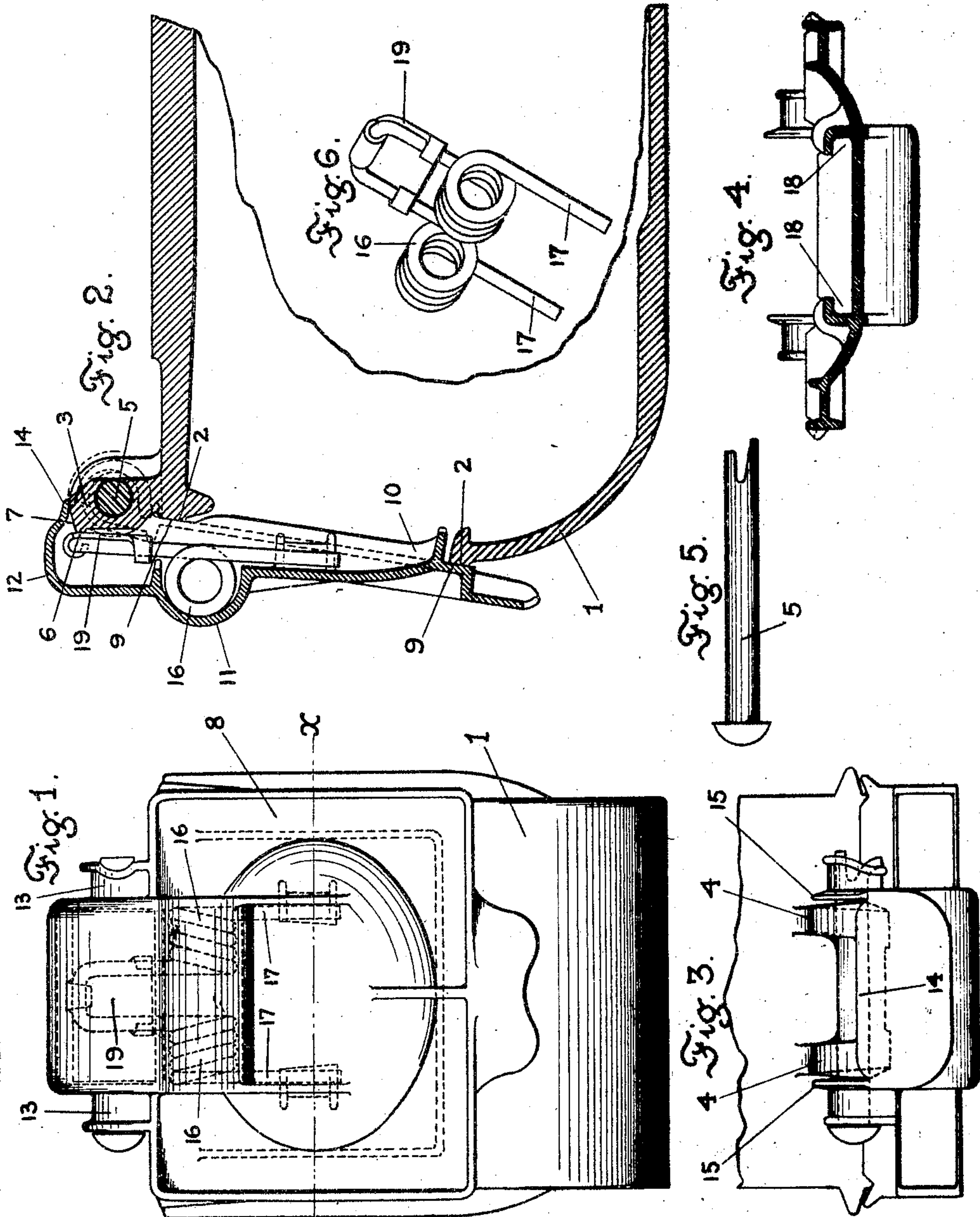


No. 855,362.

PATENTED MAY 28, 1907.

T. H. SYMINGTON.  
LID FOR JOURNAL BOXES.  
APPLICATION FILED JAN. 9, 1906.



Witnesses:  
*J. M. M. M.*  
*A. H. M. M.*

Inventor:  
Thomas H. Symington.  
By *Stewart & Stewart*  
Attorneys.



# UNITED STATES PATENT OFFICE.

THOMAS HARRISON SYMINGTON, OF BALTIMORE, MARYLAND, ASSIGNOR  
TO THE T. H. SYMINGTON COMPANY, OF BALTIMORE, MARYLAND, A  
CORPORATION OF MAINE.

## LID FOR JOURNAL-BOXES.

No. 855,362.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed January 9, 1906. Serial No. 295,295.

*To all whom it may concern:*

Be it known that I, THOMAS HARRISON SYMINGTON, a citizen of the United States of America, and a resident of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Lids for Journal-Boxes, of which the following is a specification.

My invention relates to a lid for a journal box designed to cover the front opening of the standard Master Car-Builders' journal box, to be so constructed as to exclude dust at the hinge, and to be held in place against its seat by the torsion of a spiral spring.

In the drawings similar reference numerals indicate the same parts of all the figures.

Figure 1 is a front elevation of the lid in position upon the box. Fig. 2 is a vertical longitudinal section of the box and lid. Fig. 3 is a plan view of the end of the box carrying the lid. Fig. 4 is a horizontal section of the lid through the line  $x-x$  of Fig. 1. Fig. 5 is an elevation of the hinge pin or pintle. Fig. 6 is a perspective view of the torsion spring in the position it occupies when in use and under tension.

Referring to the drawings. 1 is the box.

2 is a tooled surface around the mouth of the box which forms the seat for the lid.

3 is a lug cast upon the top edge of the box and to which the lid is hinged. This lug is constructed as shown in Fig. 3, partly in full and partly in dotted line, having a central portion which is parallel to the lid, and two supporting portions 4-4 at right angles thereto.

The lugs 3 and 4-4 are perforated horizontally for the admission of a hinge pin or pintle 5. The rear surfaces of the lugs 4-4 are curved upon a circle whose center is somewhat forward of the center of the pintle 5, so that as the lid which is bent down into close contact with the top of the lug when in contact with its seat will clear the rear surface of the lugs 4-4 as it is opened and avoid friction. The sides of the lugs 4-4 are beveled from the front rearwardly for the same purpose. The front edge of the lug 3 forms a cam surface for contact with the spring by which the lid is held upon its seat.

6 is a vertical portion, having a small area.

7 is a curved portion, struck from about the same center as that of the rear surface of

the lugs 4-4, that is to say, the center of which is in advance of the center of the pintle 5. The maximum point of tension of the spring is attained when the shoe is in contact with the upper edge of the cam surface 6.

8 is the lid, provided upon its interior face with a machined surface 9-9 which makes contact with the seat 2-2 of the box to close the aperture.

10 is a flange, extending at right angles from the interior face of the lid, just inside of the machined surface 9 on the bottom and two sides.

In the center of the lid 8, there is a raised portion or housing 11, designed to contain the coils of the spring, above which is a housing 12 which covers the lugs 3 and 4-4.

13-13 are hinge lugs cast integral with the lid on each side of the housing 12 and which are provided with central perforations to admit the pintle 5. Upon the rear edge of the housing 12 is a lip 14, which, as shown in Fig. 6, stands immediately over the pintle and contacts with the top of the lug 3 and the lugs 4-4. The cover or lid is made of malleable material, and when the lid is in the position shown in Fig. 6, this lip 14 is hammered down into close contact with the top of the lug 3 so as to make a practically dust proof joint. This close joint is preserved by the fact that the curves of the rear surfaces of the lugs 4-4 are struck from a center in advance of the center of the pintle 5 so that the moment the lid is raised the lip 14 begins to clear and friction with the lugs 3 and 4-4 is prevented.

15-15 are lips, semi-circular in form, which project from the rear edges of the hinge lugs 13-13 of the lid, and stand opposite to the inclined surfaces of the lugs 4-4. When the lid is placed in position upon the box, these lips 15-15 are hammered down against the curves of the lugs 4-4, so as to make a practically dust proof joint therewith. As the lid is raised the bevel of the lugs, shown in full and dotted lines in Fig. 3, will cause the lips 15-15 to clear said bevel surfaces and move freely without contact therewith. The bevel surfaces will permit the lid to be raised to a position where there is a clearance, and then, when the lips 15-15 are hammered down into contact with the bevel surfaces, these lips will bend, and bear



with some degree of elasticity upon the bevels 4—4, thus a very tight joint may be obtained, which will remain tight for the reason that is is not subjected to wear to any great extent in practice, the bearing surfaces clearing each other as soon as the lid is opened.

16 is a double spiral spring, having a loop between the two spirals and two free ends as shown in Fig. 6. The spirals are seated in the housing 11 of the lid and the free ends 17—17 are held firmly within the overhanging lugs 18—18 which are cast upon the interior of the lid.

19 is a shoe, secured upon the loop of the spring to take the wear of the cam surfaces 6 and 7.

The spring must be placed under torsional tension in order that it may be secured within the lid. The ends are pressed together so as to engage the lugs 18—18, and by their own elasticity, hold themselves in place. The shoe 19 is then placed in contact with the point 6 of the lug 3, and pressure applied to bring the hinge lugs into register. This pressure will compress the spring into tension. The pintle 5 may then be passed through the hinge, and its split end bent and clenched upon the recessed boss which forms one side of the lid portion of the hinge so as to lock it in place and cause it to turn therewith.

It will be noticed that this form of structure enables me to provide my lid with a long, flexible, torsional spring, having a large limit of elasticity and a consequent long life. It also provides a spring which is independent and detachable, which may be replaced by another of the same character on the road by any train hand.

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

1. In a journal box the combination of a hinged lid, an independent torsional spring mounted upon the interior of the lid, but detachable therefrom, although secured thereto, and which contacts with the cam surface upon the box to hold the lid upon its seat.

2. In a journal box the combination of a lid attached to the box, with a torsional spring interposed between the lid and the box and a cam on one of said parts co-operating with the spring to hold the lid upon the seat.

3. In a journal box, the combination of a lid secured to the box and bearing upon a seat thereon, with a torsional spring one end of which bears upon the box and acting upon a cam on the box and the other end upon the lid and holds the lid upon its seat.

4. In a journal box the combination of a

lid which is hinged to the box above the opening, a torsional spring attached to the interior surface of the lid, a cam surface upon the box bearing upon the free end of the spring carried by the lid, and adapted to maintain said spring under tension, whereby the lid may be pressed upon its seat on the box.

5. In a journal box the combination of a lid hinged to the box and engaging a seat, an independent torsional spring maintained on the lid by its own tension, and bearing upon a cam on the box while under tension to press the lid upon its seat on the box.

6. In a journal box having an opening the combination of a lid designed to close the opening hinged to the box, the box portion of the hinge being beveled away from the lid upon the sides, the lid portion of the hinge being provided with lips which may be bent into contact with sides of the box portion when the lid is closed, and which by virtue of the bevels of the sides of the box portion will clear them as the lid is opened.

7. In a journal box the combination of a lid with a double torsional spring acting upon a cam on the box, each leg being coiled, and bent so as to form a loop between them, the free ends being so bent as to hold themselves in place by their own elasticity.

8. In a journal box the combination of a lid having a central housing and two inwardly projecting hooked lugs the hooks being located opposite each other, with a double torsional spring having a central lip and two coil legs, the coils of the spring being seated in the housing of the lid and the free legs of the spring being seated and held by the hooks upon the interior of the lid, the lip of the spring being free to exert pressure upon the box, substantially as described.

9. A journal box lid hinged to the box, the pintle of the hinge having its free end clenched upon the hinge lug of the lid, so as to be fast thereto and to turn therewith.

10. In a journal box the combination of a lid hinged thereto, by a lug on the box and two lugs on the lid, one of the lid lugs being provided with a notch on its exterior surface, and a pintle passing through the hinge lugs and having its free end clenched into the notch on the exterior of the lid lug, whereby the pintle will be secured in the hinge and held fast to the lid.

Signed by me at Baltimore, Maryland, this 5th day of January 1906.

THOMAS HARRISON SYMINGTON.

Witnesses:

HARRY L. DRAKE,  
E. JOHN NICHOLS.