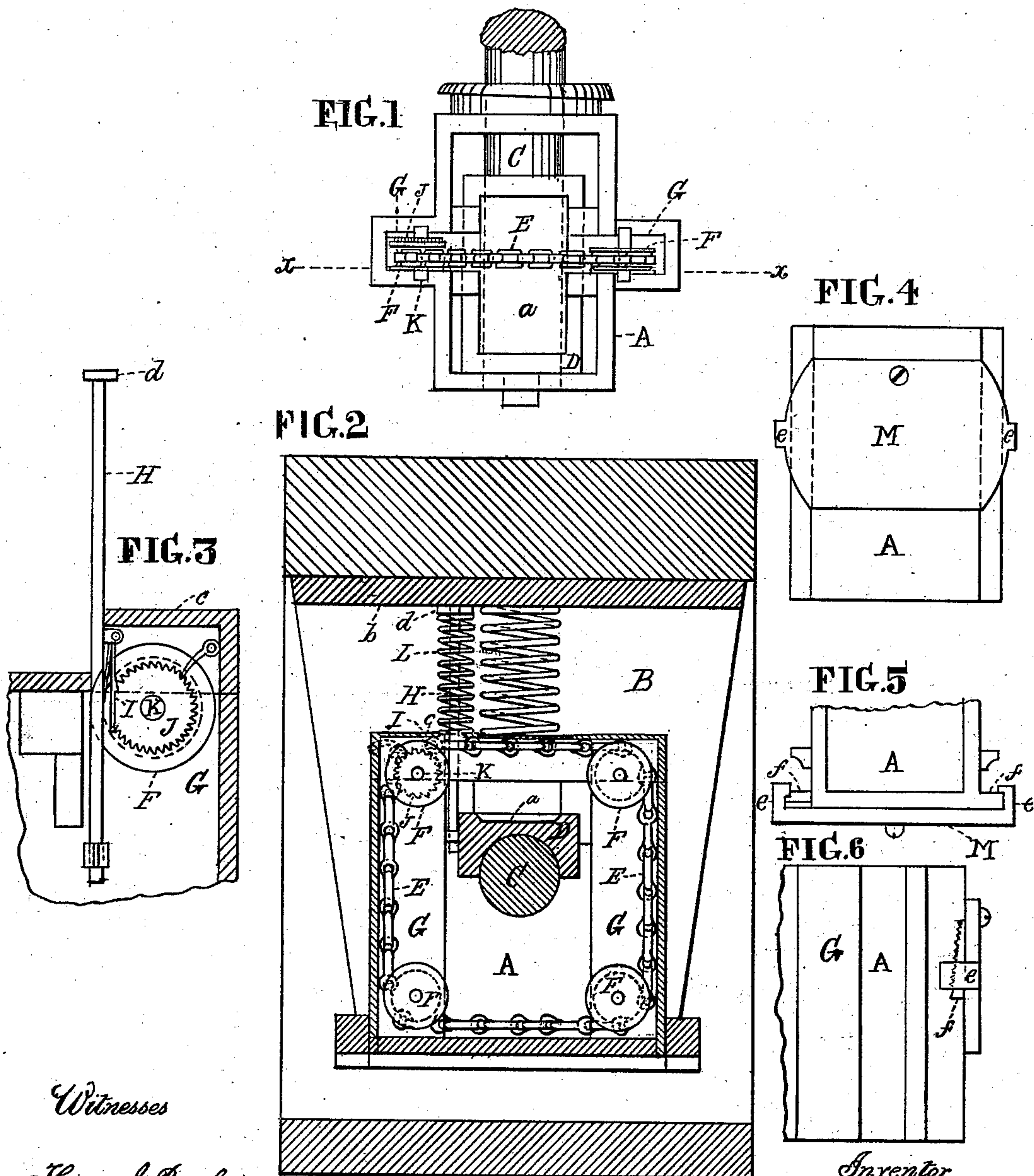


I. P. WENDELL.  
Car-Axle Box.

No. 224,751.

Patented Feb. 17, 1880.



Witnesses

Thomas J. Bewley

Geo. H. Bewley

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# UNITED STATES PATENT OFFICE.

ISAAC P. WENDELL, OF PHILADELPHIA, PENNSYLVANIA.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 224,751, dated February 17, 1880.

Application filed August 5, 1879.

*To all whom it may concern:*

Be it known that I, ISAAC P. WENDELL, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Journal-Boxes for Railroad-Cars, of which the following is a specification.

The nature of my invention consists in supplying oil to the journal-bearing by means of an endless chain, cord, or other equivalent device, which is supported by means of pulleys and passes through vertical hollow columns at opposite sides of the box, which communicate at their lower ends with the interior of the box and at their upper ends with a space in the box above the journal-bearing, the chain being carried forward by an intermittent motion produced by the vertical vibrations of the car, whereby a pawl or other equivalent device operates a ratchet on one end of one of the pulley-shafts, to give a partial turn to the pulley, and thereby to the chain, and thus cause a movement through the oil in the lower part of the box, which causes oil to collect on the chain, and as the latter passes over the journal-box the oil from the chamber is deposited in a recess in the upper side of the bearing, whence it passes through suitable openings onto the journal.

Instead of the chain being so arranged as to pass over the journal-bearing, it may be placed in the front end of the box, in front of the journal, in which case a chute must be used, so arranged as to have its front end beneath the chain to receive the oil therefrom, and its rear end over the recess of the journal-bearing, for discharging the oil therein.

To give certainty to the chain or equivalent device carrying up a sufficient quantity of oil for lubricating the journal, I connect a few buckets therewith, at suitable distances apart, which deposit their contents into the recess of the journal-bearing or into the chute, as the case may be.

In the accompanying drawings, which make a part of this specification, Figure 1 is a top view of the journal-box A with the cover and the pedestal removed. Fig. 2 is a vertical section at the line *xx* of Fig. 1, in which the box is shown in connection with the pedestal B. Fig. 3 is a detail view on an enlarged scale,

showing the connection of the pawl I and ratchet-wheel J. Fig. 4 is a front view of the box A. Fig. 5 is a top view of the front part of the box A. Fig. 6 is an edge view of the front portion of the same.

Like letters of reference in all the figures indicate the same parts.

A is the journal-box; B, the pedestal; C, the journal, and D the journal-bearing.

The bearing has a recess, *a*, which receives a constant supply of oil from the lower portion of the box by means of the endless chain E or a cord or equivalent device, which is held in place by means of the pulleys F F F F, arranged at each end of the hollow columns G G, at opposite sides of the box, in such a manner that motion being given to one of the pulleys the chain in passing through the oil at the bottom of the box collects a sufficient quantity for the lubrication of the journal, and in passing over the recess *a* of the journal-bearing deposits the oil therein, whence it passes through suitable openings of the bearing onto the journal for lubricating it.

A forward movement is given to the chain or cord E by each downward movement of the pedestal, in which the plate *b* is caused to bear upon the vertical rod H, which is provided with a spring-pawl, I, that engages the ratchet-wheel J on one end of the pulley-shaft K, whereby the pulley is given a partial turn for moving the chain forward. In the upward movement of the pedestal the rod H is carried back to its upward position by means of the wire spring L, which surrounds the rod between the lug *c* on the top of the box and the flanged head *d* of the rod, so that vertical movements are given to the rod corresponding to the downward and upward movements of the pedestal, and the action of the pawl upon the ratchet-wheel is produced, and an intermittent movement is given to the chain E in one direction, whereby a constant supply of oil is kept up for lubricating the journal.

Instead of the pawl-and-ratchet movements above described, any other suitable means may be employed by which the downward movements of the pedestal shall give a forward movement to the chain E.

M is the front cover of the box A, which is connected with the latter by means of the



reversed inclined lugs *e e* of the cover and the corresponding inclined ways *f f* on opposite sides of the box.

I have represented the chain *E* arranged at  
5 the middle of the box *A*, but may, at pleasure, arrange it in front of the journal, in which case a chute should be arranged with its front end beneath the chain and its rear end over the recess of the journal-bearing, so as to con-  
10 duct the oil from the chain to the recess.

I claim as my invention—

1. The continuous chain or cord *E*, operated by any suitable mechanism, in combination with the box *A* and journal-bearing *D*, having

a recess, *a*, in its upper side and openings lead- 15  
ing therefrom to the journal, substantially as set forth.

2. The continuous chain or cord *E*, in combination with the box *A*, having hollow columns *G G*, pulleys *F*, and ratchet-wheel *J*, the 20  
rod *H*, provided with the pawl *I* and spring *L*, and the pedestal *B*, substantially in the manner and for the purpose set forth.

ISAAC P. WENDELL.

Witnesses:

STEPHEN USTICK,  
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