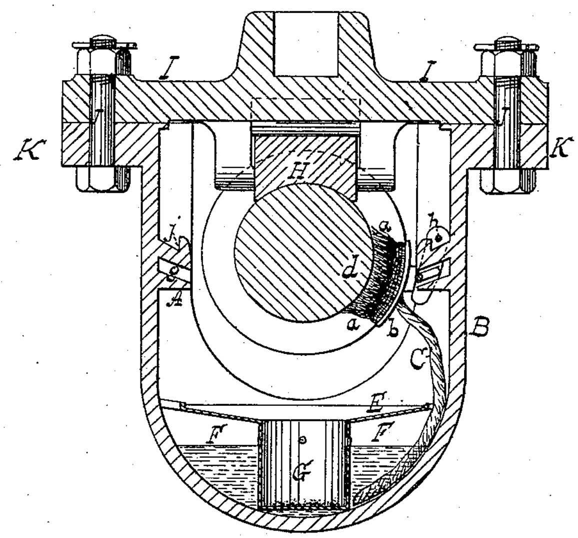
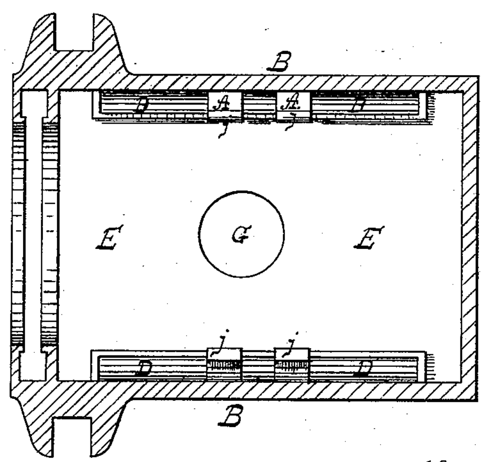


Fig. 3.



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UNITED STATES PATENT OFFICE.

KENNETH STUART AUSTIN, OF BIRMINGHAM, ENGLAND, ASSIGNOR TO BEUTHER'S RAILWAY-AXLE-BOX COMPANY, LIMITED, OF SAME PLACE.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **161,922**, dated April 13, 1875; application filed March 9, 1875.

To all whom it may concern:

Be it known that I, KENNETH STUART AUSTIN, of Birmingham, England, have invented Lubricating-Pad Brackets and Supports for Railway-Axle Boxes, of which the following is a specification:

The objects of this invention are, first, to insure an automatic supply of lubricating-oil to the journals of railway-axles, while the axles are rotating, by self-adjusting pads, fed by strips of fibrous material, whose lower ends dip into a reservoir; second, to provide easy means of attaching the pads and their frames in position within the axle-box; third, to provide for the descent or fall of the pads, whereby they keep themselves in constant contact with the journals, and adjust themselves to the rotundity under every condition of motion.

The invention will be clearly understood by the following description and the annexed drawings, in which—

Figure 1 shows a perspective view of a pad, *a*, pad-frame *b*, lugs *c c*, and bracket, whose supporting-pins pass through the lugs *c c*, for suspending the pad, whereby it keeps itself in contact with the journal of the axle *d* at all times.

The bracket is formed of two side or end cheeks, *e e*, whose lower ends are shaped for the pad-plate *b* to rest against, to prevent the plate falling so low as to interfere with the facility of putting the pad in place. Between the cheeks are a couple of lips, *f f*, to ride up and down in inclined grooves *g*, formed in projections A on the inner-side faces of the axle-box B, the upper surface of the projections being also inclined for a split key, *h*, to ride on. The split key holds the pad in place upon the projection, the fall or descent of which is limited by lips *j j* on the projections, as shown in Figs. 2 and 3, which are a transverse section and a sectional plan, respectively, of what is termed a "Beuther's axle-box," and for which my invention is specially applicable. The brackets are fitted loosely in the projections, so that they have play whether the axle be rotated for the forward or backward action. C C are tapes, of cotton or other fibrous material, whose upper ends are attached to the pads *a a*, two tapes being preferably used for each. The lower ends of these tapes, after being passed through slots D D in a screen, E, dip into oil contained in a reservoir, F, at the bottom of the box B, so that they are moistened thereby.

One of the pads, with its tape, is shown in Fig. 2, the other side of the box being clear to show the projection more clearly, there being two of such pads and tapes to each axle-box, for the side lubrication of the journal by capillary attraction of the oil to them, produced by the rotation of the axle against the faces of the pads.

G is a cup, into which the dirty oil flows from the screen E after it drips from the pads or from the axle. It having been found in practice that the quicker the axle revolves the more oil is drawn up, and this in excess for lubrication, it consequently drops from the pads and from the journal onto the screens, from whence it flows into the cup G, the cup having holes near its upper part, to permit of the oil passing again into the reservoir F. The dirt, being chiefly metallic, is of greater specific gravity than the oil, and precipitates itself to the bottom of the cup, so that the oil that flows back into the reservoir is comparatively clear and free of impurities, and is fit to be used over again.

H is the bearing, and I the cover, of the axle-box B, the cover being held in place by the bolts J J, passing through the same and through lugs K K, as shown.

I make no claim to the axle-box B as part of my invention, nor to the screen E, nor cup G. Neither do I claim any invention in side lubrication from or by an adjustable pad, supplied with oil by capillary attraction from the rotation of an axle; but

What I do claim is—

1. The projections or lugs A A on the interior sides of an axle-box, having inclined slots or grooves *g g* and notched and inclined upper faces *j j*, to receive and retain the key *h*, con-

structed and combined substantially as and for the purposes set forth.

2. In combination with a side-lubricating pad, *a*, having lugs *c c*, the bracket hinged to said lugs, and consisting of end pieces or cheeks *e e* and lips *f f* and a key, *h*, all to operate as specified.

3. The combination of the notched, slotted, and inclined projections A A in the axle-box with the brackets, having cheeks *e e* and lips *f f*, the key *h*, and the pad *a*, to which said bracket is hinged, substantially as shown.

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