(No Model.)

G. F. GODLEY.

CAR AXLE BOX.

No. 256,997. Patented Apr. 25, 1882.

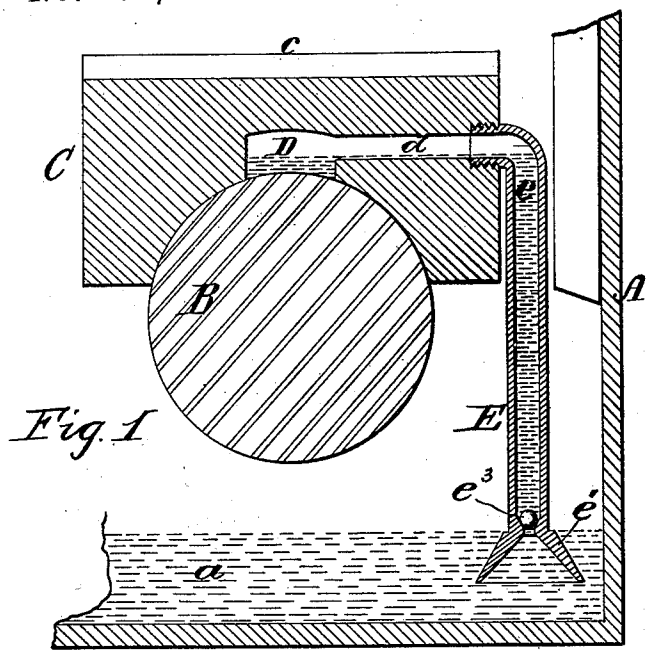


Fig. 1

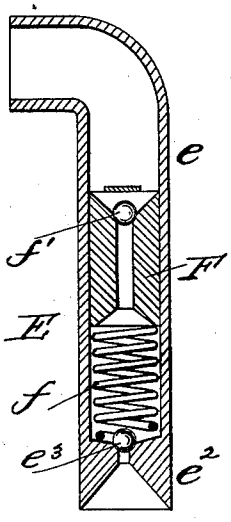


Fig. 2

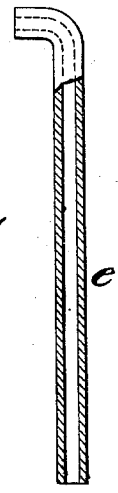


Fig. 3

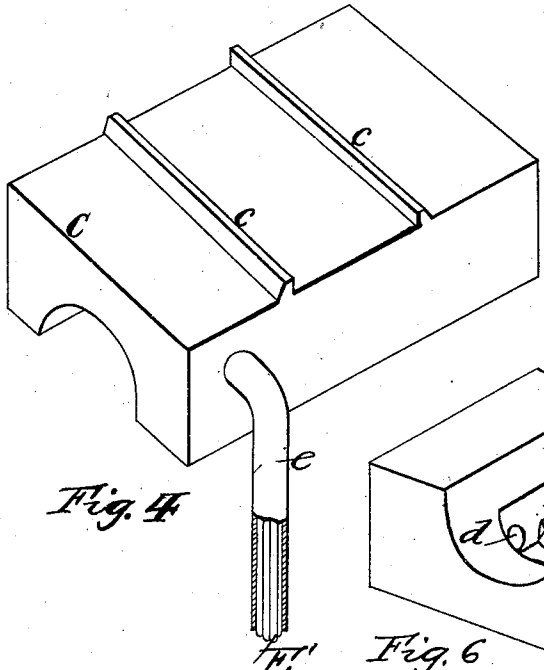


Fig. 4

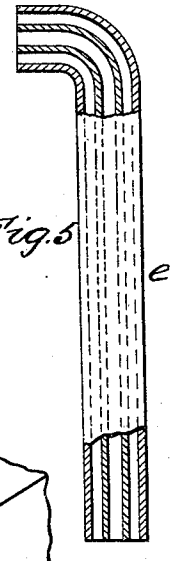


Fig. 5

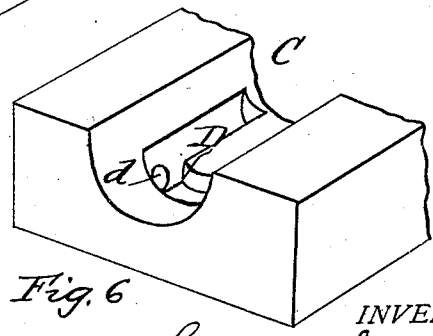


Fig. 6

WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE F. GODLEY, OF PHILADELPHIA, PENNSYLVANIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 256,997, dated April 25, 1882.

Application filed January 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. GODLEY, a citizen of the United States, resident of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Lubricators for Car-Axle Boxes, of which the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 represents a vertical section of my invention. Figs. 2 and 3 are modifications of the pumping or lifting mechanism thereof. Fig. 4 is a perspective of brass or bearing with tube attachment. Fig. 5 is an elevation, partly in section, of a modified construction of said tube; and Fig. 6 is a broken perspective of the bearing inverted.

My invention has relation to that class of lubricators for car-axle journals wherein a pump is used to lift oil to the axle-journal; and my invention has for its object to combine such pumps with the brasses or bearings in such manner that the jolting or jarring of the car will operate said pumps to lift oil from the oil-well of the axle-box to the axle-journal, such pumping of the oil being assisted by the revolution of said axle-journal.

My invention accordingly consists of an axle-box provided with brasses or bearings for the axle-journal. To said brasses are attached, or they have formed integral therewith, the pumping mechanism designed and adapted to be operated by the jolting or jarring of the car-body, and in combination with such pumping mechanism a chamber or recess formed in the brass or bearing, said chamber being closed at its bottom by the axle-journal, so that when the latter revolves a partial vacuum will be formed in said chamber. Hence when a pump or tube communicating with said chamber and with the oil-well of the axle-box is operated by the jolting of the moving car carrying such devices said partial vacuum will assist such pump; or, if the pump be dispensed with and a tube alone used, the oil will be drawn up through said tube and into said chamber by the suction or vacuum created therein by the revolution of said axle. The oil after entering such chamber flows onto the axle to lubricate the same, such axle forming the bottom of said chamber. My invention still further consists in the combination, construction, and arrangement of parts hereinafter specified and claimed.

Referring to the accompanying drawings, A represents a section of a car-axle box; B, the axle-journal, and C the brass or bearing thereof, provided with transverse ribs *c c* on its upper side, or said brass may be made in any usual or suitable manner.

D represents a chamber formed in said brass below its upper side, as shown, and is closed at its bottom by the axle B. From said chamber proceeds a conduit or duct, *d*, into the end of which is screwed a pumping attachment, E. The latter consists of a tube, *e*, having a flaring mouth, as shown at e', or otherwise, as indicated at e^2, and is provided with a valve, e^3, as illustrated. Said pump is made sufficiently long to enable it to dip into and have its lower end immersed in the oil in well *a*. As the axle B revolves a suction is created in chamber D and its communicating conduits and tubes. Hence any oil that may find its way into tube *e* tends to rise therein until it reaches conduit *d*, whence it passes thereinto and thence into chamber D, flowing down onto and lubricating axle B. Whenever the axle-box A is jolted or jarred the valve *e* rises and oil from well *a* rushes into tube *e* to supply the same with oil. If such jarring is constant, the pump E will of itself lift the necessary amount of oil to the axle-journal, being assisted, of course, by the exhaust in chamber D; but when such jarring is intermittent in its action, then the exhaust in chamber D causes the oil in tube *e* to rise to the axle-journal in the intervals between the action of the pumping devices; or such exhaust can be re-enforced by placing a spring-supported piston, F, within tube *e*, as shown in Fig. 2, the spring *f* being below said piston, as illustrated, or it may be located above the same. When such piston is used it is provided with a valve, f', as shown.

In Figs. 3 and 4 the pump is dispensed with and a tube is substituted therefor, and is provided with a small bore. In such case the exhaust in chamber D and capillary attraction are depended upon to raise the oil to the journal-bearing.

In Fig. 5 a modification of last-described construction is shown, and which consists of a tube within a tube, as illustrated; or said in-

ternal tube may be dispensed with and a bundle of wires, rods, or a wire rope or cable may be substituted therefor, as shown at E′, Fig. 4.

In placing the brass and attached tube or pump in the axle-boxes the tube or pump is turned until it aligns or is parallel in length with the brass. The latter is then inserted into the box A, whereupon the tube is lowered until it assumes a perpendicular position, or one approximating thereto. Such constructed brass or bearing with attached pump or tube may be used with various forms of axle or other journals. So, too, different styles of pumps may be secured to said bearings, such pumps being attached thereto in any suitable or desired manner and location.

What I claim as my invention is—

1. An oiling device for car-axle boxes, composed of a brass or bearing provided with a chamber or recess on its under side, a pump or oil-lifting device, and a passage between said chamber and lifting device, said pump or lifting device being constructed substantially as shown and described, and caused to operate by the vibratory motion of a moving car, as set forth.

2. In combination with a car-axle box, a brass or bearing provided with a chamber or recess on its lower or the side next the axle, a pump or lifting device, and a passage-way between said chamber and pump, whereby when said pump is operated by the vertical vibratory motion of the axle-box to lift oil to said chamber such oil will be further assisted to rise thereto by the partial vacuum created in said chamber by the revolution of the axle, substantially as set forth.

3. In a car-axle box, the combination, with a brass or axle-bearing provided with chamber D, of a tube, *e*, carrying valve e^3, piston F, spring *f*, and valve *f′*, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of January, A. D. 1882.

GEORGE F. GODLEY.

Witnesses:
C. B. ROBERTS,
JAS. W. FLETCHER.