

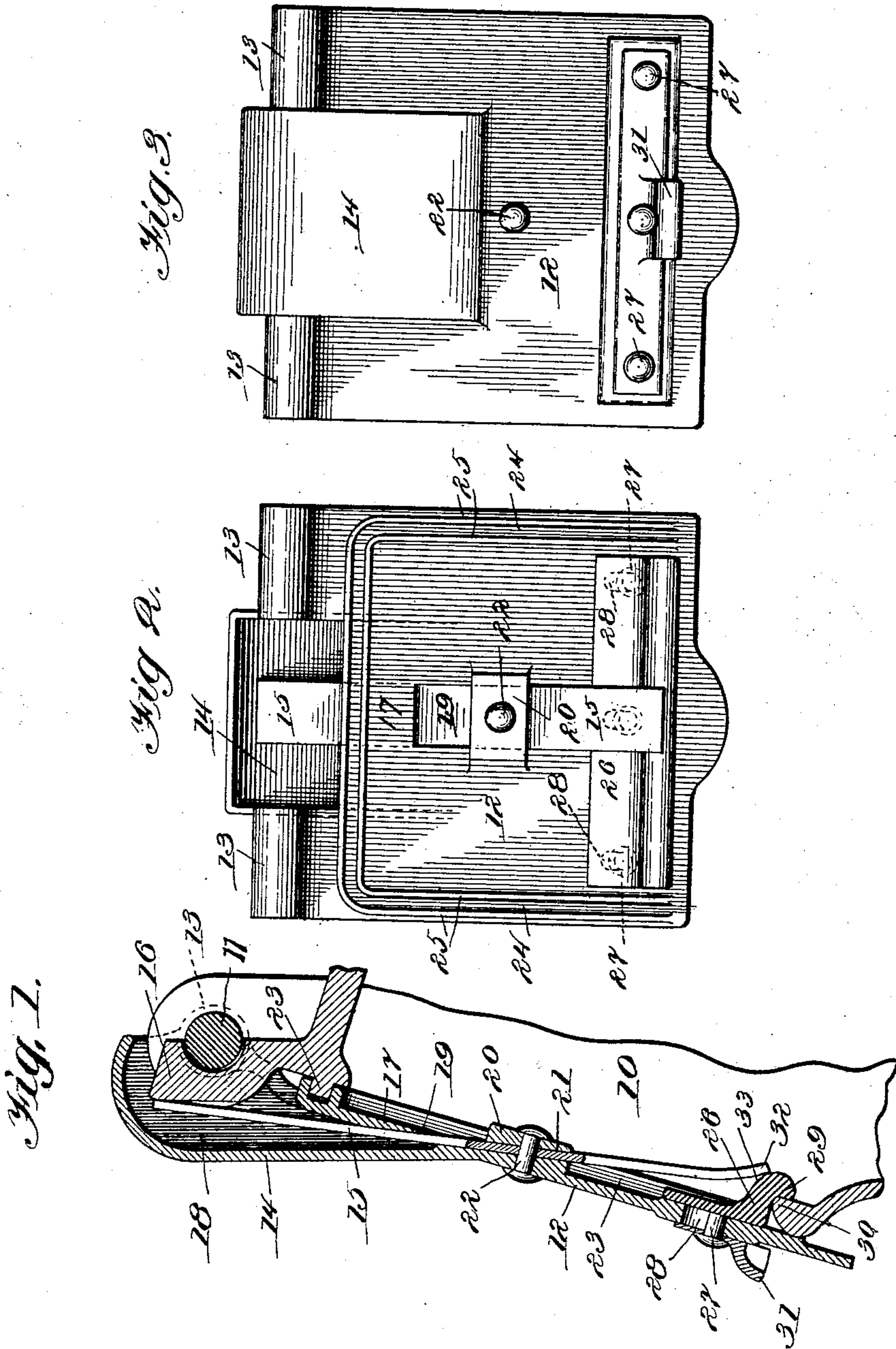
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G. A. WOODMAN.
DUST PROOF JOURNAL BOX LID.

(Application filed Dec. 20, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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DUST-PROOF JOURNAL-BOX LID.

SPECIFICATION forming part of Letters Patent No. 702,901, dated June 17, 1902.

Application filed December 20, 1901. Serial No. 86,680. (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 Dust-Proof Journal-Box Lids, of which the following is a specification.

This invention relates to novel improvements in lids for journal-boxes; and its object is to provide a lid of simple construction which will effectually prevent the entrance of dust and dirt to the box.

In the accompanying drawings I have illustrated one embodiment of the invention, in which—

Figure 1 is a central sectional view of my improved lid applied to a journal-box and in closed and locked position. Fig. 2 is a plan view of the under side of the lid. Fig. 3 is a plan view of the outer side of the lid.

In the drawings like numerals of reference designate corresponding parts in the several figures, and referring thereto—

10 is a journal-box, and 11 is the usual pintle on which my improved lid 12 is pivotally mounted, the upper part of the lid being provided with the usual knuckles 13 to receive the pintle.

Heretofore it has been customary to provide a hood or housing on the lid to accommodate and protect the upper end of a spring which bears against a shoulder adjacent to the pintle, and this hood or housing has been entirely open on the under side of the lid, so that dust and dirt could enter the box through the opening between the hood and the top of the pintle or shoulder. It is my object to overcome this defect, and I provide a lid which entirely covers and closes the opening in the box and has on the outside thereof a hood 14 to inclose and protect the upper end of a leaf-spring 15, which bears against the shoulder 16. The hood forms with the upper part 17 of the lid a chamber 18 for the upper part of the spring, and the lid is provided with an opening 19 at the bottom of this chamber through which the spring passes. At or about the middle of the lid and on the under side thereof is a lug 20, provided with an inclined opening 21, through which the spring passes, and is fastened by a rivet 22 or other suit-

able means. This construction enables me to employ a straight flat spring, which is secured in the lug 20 and passes up through the opening 19 in the lid into the chamber 18 and bears against the shoulder in the usual manner, and as the spring fits snugly in the opening 19 the lid when closed will form a complete and effective closure for the opening in the box and prevent the entrance of foreign matter therein. This is accomplished, as will be readily understood, by making the lid to entirely cover the opening in the box and providing it with a slot-opening 19, through which the spring passes into the chamber formed by the hood on the outside of the lid.

As a further means for preventing the entrance of dirt to the journal-box I provide a rib 23 on the sides and top of the box, which is arranged to enter a groove 24, formed on the under side of the lid in a suitable manner, as by the parallel flanges 25. The rib may also be formed on the lower edge of the opening in the box and the groove correspondingly continued at the lower part of the lid; but I prefer to employ a locking device at the bottom of the lid, which may be constructed as illustrated in the drawings and comprising a locking-plate 26, carried by pins or rivets 27, extending through and operating in slots 28 in the lid, this plate being provided with a lip 29, which engages the inner side of the lower wall 30 of the opening in the box. A lift-piece 31 is also carried by the pins on the outer side of the lid, so that the locking-plate may be readily lifted from engagement with the lower wall of the box-opening to open the lid. When the lid is closed, the lower wall of the box-opening will be held between the lip 29 and the lower part of the lid, whereby the lid is locked in closed position and the entrance of foreign matter entirely prevented.

I am aware that my improved dust-proof lid may be used without the locking device or with a locking device of other construction; but it will be observed that I employ the spring, which has heretofore been used to hold the lid shut, for the additional purpose of bearing on the plate 26 to force the same into locking engagement with the lower wall of the box-opening, the lower end 32 of this

spring being preferably bent and operating in engagement with the rounded shoulder 33 on the plate.

To open the lid, the lift-piece is lifted to
5 overcome the tension of the spring and withdraw the locking-plate from engagement with the lower wall of the box-opening, and then sufficient force is used to overcome the tension of the upper end of the spring to swing
10 the lid open on its pivot. The lid is shut without manipulating the locking device, as the lip 29 is rounded to slide over the rounded face of the lower wall of the box-opening, and the spring immediately forces the plate
15 into locking engagement with said wall.

I prefer to use the hood, as shown in the drawings and heretofore described, in order to protect the spring; but it is apparent that this hood may be omitted without danger of
20 dirt entering the box or of the lubricant flying out of the box, as the lid entirely covers the box-opening and as the spring fills the opening in the lid through which it passes.

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

1. The combination with a journal-box provided with an opening in the front thereof and a shoulder above the said opening, of a
30 lid consisting of a plate for entirely covering the opening in the box, and a spring fastened on the inner side of the lid and passing through a slot in the plate and bearing against said shoulder, substantially as described.
35

2. The combination with a journal-box provided with an opening in the front thereof and a shoulder above said opening, of a lid consisting of a plate for entirely covering the
40 opening in the box, a locking device on the lid, and a flat spring fastened to the lid and passing through an opening therein and having its lower end in operative engagement with the locking device on the under side of
45 the lid and its upper end bearing against said shoulder, substantially as described.

3. A lid for journal-boxes consisting of a plate for entirely covering the opening in the box, a hood on the outer side of the plate
50 forming a chamber between itself and the plate, and a spring fastened to the plate and passing through an opening therein into the chamber, substantially as described.

4. A lid for journal-boxes consisting of a
55 plate for entirely covering the opening in the box, a lug on the under side of the plate provided with an inclined opening, and a spring secured in said opening and passing through an opening in the plate, substantially as described.
60

5. A lid for journal-boxes consisting of a plate for entirely covering the opening in the box, a hood on the outer side of the plate

forming a chamber between itself and the plate, a lug on the under side of the plate provided with an inclined opening, and a spring secured in said opening and passing through an opening in the plate into said chamber, substantially as described. 65

6. The combination with a journal-box provided with an opening in the front thereof and a shoulder above said opening, of a lid provided with an opening in that part thereof which covers the opening in the box, a flat spring passing through said opening in the
75 lid and bearing against said shoulder, said lid comprising an upper portion 17 beneath the spring, substantially as and for the purpose described.

7. The combination with a journal-box lid
80 having parallel slots therein, of a locking-plate on the under side of the lid, a lift-piece on the outer side of the lid, and pins adjacent to the ends of said lift-piece, and passing through the slots in the lid and connecting
85 the locking-plate and lift-piece, said locking-plate being guided in its movement by the pins traveling in said slots, substantially as described.

8. The combination of a journal-box provided with an opening therein, a rib at the side and top edges of the opening in the box, a lid pivotally mounted on the box and comprising a plate entirely covering the opening in the box and provided with a groove to receive said rib, and a device at the bottom of the lid for locking the lid to the lower wall of the box-opening and forming with said rib and groove a continuous seal between the lid and the box, substantially as described. 100

9. The combination with a journal-box provided with an opening in the front thereof and a shoulder above said opening, of a lid consisting of a plate entirely covering the opening in the box, a hood on the outer side
105 of the plate forming a chamber between itself and the plate, and a spring fastened to the lid and having its lower end arranged on the inner side of the lid and its upper end extending through an opening in the plate into
110 the hood-chamber and bearing against said shoulder.

10. A lid for journal-boxes consisting of a plate for entirely covering the opening in the box, a hood on the outer side of the plate
115 forming a chamber, and a flat spring fastened to the plate and passing through an opening in the plate and having its upper end arranged in the hood-chamber on the outer side of the plate and its lower end arranged on the inner
120 side of the plate.

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Witnesses:

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