(No Model.)

P. N. FRENCH.

AXLE BOX LID.

No. 476,194. Patented May 31, 1892.

FIG. 1.

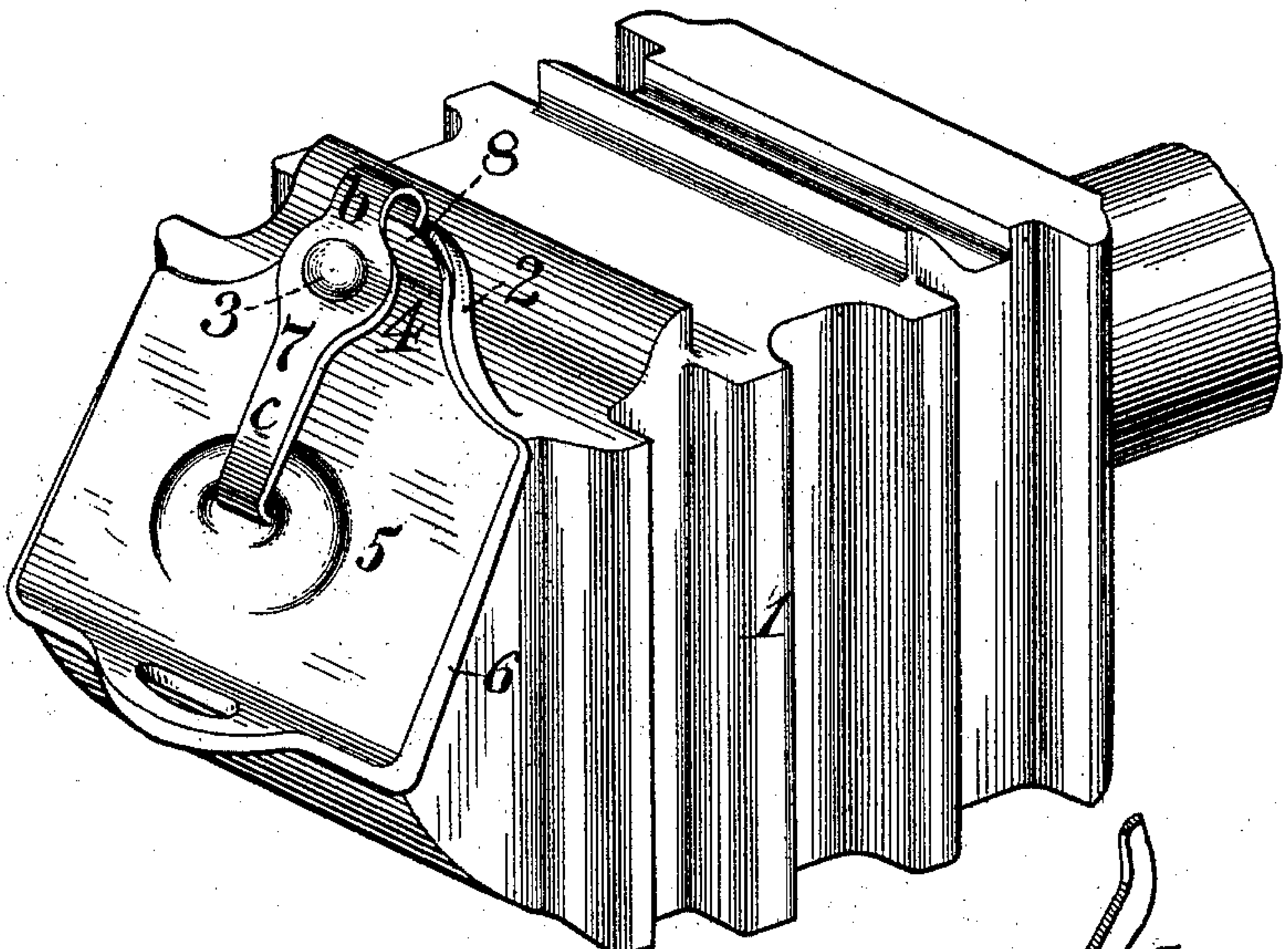


FIG. 2.

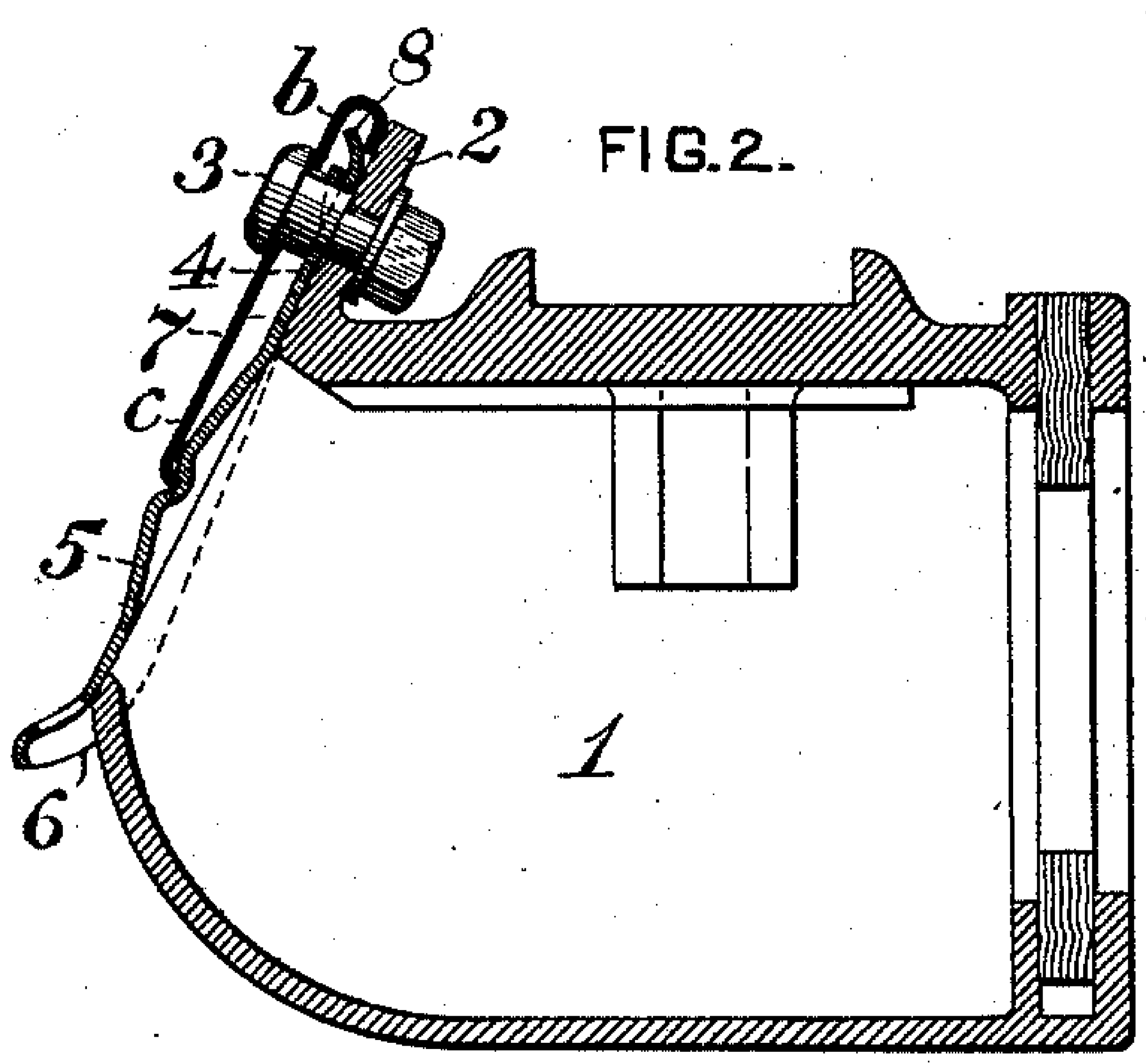


FIG. 3.

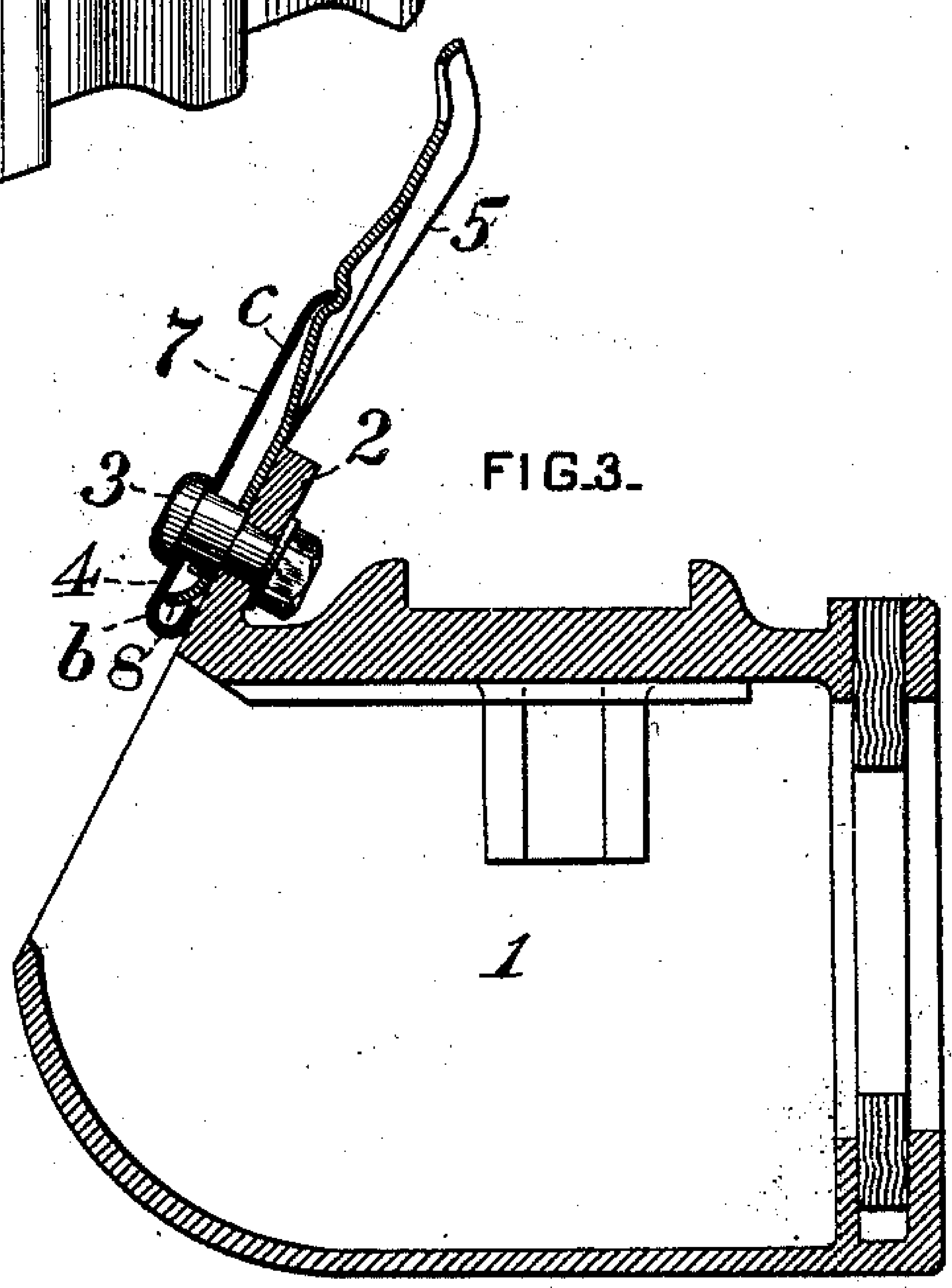
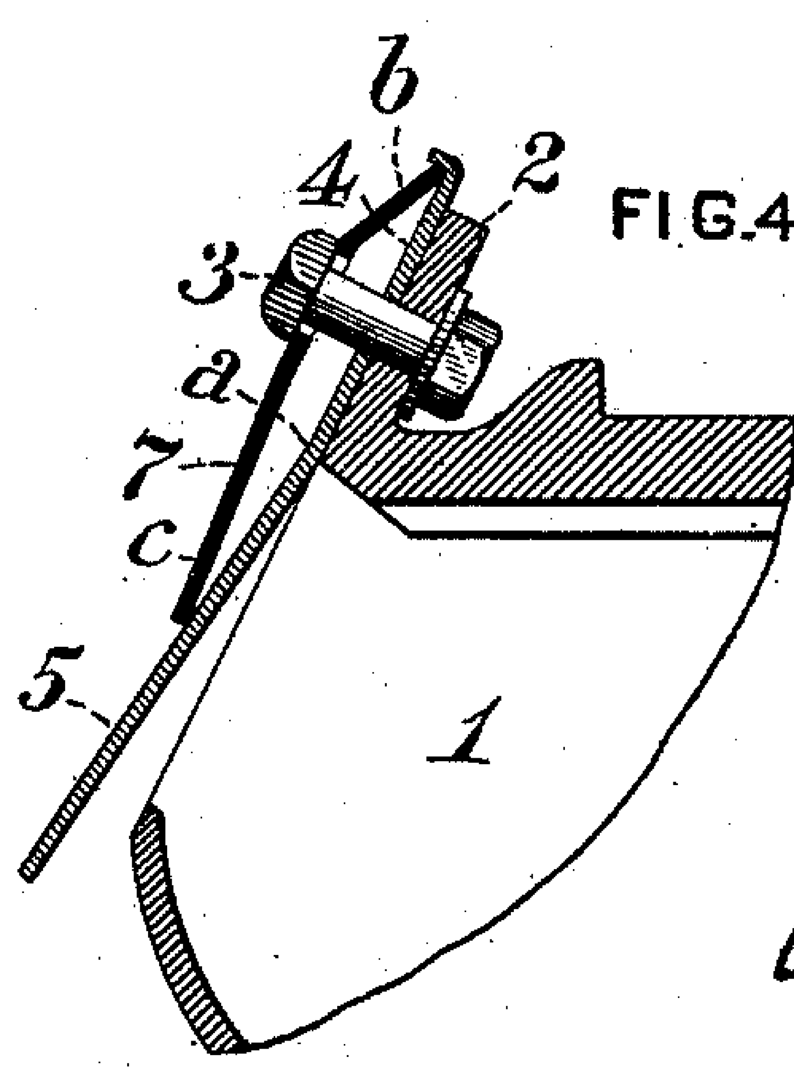


FIG. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

PHILO N. FRENCH, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO THE MORRIS BOX LID COMPANY, OF SAME PLACE.

AXLE-BOX LID.

SPECIFICATION forming part of Letters Patent No. 476,194, dated May 31, 1892.

Application filed February 1, 1892. Serial No. 419,896. (No model.)

To all whom it may concern:

Be it known that I, PHILO N. FRENCH, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Axle-Box Lids, of which improvements the following is a specification.

The invention described herein relates to certain improvements in car-axle-box covers, which should be so attached as to tightly cover the boxes that they may be readily removed whenever access is desired to the interior of the box for inspection or oiling the journal.

The object of the present invention is to provide for the application of spring-pressure to the center of a lid or cover, which is pivotally connected to one side or edge of the box, so as to be capable of edgewise movement.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view of a car-axle box having my improved cover applied thereto. Figs. 2 and 3 are sectional elevations of the same, showing the cover in a closed and an open position, respectively; and Fig. 4 is a view similar to Fig. 2, showing an old form of axle-box cover.

In the practice of my invention the box 1 is made of the usual shape and construction and is provided on one side of its front opening with a flange or projection 2. A hole is formed through this flange for the bolt 3, which also passes through a lateral projection 4 from one edge of the lid and serves as a pivot for the latter. The lid 5 is stamped or otherwise shaped from a sheet of steel or wrought-iron, or it may be formed of cast iron or steel, and is preferably provided with a rim 6 around its edges, so as to prevent accidental edgewise movement of the cover or lid.

Such lids have heretofore been held on the box by means of a spring 7, bearing at one end upon the lid at or near the middle thereof and at the other end upon the projection 4, the spring being pivotally held in position and placed under the desired tension by the pivot-bolt 3, as shown in Fig. 4. It occasionally happens that by rough handling the lid 4 will be slightly bent along the line *a* when the arrangement of spring shown in Fig. 4 is employed. When so bent, the tension of the short portion *b* of the spring from the bolt to the end bearing upon the projection 4 is enough greater than the tension of the longer portion *c* of the spring to raise the front edge of the lid from the box, thereby permitting dust to enter the box.

In my improvement the short end *b* of the spring is so constructed as to bear upon the flange or projection 2 of the axle-box, as shown in Figs. 1, 2, and 3, in all positions of the lid. A bearing for the end of the portion *b* of the spring on the flange or projection 2 is provided by making the projection 4 of the lid shorter than is required in the construction shown in Fig. 4. At or near the center of the lid is formed a slight depression for the reception of the end of the portion *c* of the spring, and in order to prevent a displacement of the spring when the lid is swung around to the position shown in Fig. 3, in which position of the lid and spring the latter is not under tension, a lip 8 is formed on the end of the projection 4 of the lid of such a length as to engage the under side of the portion *b* of the spring, which is bowed or arched, and prevents the lid from dropping away from the end of the portion *c* of the spring when the lid is in the position shown in Fig. 3. The engagement of the end of the portion *c* of the spring with the depression in the lid being thus assured, the spring will always retain the same position relative to the lid in whatever position the latter may assume.

I claim herein as my invention—

1. The combination of an axle-box, a lid so pivoted thereto as to have a lateral movement transverse of the box, and a spring having a bearing upon the lid and upon the axle-box, substantially as set forth.

2. An axle-box, in combination with a lid pivoted thereto, and a pivotal spring having a bearing on one side of its pivotal point on

the lid and on the opposite side of its pivotal point upon the axle-box, substantially as set forth.

3. An axle-box, in combination with a lid provided with a projection on one side and pivoted to the axle-box, an arched or bowed spring also pivoted to the axle-box and bearing at its ends upon the lid and axle-box, respectively, and a lip formed on the end of the projection from the lid and adapted to engage the spring when the lid is swung from over the axle-box, substantially as set forth.

In testimony whereof I have hereunto set my hand.

PHILO N. FRENCH.

Witnesses:
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