

(Model.)

2 Sheets—Sheet 1.

M. HAYDEN.
CAR AXLE BOX.

No. 257,582.

Patented May 9, 1882.

Fig. 1.

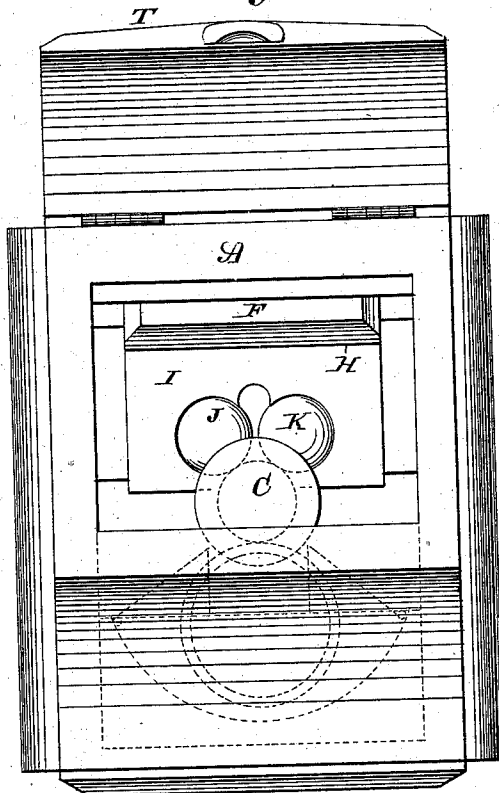
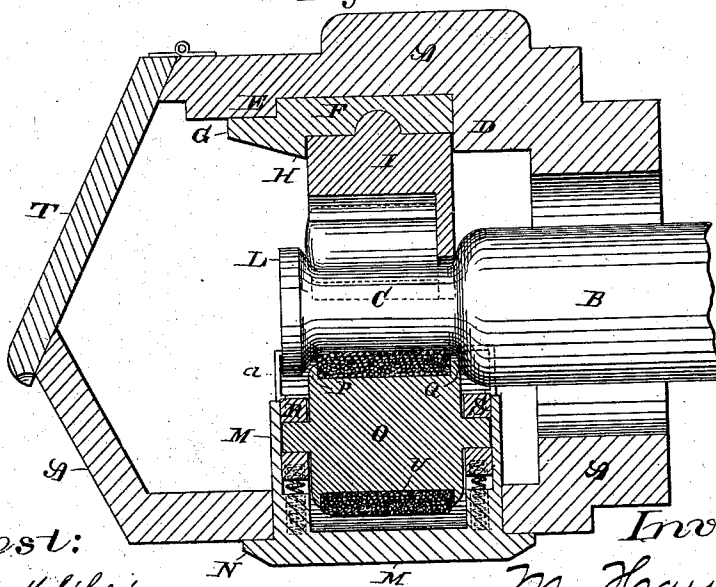


Fig. 2.



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Herm. Lauten

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M. Hayden

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Attorney.

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Fig. 3.

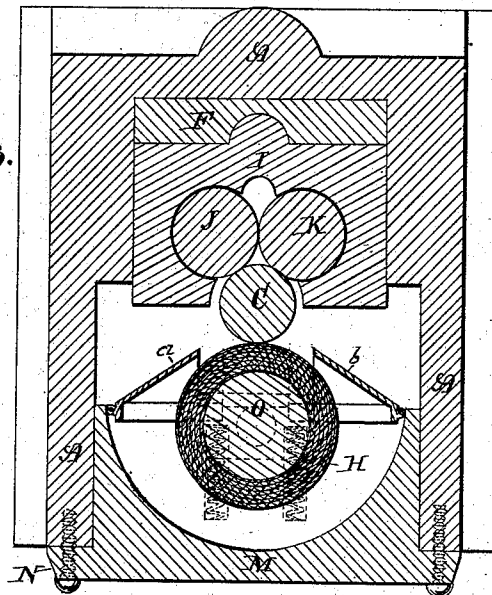


Fig. 4.

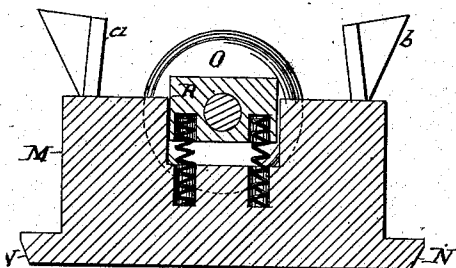
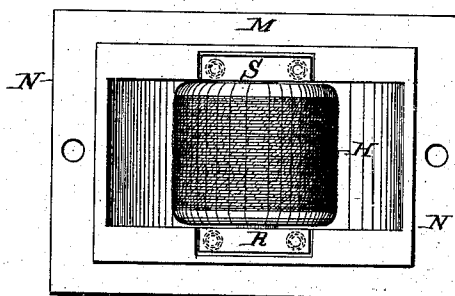


Fig. 5.



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UNITED STATES PATENT OFFICE.

MARSHALL HAYDEN, OF NEW MILFORD, PENNSYLVANIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 257,582, dated May 9, 1882.

Application filed December 24, 1881. (Model.)

To all whom it may concern:

Be it known that I, MARSHALL HAYDEN, a citizen of the United States of America, residing at New Milford, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Car-Axle Boxes; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

My invention relates more particularly to the saddle for the bearing and to the lubricating device, and has for its object the reduction of friction and the automatic feeding of the lubricant to the journal; and it consists in the construction of parts, as will be hereinafter more particularly set forth.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation with the lid of the box up. Fig. 2 is a vertical longitudinal section. Fig. 3 is a vertical cross-section. Fig. 4 is a vertical longitudinal section of one side of the oil-box, exposing the coiled springs to view; and Fig. 5 is a top view of the oil-box and feeding-roller.

A represents the car-axle box, B the axle, and C the axle-journal. Within the journal-box a recess is formed, leaving a shoulder, D and E, extending across the box. Into this recess a plate, F, provided with a projecting flange, G, and shoulder, H, is fitted, and receives the saddle I between the shoulders H and D, upon which it rests. The saddle I is provided with two communicating cavities for receiving anti-friction rollers J and K, that rest upon the journal C and receive the full weight through the saddle of the load carried by the journal C. The cavities for the rollers J and K are located side by side a suitable distance above the bottom of the saddle and extend nearly through the saddle from front to back, leaving only enough metal at the back end of the cavity to keep the rollers to their places. About one-third, more or less, as may be desired, of the adjoining sides of the cavities is cut away and a suitable opening made in the

bottom of the saddle to receive the journal C and permit the rollers to rest upon it and clear the saddle from touching it. The anti-friction rollers are cylinders with slightly oval ends, made to fit the cavities, with room for a lubricant and free revolution. They are held in the cavities when the saddle is upon the journal by the flange L upon the journal C.

Beneath the journal C an oil-cup, M, is arranged within or secured to the box A in any suitable manner. Preferably a cup constructed, as shown in Figs. 2, 3, 4, and 5 of the drawings, with a projecting flange, N, is inserted in an opening in the bottom of the axle-box and secured thereto by screws or any other suitable means. Within this cup a roller or wheel, O, with angular flanges P and Q, is placed, set in bearings R and S, mounted upon coiled springs seated in cavities in the side of the cup, so constructed as to permit of a vertical movement of the bearings upon the compression and expansion of the springs. Two covers, a and b, are hinged to the inside of the ends of the oil-cup M, and extend upward and inward, their sides resting upon the sides of the cup a suitable distance to prevent the oil from flying off at a tangent from the wheel O when its revolution is rapid. The outer ends and sides of the covers extend down inside of the cup a suitable distance, so that all the drip will be carried inside of the cup. The space between the annular flanges P and Q is filled with any suitable substance, U, preferably a fibrous material—such as cotton yarn—for retaining the oil and conveying it from the cup to the journal upon the revolution of the roller. The roller O is revolved by contact with the journal C, and in order to accomplish this the parts must be so proportioned and arranged as to cause the springs to hold the roller against the journal, as shown in Figs. 3 and 4 of the drawings.

The axle-box is provided with a lid, T, which, when open, permits of a free access to the box for inspection and placing the lubricant, which is preferably oil.

While my invention is shown and described in connection with a car-axle box, it is manifest that I may use it for other purposes for which it is suitable.

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

In car-axle bearings, the combination of the saddle I, provided with separate cells for the anti-friction rollers, and having a projecting bead on top, with the plate F, provided with a hollow to correspond with the projections on

saddle I and the recess in the axle-box A, substantially as and for the purpose described. 10

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

MARSHALL HAYDEN.

Witnesses:

T. P. GILLESPIE,
L. S. BROWN.