No. 860,563. PATENTED JULY 16, 1907.

A. PANCOAST.

DUST PROOF AXLE BOX LID.

APPLICATION FILED FEB. 23, 1906.

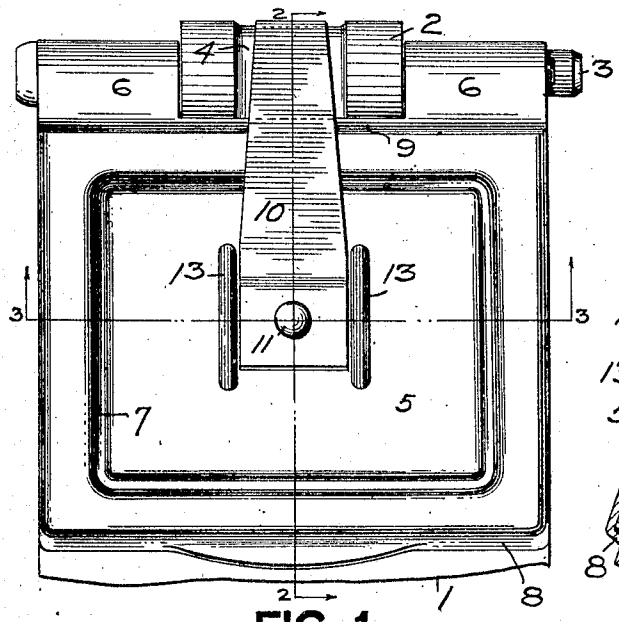


FIG. 1

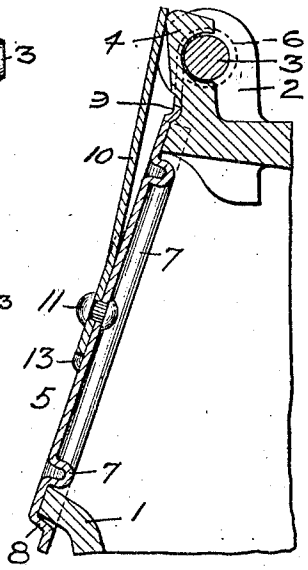


FIG. 2

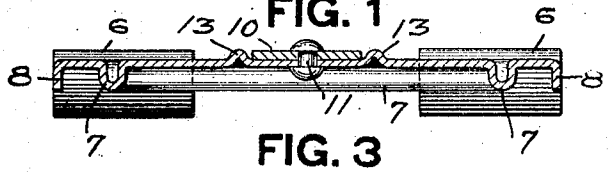


FIG. 3

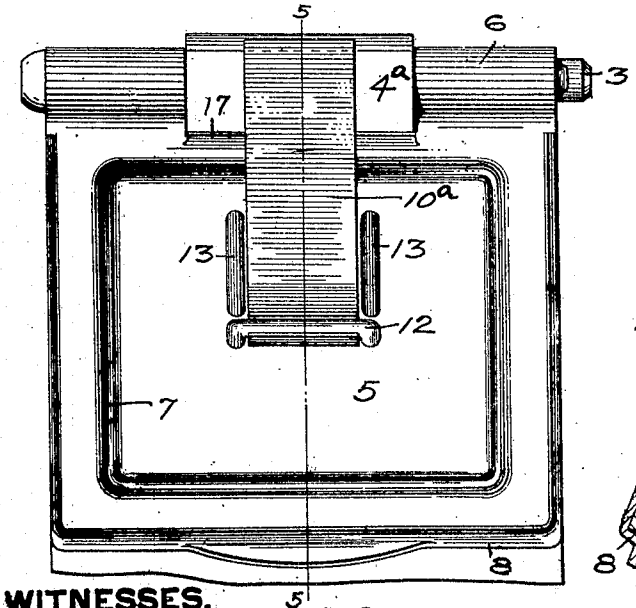


FIG. 4

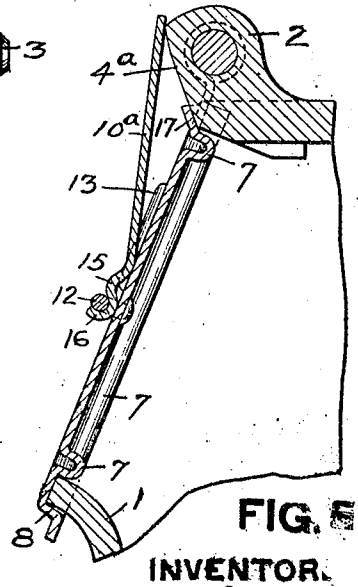


FIG. 5

WITNESSES.

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UNITED STATES PATENT OFFICE.

ALBERT PANCOAST, OF NEW KENSINGTON, PENNSYLVANIA, ASSIGNOR TO UNION SPRING AND MANUFACTURING COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

DUSTPROOF AXLE-BOX LID.

BEST AVAILABLE COPY

No. 860,563. Specification of Letters Patent. Patented July 16, 1907.

Application filed February 23, 1906. Serial No. 302,649.

To all whom it may concern:

Be it known that I, ALBERT PANCOAST, a resident of New Kensington, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Improvement in Dustproof Axle-Box Lids; and I do hereby declare the following to be a full, clear, and exact description thereof.

This invention relates to lids for axle or journal boxes of railway trucks and the like and especially to such lids formed of pressed plate metal.

Its object is to provide a lid which is simple and cheap of construction and which is practically dust proof.

My invention provides a lid which can be formed from plate metal, which is dust proof and which conforms to the standards of the Master Car Builders' Association.

The invention consists of details hereinafter described and claimed.

In the accompanying drawings Figure 1 is a face view of my lid; Fig. 2 is a vertical section on the line 2—2, Fig. 1 and showing a portion of the axle box; Fig. 3 is a horizontal section on the line 3—3, Fig. 1; Fig. 4 is a face view showing a modified form of lid; and Fig. 5 is a vertical section on the line 5—5, Fig. 4 and a portion of the axle box.

The axle box is indicated at 1, this being provided with the usual perforated ear 2 for the pivot or pintle 3 of the lid and with the spring lug 4 having a spring bearing face which is substantially vertical, or at least inclined only slightly from the vertical.

The lid 5 is formed of pressed plate metal, such as steel, and is provided with the usual hinge eyes 6 but has at its upper edge no hood for the spring due to the fact that the latter is on the outside. The lid is provided with a continuous inwardly projecting rib or flange 7 formed by pressing the metal inwardly, as shown, and arranged to enter the opening of the axle box and contact with the same at the top, bottom and both sides. Its edges also are flanged inwardly as at 8, this flange extending continuously around the face of the journal box at the bottom and both sides, and at the top is modified so as to extend underneath the spring. At this point or opposite the spring lug 4 of the box it may be reduced in width, as shown at 9, and made to project upwardly as well as inwardly but it completely closes the opening at this point. Inasmuch as the lid has no hood it is possible to get this tight opening at the top as well as at the sides and bottom.

The spring 10 (or 10^a Figs. 4 and 5) is applied to the outer face of the lid, being secured thereto either by a rivet 11, as shown in Figs. 1, 2 and 3, or by a stirrup rivet 12, as shown in Figs. 4 and 5. Suitable ribs 13 are pressed outwardly on the lid to confine the spring against swinging sidewise as might occur when only a single rivet is used. Such ribs will also preferably be used with the stirrup shown in Figs. 4 and 5. With such stirrup the lower end of the spring is provided with a shoulder 15 which prevents the spring from falling downwardly and with a hooked lower end 16 which prevents same from jumping up.

The lid shown in Figs. 4 and 5 is slightly modified at its top so as to fit the form of spring lug 4^a shown in Fig. 5. This modification consists in bending the upper flange of the lid outwardly on an incline, as shown at 17, to fit said lug.

The axle box described is practically dust proof due to the fact that the inside and outside flanges extend entirely around the axle box face, making tight contact therewith even at the top so that dirt and dust cannot work into the same. Furthermore the location of the spring on the outside dispenses with the usual hood and the necessary opening formed thereby. Even though this spring should break it would merely fall to the ground and could not get down into the journal bearing and wear the same out, as frequently happens with inside located springs. The external location of the spring makes it easy to inspect as it is always in sight so that a broken spring can be at once detected. The inner and outer flanges give sufficient friction on the axle box to hold the lid tightly shut on the axle box even though the spring should break. These flanges furthermore hold the lid properly in position even though there should be a large amount of play on the pivot bolts. In fact it is not necessary to fit these bolts tightly as the flanges necessarily position the lid. Consequently the holes in the hinge can be made by coring and do not need to be machined.

The lid as a whole is cheap of construction, exceedingly strong, dust proof, and conforms to the Master Car Builders' standards, and can be readily adapted to any form and size of axle box.

What I claim is:

1. An axle box lid interchangeable with the Master Car Builders' standard lid, having hinge eyes at its upper end and with a hinge lug opening between said hinge eyes, and provided with continuous inwardly projecting flanges at its side and bottom edges and with an upwardly projecting flange at its upper edge extending uninterruptedly between the hinge eyes, said side and bottom flanges being arranged to encircle the outside of the axle box opening, and the upper flange being arranged to bear with its side face against the outer upwardly extending face of the hinge lug of the Master Car Builders' standard axle box, and a leaf spring secured to said lid.

2. An axle box lid interchangeable with the Master Car Builders' standard lid, having hinge eyes at its upper end and an opening for the hinge lug between said hinge eyes.