

J. J. THOMAS.
Locomotive Axle-Box.

No. 226,571.

Patented April 13, 1880.

Fig. 1.

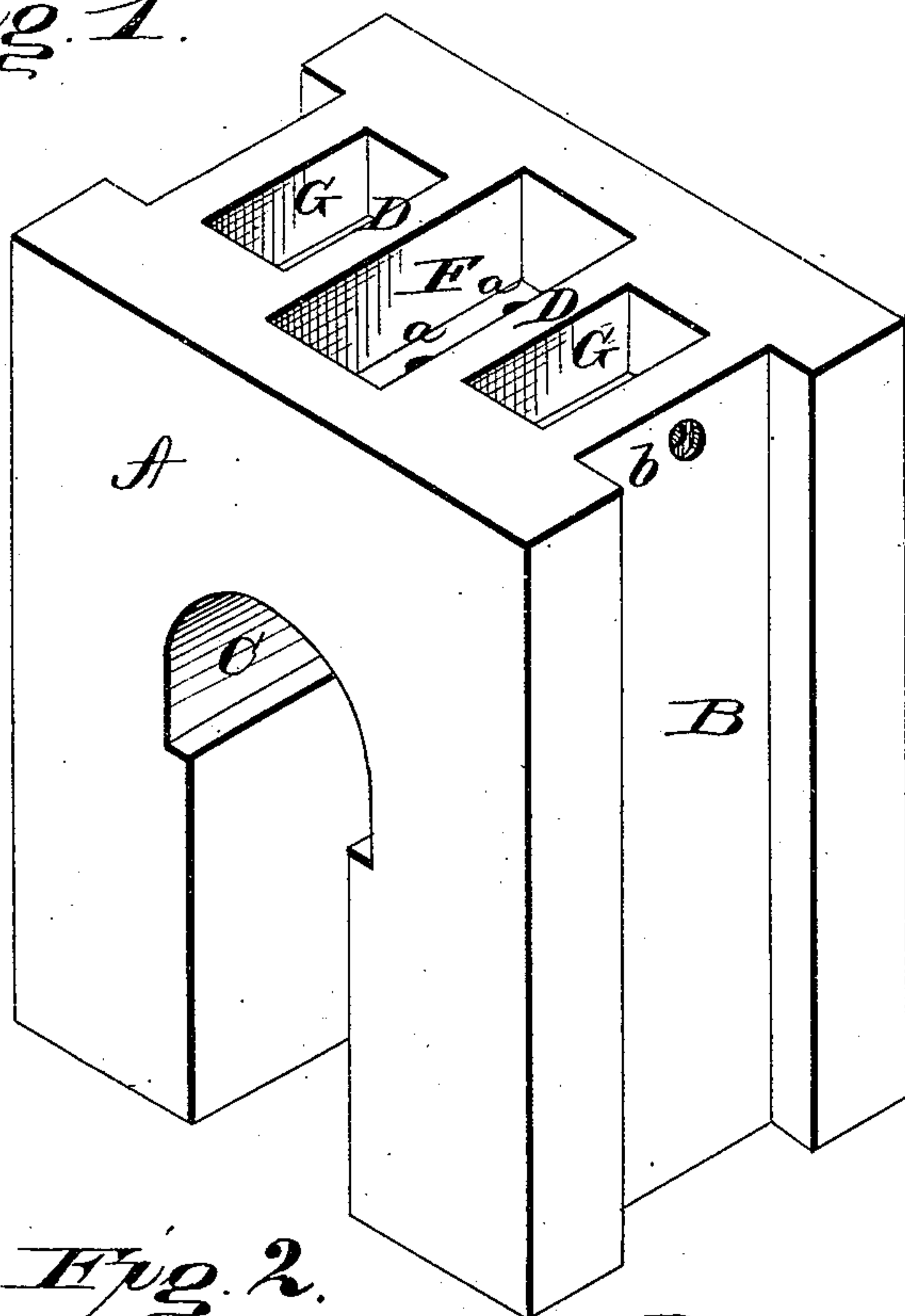
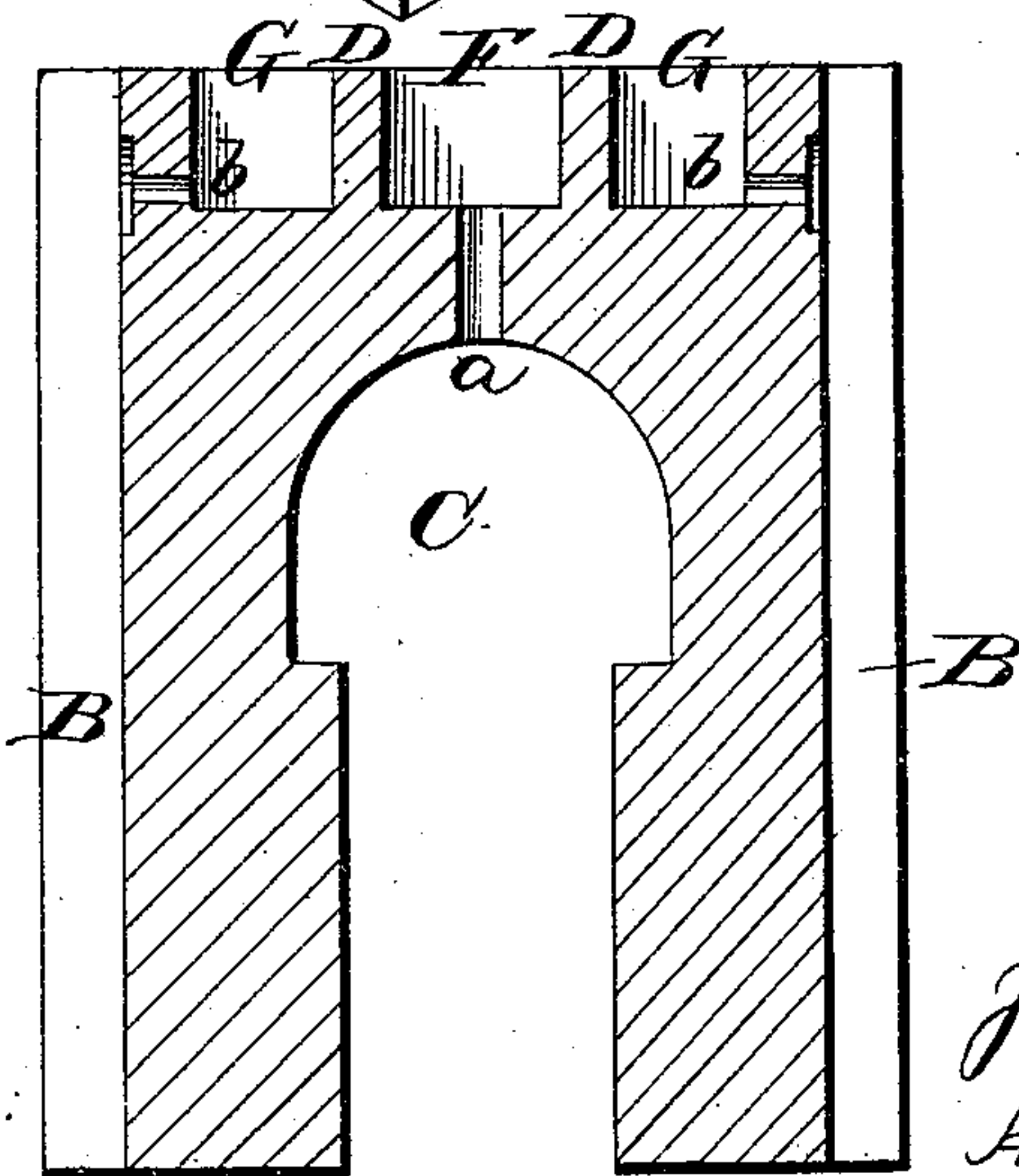


Fig. 2.



Witnesses:

F. L. Curand.
H. Aubrey Taulmin.

Inventor:

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UNITED STATES PATENT OFFICE.

JOHN J. THOMAS, OF SELMA, ALABAMA, ASSIGNOR OF ONE-HALF OF HIS
RIGHT TO TIMOTHY T. TALLMAN, OF SAME PLACE.

LOCOMOTIVE AXLE-BOXES.

SPECIFICATION forming part of Letters Patent No. 226,571, dated April 13, 1880.

Application filed February 19, 1880.

To all whom it may concern :

Be it known that I, JOHN J. THOMAS, of Selma, in the county of Dallas, and in the State of Alabama, have invented certain new and useful Improvements in Car Journal-Boxes and Driving-Boxes for Locomotives; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of an improved lubricating driving-axle box for locomotive-engines, as will be hereinafter more fully set forth, and pointed out in the claims.

In the annexed drawings, Figure 1 is a perspective view of my invention. Fig. 2 is a central vertical section of the same.

A represents a driving-axle box for locomotives. In the sides of box are grooves B B, where it slides up and down in the jaws of the frame of the engine; also where the wedges or shoes are fitted for taking up the lost motion from wear and tear of usage. The semi-circle C in the box represents the size of axle of the driving-wheel with the brasses left out to show the application of either half-round or octagon brasses.

In the upper end of the driving-box is a recess or cavity for the purpose of holding waste and oil for lubrication. In the usual style of boxes this recess or cavity is all one open space, with holes *a* leading down perpendicularly to the axle, and also holes *b* leading to the recesses or grooves B in the edges of the box, for the purpose of conveying oil to the wedges and shoes for lubrication; but as the holes *a* leading to the axle are larger than the holes *b* and the rotary motion of the axle produces a suction, the bulk of the oil is drawn to the axle, and the shoes and wedges receive but little oil, and consequently will get dry and cut.

To remedy this serious difficulty I provide the recess or oil-chamber with two partitions, D D, which divide the same into three chambers, F and G G, as shown.

By this improvement the oil is equally ap-

portioned to its respective channels for lubrications. The chambers are proportioned to suit the quantity of oil required on each part of the box, the center chamber, F, furnishing through the channels or passages *a* oil to the axle, and the side chambers, G G, through their channels *b b* to the shoes and wedges.

A driving-axle box constructed on this principle will always insure equal and universal lubrication of all friction-surfaces, thereby preventing all chafing and cutting so frequent on the present style from unequal distribution of oil or other lubricators.

By this manner of lubrication there is always perfect freedom of motion of the box in the jaws of the frame of the engine, thereby avoiding any possibility of the box sticking or hanging therein, which often occurs, and frequently proves disastrous to the engine by breakage of the frame, springs, or spring-hangers.

By a free and equal lubrication there is produced a universal freedom of motion in all the working parts of an engine, producing less wear and tear to the machinery, general economy in repairs, and comfort to the engineer.

The outer ends of the holes *b* are enlarged or countersunk, so as to readily clear themselves and prevent them from being choked with oil, gum, or other substance.

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

1. A driving-axle box for locomotive-engines provided at the top with three separate and distinct oil-chambers, each having channels to supply oil to the required parts, substantially as herein set forth.

2. The box A, provided with grooves B B, recess C, oil-chambers F and G G, and channels *a* and *b b*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of February, 1880.

JOHN J. THOMAS.

Witnesses:

A. P. YOUNG,

J. R. SATTERFIELD.