No. 647,886. Patented Apr. 17, 1900.

# J. G. SMITH.

## JOURNAL LUBRICATING BOX.

(Application filed Sept. 2, 1899.)

(No Model.)

Fig. 1.

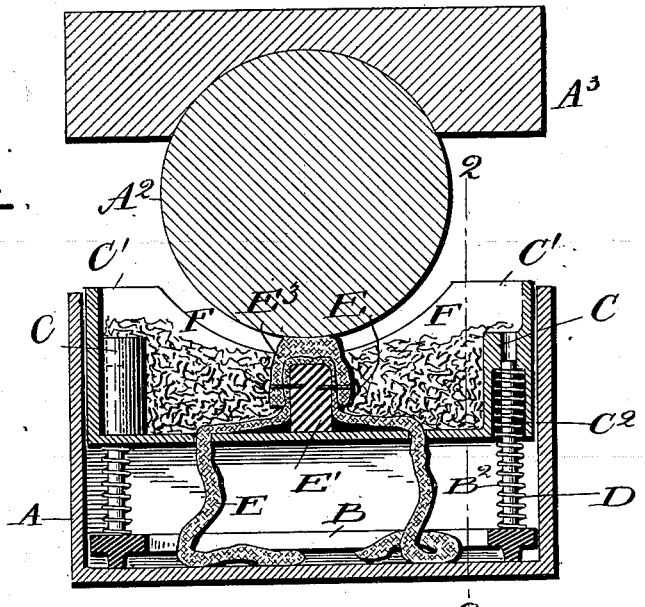



Fig. 2.

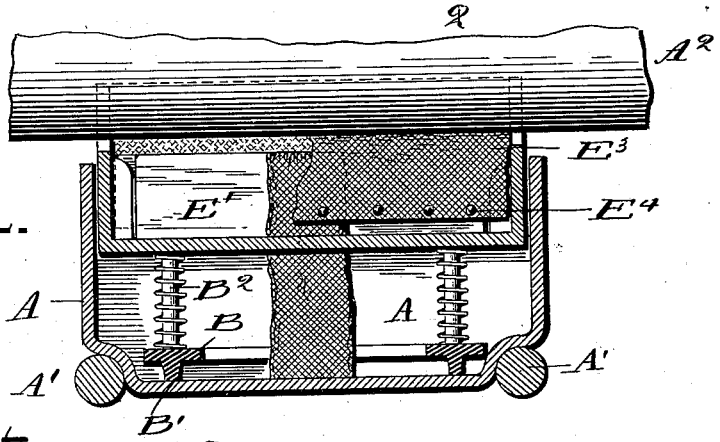
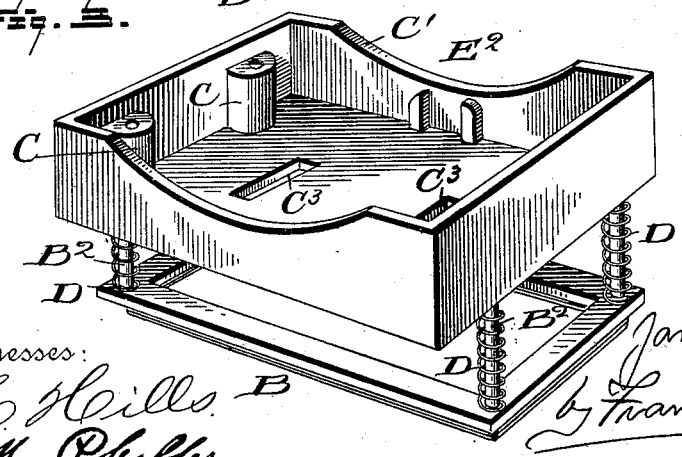



Fig. 3.

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# UNITED STATES PATENT OFFICE.

JAMES G. SMITH, OF COVINGTON, KENTUCKY, ASSIGNOR OF TWO-THIRDS TO GEORGE HILDENBRANDT, OF SAME PLACE, AND GEORGE W. DAVY, OF LOUISVILLE, KENTUCKY.

## JOURNAL-LUBRICATING BOX.

SPECIFICATION forming part of Letters Patent No. 647,886, dated April 17, 1900.

Application filed September 2, 1899. Serial No. 729,001. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES G. SMITH, a citizen of the United States, residing at Covington, in the county of Kenton, and State of Kentucky, have invented certain new and useful Improvements in Journal-Lubricating Boxes; and I do declare the following to be a full, clear, and exact description of the invention, 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, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in lubricating journal-boxes adapted for application to any class of machinery and particularly to railway rolling-stock.

The invention has for its object to provide an improved means for supporting the tray carrying the lubricating-wick in yielding contact with a rotating journal.

One particular object of the invention is to permit the use of a longer and more resilient coiled spring than heretofore, and therefore produce a more firm and yielding contact between the wick and the journal.

A further object of the invention is to provide means for preventing a movement of the feeding-wick by reason of the rotating axle therewith, which movement frequently serves to displace the feeding-wick.

Another object is to interpose means between the ends of the tray to prevent a movement and collection of the packing at one side of the box, which would naturally occur at the side toward which the journal is rotating.

More specifically, the invention has for its object to improve upon the construction of parts shown and described in my pending application, Serial No. 691,914, filed September 26, 1898.

To these ends and to such others as the invention may pertain, the same consists in the novel construction and in the peculiar arrangement and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating the same parts throughout the several views, and in which drawings—

Figure 1 represents a transverse section of the invention. Fig. 2 represents a vertical longitudinal section upon the line 2 2 of Fig. 1, and Fig. 3 represents a detailed perspective view of the tray and supporting-frame and springs.

Reference now being had to the details of the drawings by letter, A represents the oil cellar or tank, which in the present instance forms a receptacle adapted to receive and retain the other parts of the device. This may be supported in any suitable manner—as, for instance, by the supporting-rods A′—and is disposed longitudinally beneath a journal or axle $A^2$, above which any desired form of bearing-block $A^3$ may be applied.

Upon the base of the oil-cellar A a supporting-rack B is located and raised above the bottom thereof by suitable feet B′. Projecting vertically from this rack are a series of guiding-pins $B^2$, adapted to enter a recessed lug C, formed in the wall of the wick-tray. Surrounding the guide-pins $B^2$ and extending into the recess $C^2$ of the lug C is a coiled spring D. It is obvious that the recessing of the lugs C permits of the use of a longer spring D, and thus increases the elasticity of the tray when in contact with the journal. The recess in the upper portion of the lug fits the pin $D^2$, and thus forms a guide for the tray.

The tray C′ is provided upon its bottom with apertures $C^3$, through which a feed-wick E extends to the lower part or bottom of the oil-cellar A. This wick passes over a bearing-block E′, held in position by lugs $E^2$ at the opposite ends of the tray. The wick is secured to this block by any suitable means and is protected from wear by the journal by means of a textile strip $E^3$, which passes over the feeding-wick and is also secured to the block

E′ by means of a securing-pin E⁴. This construction prevents the contact of the journal with the feeding-wick and the consequent displacement of the wick by being drawn up from the oil-cellar by the movement of the journal.

For the purpose of properly packing the journal or axle a packing material F is inserted within the tray at opposite sides of the block E′ and receives the oil from the feeding-wick to assist in the lubrication of the axle. The block E′ divides the tray into two compartments upon a line beneath the axis of the journal, and thus prevents any movement of the packing material from one side of the tray to the other. If this block were not present, the packing would be frequently forced to one side of the tray and would there become jammed, so as to serve to depress the tray upon its spring-bearing, and thereby remove the lubricator from the axle and defeat the object for which the packing is provided.

From the foregoing description it will be seen that the oil from the cellar A will be fed by the wicks E to the moving journal and that any drip or excess of oil will return to the cellar through the apertures in the bottom of the tray C′. The wick and packing are always maintained in close contact with the journal.

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

1. In a journal-box, an oil cellar or tank, the vertical guide-pins, a wick-tray having apertured lugs to fit said pins and having enlarged recesses, bearing-springs extending into said enlarged recesses and surrounding said pins, and a feeding-wick extending from said cellar to said tray, substantially as described.

2. In a lubricating journal-box, an oil tank or cellar, a tray supported therein and provided with apertured lugs at its opposite sides and holding-lugs at its opposite ends, springs extending into said side lugs, a block held by said end lugs, and a wick extending from said cellar to said tray, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAS. G. SMITH.

Witnesses:
GEO. HILDENBRANDT,
M. D. MCINERNEY.