

(No Model.)

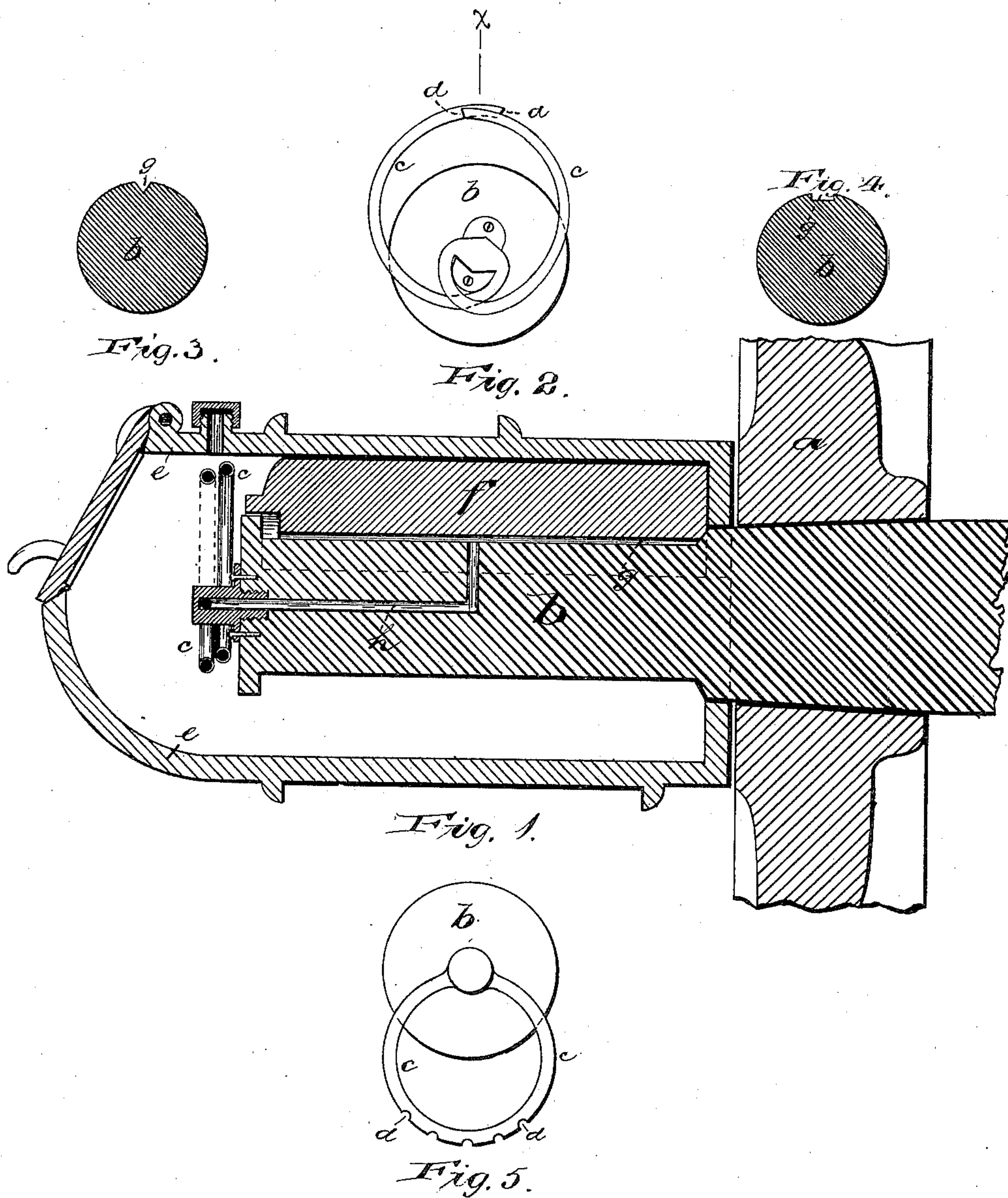
2 Sheets—Sheet 1.

B. D. GALLAHER.

CAR AXLE BOX.

No. 302,903.

Patented Aug. 5, 1884.



*Attest:*

*W. J. Campbell.*  
*Edward G. Kempf.*

*Inventor:*

*Benjamin D. Gallaher,*  
*by Drake & Co.*  
*attys.*

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B. D. GALLAHER.  
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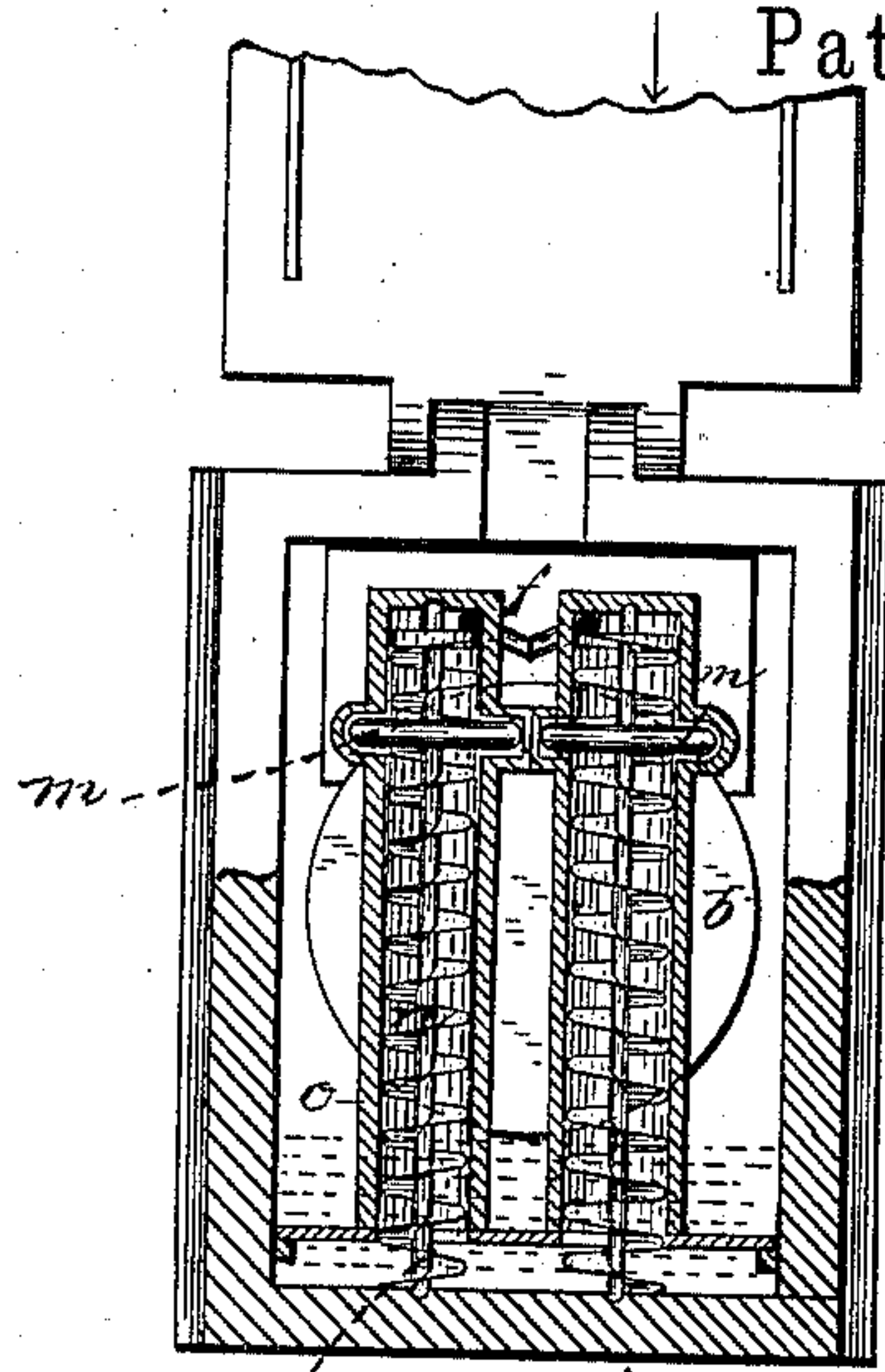


Fig. 6.

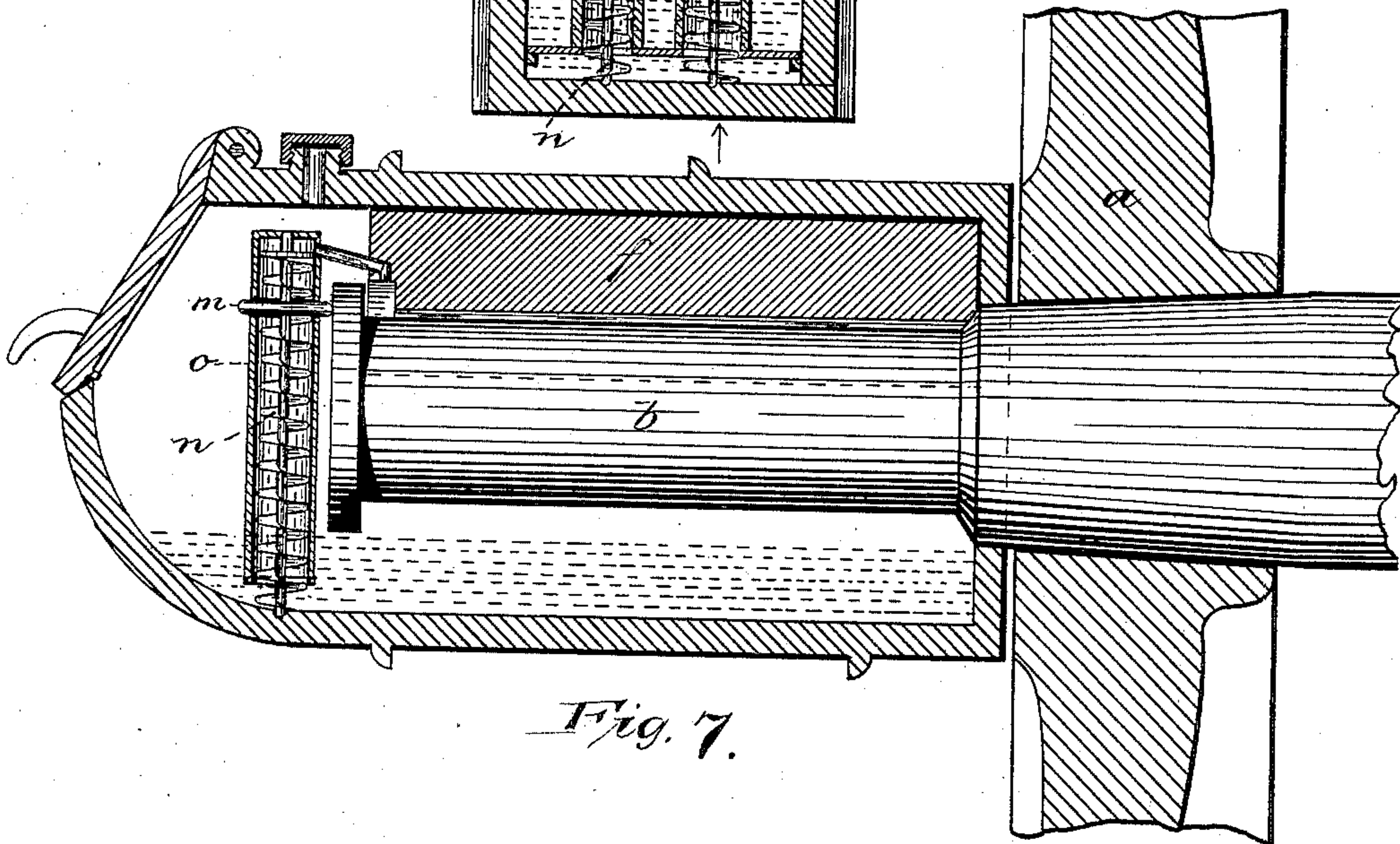


Fig. 7.

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# UNITED STATES PATENT OFFICE.

BENJAMIN D. GALLAHER, OF EAST ORANGE, ASSIGNOR OF TWO-THIRDS TO JOSEPH M. BATTIN, JR., AND WILLIAM A. HUFF, BOTH OF NEWARK, NEW JERSEY.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 302,903, dated August 5, 1884.

Application filed December 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN D. GALLAHER, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Car-Axle Oilers; 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 of reference marked thereon, which form a part of this specification.

The object of this invention is to automatically lubricate the revolving journals of railway or tramway cars, &c.; and it consists in the construction, arrangements, and combinations of parts, substantially as will be hereinafter set forth, and finally embodied in the several clauses of the claims.

Referring to the accompanying two sheets of drawings, in which similar letters of reference indicate like parts in each of the several figures, Figure 1 is a sectional view of a railway or tramway wheel journal and bearing; Fig. 2, an end view of a journal, showing mechanism for automatically raising the lubricant; Figs. 3 and 4, cross-sections of the journal, showing certain longitudinal grooves therein; and Figs. 5, 6, and 7 illustrate certain modifications, all substantially as will be more specifically described.

In said drawings, *a* is a railway or tramway wheel, and *b* a journal revolving therewith, at the extremity of which latter is arranged mechanism adapted to be operated by the revolving journal to automatically raise the lubricant and direct the same to the bearing. Upon the extremity of said journal I secure curved tubular arms *c c*, having apertures or openings *d d* therein at points distant from said journals. Said arms rotate with the journals, and thus cause the parts thereof having the openings to enter into the lubricant, carried in suitable receptacles, *e*, and force the said lubricant toward the journal-bearing. By duplicating the curved arms *c* and arranging them oppositely, as shown, the lubricant is forced to the journal whether the wheel travels in one direction or the other, as will be understood. The journal or the brass bushing or bearing-piece *f* is longitudinally

grooved, as at *g*, to distribute the lubricant evenly over the length of the journal. Said journal has in some cases a duct, *h*, formed therein, leading from the raising mechanism to the groove *g*.

Instead of having disconnected tubular arms, as shown in Figs. 1 and 3, they may be continuous, as in Fig. 5, the openings to allow the passage of the lubricant being formed as shown. Again, materially different mechanism producing equivalent results may be employed—such, for example, as is illustrated by Figs. 6 and 7, which show friction-wheels *m m* engaging with the extremities of the journal and receiving action therefrom, said friction-wheels being arranged upon and actuating screw-shafts *n*, which descend into the lubricant and cause the latter to pass upward through the tubular chambers *o* to the journal-bearings. Both right and left hand screws are employed to raise the lubricant when the train or car is going either forward or backward.

Other equivalent mechanism—such as an endless chain—may be employed in connection with the revolving journal to lubricate the same; but it is deemed unnecessary to show in the drawings other equivalent mechanisms which may be employed in accordance with this invention.

Having thus described my invention, what I claim as new is—

1. The combination, with the revolving journal, having a duct therein, of the tubular arm leading the lubricant from the journal-box to said duct, substantially as herein set forth and shown.

2. In combination, the car-axle having the duct *h* therein, the box, and the revolving arms working on the ends of said journal, and adapted to force the lubricant through said arms to said duct, substantially as set forth.

3. In combination, the car axle or journal having the groove *g* and duct *h* therein, and the revolving arms working on said journal and communicating with said duct, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of December, 1883.

BENJAMIN D. GALLAHER.

Witnesses:

CHARLES H. PELL,  
W. A. HUFF.