No. 673,620. Patented May 7, 1901.

G. S. MARSHALL.

JOURNAL BOX.

(Application filed May 7, 1900.)

(No Model.)

Fig. 1.

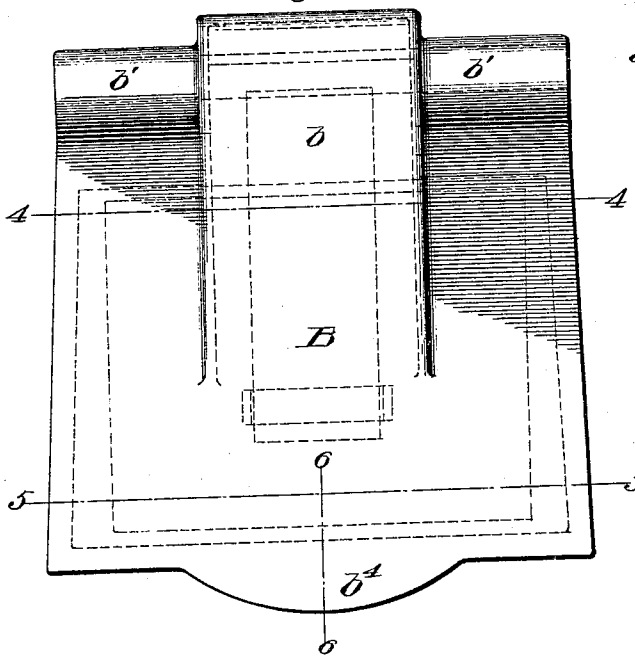


Fig. 2.

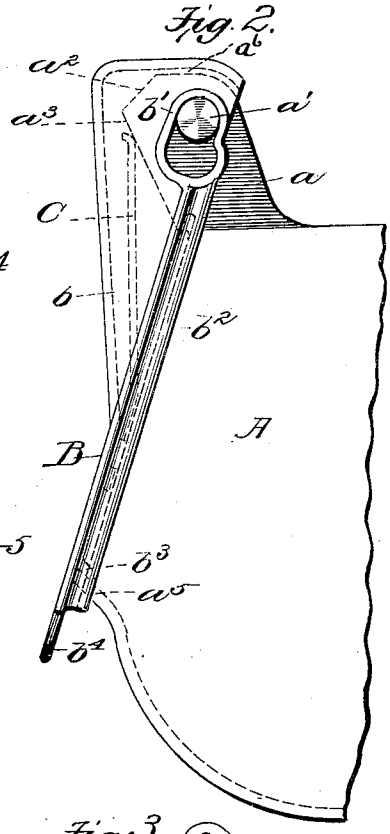


Fig. 4

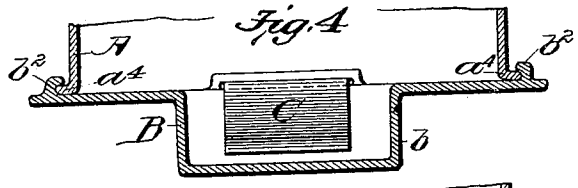


Fig. 5.

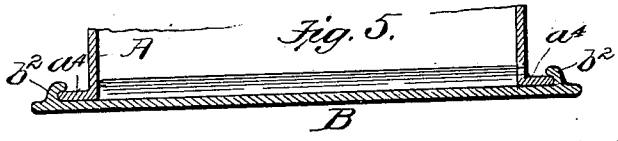


Fig. 3.

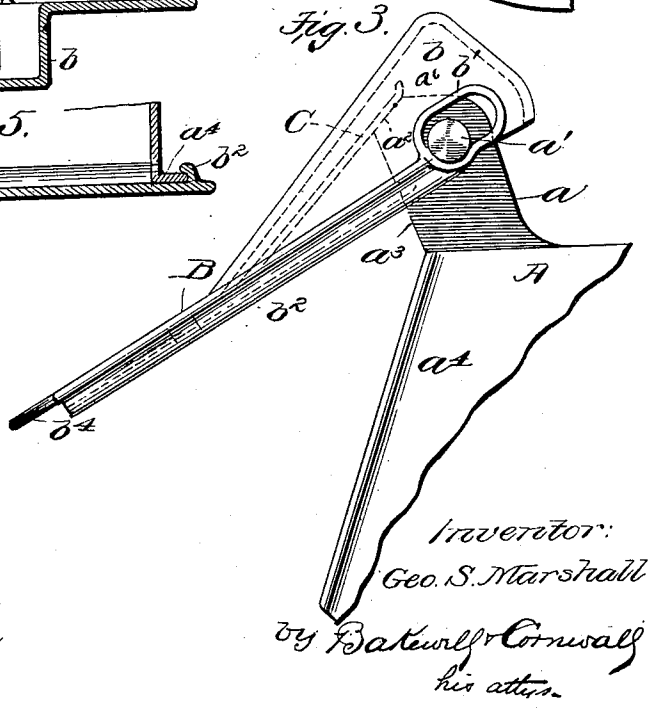


Fig. 6.



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UNITED STATES PATENT OFFICE.

GEORGE S. MARSHALL, OF ST. LOUIS, MISSOURI.

JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 673,620, dated May 7, 1901.

Application filed May 7, 1900. Serial No. 15,784. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. MARSHALL, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Journal-Boxes, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevational view of my improved journal-box lid. Fig. 2 is a side elevational view of the same mounted upon the journal-box. Fig. 3 is a similar view showing the lid partially open. Fig. 4 is a sectional view on line 4 4, Fig. 1. Fig. 5 is a sectional view on line 5 5, Fig. 1; and Fig. 6 is a sectional view on line 6 6, Fig. 1.

This invention relates to a new and useful improvement in a lid for journal-boxes, such as are usually employed on car-trucks, one object being to provide a lid for journal-boxes which when closed will tightly seal the opening in the journal-box, said lid being held in its closed or sealed position against accidental displacement.

Another object is to make the lid semi-automatic in its opening movement, so that when the lid is raised a short distance from its seat it will have a tendency to move outwardly and expose the opening in the box.

With these objects in view the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings, A indicates a portion of the journal-box, which is provided with the usual opening in its outer end, said box also having the upwardly and outwardly extending hinge-lug a on its upper face, which hinge-lug carries the pintle a', forming a pivot for the lid. This hinge-lug is preferably arranged centrally with respect to the box, and the pintle extends on each side thereof. The hinge-lug is also formed with inclined faces a^2 and a^3 and a horizontal face a^6, formed on its upper portion, for coöperating with the lid-spring, hereinafter described. The box is provided with laterally-extending flanges a^4, which, as shown in Fig. 1, (see also Figs. 4 and 5,) are made narrow at their upper ends, while said flanges diverge at their lower ends, forming a seat of considerable area, against which the inner face of the lid seats itself. The bottom wall of the box curves upwardly and outwardly to form the throat, while said wall at the mouth or opening of the box is preferably inclined, as shown at a^5, Fig. 6.

B indicates my improved lid as an entirety, which is provided with a housing b to inclose the hinge-lug and also accommodate the spring C, which coöperates with the inclined faces of said hinge-lug. Lid B is also provided with laterally-extended bearings b' for receiving the pintle a', said bearings, as shown in Figs. 2 and 3, being elongated substantially in the line of inclination of the plane of the flanges a^4, while said openings are enlarged at their lower ends to permit the lid to bodily move forward in its opening movement.

b^2 indicates inturned flanges which converge toward each other at their upper ends to correspond with the angle of inclination of the flanges a^4 on the box.

b^3 indicates a flange or rib arranged on the inner face of the lid, near the lower edge thereof, for coöperating with the bottom wall of the box, said flange serving as a hood therefor.

An extension b^4 is preferably provided at the lower edge of the lid, by which said lid may be manipulated.

As shown in Fig. 1, the lid is closed, the spring C, bearing against the inclined face a^3, tending to force the lid downwardly, wedging the same tightly over the flanges a^4. Should it be desired to open the lid, pressure is applied, preferably, at the bottom edge, raising the lid, the elongated bearing-slots permitting this, and when the lid is so raised the free end of spring C has passed the meeting point of the inclined faces a^2 and a^3 and occupies a position on the upper face a^2, tending to throw the lid outwardly. The pintle now being opposite the enlargement or socket of the lower end of the bearing permits the lid to bodily move outward, and in such outward position the flanges b^2 are out of coöperative position with respect to the flanges a^4 and the free end of spring C is resting upon the nose of the hinge-lug, so that when the lid is turned on its pivot upwardly it will occupy

the position shown in Fig. 3. From this position it can be raised until the spring C rests upon the horizontal face a^6 to expose the opening in the journal-box for the purpose of giving full access thereto.

In closing the lid it is turned down until its inner face rests upon the flanges a^4. From this position it is forced downwardly, so that its flanges b^2 engage the flanges a^4 to lock the lid in place, and the hood-flange b^3 coöperates with the inclined bottom wall a^5 of the box. The pintle now occupies the upper narrow portion of the elongated bearing-slots, and the free end of spring C is resting upon the inclined face a^3 and exerts a constant downward pressure on the lid, holding it in its home position.

I am aware that many minor changes in the arrangement, construction, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. The combination with a journal-box having a hinge-lug provided with three faces arranged at an angle to each other for coöperating with the lid-spring, of a lid, and a spring on said lid, said spring bearing upon one of said hinge-lug faces to hold the lid in its home position, on another of said hinge-lug faces for holding the lid in a partially-open position, and on another of said hinge-lug faces for holding the lid in its full-open position; substantially as described.

2. The combination with a journal-box provided with a hinge-lug and pintle, of a lid having an elongated bearing, said bearing extending in the plane of the body portion and being enlarged at its lower portion for coöperating with said pintle, and a spring on the lid for coöperating with the hinge-lug for forcing said lid to, and holding said lid in, its home position; substantially as described.

3. The combination with a journal-box provided with flanges diverging from the point of support of the lid, of a lid provided with flanges diverging from its point of support for coöperating with the box-flanges; substantially as described.

4. The combination with a journal-box provided with diverging flanges, of a lid having a variable pivot-point, and flanges on said lid for coöperating with the box-flange; substantially as described.

5. The combination with a journal-box, of a hinge-lug and pintle, flanges on the box which converge toward said hinge-lug, a lid having an elongated bearing coöperating with the pintle, flanges on said lid for coöperating with the box-flanges, and a spring on the lid for coöperating with the hinge-lug; substantially as described.

6. The combination with a journal-box provided with converging flanges a^4, and a pivoted lid provided with flanges b^2 and b^3; substantially as described.

7. The combination with a journal-box, of diverging flanges thereon, a lid provided with diverging flanges for coöperating with said first-mentioned flanges for locking said lid in its home position on the journal-box, a spring which exerts a pressure to constantly hold said lid in its locked position, a pintle forming the pivotal point of said lid, said lid being provided with bearing-openings for engaging said pintle, whereby, when said lid is moved bodily it is unlocked from the box and the spring exerts a pressure to throw the lid open; substantially as described.

8. The herein-described journal-box provided with a hinge-lug a having the inclined faces a^2 and a^3, the flanges a^4, and the inclined bottom walls a^5; substantially as described.

9. The herein-described journal-box lid, the same having flanges b^2, and the hood-flange or rib b^3; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 4th day of May, 1900.

GEORGE S. MARSHALL.

Witnesses:
WM. H. SCOTT,
A. S. GRAY.