

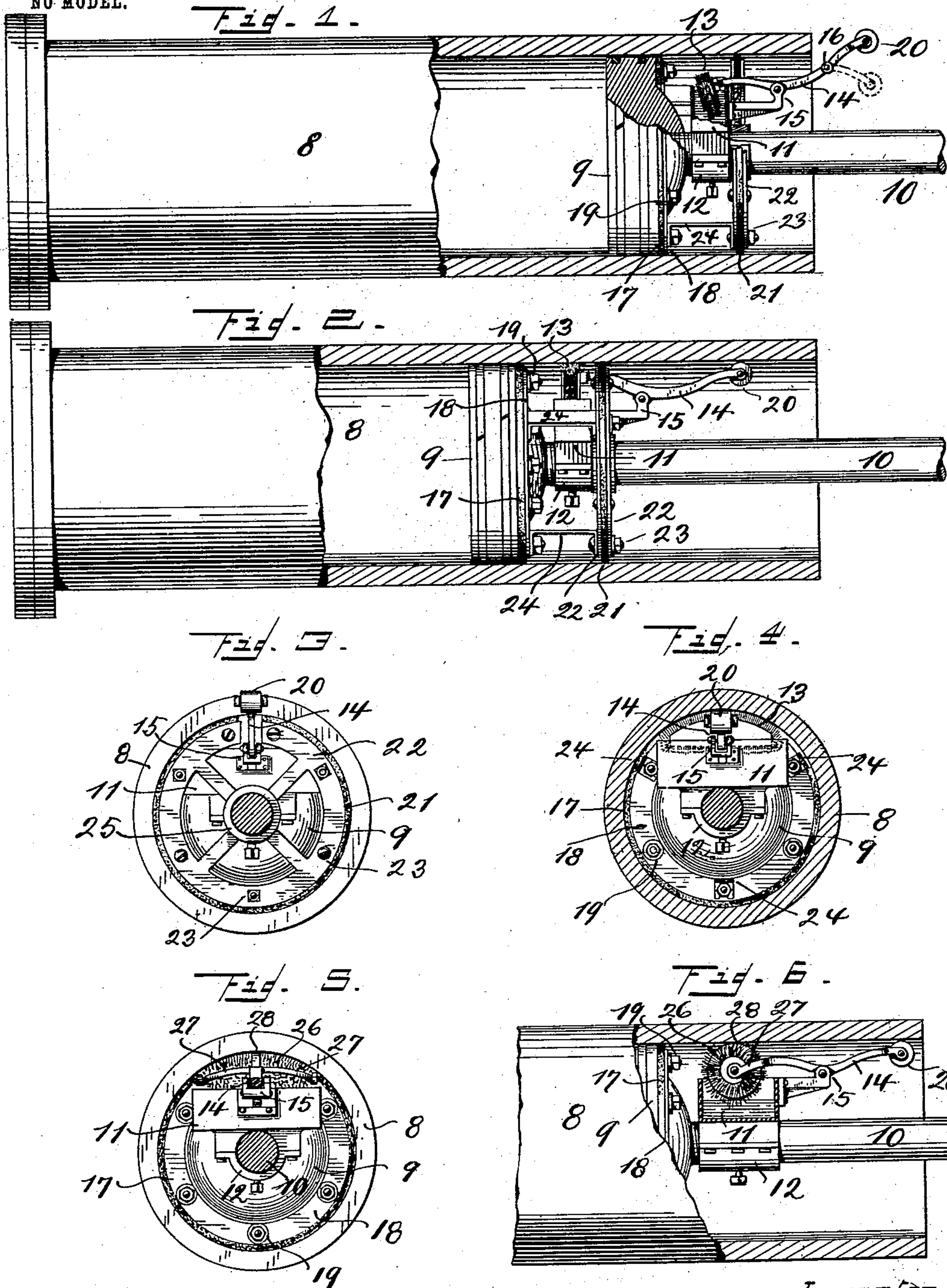
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J. M. GARD.
TRAVELING OILER.

APPLICATION FILED APR. 20, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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TRAVELING OILER.

SPECIFICATION forming part of Letters Patent No. 750,960, dated February 2, 1904.

Application filed April 20, 1903. Serial No. 153,396. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. GARD, a citizen of the United States, residing at Dayton, Campbell county, Kentucky, have invented a certain new and useful Traveling Oiler; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference characters marked thereon, which form also a part of this specification.

This invention relates to devices used for applying lubricant to the wearing-surfaces of operating parts in cases where such surfaces are not readily accessible on account of location and where the application must also be had while such parts are in motion.

My invention is devised principally for use in connection with elevator machinery, and it is more particularly intended for lubricating the interior wearing-surface of the pressure-cylinder, where such is used. It is quite difficult to apply oil to the inside of such a cylinder with ordinary means, since it can only be done while the moving piston-head is at the extreme end of its instroke, which fact prevents the work to be done from being seen, and therefore causes the oiling to be imperfectly performed, either by insufficient application of the lubricant or by an excessive one, causing waste, or by failing to reach the proper parts or surfaces. A swab at the end of a rod or devices traveling with some of the moving parts, like the piston-head, have heretofore been used to overcome to some extent this difficulty; but most of them are subject to certain objections and also require manual attention.

The object of my invention is to apply lubricant to these surfaces in a proper manner, irrespective of difficulty of access or of motion of such parts and without requiring manual attention.

In the following specification and particularly pointed out in the claims is found a full description of my invention, together with its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows in side view, with parts broken away, a cylinder and piston which may

be parts of a hydraulic elevator outfit and fitted out with the device of my invention, the piston being shown near the end of the outstroke. Fig. 2 in a similar view shows the piston in an intermediate position and with my device in action. Fig. 3 is an end view of Fig. 1. Fig. 4 is a similar view of Fig. 2 with the exception of the cylinder being in section and parts modified. Fig. 5 in an end view shows a further modification. Fig. 6 shows the same modification, together with part of a cylinder, in a view similar to Fig. 2.

8 indicates the cylinder, which may be the pressure-cylinder of a hydraulic elevator. 9 is the piston fitted to it, and 10 is the piston-rod. The piston is caused to move back and forth by the alternate admission and discharge of water, thereby actuating other parts connected to the outer end of the piston-rod for purposes of operating the elevator. The lubricant is contained in a receptacle 11, affixed to the piston or piston-rod by any suitable means—as, for instance, as shown in Fig. 6, by a cap 12. It is filled while the piston is in its farthest position out and while the parts are at rest—as, for instance, in the morning before beginning the day's operation. The oil is supplied against the inner surface of the cylinder by a brush 13 at the inner end of a lever 14, pivoted at 15. The weight of the parts is such that the brush will normally seek the oil-tank. It is caused to come in contact with the inner surface of the cylinder to supply oil thereagainst by the outer end of this lever, which latter is so shaped that while the parts move inside the cylinder said end will come in contact with this latter, and by being depressed raise the saturated brush against the cylinder, all as shown in Fig. 2. Toward and at the end of the outstroke this depressed end of the lever will become free and permit the brush to drop again into the oil, as shown in Fig. 1. To ease the friction, this outer end carries, by preference, a roller 20. If by reason of sufficient lubrication it is desirable to interrupt the application of oil at times, the device may be rendered inoperative by preventing contact of the outer end of the lever with the cylinder. This may be done by having the outer part of the lever in two parts

hinge-jointed and by providing a tightening-screw 16, whereby said end may be held either in an elevated operative position, as shown, or let down in an inoperative position, as shown by dotted lines in Fig. 1. Since the oil is supplied only against the upper part of the cylinder, it is desirable to provide a wiping or distributing device rather than rely on the piston to distribute the oil over the entire surface of the cylinder. For such purposes I provide one or two rings of suitable soft and yielding material, which has also absorptive qualities to retain the oil—like felt, for instance. There may be one ring only on either side of the brush, or two may be used, one on each side of it. In Figs. 1, 2, and 3 two rings are shown. One ring (indicated by 17) is secured against the piston by means of a clamping-ring 18 and held by studs and nuts 19. This ring is also shown in Figs. 4, 5, and 6. In Figs. 1, 2, and 3 the additional ring 21 is shown on the outer side of the oiling device. This ring is held by one or, preferably, between two clamping-rings 22, secured to each other by bolts 23. These rings may be supported on the piston by braces 24, held by the same studs which hold the clamping-rings and as shown in Figs. 1 and 2, and the rings may have arms connected to a hub 25, which is mounted on the piston-rod, as shown in Fig. 3. Where this additional outer wiping device is used, it becomes necessary to cut out the rings sufficiently at the top to permit working of the lever. In the modification shown in Figs. 5 and 6 a rotary brush 26 is used, the inner end of the lever being forked, as shown at 27, the end of the fork branches providing bearings between which the ends of the brush are mounted. Midway between the ends of this brush there is a roller 28, of suit-

able material, like rubber or wood or wood covered with leather, and which by its positive frictional contact with the cylinder insures rotation of the brush. In the drawings lever 14 is cut away in Fig. 5 in order to show this roller plainly.

Having described my invention, I claim as new—

1. In a traveling oiler for a hydraulic cylinder, the combination of an oil-receptacle connected so as to travel with the moving parts, a brush and a pivoted lever at one end of which it is carried in a manner to be free to move between the oil-receptacle and the inner surface of the cylinder, the outer end of this lever being so formed that while the oiling device is traveling inside of the cylinder it comes in contact with the latter and is depressed thereby for the purpose of raising the brush against the cylinder.

2. In a traveling oiler for a hydraulic cylinder, the combination of an oil-receptacle connected so as to travel with the moving parts, a brush, a pivoted lever at one end of which it is carried in a manner to be free to move between the oil-receptacle and the inner surface of the cylinder, the outer end of this lever being so formed that while the oiling device is traveling inside of the cylinder it comes in contact with the latter and is depressed thereby, for the purpose of raising the brush against the cylinder, and an oil-distributing device also carried by the moving parts to distribute the oil applied by the brush.

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

JOHN M. GARD.

Witnesses:

C. SPENGEL,
AUGUST BOEHME.