W. W. WHITAKER.

CAR AXLE BOX.

No. 177,046. Patented May 2, 1876.

Fig. 1.

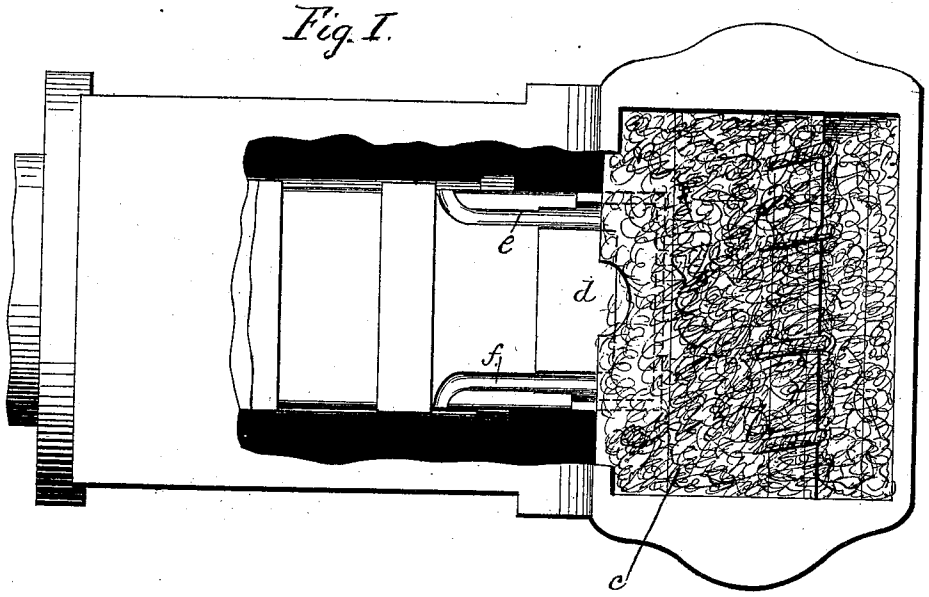
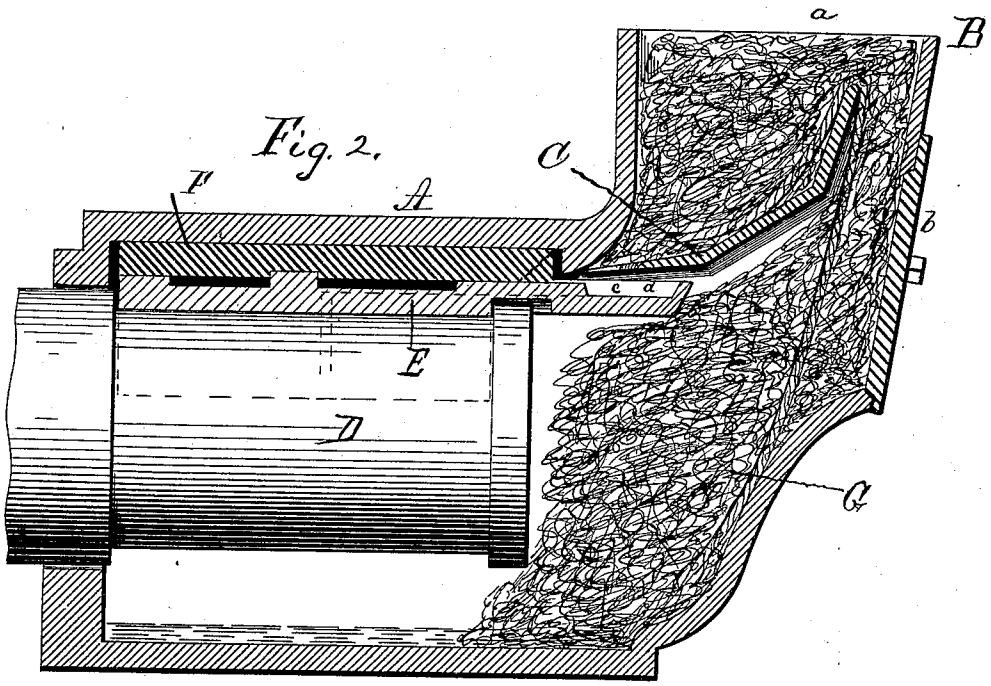


Fig. 2.



Witnesses;
Granville Lewis
Hugh Heath

Inventor
William W. Whitaker
by C. M. Cushing
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM W. WHITAKER, OF GLOVERSVILLE, NEW YORK.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **177,046**, dated May 2, 1876; application filed December 17, 1875.

To all whom it may concern:

Be it known that I, WILLIAM W. WHITAKER, of Gloversville, Fulton county, New York, have invented an Improvement in Car-Axle-Box Lubricators; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a view of my axle-box, with a portion of the casing broken away to expose the internal construction. Fig. 2 is a central longitudinal section thereof.

This invention relates to means for insuring the constant lubrication of the axle so long as any oil is in the box; and the invention consists in arranging cotton waste or other absorbent in the box, in conjunction with a division-plate and oil-ducts, and relatively to each other and the axle, in such manner that the oil, after having been once used, is drawn up from the bottom of the box by the capillary attraction of the waste, and again supplied to the axle, and so on continuously as long as any oil remains.

The letter A represents the box or casing as ordinarily constructed, except that the front is made in the shape of a hopper, B, which latter is provided with top and front or face covered openings *a* and *b*, respectively. An angular inclined or curved plate, C, is arranged transversely in this hopper, the lower edge whereof fits closely against the upper wall of the box, and is made with a central opening, *c*. Over the axle D is placed a bearing, E, of Babbitt or analogous metal, and over this, and next to the box, is placed a piece of packing, F. The upper face of the plate E has formed in its forward end a pan, *d*, from which grooves *e f* extend to, and merge in, the side edges of said bearing. The hopper-space on both sides of the plate C is filled with waste or equivalent absorbent, G. Wicks may be also employed and arranged to extend from the bottom of the box over onto the plate C, as indicated in the drawing, or they may be employed alone. The lubricating material, as oil, is introduced into the box through the top of the hopper, and on the upper side of the plate C, whence it passes down said plate through its opening *c* into the pan *d*, and thence through the oil ducts or grooves *e f* onto the axle. The droppings from the axle, falling on the bottom of the box, are absorbed by the waste, and by the capillary attraction of said waste carried up to the plate C, and again supplied to the axle, and so on continuously until the oil is exhausted or used up. By this simple construction the greatest economy of lubricant is possible.

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

1. An axle-box provided with a divided hopper B, filled with waste or equivalent absorbent, arranged to afford a constant supply of lubricant to the axle by the operation of capillary attraction in such waste, substantially as specified.

2. The combination, in an axle-box, of a dividing-plate, C, oil-conducting bearing-plate E, and absorbent G, the capillary attraction in which latter operates to return the lubricant once used to the axle for reuse continuously, substantially as specified.

The above specification of my said invention signed and witnessed, at Washington, this 3d day of December, A. D. 1875.

WILLIAM W. WHITAKER.

Witnesses:
C. M. PARKER,
HUGH HEATH.