(Model.)

W. G. RAOUL.

Car Axle Box.

No. 238,610. Patented March 8, 1881.

Fig. 1.

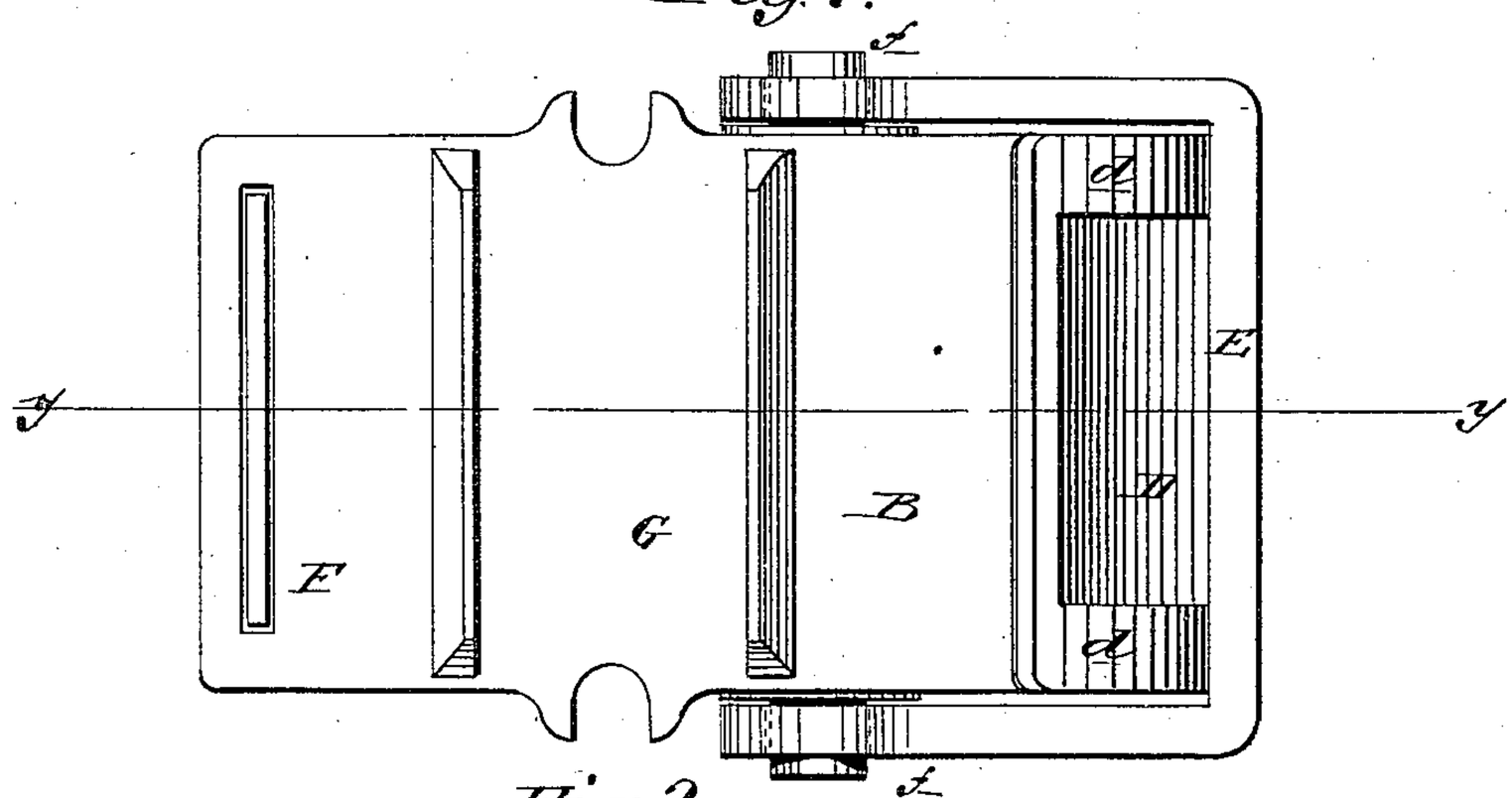


Fig. 2.

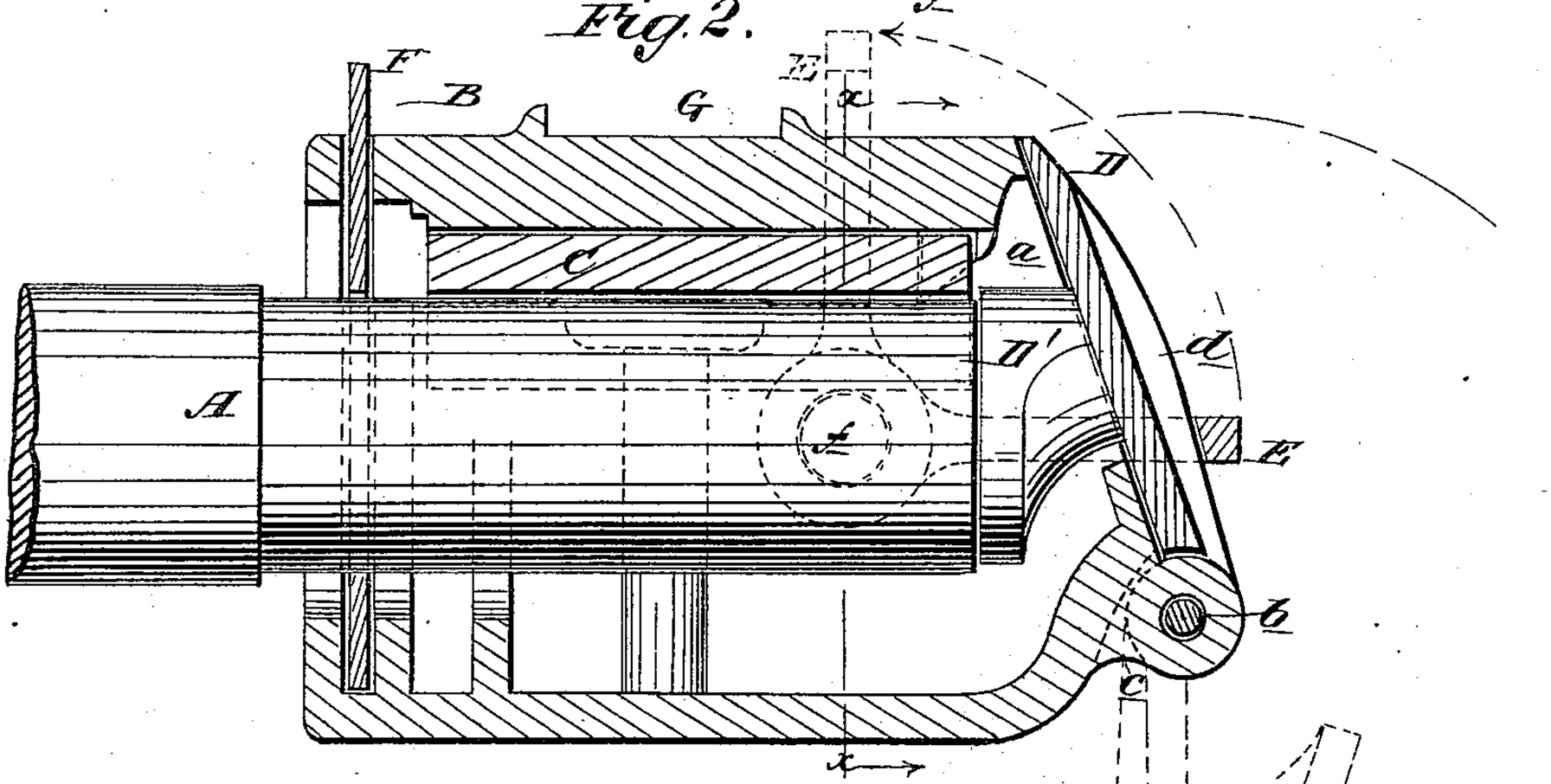
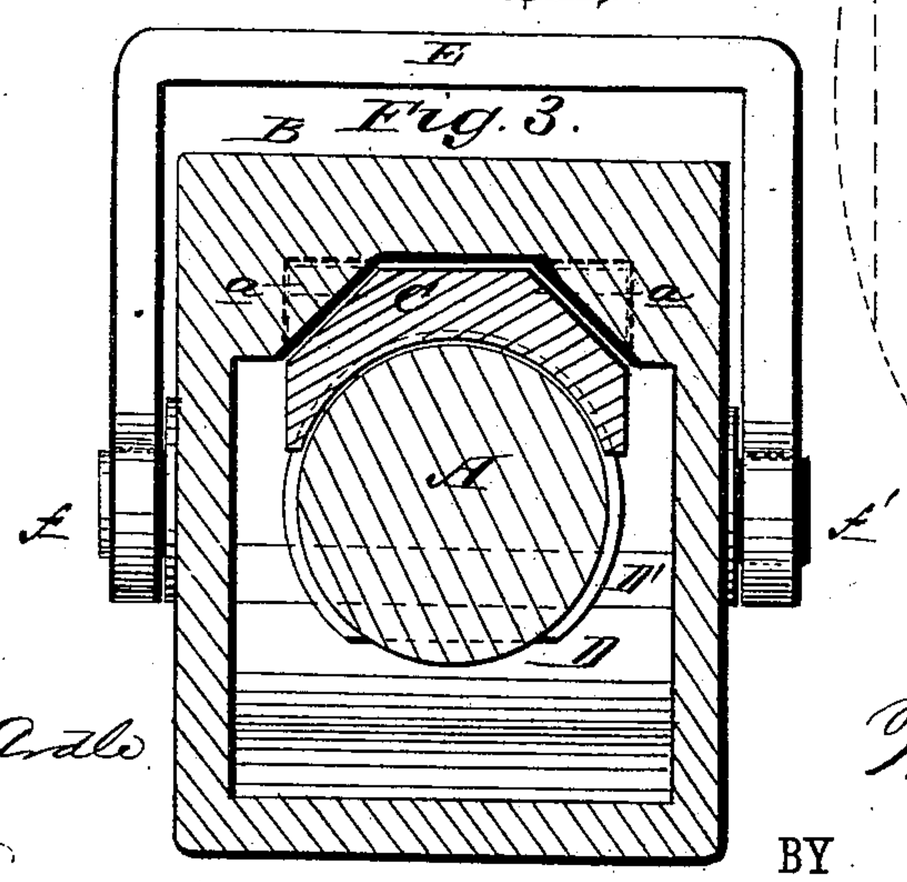


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM G. RAOUL, OF MACON, GEORGIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 238,610, dated March 8, 1881.

Application filed December 22, 1880. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM G. RAOUL, of Macon, in the county of Bibb and State of Georgia, have invented a new and Improved Car-Axle Box, of which the following is a specification.

The object of this invention is to provide an axle-box for car-journals of such design and arrangement as to dispense with the use of the wedge or key heretofore used over the journal-brass, and to dispense with the button or collar heretofore used on the ends of the axle to receive the end-thrust; also, to provide the axle-box with a close-fitting lid or cover that can be opened and closed easily and quickly.

The invention consists of a lid or cover hung to the lower edge of the outer end of the axle-box, having on its inner face a boss that, when said lid or cover is closed, serves to receive the end-thrust or end bearing of the axle; and it consists, further, of a stirrup or shackle pivoted on the sides of the axle-box, and designed to be turned down over the closed cover or lid to hold it firmly in a closed position and keep the boss against the thrust of the axle.

Figure 1 is a plan view of the axle-box. Fig. 2 is a longitudinal sectional elevation of the same with axle in position on line *y y*, Fig. 1. Fig. 3 is a vertical end elevation on line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

In the accompanying drawings, A represents the axle-journal, and B the axle-box, the top of which, on the inside, is shaped to correspond with the back of the journal-brass C, and has downward-projecting lips or shoulders *a a*, that serve as stops to said brass C, thus dispensing with the usual wedge or stop-key.

D is the cover or lid, hung by a pivot, *b*, to the lugs *c c*, that are formed at the lower side of the front of said box B, so that said cover D opens downward instead of upward, as usual. On the inside of the cover D, and about in the center thereof, is a projecting boss, D′, of suitable size and form to take against the end of the axle A, and constitute the end-thrust bearing thereof. This boss D′ may be an integral part of the cover D, or may be attached thereto, and it may be faced with anti-friction metal, if desired.

It will be seen that by having a boss, D′, for each end of the axle A to bear against the usual button or collar on the end of the axle may be dispensed with.

When the cover D is opened the boss or bearing D′ moves with it, and thus ample space is given for the insertion of oil and packing within the box B.

On the outer face of the cover D, along its sides, are formed the sloping ribs *d d*, whose purpose is hereinafter explained.

On the sides of the box B are projecting lugs *f f*, on which is pivoted the stirrup or shackle E, that is swung down in a horizontal position over the cover D to hold the latter tightly closed, the said stirrup E taking on the sloping ribs *d*, so as to draw and hold the cover firmly, and the cover D is released by raising the stirrup E. The lugs *f f* are set in the plane of the longitudinal axis of the axle A, and the stirrup E, when pressed down, is on the same line, so that the cover D and boss D′ are held securely against the end-thrust of the axle A, the stirrup E receiving the strain or thrust directly.

F represents the dust-guard, and at G is the seat for the equalizing-bar.

It will be seen that the end-thrust bearing of the axle in this device is much stronger and more unyielding than the ordinary stop key and plate, and that by hinging the cover at the lower instead of at the upper edge of the box-opening the interior of the box is more easily and conveniently gotten at.

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

1. The combination, with the axle A, of the bottom-pivoted cover D, provided with the projecting boss D′, arranged to abut against the end of the journal of said axle, as and for the purpose described.

2. The combination, with the bottom-hinged cover D, having sloping ribs *d* on the outside, of the stirrup E, pivoted on the sides of box B to lugs *f*, in a horizontal plane passing through the axis of the journal, as described.

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Witnesses:
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