

No. 673,836.

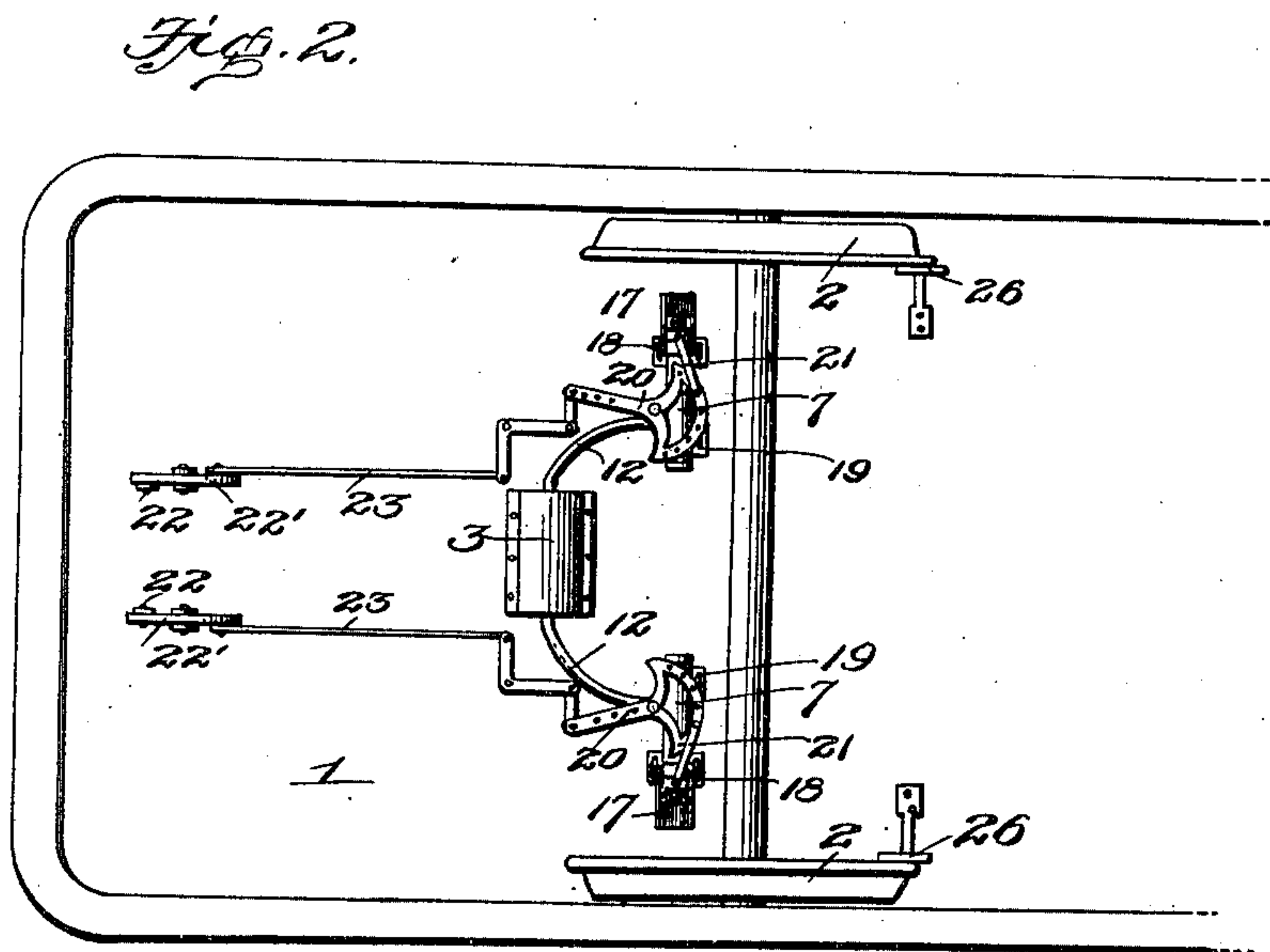
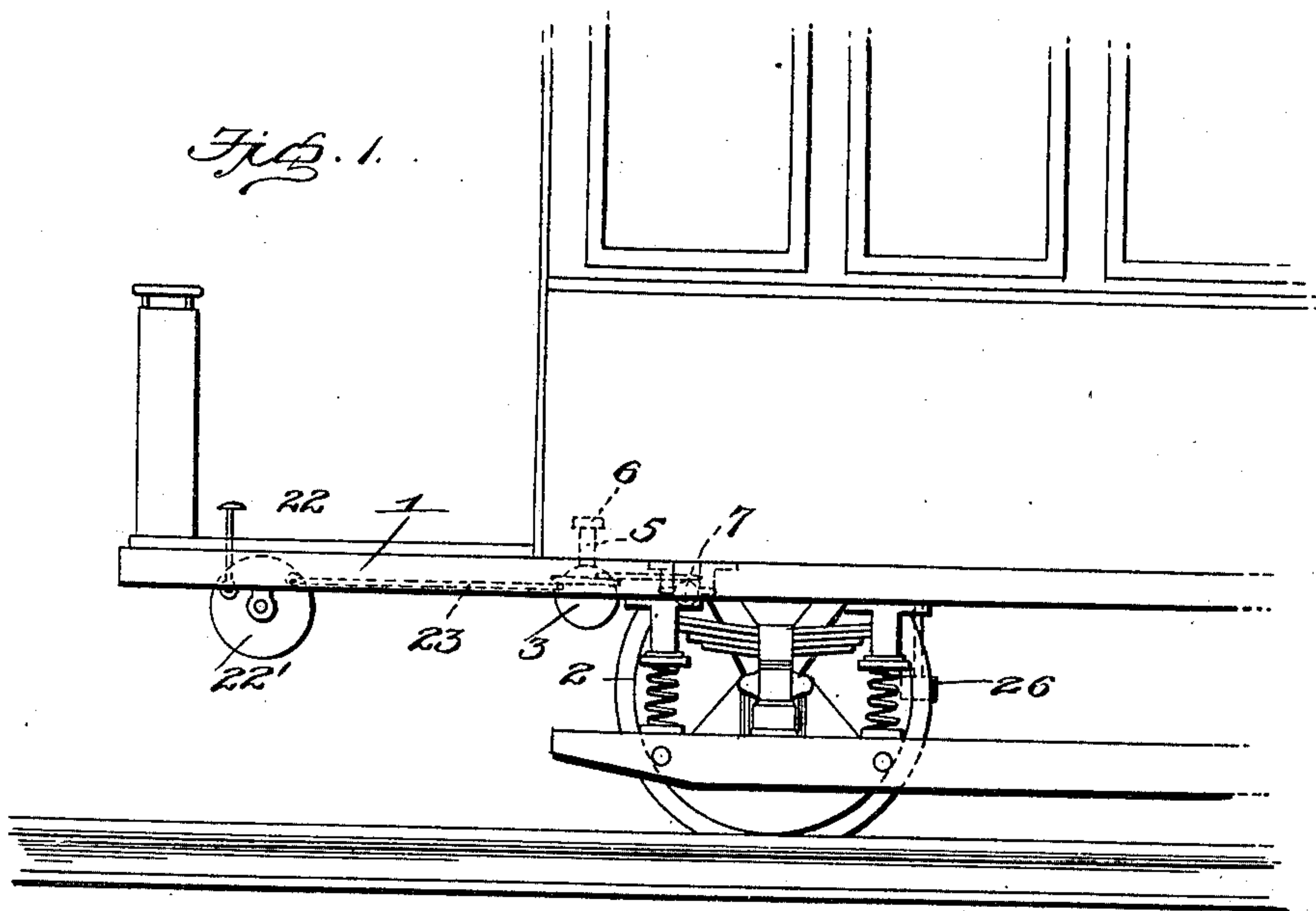
S. C. GRAY & W. J. COX.
LUBRICATOR.

Patented May 7, 1901.

(Application filed Oct. 4, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Inventors

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Fig. 3.

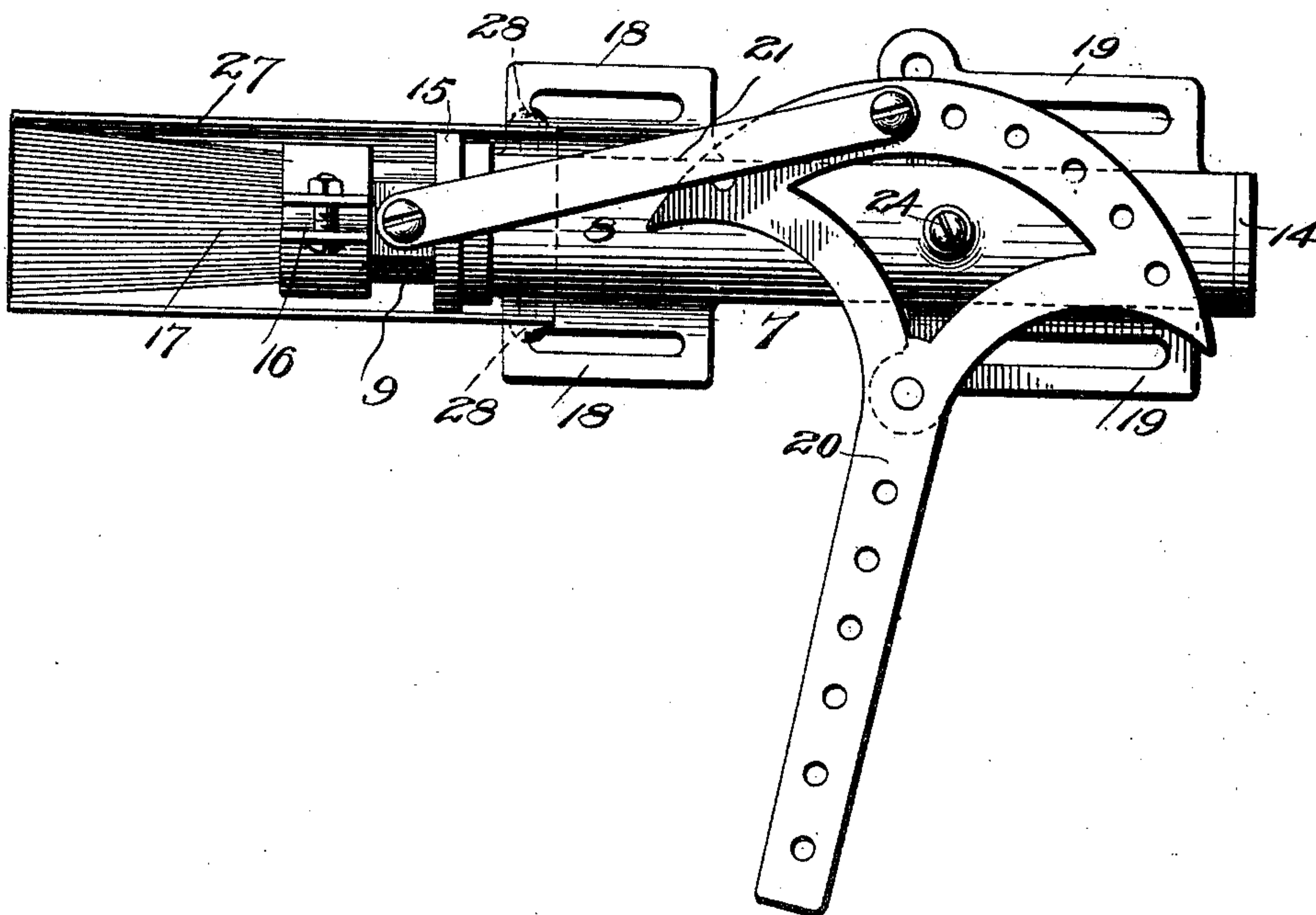
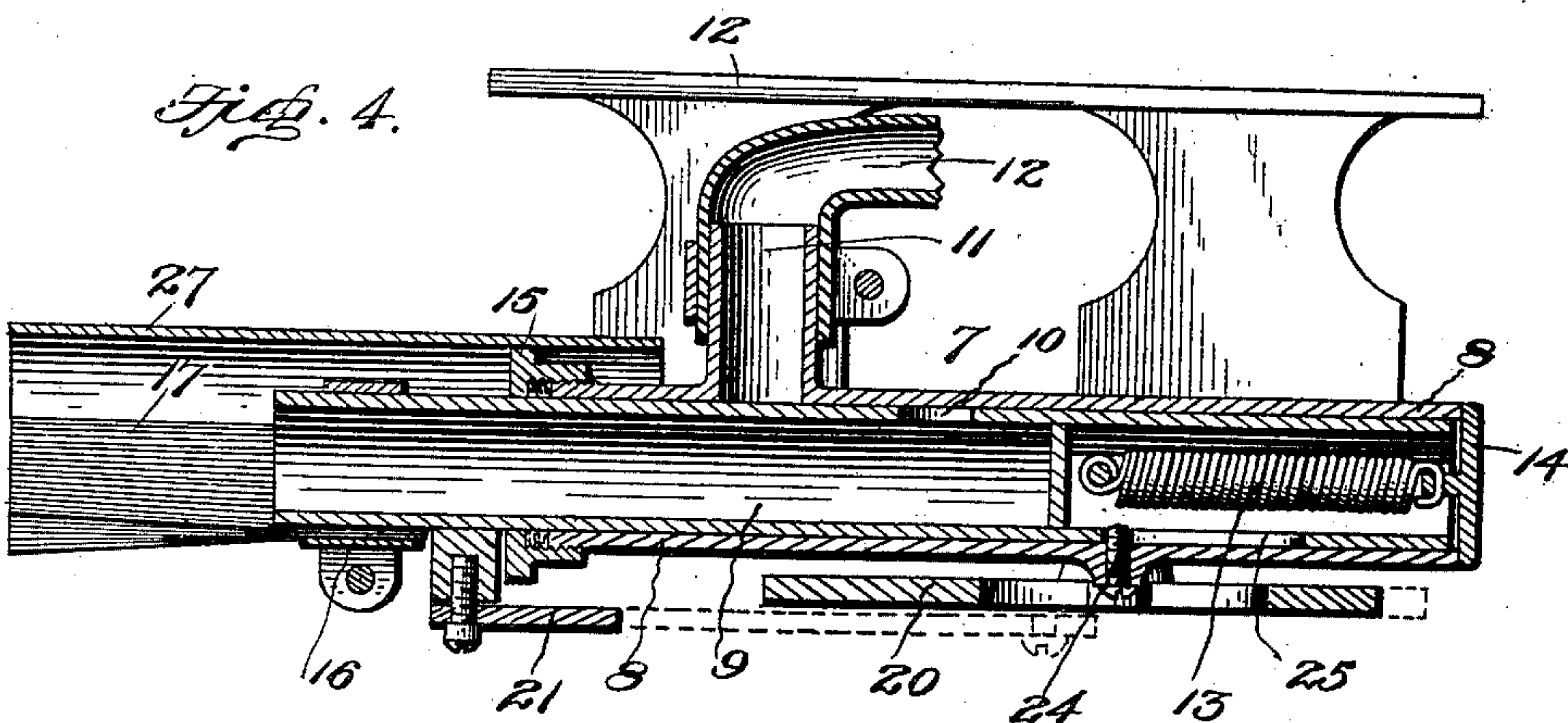


Fig. 4.



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UNITED STATES PATENT OFFICE.

SERVETUS C. GRAY AND WILLIAM JAMES COX, OF NASHVILLE, TENNESSEE,
ASSIGNORS OF TWO-THIRDS TO JOHN W. LOVE AND GOODLOE COCK-
RILL, OF SAME PLACE.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 673,836, dated May 7, 1901.

Application filed October 4, 1900. Serial No. 31,998. (No model.)

To all whom it may concern:

Be it known that we, SERVETUS C. GRAY and WILLIAM JAMES COX, citizens of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented certain new and useful Improvements in Lubricators; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to lubricators, and more particularly to that class of lubricators designed for lubricating traction-rails at curves to permit of the cars more easily passing around the same.

One object of the invention is to improve the construction shown in Patent No. 657,482, granted to us September 4, 1900, by making provision for lubricating the rails with oil instead of a semiplastic lubricant.

A further object is to provide means for shielding the distributing-brush when not in use to prevent lodgment and accumulation thereon of all foreign matter, such as dust and the like.

A still further object is to provide means for scraping the wheel of a car against which the brush acts, so that any substance which tends to lodge upon said wheel will not be brought in contact with the brush, and thereby clog or damage the same.

With these and other objects in view the invention consists in certain features of construction and combination of parts, which will be hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side view of the front portion of a street-car, illustrating the application of our invention. Fig. 2 is a bottom plan view. Fig. 3 is an enlarged detail plan view of the lubricator removed, and Fig. 4 is a vertical longitudinal sectional view.

Referring to the drawings, 1 denotes the platform of a street-car, and 2 the front wheels thereof.

3 denotes the oil-supply tank, provided with lateral flanges, bolted to the floor of the car immediately in advance of the front

wheels and having a filling-tube 5, extending up through the floor of the car and closed by a cap 6.

7 denotes the lubricator, which preferably consists of a tubular casing 8, in which is mounted to slide a discharge-tube 9, having an aperture 10, which is adapted to be brought into alinement with a nipple 11, to which a pipe or hose 12 is connected and leads to the oil-supply tank. A coil-spring 13 is connected at one end to the tube and at the other end to a cap 14 at the rear end of the casing and serves to hold the tube in the position shown in Fig. 4—that is, with its aperture out of alinement with the nipple—so as to cut off the supply of oil from said tube. The outer end of the tube is provided with a stuffing-box 15 to prevent the escape of oil between the outer surface of the tube and the inner surface or wall of the casing. Secured to the outer end of the tube by a clamp 16, similar in construction to the clamp used for attaching the hose to the nipple, is a distributing-brush 17, which is adapted to engage the inner side of the flange of the wheel, and thereby discharge oil upon said flange, so that it may be distributed upon the guard-rails at the curves of the track. The casing may be secured to the bottom of the car in any suitable manner, and is shown in the present instance as being provided with an outer and inner set of longitudinally-perforated ears 18 and 19 to permit them to be attached to depending brackets from the bottom of the car and be adjusted with proper relation to the wheels.

Any suitable means may be employed for alining the aperture of the discharge-tube with the nipple of the casing, and in the present instance we have shown a lever 20, pivoted to one of the ears and connected to the forward end of the discharge-tube by a pivoted link 21. A push-rod 22 works through a hole in the platform of the car and is pivoted to a crank-wheel 22'. A link 23 connects the crank-wheel with the lever in a manner similar to that shown in our patent hereinbefore referred to. By compressing this push-rod the discharge-tube will be forced outward

against the tension of its spring and the brush be brought into contact with the inner side of the wheel-flange. To limit the outward movement of the discharge-tube, any
 5 suitable means may be provided; but that shown in the present instance consists of a stop screw or stud 24, secured to the casing and projecting into a longitudinal slot 25, formed in the discharge-tube.

10 As the wheels are likely to gather up the dust, mud, grease, and other foreign matter upon the track and as it is desirable to prevent these foreign substances from coming in contact with the brush when the latter is ap-
 15 plied to the wheel, we provide a scraper 26, which is located immediately at the rear of the front axle on the wheels and is in engagement with the inner face of the wheel-flange, so as to remove all foreign substances there-
 20 from, and thus present the clean surface of the wheel to the brush when it is brought in contact with the wheel, thus preventing the clogging of the brush. This scraper is preferably made of springy material.

25 To shield the brush from flying dust and the like, we provide a hood or shield 27, which is preferably made of sheet metal and is semi-circular in cross-section. The inner end of the shield is provided with longitudinal notches
 30 or slots which slip over the outer ears of the casing and is held in place by set-screws 28, which engage the casing at opposite points below its axis.

The wear of the brush may be compensated
 35 for by adjusting the inner end of the link 21 in the apertures of the curved head of the lever or by adjusting the link 23 in the apertures of the arm of the lever.

From the foregoing description, taken in
 40 connection with the accompanying drawings, the construction, operation, and advantages of our invention will be readily understood without requiring an extended explanation.

The device is exceedingly useful for the
 45 purpose for which it is designed and may be

placed upon the market at a comparatively small cost.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the prin- 50
 ciple or sacrificing any of the advantages of this invention.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is— 55

1. The combination with an oil-supply tank, of a lubricator secured to the bottom of a car and comprising a casing and a discharge-tube having a sliding movement within said casing and provided with an aperture adapted to 60
 aline with a nipple carried by said casing, a pipe connecting the oil-supply tank with the nipple, and means for alining the aperture of the discharge-tube with the nipple, substan- 65
 tially as set forth.

2. The combination with the wheels of a car, of a scraper located and arranged in a posi-
 tion to scrape the inner side of the wheel-
 flange, and a lubricator arranged to discharge
 a lubricant upon the inner side of the wheel- 70
 flange at a point in advance of the scraper, substantially as set forth.

3. In a lubricator, the combination with a casing having an inlet-opening, of a discharge-
 tube mounted to slide in the casing and pro- 75
 vided with an opening adapted to be brought into register with an opening in the casing, means for moving the oil-supply tube, and a shield or dust guard attached to the casing to cover the outer end of the supply-tube, sub- 80
 stantially as set forth.

In testimony whereof we have hereunto set our hands in presence of two subscribing wit-
 nesses.

SERVETUS C. GRAY.
 WILLIAM JAMES COX.

Witnesses:

GOODLOE COCKRILL,
 L. H. DAVIS.