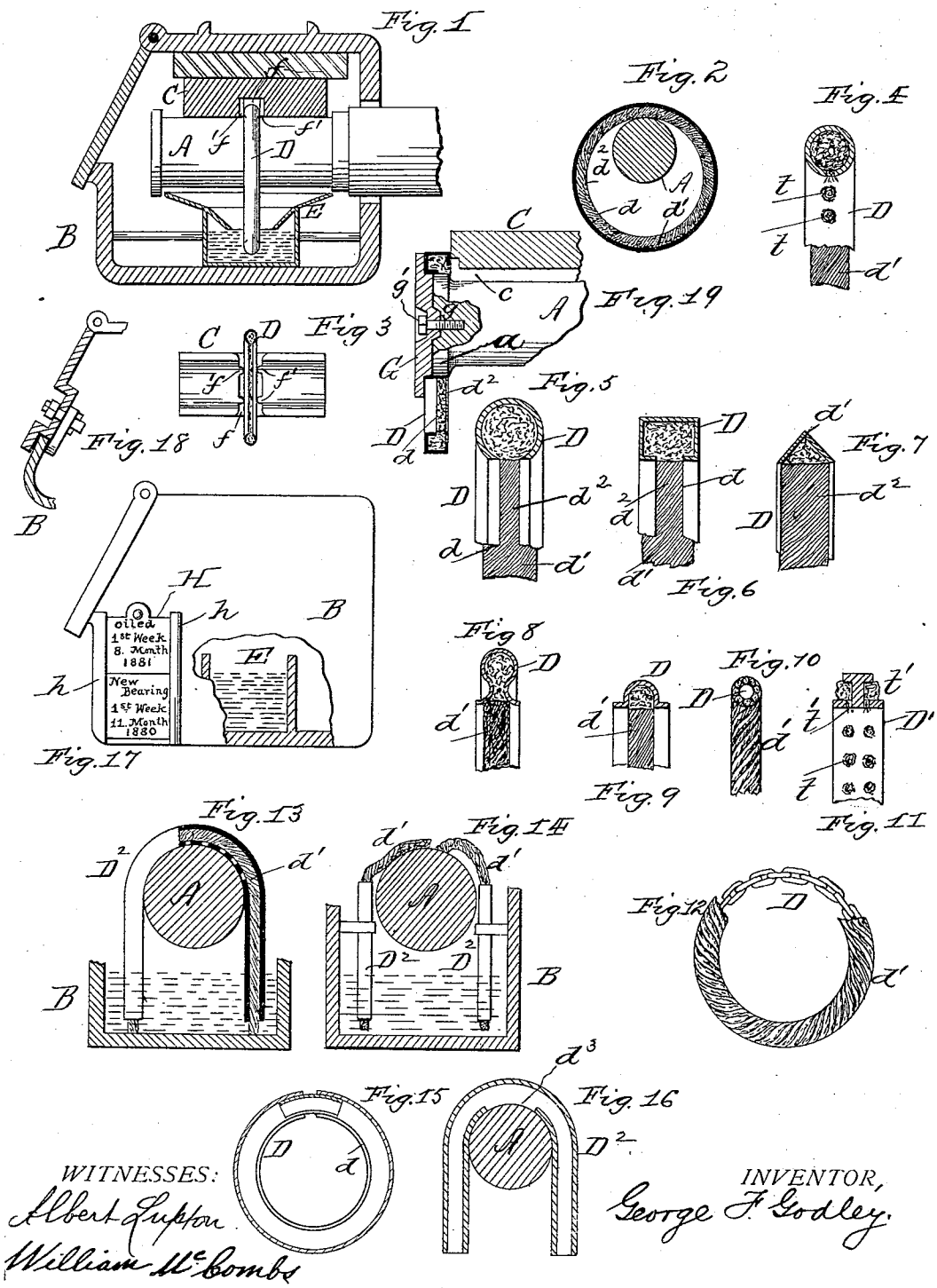
(No Model.)

G. F. GODLEY.

CAR AXLE LUBRICATOR.

No. 250,522. Patented Dec. 6, 1881.



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UNITED STATES PATENT OFFICE.

GEORGE F. GODLEY, OF PHILADELPHIA, PENNSYLVANIA.

CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 250,522, dated December 6, 1881.

Application filed October 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. GODLEY, a citizen of the United States, resident of Philadelphia, in the 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 is a longitudinal vertical section of a car-axle box with my improvements applied thereto. Fig. 2 is a cross-section of the lubricating-ring and axle. Fig. 3 is an inverted plan of axle-bearing with oiling-ring, the latter being in section. Figs. 4, 5, 6, 7, 8, 9, 10, and 11 are sections of various forms in cross-section of lubricating-rings. Fig. 12 is an elevation of the chain form of the same. Figs. 13, 14, 15, and 16 are sectional views representing modifications of my invention. Fig. 17 is an elevation, partly in section, of an axle-box with ticket or indicator attached thereto. Fig. 18 is a section of axle-box lid with lock therefor; and Fig. 19 is a detail section of axle journal and bearing, showing the lubricating-ring placed on the collar at the extremity of the axle.

My invention has relation to that class of car-axle lubricators which consist of rings suspended from the axle-journal, and which are of such diameter that they will dip into and pass through the oil in the axle-boxes, whereby when said rings rotate they will carry oil to the axle-journal bearings.

Heretofore such rings have been so made that they failed to carry the necessary amount of oil to the journal-bearings; hence the latter were imperfectly lubricated.

My invention has for its object to provide such rings with means whereby they will conduct to the axle-bearings the requisite quantity of oil necessary for the efficient lubrication of the same.

My invention accordingly consists of the application to said lubricating-ring of a wick of fibrous material, said wick being either wrapped around the ring or placed within a groove or recess formed therein, or the ring may be hollow and the fibrous material packed within the same.

My invention still further consists of the combination, construction, and arrangement of parts, as hereinafter more fully described.

There are numerous ways in which my invention may be carried into effect, and they will readily suggest themselves to a skillful mechanic, some of which I will now proceed to describe.

Referring to the accompanying drawings, A represents the axle-journal within the box B, and C is the bearing therefor, of any suitable form, arranged in the usual or any desired manner.

D is the lubricating-ring, preferably formed of a hollow tube having an annular kerf or cut on its inner side, as shown at *d*. Said ring is filled or packed with wick or other fibrous or absorbent material *d'*, in such manner that the latter will preferably protrude through said kerf or cut *d*, as indicated at d^2. Said ring is of a diameter larger than that of the axle, so that when placed thereon it will dip down into the oil contained in receptacle E in box B. Said ring may be placed upon the axle-journal at any suitable part thereof, as may be desired. In Fig. 1 I have shown it passing through a recess, *f*, in bearing C, said recess having ribs or projections *f' f'* formed on its sides, which serve the double purpose of lessening the degree of frictional contact between said sides and ring, and also act as wipers for removing oil adhering to the exterior parts of said ring. In Fig. 19 I have shown the ring placed upon the axle-collar *a*, which, if desired, may be beveled off, as illustrated.

G is a disk, secured to the axle at *g* by screw *g'*, and serves to hold said ring in position. The bearing C is suitably grooved, as shown at *c*, to provide an oil-duct throughout the length of said bearing.

When the car to which said devices are attached is in motion the revolution of the axle causes the ring to rotate, and as it passes through the oil-well the packing of absorbent material takes up such oil and carries it up to the axle-journal. The weight of the ring compresses such packing as it passes over the journal, and its contained or absorbed oil is thereby squeezed out from said packing. Such oil then finds its way along the entire length of the journal, and the latter is thereby effectively lubricated.

The oil well or receptacle E may be separate from the axle-box B, as shown in Fig. 1, and may, if desired, be provided with lipped edges *e;* or said well may be an integral part of the box B, as shown in Fig. 17.

The ring D may be round in cross-section, as shown in Figs. 1, 4, and 5, or it may be square, oblong, triangular, or irregularly and regularly curved, as shown in Figs. 6, 7, 8, and 9. I have in Fig. 11 represented the ring as made T shape in cross-section and provided with perforations *t*, which are also shown in Fig. 4. Said ring D is packed, as indicated at *t'*, so as to project through said perforations. If desired, however, the ring $D^{\times}$ may be used without the packing.

Figs. 10 and 12 show the absorbent material wrapped around the ring, which may consist of a wire, as indicated in Fig. 10, or a chain, as shown in Fig. 12.

A modification of the ring is illustrated in Figs. 13, 14, and 16, and it consists of a bent perforated pipe, D^2, packed, as shown in Fig. 13, or straight vertical pipes, as represented in Fig. 14, or said pipe may be cut away, as shown at d^3, Fig. 16. When the last-described constructions are employed, the oil is fed to the axle-bearing by capillary attraction, assisted by a slight exhaust or suction generated in said pipes by the revolution of the axle.

When ring-lubricators are used for car-axle boxes, it is desirable to have the lids or covers of the latter securely locked, and such result may be effected by the locking device represented in Fig. 18; so, too, it is also desirable to have an indicator upon the axle-box to show when said box was last filled with oil and fitted with new bearings. Accordingly such indicator is represented at H, secured in dovetail grooves *h*, and marked, as illustrated in Fig. 17; or said tag may be attached to the box in any other suitable or desired manner.

What I claim as my invention is—

1. A lubricating device for car-axle boxes, consisting of a hollow or groove metallic holder, in which is placed a fibrous or other absorbent material, designed and adapted to be located upon the axle-bearing, and having connection with the oil-well of the axle-box, substantially as set forth.

2. An oiling device for car-axle boxes, consisting of a grooved or perforated ring or bent pipe encircling the axle-journal, substantially as shown and described.

3. An oiling device for car-axle boxes, composed of a grooved or perforated ring or bent pipe encircling the axle-journal, and having a packing of fibrous or absorbent material, substantially as shown and described.

4. An oiling device for car-axle boxes, consisting of a hollow metal holder or ring perforated on its internal periphery or side, and packed with fibrous or other absorbent material, said parts encircling the axle, substantially as shown and described.

5. In combination with a car-axle journal and its box, a perforated ring or bent pipe packed with fibrous or absorbent material, and a portable or detachable oil-receptacle having lipped or flaring edges *e*, substantially as shown and described.

6. An oiling device for car-axle boxes, composed of a hollow ring having a kerf or perforations in its inner side and packed with fibrous or absorbent material to protrude through said kerf or perforations, substantially as shown and set forth.

7. The combination of the axle-journal, ring D, placed on collar *a*, and disk G, substantially as shown and described.

8. The bearing C, having recess *f* and ribs *f'*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 12th day of October, A. D. 1881.

GEORGE F. GODLEY.

Witnesses:
JAS. W. FLETCHER,
ROBT. TURNBULL.