No. 701,855. Patented June 10, 1902.

G. W. DECKER.

LUBRICATING ATTACHMENT FOR CAR AXLES.

(Application filed Aug. 9, 1901.)

(No Model.)

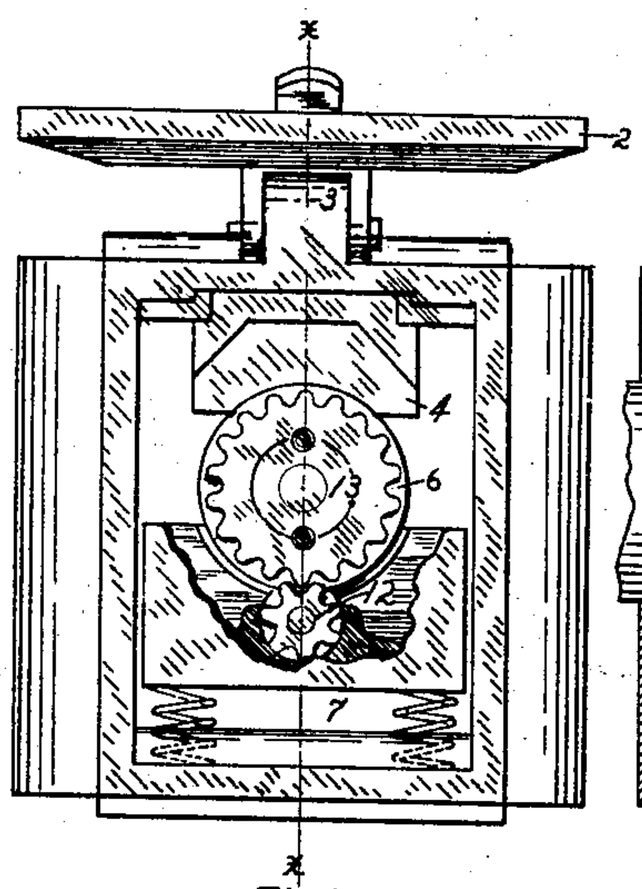

Fig. 1.

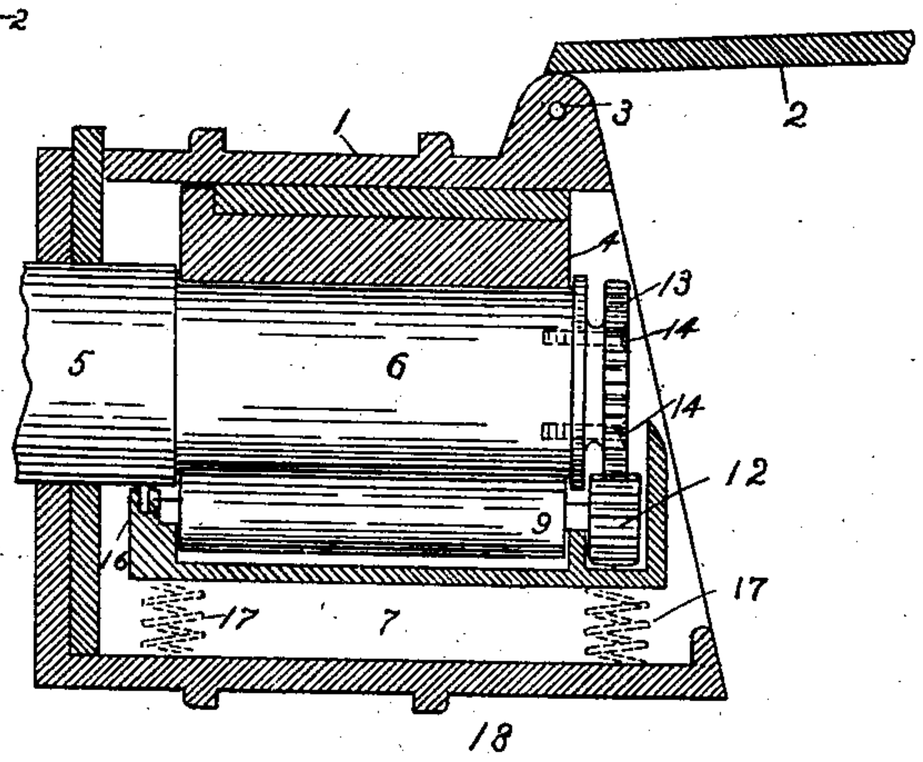

Fig. 2.

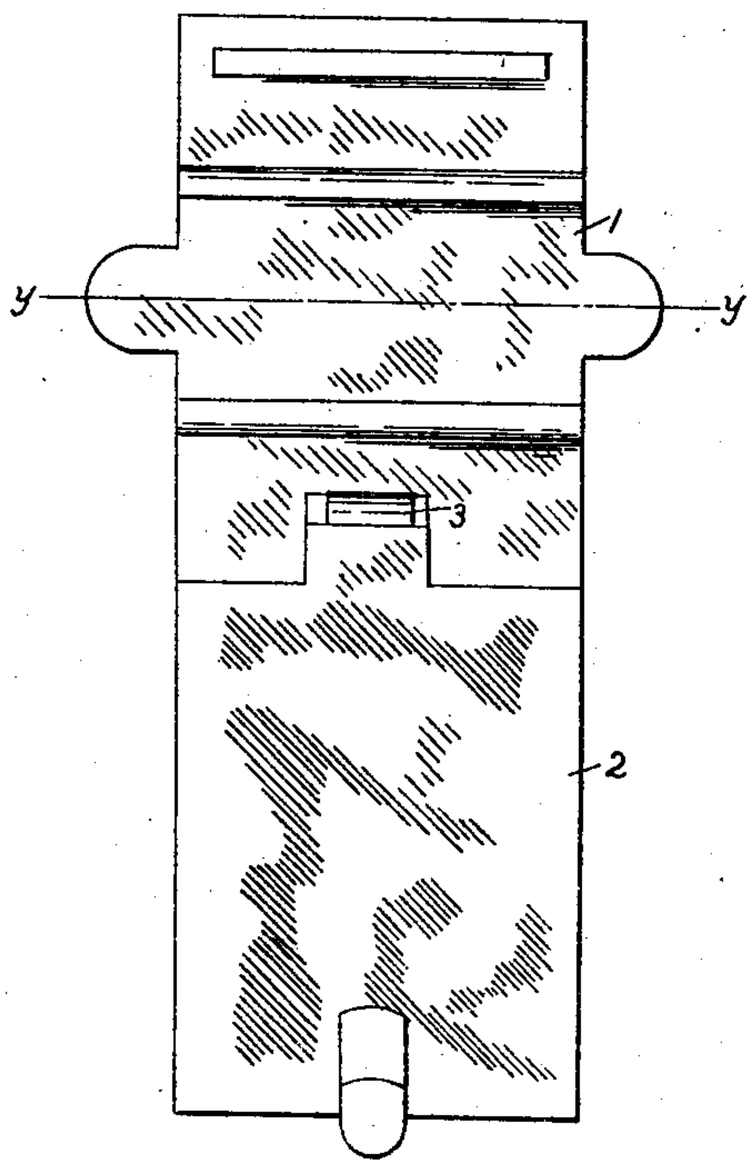

Fig. 3.

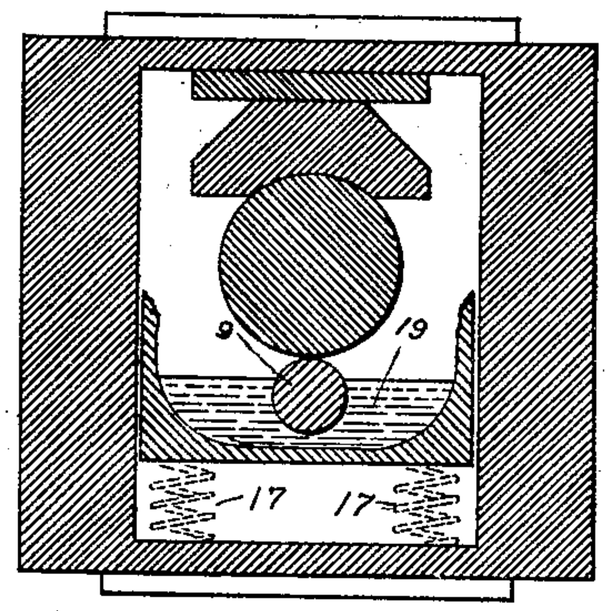

Fig. 4.

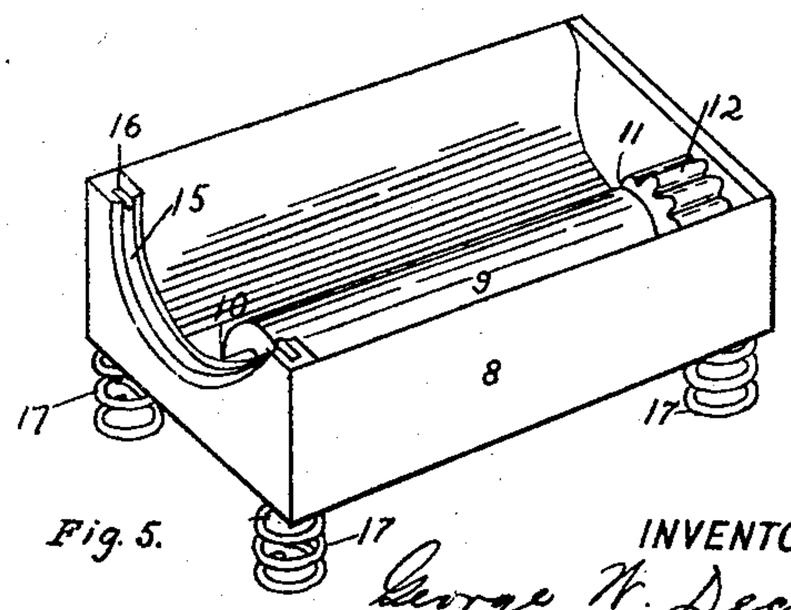

Fig. 5.

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LUBRICATING ATTACHMENT FOR CAR-AXLES.

SPECIFICATION forming part of Letters Patent No. 701,855, dated June 10, 1902.

Application filed August 9, 1901. Serial No. 71,479. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. DECKER, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Lubricating Attachments for Car-Axles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to lubricating devices such as are adapted to be used for the journals of railway-cars, locomotives, and the like; and the objects of the invention are to eliminate the use of cotton-waste, to provide a lubricator which acts with certainty, to provide a more efficient and simplified lubricator than those now in use, and to provide an attachment which may be applied to the car-axle boxes now in use, and other objects as are herein specified, and more particularly pointed out in the claim.

To these ends the invention consists of the construction, combination, and arrangement of the parts specified, and illustrated in the drawings, in which—

Figure 1 is an end elevation of a car-axle within a journal-box with lubricating attachment constructed according to my invention. Fig. 2 is a view, partly in cross-section, taken on the line *x x* of Fig. 1. Fig. 3 is a top view of the car-axle box shown in Fig. 1. Fig. 4 is a view in cross-section, taken on the line *y y* of Fig. 3. Fig. 5 is an isometrical perspective showing the lubricant-receptacle and its attachments which constitute the principal features of my improvement, the same being removed from the journal-box in which it is to be used.

Similar characters of reference denote like and corresponding parts throughout the several views.

In the drawings, 1 designates the journal-box, constructed with an outward opening equal to the area of the end of the box. This construction permits of the removal of the contents of the lower part of the box by sliding out horizontally. The open end of the box is arranged to be closed by a lid 2, hinged at 3, and may be held shut by gravity or any desirable means. It is fitted internally with the usual bearings 4, which are arranged to direct the weight of the car upon the top surface of the axle-journal 5, which is turned off smaller at 6 to provide a proper surface for the bearing-plate 4. In the lower part of the journal-box 7 it is usual to provide a receptacle for cotton-waste, which is saturated with lubricant. By my invention I provide in place of the usual cotton-waste a lubricant-receptacle 8, made from cast-iron or other suitable material, and the same is fitted on the inside with a roller 9, arranged to have its convex surface in contact with the lower convex surface of the neck of the axle end 6. The said roller is provided with bearings 10 and 11, whereby it is easily revolved in the box or receptacle 8. It is further provided with a toothed gear 12, adapted to engage with the outer toothed gear 13, which latter is secured to the end of the axle 5 by means of set-screws 14 14 or other suitable means. By this latter arrangement the roller 9 is forced to revolve in conjunction with the axle during the movement of the car. The cut-away portion on the inner end of the box accommodates the axle in fitting the parts together, and a rubber or other suitable strip 15, fitted into a groove 16, is adapted to make a close joint with the inner shoulder of the axle. The lubricant-receptacle 8 itself is supported on springs 17 17, which may be constructed from rubber, if desired, or other springy material. I prefer to have it made from metallic springs. The lower ends of the same rest on the bottom 18 of the journal-box. These springs when the journal-box is in position are under compression, so as to cause the upper surface of the roller to press against the lower surface of the axle end 6. Within the receptacle 8 any suitable lubricant, (designated 19,) which may be oil, graphite, or a mixture of the same, is placed so that the roller 9 revolves within the body thereof.

In using the device the toothed gear 13 is screwed fast to the outer end of the car-axle, and the lubricant-receptacle 8 is inserted underneath the axle in such a position that the roller 9 aforesaid lies in contact with the surface of the axle-end 6. The lubricant then being placed in the box, as shown, when the car is moved the roller 9 revolves in unison with the axle, and the lubricant adhering to its surface is thereby continuously transmitted evenly to the surface of the bearing

of the car-axle above. No cotton-waste is to be used. As the bearing above wears away and the axle recedes upward the springs on the lower part of the lubricant-receptacle cause it to follow upward and hold the roller into action, so that the wearing away of the bearings does not incapacitate the device. Should dirt of any kind fall into the lubricant, the roller will help to reduce it to such fineness as to do no damage. Adhesion to the surface of the lower roller is more likely to take place than adhesion to the upper roller, so that dirt, if carried up with the lower roller, is more likely to be carried back again and washed off in the lubricant below until it is reduced to such powder as to be devoid of doing damage.

The construction set forth is especially adaptable to the application of such lubricants as are semiliquid or such as graphite. Heretofore it has been difficult to apply graphite in the lubrication of car-axles. This device by revolving the roller through the body of the graphite evenly distributes it and insures lubrication where graphite is to be used.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A car-axle-lubricating attachment comprised in an axle-box proper with a free open end, a lubricant-receptacle removably secured within the walls of said box, suitable supporting-springs arranged on the bottom of said receptacle, a take-up roller mounted within said lubricant-receptacle, and arranged to parallel the journal to be lubricated and lie in contact therewith, in combination with means for revolving said take-up roller, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. DECKER.

Witnesses:
J. B. SMITH,
JOHN KURTZ.