A. CHRISTIANSON.

JOURNAL BOX LID.

APPLICATION FILED NOV. 21, 1907.

906,613. Patented Dec. 15, 1908.

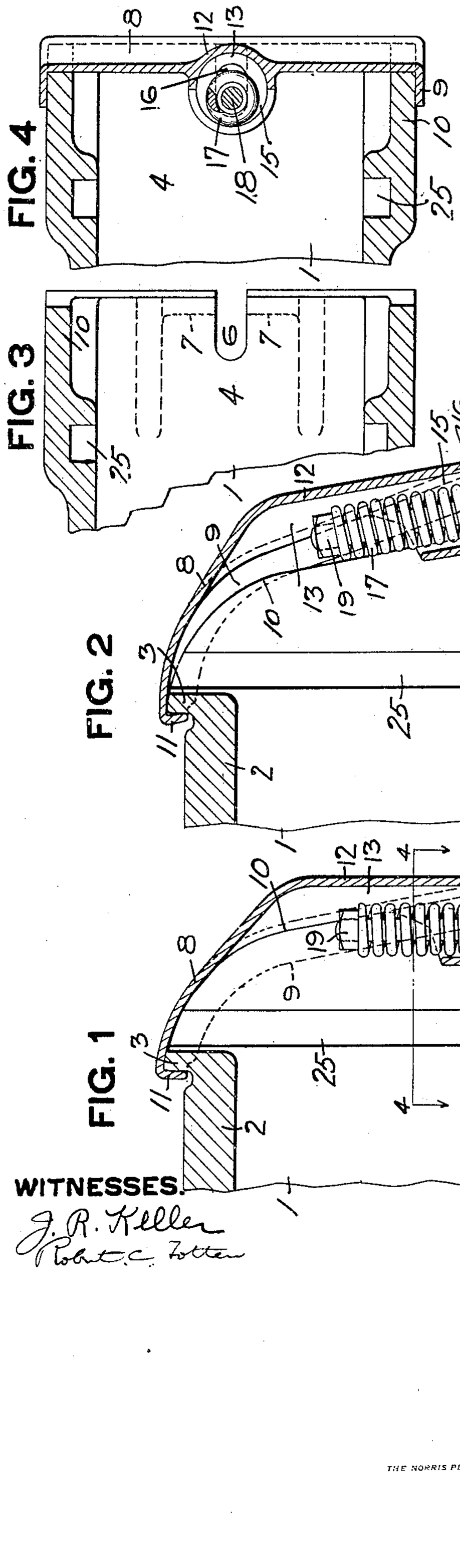

FIG. 4

FIG. 3

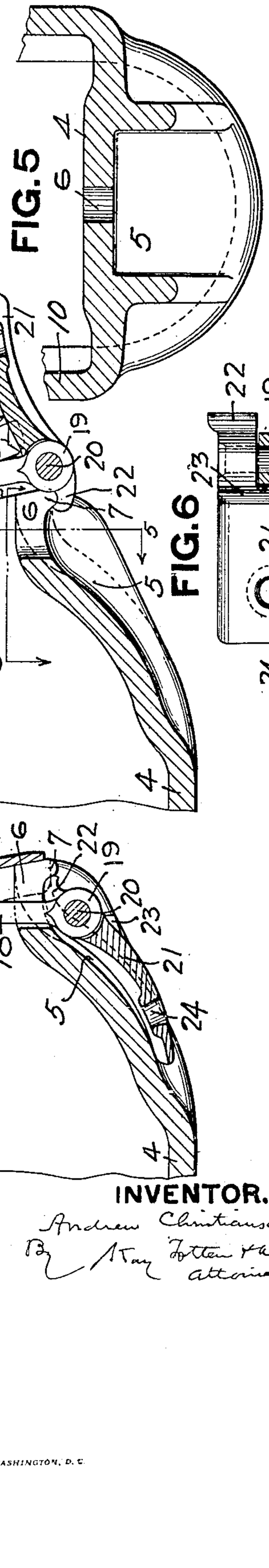

FIG. 5

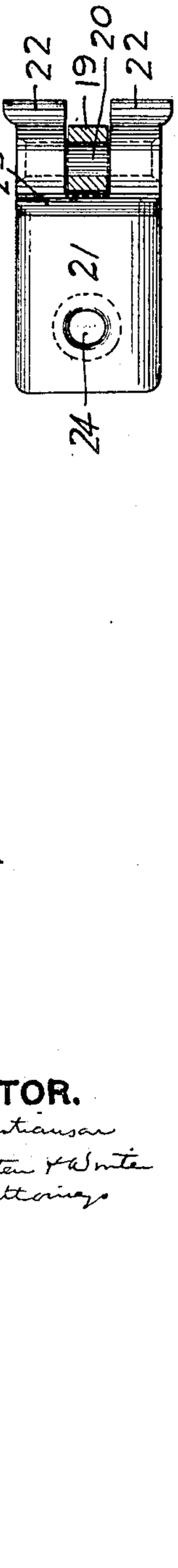

FIG. 6

FIG. 2

FIG. 1

WITNESSES.

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UNITED STATES PATENT OFFICE.

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JOURNAL-BOX LID.

No. 906,613. Specification of Letters Patent. Patented Dec. 15, 1908.

Application filed November 21, 1907. Serial No. 403,217.

To all whom it may concern:

Be it known that I, ANDREW CHRISTIANSON, a resident of Butler, in the county of Butler and State of Pennsylvania, have invented a new and useful Improvement in Journal-Box Lids; and I do hereby declare the following to be a full, clear, and exact description thereof.

This invention relates to journal boxes and lids therefor and more especially to those adapted for motor trucks.

The object of the invention is to provide a journal box lid having no projecting portions liable to strike against obstructions and be damaged, and which is so constructed that it can be readily removed when desired and securely locked in place in use.

The invention comprises the construction and arrangement hereinafter described and claimed.

In the accompanying drawing Figure 1 is a vertical section through the end of a journal box showing the lid applied thereto; Fig. 2 is a similar view showing the parts with the lid unlocked; Fig. 3 is a horizontal section on the line 3—3, Fig. 2; Fig. 4 is a similar section on the line 4—4, Fig. 1; Fig. 5 is a vertical section on the line 5—5, Fig. 2; and Fig. 6 is a detail view of the locking lever.

The journal box is shown at 1 having an outer open end or mouth and may be of any desired pattern. The top wall 2 is provided with an upwardly projecting flange 3 and the bottom wall 4 is provided on its outer face with a recess or depression 5 and the edge of said lower wall is provided with a notch 6 and with downwardly projecting shoulders 7 on either side of said notch. The lid 8 may be either a casting or of pressed metal, being shown as a casting, and is provided with side flanges 9 fitting snugly outside of the side walls 10 of the axle box, and at its top has a downwardly projecting flange 11 adapted to hook over the upwardly projecting flange 3 on the top wall of the box. The lid is provided centrally with an outwardly bulging portion 12 providing a chamber 13 on the inner side of the lid. At the bottom of said chamber is a pocket 15 having a hole 16 through its bottom. Seated in the pocket 15 is a spiral spring 17 which surrounds a rod or bolt 18 having at its upper end a nut 19 bearing on the upper end of the spring. Said rod or bolt extends downwardly through the hole 16 in the bottom of the pocket 15 and when the lid is locked projects downwardly through the notch 6 in the bottom wall of the box. At its lower end it has an eye 19 for receiving the pivot pin 20 of a locking lever 21. This lever has cam or toe pieces 22 arranged to engage the downwardly projecting shoulders 7 on the bottom of the box, and also has a projecting face 23 arranged to engage the lower edge of the lid and lift the same. The lever is provided with a hole 24 for the insertion of a bar or the like to operate the lever if necessary.

Fig. 1 shows the lid in locked position with its top flange 11 lying behind the top flange 3 of the box and with the locking lever 21 pushed inwardly and lying in the recess 5 in the bottom face of the box. In this position the cam members 22 of the lever are thrust against the shoulders 7 on the bottom walls of the box and securely hold the lid in locked position. To unlock the lid the lever 21 is pulled downwardly and outwardly to the position shown in Fig. 2 thereby releasing the lower end of the rod 18 and permitting the lower edge of the box to be swung outwardly, the projection 23 engaging the lower edge of the lid and lifting the same. When the lid entirely clears the box it can be lifted off. The mouth of the box is curved backwardly at the top and the lid is correspondingly curved. When the lever 21 is in locking position the spring 17 is compressed and exerts a downward pull on the lid. This not only serves to hold the top flange of the lid behind the top flange of the box, but also by reason of the curved contour of the lid and mouth of the box causes the lid to be firmly pressed against the edges of the box mouth and form a tight closure. The box is shown provided with grooves 25 for receiving the usual gib or forked plate used for holding the axle against endwise movement.

The arrangement shown provides an axle box lid having practically a smooth exterior so that when used for motor car purposes, such as in cities, there are no projecting parts to hit against trucks or other obstructions. The lid fits very tightly over the mouth of the box, making the latter practically dust proof. The locking device holds the lid securely in position so as to

prevent the same falling off in service but at the same time is so constructed that the lid can be readily removed whenever desired.

What I claim is:

1. The combination of a journal box having an outwardly projecting flange at its top, a lid provided with an inwardly projecting flange at its top arranged to engage behind said flange on the box, a lever arranged to lock the lower edge of the lid to the box, and a yielding mounting for said lever.

2. The combination of a journal box having an outwardly projecting flange at its top, a lid provided with an inwardly projecting flange at its top arranged to engage behind said flange on the box, a cam member arranged to lock the lower edge of the lid to the box, and a yielding mounting for said cam member.

3. The combination of a journal box having an outwardly projecting flange at its top, a lid provided with an inwardly projecting flange arranged to engage behind the top flange of the box, a cam member carried by the lid and arranged to engage the box, and a spring connection between said cam member and the lid.

4. The combination of a journal box provided on its bottom with a shoulder or shoulders, a lid fitting over the mouth of the box, a yielding member carried by said lid, and a lever pivoted to said yielding member and arranged to engage the shoulder on the box.

5. The combination of a journal box having an outwardly projecting flange at its top, a lid provided with an inwardly projecting flange at its top arranged to engage behind said flange on the box, and a lever for locking the lower edge of the lid to the box, said lever having a projection arranged to engage the lower edge of the lid and lift the same.

6. The combination of an axle box having its lower wall notched and provided with downwardly projecting shoulders, a lid fitting over the mouth of the box, a spring pressed rod carried by the lid, and a lever pivoted to said rod and provided with cam projections for engaging the shoulders on the box.

7. The combination of an axle box having its lower wall notched and provided with downwardly projecting shoulders, a lid fitting over the mouth of the box, a spring pressed rod carried by the lid, and a lever pivoted to said rod and provided with cam projections for engaging the shoulders on the box and with a cam arranged to engage the lower edge of the lid and lift the same.

8. The combination of an axle box provided on its top wall with an upwardly projecting flange and having its bottom wall notched at the forward edge and provided on the lower face with a recess and with a downwardly projecting shoulder at the edge, a lid having at its upper edge an inwardly projecting flange to fit over the flange on the top of the box, a spring pressed bolt or rod carried by the lid and arranged to project through the notch in the bottom wall of the box, and a lever pivoted to said bolt or rod and provided with a cam member for engaging the shoulders on the bottom of the box and arranged when in locking position to lie in the recess in the bottom wall of the box.

In testimony whereof, I the said ANDREW CHRISTIANSON have hereunto set my hand.

ANDREW CHRISTIANSON.

Witnesses:
ROBERT C. TOTTEN,
J. R. KELLER.