

No. 702,900.

Patented June 17, 1902.

G. A. WOODMAN.
JOURNAL BOX LID.

(Application filed June 8, 1901.)

(No Model.)

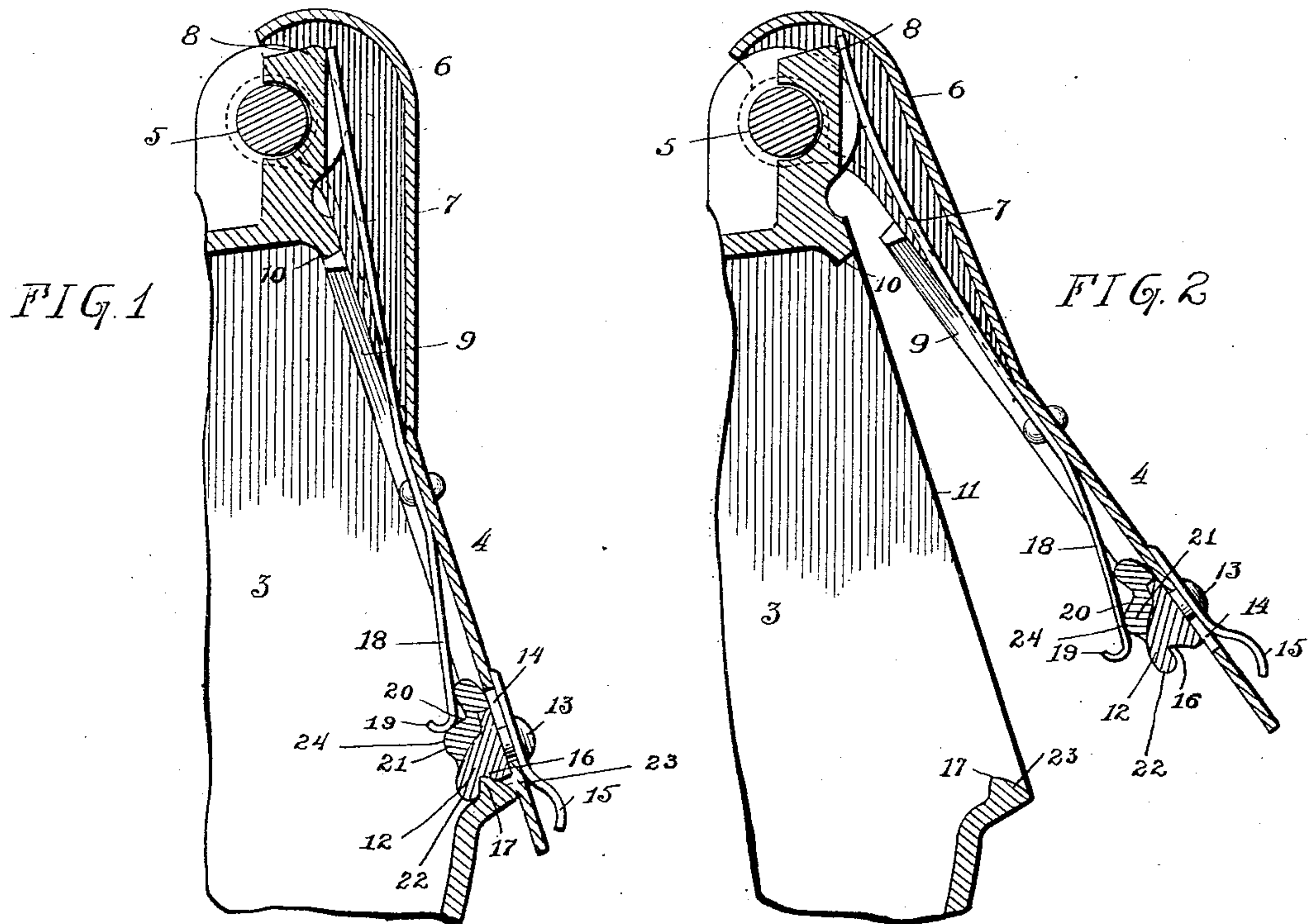
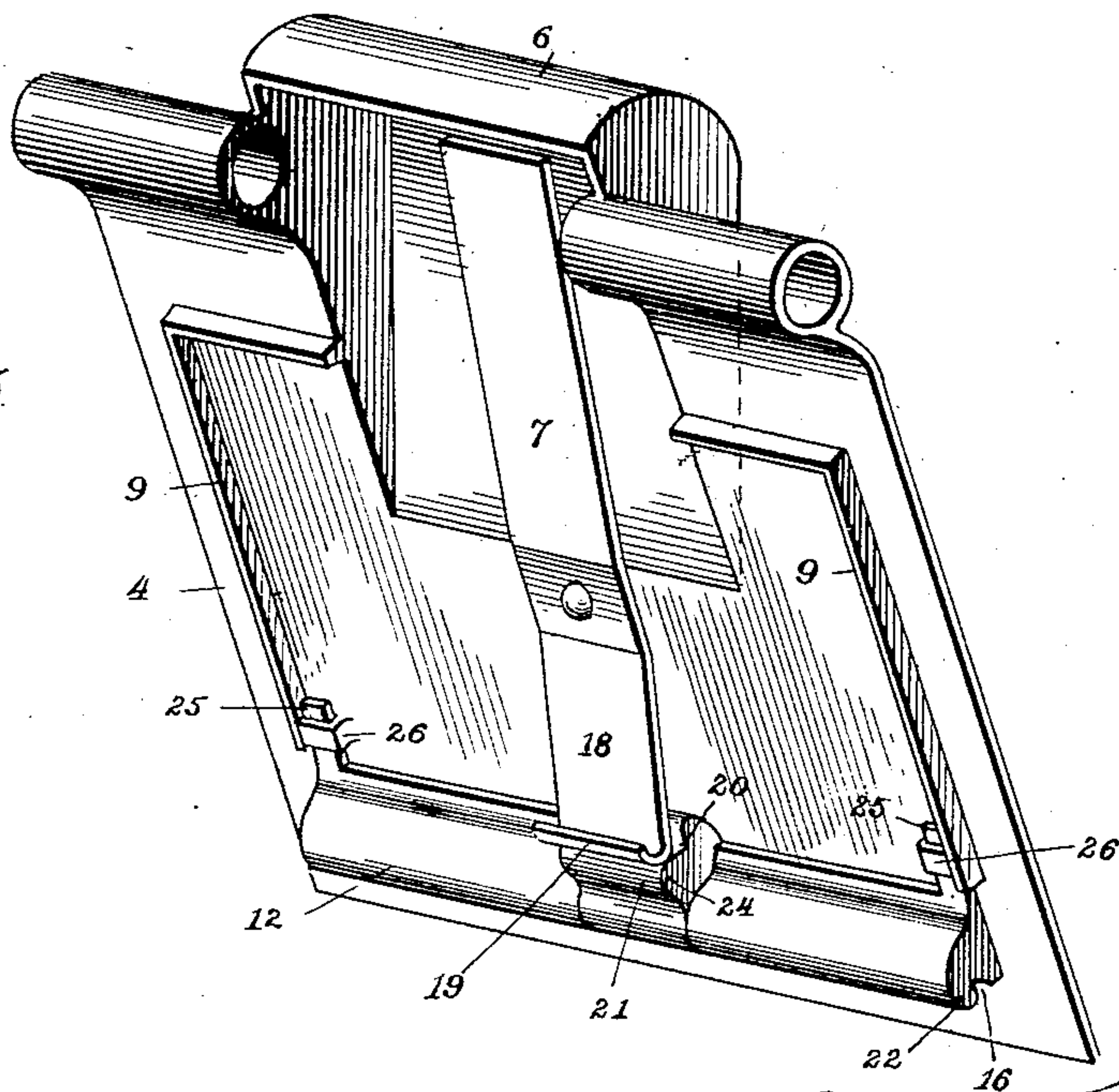


FIG. 3



Witnesses:

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George A. Woodman,
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UNITED STATES PATENT OFFICE.

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JOURNAL-BOX LID.

SPECIFICATION forming part of Letters Patent No. 702,900, dated June 17, 1902.

Application filed June 8, 1901. Serial No. 63,744. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WOODMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Journal-Box Lids, of which the following is a specification.

My invention relates to novel improvements in car-axle-box lids; and its object is to provide a lid which will form a dust-proof connection with the box and effectually prevent dust and cinders from entering therein.

Another important object of the invention is to provide a locking device for fastening the lid in closed position, which device locks automatically when the lid is closed and is unlocked in the initial operation of raising the lid.

With these and other ends in view the invention consists in the novel construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view illustrating my improved lid in closed and locked position. Fig. 2 is a similar view showing the lid slightly raised from closed position and the locking device in unlocked position. Fig. 3 is a perspective view showing the under side of the lid detached from the box.

Referring to the drawings, in which like numerals of reference denote corresponding parts in all the figures, 3 designates a journal-box to which my improved lid 4 is pivotally connected at 5 and provided with a hood or housing 6 for the spring 7, which is arranged in engagement with the shoulder 8.

On the inner face of the lid I provide a flange 9, which is arranged to engage the side and top edges 10 of the opening 11 in the box, the said edges and the flange being beveled to form a tight joint when the lid is closed, and thereby prevent the entrance of dirt and cinders into the box.

Near the lower edge of the lid and on the inner side thereof I provide a locking-plate 12, which is carried by a pin 13, extending through and operating in a slot 14 in the lid, and to which a lift-piece 15 is also connected.

The locking-plate is provided with a recess 16 in its lower edge to receive the rib or flange

17 on the lower edge of the opening in the box, both said recess and rib or flange being shaped to form a locking connection when the plate is in its lowered position. In order to hold the plate in locked position, I provide a spring 18, which may be separate and independent of the spring 7 or formed by a part thereof, as shown in the drawings, the lower end 19 of this spring being curved and arranged to rest in a recessed seat 20 in an enlargement 21 at or about the middle of the plate.

When the lid is closed, the locking-plate will be in lowered position and in locked engagement with the rib 17, the lower end 19 of the spring 18 being seated in the recess 20 to hold the plate in this locked position. To unlock and raise the lid, the locking-plate is forced upward against the tension of the spring 18 by raising the lift-piece 15 until the lower end of the locking-plate clears the rib 17. After the lid has been swung outward in the position shown in Fig. 2 the locking-plate will by its own weight and under the influence of the spring 18 return to its normal lowered position when the pressure is removed from the lift-piece, and if the lid is closed violently without raising the lift-piece the rounded shoulder 22 at the lower end of the locking-plate will engage the inclined face 23 of the rib 17, and thereby force the locking-plate up against the tension of the spring, this operation being facilitated by reason of the rounded shoulder 24, which slides up under said spring and forces the same outward.

My improved lid may be used in connection with journal-boxes of many different varieties, and I do not limit myself to any particular type. The lid is constructed so as to close the box-opening tightly and prevent dust and dirt from entering the box, and the improved locking device automatically locks the lid in closed position when the lid is shut. The locking device is simply and easily operated, it being observed that it will automatically operate to lock the lid when the lid is shut and that it is unlocked in the initial movement of raising the lid.

To guide the locking-plate in its sliding movement, I may provide upward extensions

25, arranged near the ends of the plate, to lie close against the flange 9 and held by guide-lugs 26 on the inner side of the lid.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a journal-box having an opening therein and a lid therefor, of a locking device carried by said lid, said locking device consisting of a plate slidably supported on the inner side of the lid and resting upon the lower wall of the opening in the box when the lid is closed, and a flat spring secured to the lid above the plate and bearing upon said plate to hold same in engagement with said lower wall of the opening, substantially as described.

2. The combination with a journal-box and a lid therefor, of a shoulder on the box, a locking device on the lid, and a flat spring fastened to the lid and having its upper end bearing against said shoulder and its lower end bearing against said locking device, substantially as described.

3. The combination with a journal-box having an opening therein, of a lid for said opening provided with a flange and guide-lugs on its inner side, a locking device consisting of a plate slidably mounted on the inner side of the lid and provided with extensions at its ends arranged to operate within said guide-lugs and against said flange, and a spring bearing on the plate, substantially as described.

4. The combination with a journal-box having an opening therein and a rib on the lower edge of the opening, of a lid for said opening, a locking-plate slidably mounted on the inner side of the lid and provided with a recess in its lower edge to receive the rib on the box, and a spring secured to the lid and bearing upon said plate, substantially as described.

5. The combination with a journal-box lid, of a locking-plate slidably supported on the inner side thereof and provided with a recess in its lower edge and a rounded shoulder adjacent thereto, substantially as and for the purpose described.

6. The combination with a journal-box lid, of a locking-plate slidably supported on the inner side thereof to engage and rest upon the lower edge of the opening in the box, and a spring fastened to the inner side of the lid and pressing downward on the plate to force the plate down upon the lower edge of the box-opening and effect a locking engagement of the plate therewith when the lid is closed, substantially as described.

7. The combination with a journal-box lid, of a locking-plate slidably supported on the inner side thereof and provided with a recessed seat and a rounded shoulder adjacent thereto, substantially as and for the purpose described.

8. The combination with a journal-box lid, of a locking-plate slidably supported on the inner side thereof and provided with a recessed seat and a rounded shoulder adjacent thereto, and a spring fastened to the lid and having its lower end normally arranged in said seat, substantially as described.

9. The combination with a car-axle-box lid, of a locking-plate slidably supported on the inner side of the lid and provided with a recess in its lower edge and a rounded shoulder adjacent thereto, and having a recessed seat in its upper edge and a rounded shoulder adjacent thereto, and a spring fastened to said lid and having its lower end arranged in said seat, substantially as described.

GEORGE A. WOODMAN.

Witnesses:

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