

(Model.)

2 Sheets—Sheet 1.

S. IRVIN.
JOURNAL BOX LID.

No. 538,258.

Patented Apr. 30, 1895.

Fig. 1.

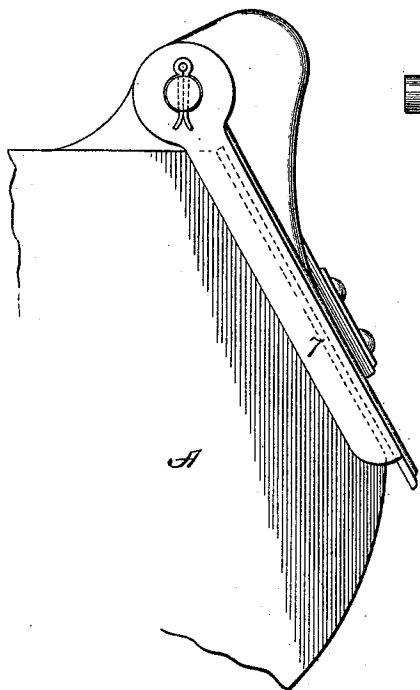


Fig. 2.

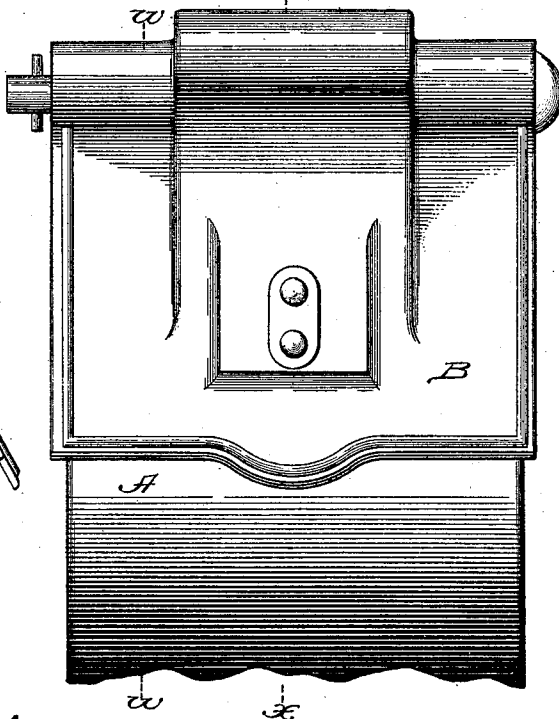
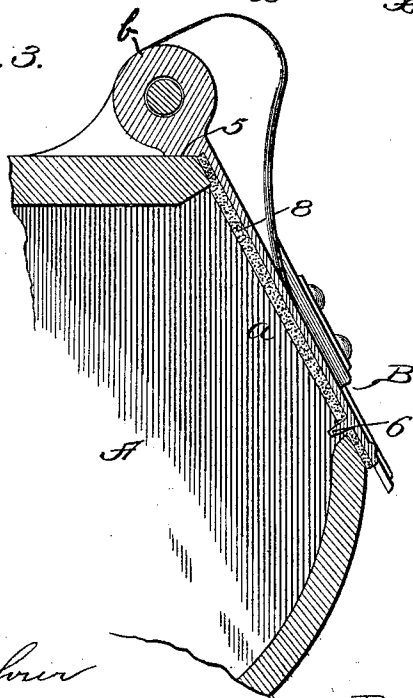


Fig. 3.



witnesses:
Harry S. Rohrer
Jm. O. Dye.

Inventor:
Samuel Irvin
By F. W. Ritter, Jr.
Atty.

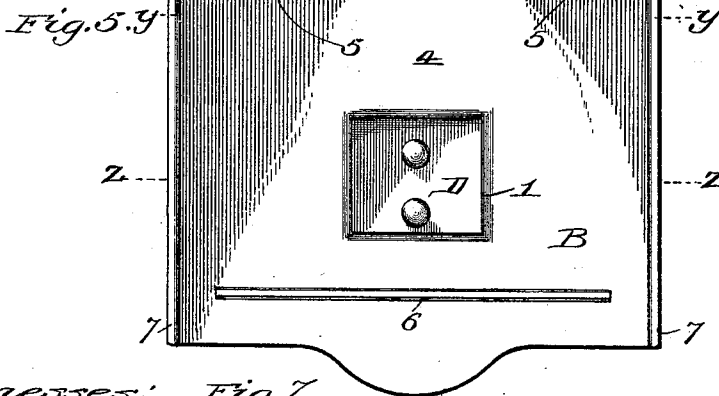
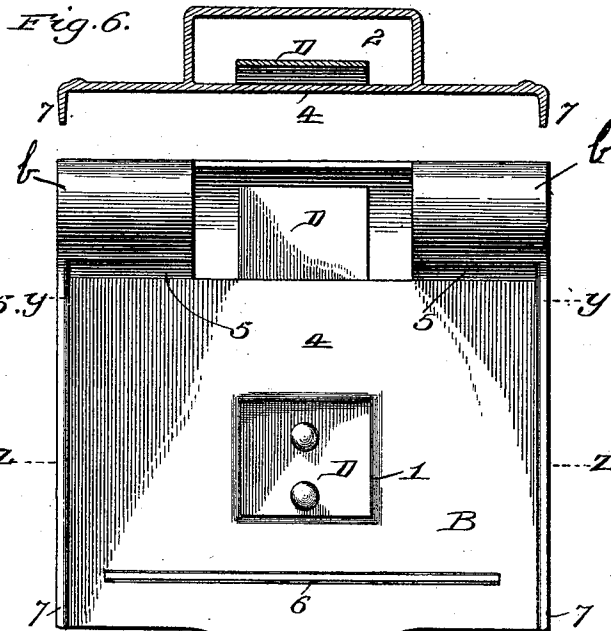
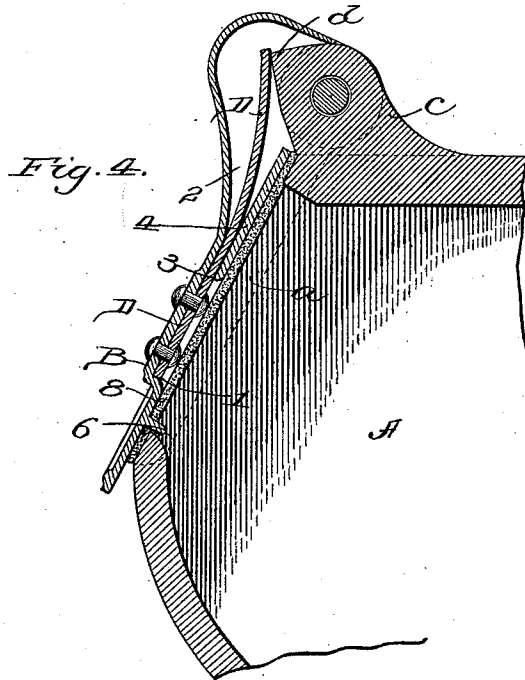
(Model.)

2 Sheets—Sheet 2.

S. IRVIN.
JOURNAL BOX LID.

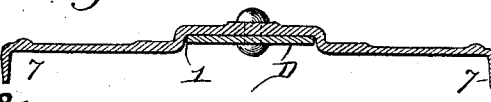
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Witnesses: Fig. 7.

Harry S. Rohrer.
Jm. E. Wye.



Inventor:
Samuel Irvin
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Att'y.

UNITED STATES PATENT OFFICE.

SAMUEL IRVIN, OF SEDALIA, MISSOURI.

JOURNAL-BOX LID.

SPECIFICATION forming part of Letters Patent No. 538,258, dated April 30, 1895.

Application filed February 11, 1895. Serial No. 537,932. (Model.)

To all whom it may concern:

Be it known that I, SAMUEL IRVIN, a citizen of the United States, residing at Sedalia, in the county of Pettis, State of Missouri, have
5 invented certain new and useful Improvements in Journal-Box Lids; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—
10 Figure 1 is a side elevation of a portion of a car axle journal-box closed by a lid embodying my invention. Fig. 2 is a front elevation of what is shown in Fig. 1. Fig. 3 is a sectional view taken on the line *w w*, Fig. 2.
15 Fig. 4 is a sectional view taken on the line *x x*, Fig. 2. Fig. 5 is a bottom plan view of the lid detached. Fig. 6 is a transverse sectional view of the lid taken on the line *y y*, Fig. 5; and Fig. 7 is a transverse sectional view of
20 the lid taken on the line *z z*, Fig. 5.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of dust-proof lids for car-axle journal-boxes of
25 the Master Car Builders' standard, or similar journal-boxes which are provided with hinged, spring held, lids.

As is well known to those familiar with railroad practice, in order to obtain uniformity
30 and interchangeability of parts, certain standard dimensions and forms of construction for various railroad appliances have been officially adopted and established, and among such articles are the car axle journal-box and
35 its lid.

In order to meet the requirements of railroad practice, the journal-box and its lid must conform to the established standard—and said standard demands a hinged lid having a
40 housing for concealing a flat spring secured to the lid by rivets and bearing by its free end on the pintle lug of the box.

As at present constructed the Master Car Builders' standard lid is formed on its under
45 surface with a seat for the attached end of the flat lid spring, and in line therewith it has a depression (or outward swell) which forms the housing for the flat spring and the free end thereof which bears on the pintle lug of
50 the journal box. As a result of said construction, the spring is exposed on the under side of the lid. The lid, practically, only rests on,

or contacts with three sides of the rectangular opening of the box, and owing to the character of the hinge joint the fourth (or upper) 55 side of the rectangle is open for the passage of dust and dirt which sifts in around the hinge joint of the lid and box to the great detriment of the journal. To overcome said defects of construction and obtain a substan- 60 tially dust proof lid for the Master Car Builders' standard (and similar) journal-boxes, I retain the present general exterior shape and appearance of the Master Car Builders' standard lid but add to the under surface thereof 65 a web or wall which closes the hitherto open spring housing and converts the same into a pocket, said pocket being open above to receive the pintle lug of the journal box, and slotted below for the passage of the attached 70 end of the flat spring, thus securing a lid co-extensive on its under surface with the opening of the journal box and provided with a pocket which includes or incloses the spring and will arrest and retain any dirt or dust 75 which drifts from the top of the journal box—and such a construction, or its equivalent, embodies the main feature of my invention.

In order to more effectually guard those portions of the box-opening on each side of 80 the pintle lug, I add to the metal of the hinge sections of the lid (on each side of housing) forming thereon square or abutting shoulders adapted to rest on the top of the journal-box, and such a construction or its equivalent, em- 85 bodies a second feature of my invention.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more specifically so that others skilled in the 90 art to which it appertains may apply the same.

In the drawings, A indicates a car-axle journal-box with the usual oil and waste opening *a* closed by the lid B, the top of said box A being provided with the pintle lug *c* having the 95 spring bearing *d* for the free end of the flat spring D attached to the lid B. The lid B, I form with a depression 1, upon its under surface of form and shape adapted to receive that end of the flat spring which is attached 100 to the lid, and upon its upper surface with a swell which in conjunction with the web 4 (or continuation of the under surface of the lid) forms a pocket 2 for the spring D, said

pocket being of general rectangular cross section (see Fig. 6) and communicating with the depression 1 on the under side of the lid by a slot 3 adapted for the passage of the flat spring

5 D. The slot 3 is preferably of dimensions corresponding with the cross section of spring D so that the spring shall, when in place, close the slot and thus cut off all communication between pocket 2 and the under surface
10 of the lid or interior of the journal box. The under side of the spring pocket is thus closed by the transverse web or wall 4, which produces a lid co-extensive with the waste and oil opening *a* of the journal-box A, and which
15 is practically continuous or unbroken, as the slot 3 is closed by the flat spring D which passes therethrough. The pintle lug *c* on box A is centrally placed, and those *b b* of the lid B, two in number, are located one on each
20 side, so as to receive the pintle lug *c* of the box A between them when the lid is in place on the box.

The pintle lug *c* on box A will of itself prevent the drifting of dust into the box from
25 that portion of the top of the box to which said pintle lug is attached, but in order to guard the lid on each side of said pintle lug *c*, I increase the amount of metal in each of the two pintle lugs *b b* of the lid forming
30 thereon flat shoulders 5, 5, which rest directly on the top of the box A on either side of said pintle lug *c*.

In fitting the lid B for service, the flat spring is inserted in the pocket 2 through the opening
35 between the pintle lugs *b* of the lid and its end driven through the slot 3 into the recess or depression 1 on the under side of the lid, when it can be secured by rivets in the usual way, and a lid practically continuous on its
40 under surface and co-extensive with the oil and waste opening *a* of the journal-box will be obtained.

If desired a shoulder or flange 6 may be provided at or near the lower under side of the
45 lid to enter the opening *a* of the journal-box, and side flanges 7, 7 (as usually employed) to guard the sides—while the substantially continuous under surface of the lid renders practical and effective the use of a soft lining 8 of
50 felt or other suitable substance.

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

1. A journal box lid having in its upper surface a spring inclosing pocket which is open
55 above for the reception of the pintle lug of the journal box and is provided with a slot for the spring in that portion of the lid covered by the pocket, substantially as and for the purposes specified. 60

2. A journal-box lid having in its upper surface a spring pocket and in its under surface a spring receiving depression communicating with said pocket: substantially as and for the purposes specified. 65

3. In combination with a journal box-lid having in its upper surface a spring pocket which is open above to receive the pintle lug on a journal box and which is provided with a slot for the passage of a spring, a flat spring
70 of cross sectional area to close the spring slot, said spring arranged in said slot with its free end within the pocket: substantially as and for the purposes specified.

4. A journal-box lid, having a spring pocket, square shouldered pintle lugs on each side of
75 said pocket, and a slot in that portion of the lid inclosed by the pocket, substantially as and for the purposes specified.

5. A journal-box lid having in its under surface the depression 1, on its upper surface the pocket 2, the slot 3 in that portion of the lid inclosed by pocket 2, and the pintle lugs having square shoulders 5, substantially as and
80 for the purposes specified. 85

6. A spring controlled, hinged lid for journal boxes, said lid having a spring pocket in its upper surface, its under surface being continuous, co-extensive with the opening to be closed thereby, and provided near its lower
90 edge with a cross rib or flange, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 5th day of February, 1895.

SAMUEL IRVIN.

Witnesses:

G. L. FAULHAHN,
GEO. G. FLOYD.