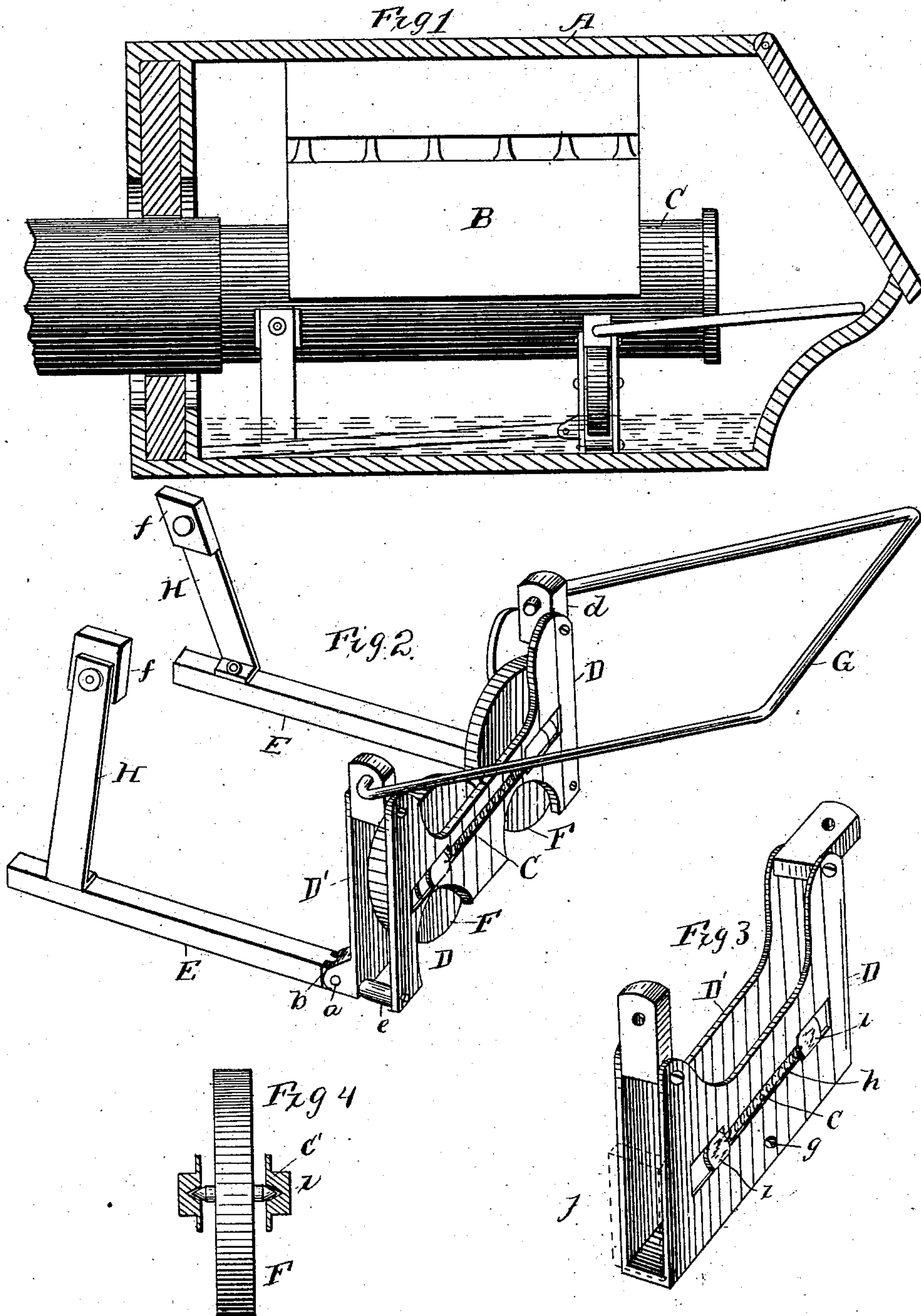


(No Model.)

A. BRADFORD, Dec'd.,
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LUBRICATOR.

No. 293,705.

Patented Feb. 19, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

ADDISON BRADFORD, OF BROOKLYN, NEW YORK; WM. W. BLACKMAN, ADMINISTRATOR OF SAID ADDISON BRADFORD, DECEASED, ASSIGNOR OF FIVE-SIXTEENTHS TO THEODORE C. WIGGINS, OF SAME PLACE, AARON R. SMITH, OF NEW BRIGHTON, AND ALBERT S. COMSTOCK, OF NEW YORK, N. Y.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 293,705, dated February 19, 1884.

Application filed July 25, 1883 (No model.)

To all whom it may concern.

Be it known that I, ADDISON BRADFORD, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Lubricators; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 the letters of reference marked thereon, which form part of this specification.

This invention relates to mechanical contrivance for applying lubricants to journal-bearings, and particularly to the bearings and journals of car-axles, and has for its object to economize the quantity of oil used and the waste thereof from the journal-box, and also, when desired, to prevent the lubricating carrying-wheels from dipping directly into the oil, whereby the lubricating material is prevented from becoming gummy and thick, and whereby the desired quantity alone is supplied to the journal and bearings, as will hereinafter more fully appear.

The invention consists in providing a frame of peculiar construction, to which is attached waste-preventing rubbers at one end, which act spring-like in maintaining said rubbers in contact with the journal, and at the other end are mounted lubricating rollers or wheels. This end is pivotally arranged at its bottom, and provided with a bail or brace at its top, so that it can lie flat when access to the journal is desired, and also for its ready insertion into the journal-box.

It further consists in providing said latter end with an elongated slot in which the journal-bearings of the rollers work, and which are adapted to move lengthwise in said slot, whereby the wheels or rollers can yield to the up-and-down movement of the axle-journal, and also to axle-journals of different sizes; and it finally consists in forming the lubricating end of the frame into a box and supplying said box with lubricating material through small apertures or through some porous material in such quantities as will be sufficient

to supply the demand of the axle in such manner that the said supply will be pure, clean oil, devoid of such impurities as would rise if the lubricating-wheels were constantly in contact with the oil, all of which will more fully hereinafter appear. A lubricator for car-axle journals needs to be so constructed as to be readily applied to the journal while in its place in the journal-box, and readily adapt itself to the varying sizes and shaped boxes and journals, also the varying movements and conditions of the journal and box as they relate to each other. In this lubricator all these demands are met by its construction and adaptability. It is also simple and durable in construction, and can be manufactured at a very small cost.

Figure 1 shows the application of the lubricator to a journal and journal-box, as it is represented in perspective in Fig. 2. The construction consists of a set of wheels or rollers journaled and mounted between suitable frame-pieces, said wheels or rollers being journaled in movable bearings adapted to slide in slots or grooves in the frame-work, and are held together by springs in connection with the bearings, so that the wheels are brought close together by the tension of the springs. The purpose for which they are thus journaled and held together is that when in position they may readily yield to the conditions of the journal, bearing against the same by the spring-tension, and made to revolve by the journal, thereby supplying the lubricant, the lower part of the wheels running in the same. To the frame-work are connected one or more arms in such a manner as to permit the frame-work and wheels to tilt down in an opposite direction to the extended arms, for placing the lubricator in position in the journal-box, with the journal in running position, and is then easily raised again to an upright position. The arm or arms are so joined to the frame-work as to prevent the lubricator from tipping over toward said arms. These extended arms pass on the bottom of the box, under the journal, till the ends press against the rear end of the box, when the lubricator is raised to an up-

right position, and the bail-handle or brace, connected with the upper part of the frame-work, is placed inside the end of the box by the door, thus holding the lubricator in a firm upright position. To said arms are attached springs with suitable bearing ends, that bear against the inner portion of the journal's bearing to take off the surplus oil inside the journal-box, to prevent its escape and waste by following the journal outside the box. Fig. 3 shows the frame-work in which the wheels or rollers are journaled in a closed frame-work, except a suitable opening at the end or elsewhere is covered with a porous substance or perforated material, or a small hole is left open near the bottom, for the purpose of supplying the wheels with but a moderate amount of oil; also to prevent agitating the oil by running the wheels in it. Fig. 4 shows the journal of the rollers and bearings in section.

In the drawings, A represents a journal-box of a railroad-car, B the brass or bearing, and C the axle-journal, all of ordinary construction.

On the bottom of the box is the frame D D', between which are the oiler-rolls F F, working on shaft c', provided with conical journals, and which work in like bearings, i, which are adapted to slide in an elongated slot, h, and held in a yielding position by means of springs c c, one being on each side of the frame D D'.

Attached to frame D is a hinged frame, E, extending longitudinally along the bottom of the box, and to which is attached two vertical springs, H H, carrying oil-rubbers f f, which are arranged to rub off the oil on journal, whereby its waste is prevented.

G is a bail or brace secured to space-blocks d d in the head of the frame D D', and serves the purpose of support and also of raising and lowering the said head-frame. The frames D D' are spaced below by the means of thimble e.

a b are lugs and pivots whereby the head D D' is hinged.

g, Fig. 3, is an oil-hole to admit oil within the box formed by the frame-head D D'; or it may be admitted by means of porous material at the end, as shown by the letter j.

The operation of all the above parts will be readily understood from the foregoing description.

Having described my invention and the means of carrying the same into effect, I desire to say that many modifications of detail

may be made within wide range without departing from the spirit thereof.

I claim—

1. The combination, in a lubricator for car-boxes, consisting of the yielding lubricating-rollers, pivoted as described, and adapted to be in contact with the journal-bearing for the supply of oil, of the vertical spring-supports having the rubbers, also adapted to be in contact with the journal-bearing, for preventing the waste of oil, as set forth.

2. The lubricator for car-axles and the like, consisting of the carrying-frame D D', horizontal frame E, pivoted as set forth, and the spring-rubbers, the former having lubricating-rollers, as set forth.

3. The combination, in a lubricator having the upright frame-head and the horizontal frame, the former having the elongated slot adapted to receive the horizontal moving bearings of the oilers, of the springs, whereby the oil-rollers may approach to and recede from each other, as shown and described.

4. A lubricator for railroad-car axles, consisting of the hinged frames having the oilers and rubbers, in combination with the bail and brace, as described.

5. A lubricator for car-axles, having the hollow head forming an oil-box, said box being provided with oil-inlet apertures for the supply of oil to the rollers, whereby only sufficient lubricant is fed to the axles, and with the movable spring-operating journal-bearings for said rollers, as described.

6. The combination, with a journal-box, of an oil-receptacle therein, and adapted to have one or more lubricating-rollers, said box being provided with controlling oil-inlet aperture, for the purpose set forth.

7. In a lubricator, one or more journaled rollers in a suitable box or device, to prevent said rollers from running in the oil outside of said box or device, the said box or device being provided with controlling oil inlet or aperture, for the purpose set forth.

8. A lubricator provided with spring-armed oil wiper or rubber, as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ADDISON BRADFORD.

Witnesses:

O. E. DUFFY,
EDWARD E. ELLIS.