

(No Model.)

S. WILLS.
CAR AXLE BOX.

No. 314,408.

Patented Mar. 24, 1885.

Fig. 1.

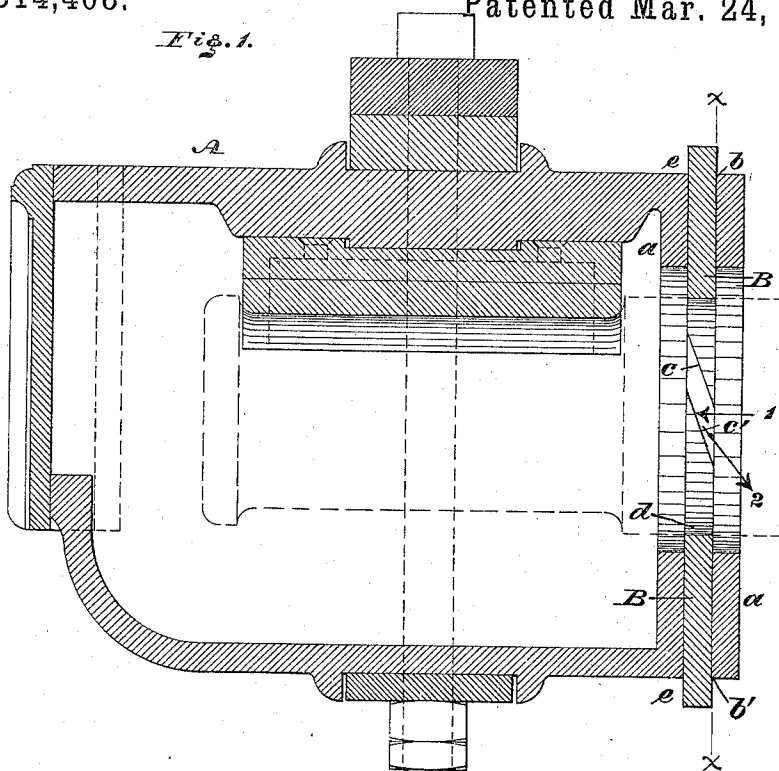
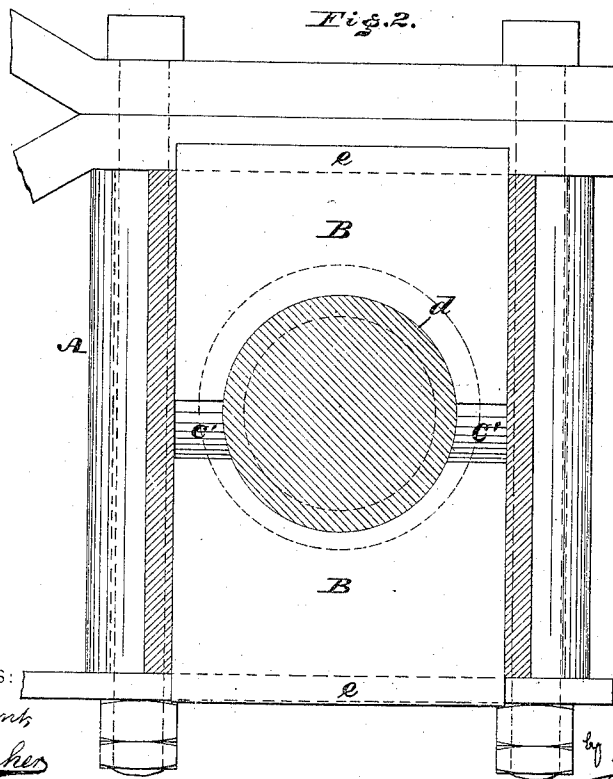


Fig. 2.



WITNESSES:

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CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 314,408, dated March 24, 1885.

Application filed June 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL WILLS, a citizen of the United States, residing in the city and county of Camden, State of New Jersey, have invented a new and useful Improvement in Car-Axle Boxes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a central longitudinal vertical section of an axle-box embodying my invention. Fig. 2 is a transverse vertical section thereof in line *x x*.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists of a car-axle box provided with a back board, the object whereof is to prevent the escape of oil and entrance of dirt, the construction of said back board or dust-guard being such that it is firmly held in position by being compressed by the walls of the portion of the box constituting the dust-chamber, as will be hereinafter fully set forth.

Referring to the drawings, A represents a car-axle box, which, excepting the feature of my invention, is of well-known form and construction. In the top and bottom of the rear wall, *a*, of the box are openings *b b'*, in which are tightly fitted the back board, B, formed of wood or other suitable material, of two separate parts or sections, one being inserted from above through the upper opening, *b*, and the other from below through the lower opening, *b'*, the sides of lower end of the upper part and the upper end of the lower part being cut away or beveled, as at *c c'*, and each of said ends having a central semicircular opening, *d*, to embrace the axle or journal, one end overlapping the other, as shown. It will be seen that when the back board is in position it closes the rear of the box, so that oil is retained within the box, and dirt, &c., prevented from entering the same. When the openings *d* are worn, the parts of the board are driven in, respectively, from above and below, so that said openings again close around the axle or journal, it being noticed that the ends of the parts of the board project outside of the upper and lower walls of the box, as at *e e*, so as to be readily struck, and thus forced or driven into the box to greater extent, the ends of the parts of the board within the box pre-

senting no obstacle to the motion of said parts, owing to the bevel nature of said ends. It will also be seen that should dirt, stones, &c., reach the spaces formed by the beveled faces or ends *c c'* it may enter the same, but the end *c'* acts as a deflector, and so causes the discharge of the dirt, &c., (see the arrows, Fig. 1,) it thus being prevented from entering the box, as is evident.

It will be noticed that the thickness of the boards or sections of the dust-guard is considerably greater than the space between the walls of the dust-chamber, consequently the sections require to be forcibly driven into position, whereby they are tightly compressed, and as they wear off it will only be necessary for the car-inspector to drive up the lower section, thus keeping the dust-chamber properly closed, and as the boards are compressed they are made harder, so that their durability is increased.

I am aware of the Letters Patent No. 41,616 for a car-axle box granted to W. Groat on the 16th day of February, 1864, in which there is shown a dust-guard formed of sections which are adjustable on the axle by means of a wedge-shaped key.

I am also aware of the Letters Patent No. 233,152 for a car-axle box granted to G. J. Holton on the 12th day of October, 1880, the same having a sectional dust-guard, the lower section whereof being pressed against the axle by means of a spring within the dust-chamber.

I am also aware of the Letters Patent No. 298,253 for a car-axle box granted to D. S. Stimson, May 6, 1884, in which the sections of the dust-guard are separable in horizontal direction. In the Groat patent the two sections require to be grooved to receive the adjusting-key, and the latter necessarily requires some means of fastening to prevent loss of the same. In the Holton patent the dust-chamber is necessarily made with a removable bottom in order to apply and remove the spring. In the Stimson patent the sections of the guard are applied from the sides of the box, and thus require two springs to retain the guard in position.

By my construction I avoid wedging or tightening keys and springs, and thus simplify

and cheapen a dust-guard and improve the nature thereof.

Having thus described my invention, what I claim as new, and desire to secure by Letters
5 Patent, is—

1. A car-axle box having a dust-guard which is formed of sections which are forcibly driven into the dust-chamber and thus held by the compression of the walls thereof, substantially
10 as and for the purpose set forth.

2. A car-axle box having a dust-guard formed of sections which are cut away on the sides of their inner ends and driven into the dust-chamber and held therein by compression of the walls of said chamber, substantially as
15 and for the purpose set forth.

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Witnesses:

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