No. 781,804. PATENTED FEB. 7, 1905.

E. BERGER.

LUBRICATOR.

APPLICATION FILED DEC. 24, 1903.

Fig. 1

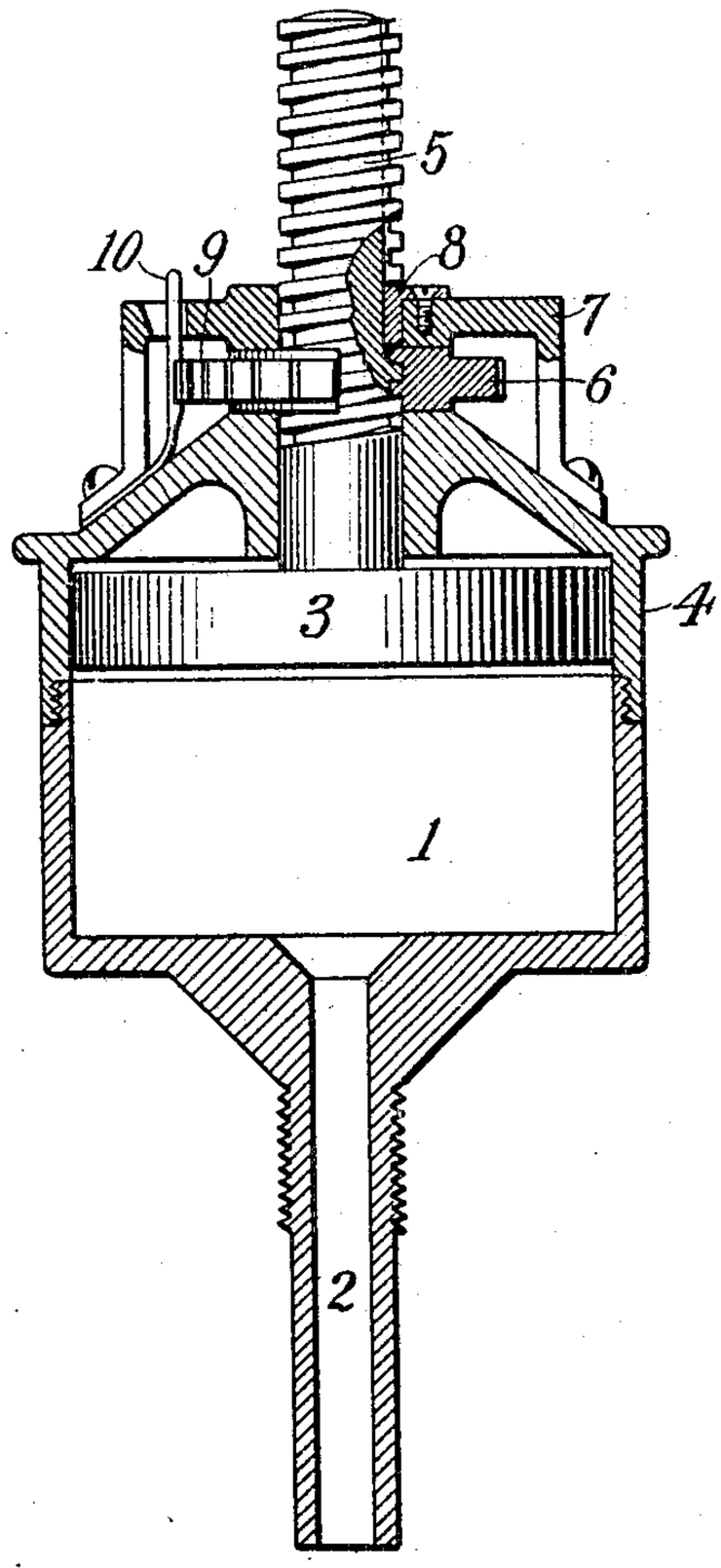
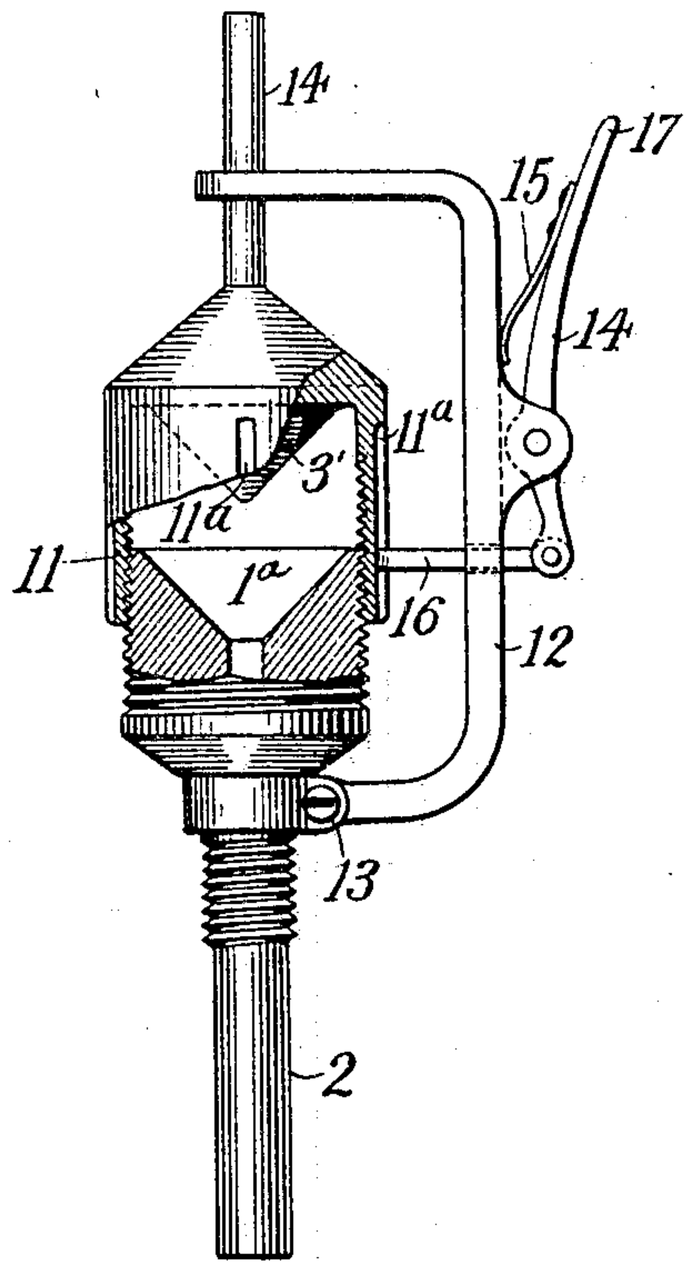


Fig. 2



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UNITED STATES PATENT OFFICE.

EDOUARD BERGER, OF JERSEY CITY, NEW JERSEY.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 781,804, dated February 7, 1905.

Application filed December 24, 1903. Serial No. 186,456.

To all whom it may concern:

Be it known that I, EDOUARD BERGER, a citizen of Switzerland,, residing at Jersey City, county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Lubricators, of which the following is a specification, reference being had to the drawings accompanying and forming part of the same.

My invention relates to devices for supplying lubricant to a bearing, particularly of the type in which the lubricant, usually a viscous or semisolid material, is held in a suitable receptacle, from which latter it is expressed through a tube to the bearing by a plunger working in coöperation with the receptacle.

The object of my invention is to produce such a device which shall be simple and inexpensive and positive in operation.

To these ends it consists of the novel features and combinations hereinafter described, and more particularly pointed out in the claims.

Referring now to the drawings, Figures 1 and 2 show two embodiments of the invention.

In Fig. 1, 1 represents the receptacle which contains the lubricant. Leading from the bottom thereof is a tube 2 of a length sufficient to extend through the bearing to a point where the lubricant will be delivered to the moving part. A reciprocating plunger is provided in each form (indicated by 3 in Fig. 1 and by 3′ in Fig. 2) to press the material out through the tube 2. In Fig. 1 a closure 4 is removably secured to the receptacle in any convenient way, as by screw-threads, as shown. The closure or cap has an opening through which extends the screw-threaded stem 5 of the plunger. A screw-collar 6, coacting with the stem 5, is held stationary relative to the motion of the stem by a yoke 7, as shown. A feather 8, engaging a groove in the stem, prevents the latter from turning. It is obvious that rotating the collar will reciprocate the plunger, whereby the lubricating material in the receptacle may be forced out through the tube 2. The collar 6 is provided on its periphery with notches, as 9, adapted to receive a spring-pressed stop 10 to hold the collar against accidental rotation, and so hold the plunger positively in adjusted position. By means of the notches in the collar the extent of rotation of the latter, and consequently the quantity of lubricant forced out by the plunger, which moves a known distance for each turn of the collar, can be accurately gaged.

In the embodiment shown in Fig. 2 the closure for the receptacle 1^a is formed, as shown, by the plunger 3′ and its depending flange 11, the screw-threads in the latter serving to reciprocate the whole to force out the lubricant, as in the other device. To perform the function of the yoke 7 in serving as a guide for the plunger-stem, I provide an arm 12, pivoted to the tube or receptacle at 13 and having in its other end an opening through which the stem 14 passes. When the closure is removed from the receptacle, the arm 12 may be allowed to drop, serving as a convenient holder for the closure. To hold the plunger against accidental displacement, as well as for the purpose of gaging the descent thereof and the amount of lubricant which is thereby expressed, the flange 11 is provided with a plurality of longitudinal grooves, as 11^a, four being a convenient number, which are adapted to engage a spring-pressed stop consisting of a lever 14, pivoted on the arm 12, a spring 15, and a finger 16, which enters one of the grooves 11^a. The grooves are made of sufficient length so that the finger 16 will be able to engage a groove in any position of the plunger. When it is desired to adjust the latter, it is only necessary to press the thumb-piece 17 of the lever 14, thereby lifting the finger 16 out of the notch, whereupon the plunger may be turned to force out the desired quantity of lubricating material. The lever is then released and enters the notch which has come into position to be engaged thereby.

By the use of such devices as I have described above the annoyance of frequent lubrication is overcome. When it is necessary to lubricate the bearings, it is effected simply by turning down the plunger, thereby expelling any desired quantity of the material. The devices may readily be made of a size to hold several months' or a year's supply of lubricating material, so that except at long in-

tervals it is never necessary to do more than adjust the plunger, as stated. The convenience of my invention has been found to be of particular benefit in the case of heavy trucks and drays, which require frequent lubrication and considerable labor on account of the necessity of removing the wheels. By using my lubricator, however, the wheels need never be removed for such purpose, and the whole operation becomes a matter of a few seconds instead of several minutes, as before.

The invention is of course capable of various embodiments without departure from its proper scope, and I therefore do not consider myself limited to what is herein specifically shown and described.

What I claim is—

1. In a device of the kind described, the combination of an exteriorly-threaded receptacle, a tube communicating therewith to deliver lubricant to a bearing, a plunger, a flange on the plunger screw-threaded on its interior to engage the threads in the receptacle, a stem on the plunger, a pivoted yoke carried by the receptacle having a bearing for the plunger-stem, and a spring-stop carried by the yoke to engage the flange of the plunger and hold the same in adjusted position, as set forth.

2. In a device of the kind described, the combination of a receptacle, a tube communicating therewith to deliver lubricant to a bearing, a plunger coöperating with the receptacle to expel the lubricant through the tube, a stem on the plunger, means for actuating the plunger, a yoke carried by the receptacle, having a bearing for the plunger-stem, and a spring-stop adapted to engage the means for actuating the plunger, to hold the plunger in adjusted position, as set forth.

EDOUARD BERGER.

Witnesses:

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