

(No Model.)

N. H. DAVIS.
AXLE BOX LID.

No. 562,589.

Patented June 23, 1896.

Fig. 1.

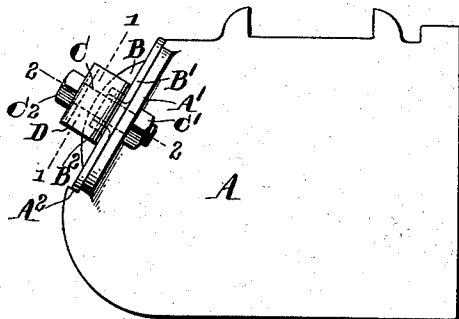


Fig. 2.

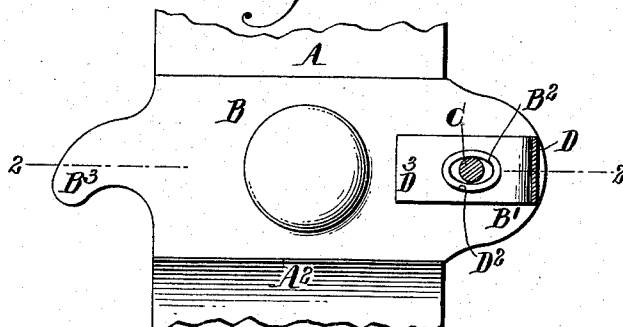
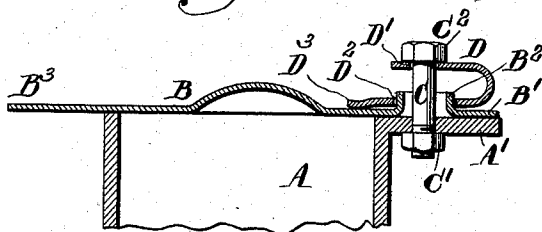


Fig. 3.



Witnesses.

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AXLE-BOX LID.

SPECIFICATION forming part of Letters Patent No. 562,589, dated June 23, 1896.

Application filed March 14, 1896. Serial No. 583,214. (No model.)

To all whom it may concern:

Be it known that I, NATHAN H. DAVIS, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Axle-Box Lids, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of the specification.

My invention relates to axle-box lids such as are used in connection with the axle-boxes of railway-cars, and has for its object to provide a lid and lid-spring of simple, efficient, and cheap construction.

The nature of my improvements will be best understood as described in connection with the drawings in which they are illustrated, and in which—

Figure 1 is a side elevation of an axle-box provided with my improved lid and spring. Fig. 2 is a view of the lid, taken on section-line 1 1 of Fig. 1; and Fig. 3 is a sectional view taken on the line 2 2 of Fig. 2.

A is the axle-box; A', a flange or extension of the box at one side of the opening therein; A², a ledge at the lower side of the opening against which the lower edge of the lid rests when it is closed.

B is the axle-box lid, which, as shown, and as I prefer to construct it, is made of stamped malleable metal. It is provided with an extension, preferably rounded, as shown at B', and in this extension is formed a perforation with an upwardly-extending flange, as indicated at B². This flange, for reasons which will be understood in connection with the further description, should be of other than circular form, preferably of elliptic form, as shown in the drawings, the longer axes of the ellipse lying in the direction of the length of the lid.

B³ is an extension from the opposite side of the lid, formed to make a convenient gripping-place whereby the lid may be engaged and opened.

C indicates the device by which the lid is pivotally secured to the axle-box and by which the spring to be hereinafter described is held in proper tension. This device may conveniently be a bolt, as is shown in the drawings, the threaded end passing through the

flange A' of the lid and being secured thereto by a nut C', while the head C² of the bolt rests upon the upper leg or arm of the spring. This spring is indicated at D and is made of a U shape, preferably having one leg considerably longer than the other, as indicated at D³. The spring is provided with two perforations, one, D², of such shape as to fit over and preferably engage with the flange of the perforation B² while the other spring perforation, D', is in the opposite leg of the U and is of such size as will permit the bolt C to pass through it.

In my preferred construction the perforation D² not only rests around the flanged perforation B², but so engages it as to prevent any rotative movement of the spring D, which in normal position should lie substantially in the direction of the longitudinal axis or center line of the lid with its long arm D³ extending out and resting upon the face of the lid. Indeed I prefer so to form the spring D that its greatest pressure will be exerted on the face of the lid through the end of its long arm D³.

My reason for preferring to make the flanged perforation B² of elliptic form, as described, and for making the perforation D² of corresponding form is the very obvious one that by this construction not only is the spring prevented from turning around the perforation B², but the necessary perforation in the spring-plate is such as to weaken the spring as little as possible.

It is to be noted that while the elongated or elliptical form of the flanged perforation B² is such as to permit a certain movement of the lid with reference to its pivot-bolt C yet the engagement of the spring D with the flange of the perforation and the comparatively close fit of the perforation D' upon the bolt C is such as to prevent any objectionable movement of the lid with reference to its pivot-bolt.

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

1. An axle-box lid having a flanged perforation B² extending upward from one end in combination with a U-shaped spring having a perforation as D² adapted to fit over the flange of perforation B² formed in one arm

and a corresponding perforation D' in its other arm, and means as bolt C for putting spring D under tension and securing the lid to an axle-box.

- 5 2. An axle-box lid having a flanged perforation B² extending upward from one end in combination with a U-shaped spring D having one arm D³ formed longer than the other and adapted to lie upon the top of the lid and
10 extend toward the center thereof said spring having a perforation as D² in its longer arm adapted to fit over the flange of perforation B² and a corresponding perforation D' formed in its shorter arm and means as bolt C for putting
15 spring D under tension and securing the lid to an axle-box.

3. An axle-box lid having a flanged perforation B² of other than circular outline extending upward from one end in combination with
20 a U-shaped spring having a perforation as D² and adapted to fit over and engage with the

flange of perforation B² formed in one arm and a corresponding perforation D' in its other arm, and means as bolt C for putting spring D under tension and securing the lid to an axle- 25 box.

4. An axle-box lid having a flanged elliptically-shaped perforation B² extending upward from one end with its longer axes lying in the direction of the length of the lid in
30 combination with a U-shaped spring having an elliptical perforation as D² adapted to fit over the flange of perforation B² formed in one arm and a corresponding perforation D' in its other arm, and means as bolt C for putting
35 spring D under tension and securing the lid to an axle-box.

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Witnesses:

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