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PATENTED NOV. 14, 1905.

H. H. LYTLE & E. D. CAWLEY.

LUBRICATOR.

APPLICATION FILED OCT. 19, 1904.

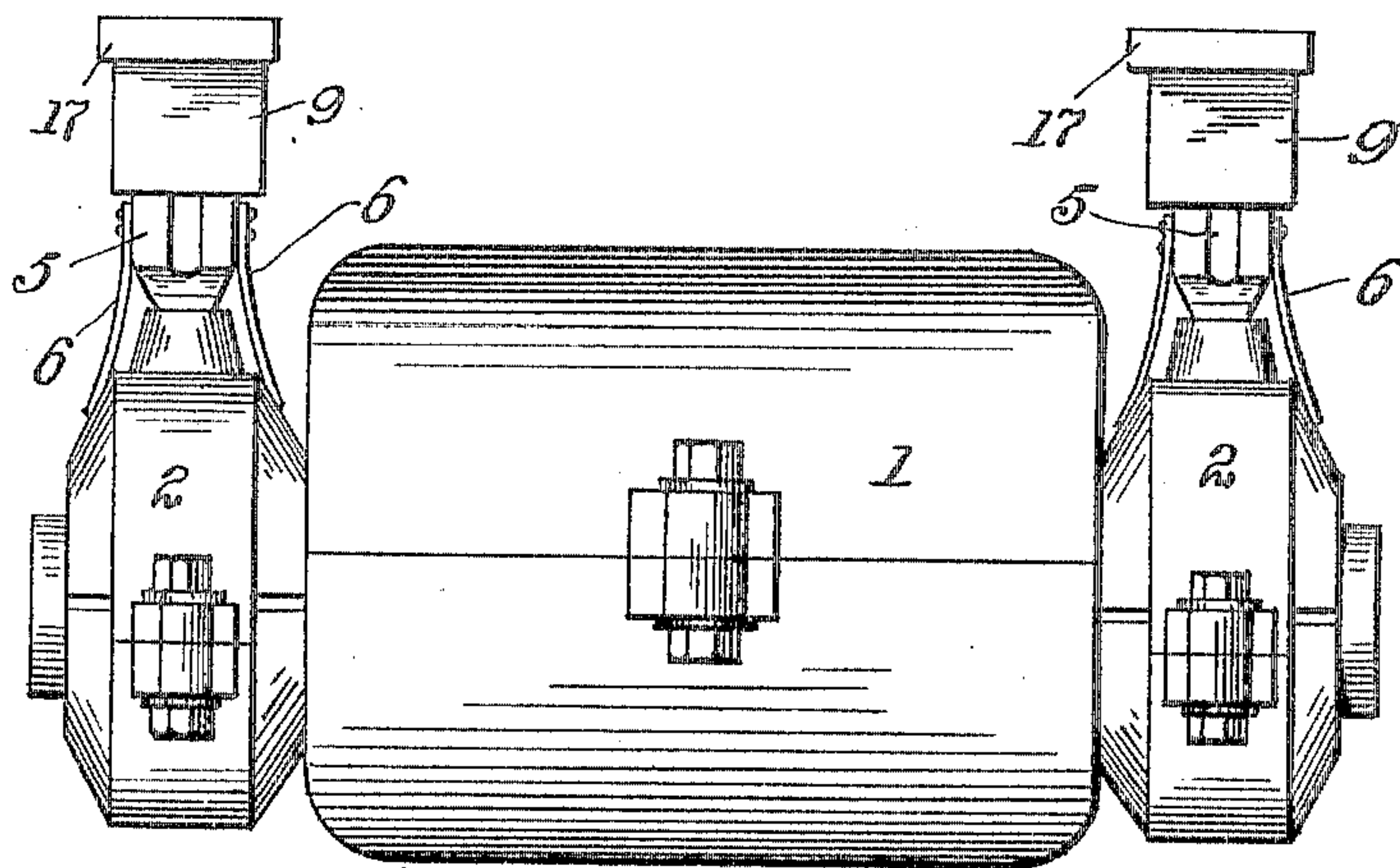


Fig. 1.

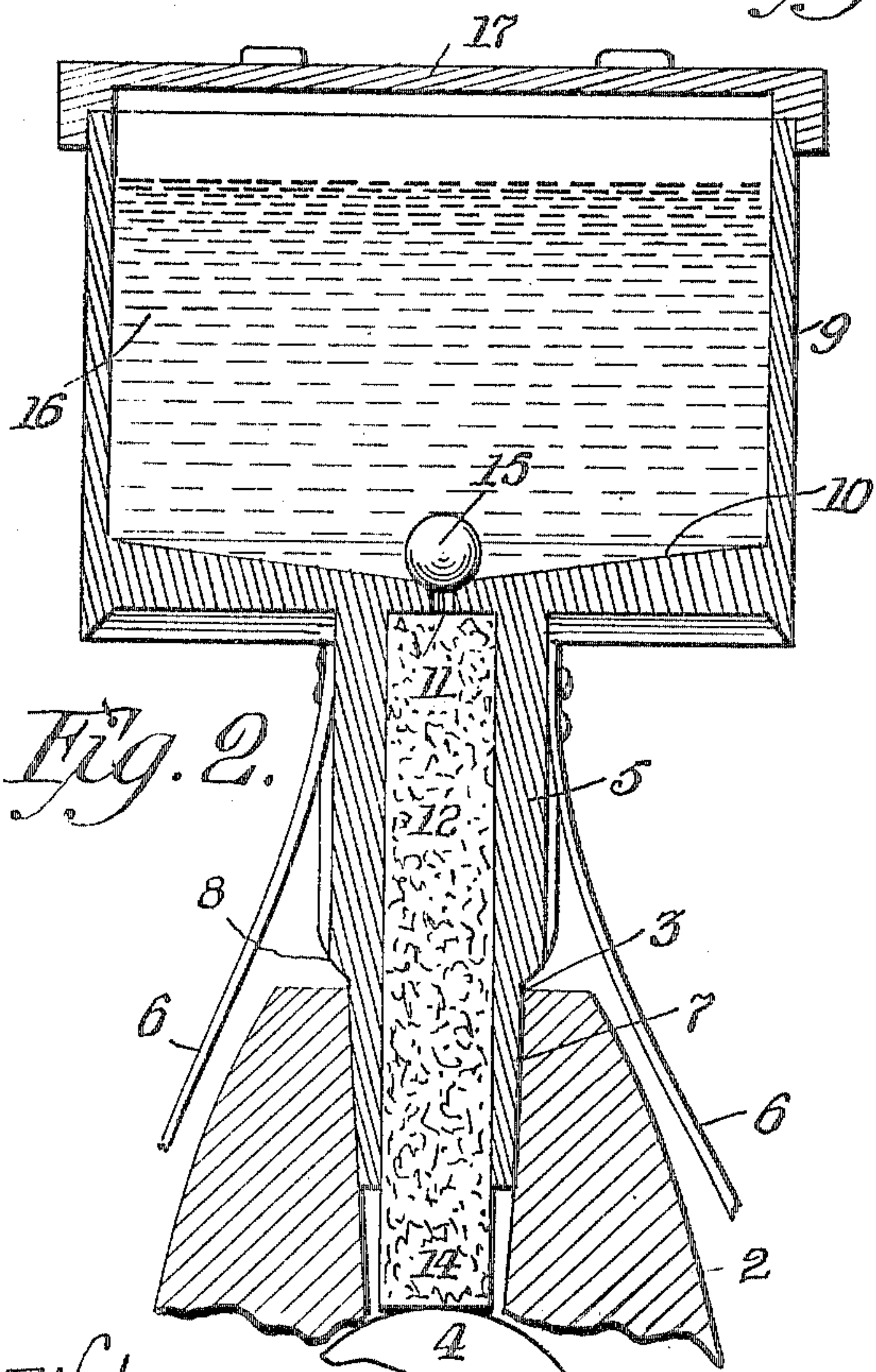


Fig. 2.

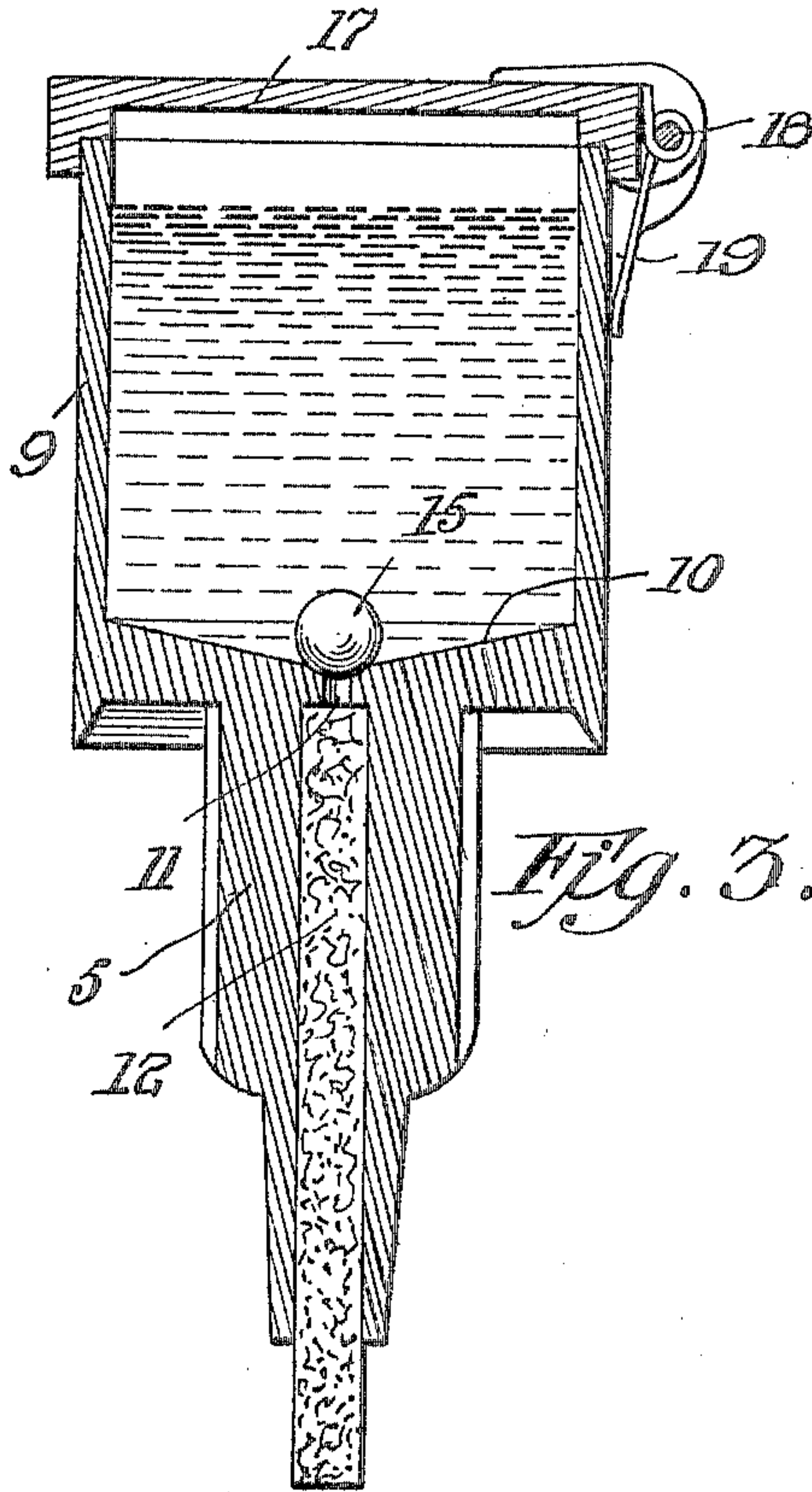


Fig. 3.

Witnesses:
R. H. Butler
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UNITED STATES PATENT OFFICE.

HARRY H. LYTTLE, OF BEAVER, AND ELEAZER D. CAWLEY, OF ALLEGHENY, PENNSYLVANIA, ASSIGNORS OF ONE-HALF TO EDWARD F. GRIMM, OF PITTSBURG, PENNSYLVANIA.

LUBRICATOR.

No. 804,612.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed October 19, 1904. Serial No. 229,386.

To all whom it may concern:

Be it known that we, HARRY H. LYTTLE, residing at Beaver, in the county of Beaver, and ELEAZER D. CAWLEY, residing at Allegheny, in the county of Allegheny, State of Pennsylvania, citizens of the United States of America, have invented certain new and useful Improvements in Lubricators, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to lubricators, and more particularly to that class of lubricators that comprise oil-cups which are adapted to be secured adjacent to the bearings of an axle or shaft; and the object of our invention is to provide an oil-receptacle of this type wherein the oil will be automatically and regularly fed to the bearings of the axle or shaft.

Our invention is particularly applicable to motors which are carried by the trucks of street-cars, and we have constructed our improved lubricator of such form as to be readily applicable to motors of this class, and where heretofore an opening only has been provided to lubricate the shaft of the motor we provide a receptacle which is adapted to be placed adjacent to the ordinary opening, so that the oil may be automatically fed to the bearing or journal-boxes of the shaft of the motor.

While this lubricator is particularly adapted for motors, it is obvious that the same may be advantageously used in connection with other machinery where lubricators and oil-cups are used.

The above and other objects of our invention will be apparent from the foregoing description, taken in connection with the drawings, wherein like numerals of reference indicate like parts throughout the several figures, in which—

Figure 1 is a front view of a general type of motor used in railway construction, showing our improved lubricator in position thereon. Fig. 2 is a vertical longitudinal sectional view of our improved lubricator. Fig. 3 is a vertical cross-sectional view of the same.

In carrying out our invention we have constructed our improved lubricator in such a manner as to make the same particularly adapted to motors which are carried by the

trucks of street-cars for propelling the same, and where these motors are used comparatively small space exists for a larger or complicated oiling device, and in the present practice an opening is provided in the bearings of the motor to allow access of the oil to the shaft of the motor, and it has been found that by this practice the bearings of the shaft often become heated and require to be oiled frequently during its use; and it is the primary object of our invention to provide an oil-receptacle which will occupy comparatively small space and can be readily secured to the bearings or journal-boxes of the motors that are now in use, and we employ an oil-receptacle which may be readily cast of metal or may be constructed of any suitable material commonly used in devices of this character.

In the accompanying drawings the reference-numeral 1 designates a motor of the type generally used in railway construction, and 2 2 designate the bearings or journal-boxes of the shaft of the motor, each of these bearings being provided with an opening 3, which communicates with the top of the shaft 4 of the motor, and in this opening 3 we secure our improved lubricator.

The reference-numeral 5 indicates the shank portion of our improved lubricator, this shank portion being preferably rectangular in cross-section and having its lower end cut away on each side, forming a contracted end at 7, a beveled portion 8 being provided between the shank portion 5 and the contracted end 7 thereof. The shank portion 5 of the lubricator is mounted in the opening 3 of each journal-box and is supported therein by steel springs 6, which have their one end secured to the sides of the shank portion 5, while the other ends of said springs are adapted to engage the sides of the journal-boxes.

Formed integral with the shank portion 5 of the lubricator is an oil-receptacle 9, which is also preferably rectangular in cross-section, and the bottom of this receptacle is tapering, as indicated at 10, and is provided centrally thereof with an aperture 11, which communicates with a recess 12, formed in the shank portion 5 of the lubricator. In this recess a suitable wick 14 is mounted, and said wick is adapted to bear upon the periphery of the

shaft 4. In the receptacle a spherical body or ball 15 is placed, and when said lubricator is at rest said ball will normally lie over the opening 11 and prevent the oil 16 from entering the recess 12.

The reference-numeral 17 designates a suitable cover or lid which is hinged, as indicated at 18, to the one side of the receptacle, and the pivot-pin of said hinge is provided with a spring 19, which will normally hold the lid or cover in a closed position upon the lubricator.

Any desired lubricant or lubricating liquid may be used in connection with our improved lubricator, and the receptacle is so designed that the lubricant reaches the bearings in a filtered condition on account of the seepage of said lubricating-oil through the wick, thereby insuring a perfect lubrication and at the same time only permitting the oil to pass upon the bearing when the car is in motion, the oil-supply being automatically cut off when the car or vehicle comes to a stop thereby eliminates any waste of oil. By this construction the shaft 4 will be continually supplied with a sufficient amount of filtered oil to lubricate it and prevent the bearing or journal-box of

the motor from becoming dry or overheated from the rotation of the shaft therein.

While we have herein shown the lubricator as constructed of three separate parts, it is obvious that the same may be made of a casting and that the general shape and contour of the lubricator may be changed without departing from the general spirit and scope of the invention.

What we claim, and desire to secure by Letters Patent, is—

In a lubricator, a receptacle having a shank adapted to be inserted in the oil-opening of a bearing, said shank being formed with a recess extending longitudinally thereof, a wick located in said recess and a ball located in said receptacle and adapted to cover an opening leading from said recess into the receptacle.

In testimony whereof we affix our signatures in the presence of two witnesses.

HARRY H. LYTLE.
ELEAZER D. CAWLEY.

Witnesses:

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