

(No Model.)

N. H. DAVIS.
AXLE BOX LID.

No. 562,588.

Patented June 23, 1896.

FIG. 1.

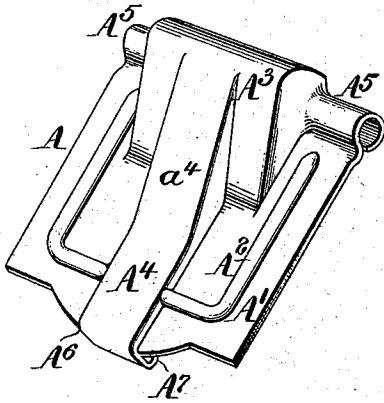


FIG. 4.

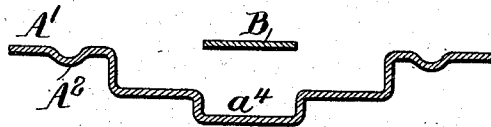


FIG. 5.

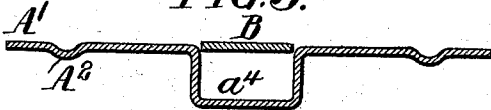
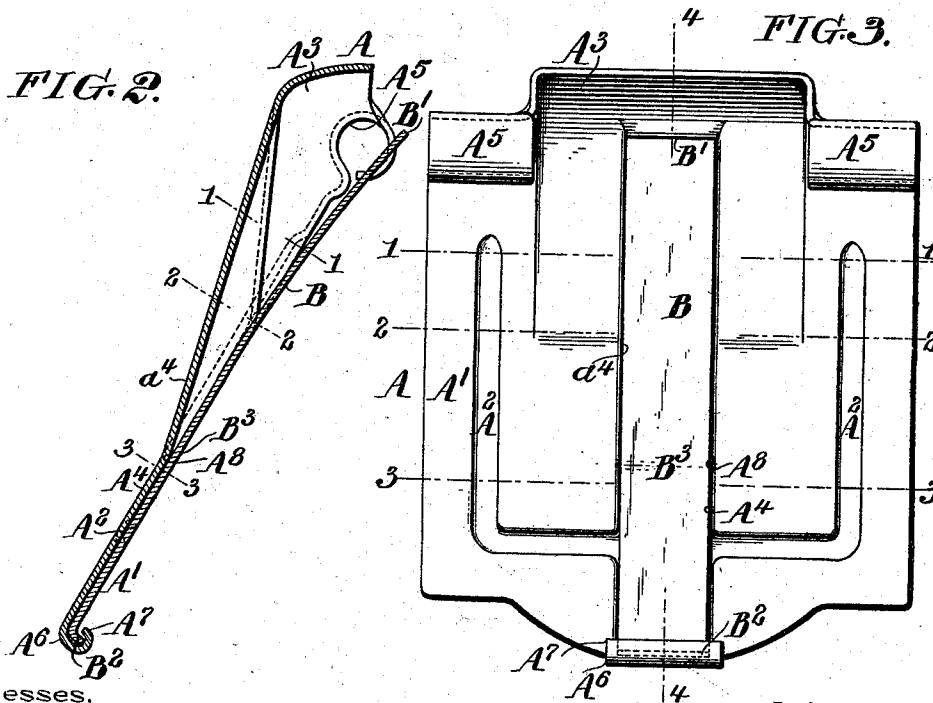


FIG. 6.



FIG. 2.



Witnesses.

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AXLE-BOX LID.

SPECIFICATION forming part of Letters Patent No. 562,588, dated June 23, 1896.

Application filed March 14, 1896. Serial No. 583,212. (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 as covers to the axle-boxes of railway-cars, and my object is to provide a lid of novel construction, and especially one adapted to be engaged with the spring by which it is held in a closed or open position in a novel and improved manner.

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 perspective view of the top or outer side of my improved lid. Fig. 2 is a central longitudinal section through the lid; Fig. 3, a plan view of the inside or face of the lid; and Figs. 4, 5, and 6, cross-sectional views taken on the section-lines 1, 2, and 3 of Figs. 2 and 3.

A indicates the axle-box lid, which, as shown, and as I prefer to construct it, is made of a plate of iron or steel stamped to the desired form.

A' indicates the flat inner face of the lid, which comes in contact with the rim surrounding the opening in the axle-box.

A² is a strengthening-rib thrown up from the back of the plate.

A³ is what is known as the "hood," which, in the top of the lid illustrated in the drawings, extends over the projection at the top of the axle-box, to which projection the lid is hinged.

A⁴ is a recess formed or stamped on the inside of the lid and in which recess the spring indicated at B is situated. This recess A⁴ in my construction extends to the lower end of the box-lid, and from that end upward to a point indicated at A⁵ need be only a sufficient depth to insure that its walls will hold the spring in position. From the point A⁵ upward the recess is deepened, as indicated at A⁶, for the purpose of affording free play to the upper end of the spring B, the deepened

recess A⁴ merging into the hood A³, as indicated best in Figs. 1 and 2.

A⁵ A⁵ indicate the hinge-eyes formed on each side of the hood A³.

A⁶ indicates the lower end of the lid, the metal of which is formed, preferably, by bending into a downwardly-extending hook, as indicated at A⁷, this hook registering with the lower end of the groove A⁴.

B, as already stated, is the spring, which is formed with a hooked end B² at its lower end. The upper end of the spring, which extends through the deepened groove A⁴ and into the hood A³, is indicated at B', while at B³, I have indicated the point on the spring where it leaves contact with the bottom of the groove A⁴, that is to say, the point on the spring which registers with the point A⁸ of the lid.

The spring is secured in place simply by engaging its lower end B² with a hooked end A⁷ of the lid-plate. As shown, the bent end of the spring rests against the bottom of the hook A⁷, but obviously the bent end of the spring may be somewhat shorter, in which case the actual contact would be between the extreme end of the hook A⁷ and a point on the body of the spring above the hook B². The end B' of the spring is, as is well understood, pressed upward when the spring is hinged to the box, this pressure being transmitted to the point A⁸ on the lid, which serves as a fulcrum, while the engagement of the hooked end of the spring with the hooked end of the lid serves as an anchorage.

By my construction I am enabled to use a spring of maximum length, and I secure also not only the resiliency of the spring-plate between the upper end of the spring and the point B³, but also the resilience of the spring-plate between the point B³ and the hooked end of the spring, this part of the spring having the capacity to bow outward to a slight but useful extent.

It will also be observed that by my construction there is no perforation in the face of the lid nor is it necessary to provide an anchorage for the spring by bolting or riveting some anchoring device to the lid, as is usually the case.

It is a distinct advantage in my lid that the groove A⁴ involves in stamped metal the formation of a corrugation in the lid extending

to its lower end, as this corrugation stiffens and strengthens the lid against the blows or jerks incident to opening it.

While I prefer to form the end A⁶ of the lid in the form of a hook, as shown at A⁷, it will suffice in some cases to simply form or bend it downwardly and inwardly, so as to afford a rest for the straight end of a spring-plate, relying upon friction to anchor the spring in place longitudinally.

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 recess A⁴ formed on its inner face to receive a spring said recess being deepened toward its upper end in order to give play to the spring and extended to the extreme lower end of the lid, said box-lid having also at its extreme lower end a downwardly and inwardly extending projection formed integral with the lid and adapted to project over the end of recess A⁴ and to engage the end of a spring-plate lying in said recess A⁴.

2. An axle-box lid having a recess A⁴ formed on its inner face to receive a spring said re-

cess being deepened toward its upper end in order to give play to the spring and extended to the extreme lower end of the lid, said box-lid having also at its extreme lower end a hook-like projection A⁷ formed integral with the lid and adapted to project over the end of recess A⁴ and to engage a hooked end on a spring-plate lying in recess A⁴.

3. An axle-box lid having a recess A⁴ formed on its inner face to receive a spring, said recess being deepened toward its upper end in order to give play to the spring, said box-lid having also at its lower end a hook-like projection A⁷ adapted to engage a hooked end on a spring-plate lying in recess A⁴ in combination with a spring B having a hooked end B².

4. An axle-box lid formed of struck-up wrought metal having a recess A⁴ formed by a corrugation of the metal of the lid and deepening toward the upper end of the box-lid and a hooked lip A⁷ formed on the lower end of the lid and integral therewith.

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Witnesses:

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