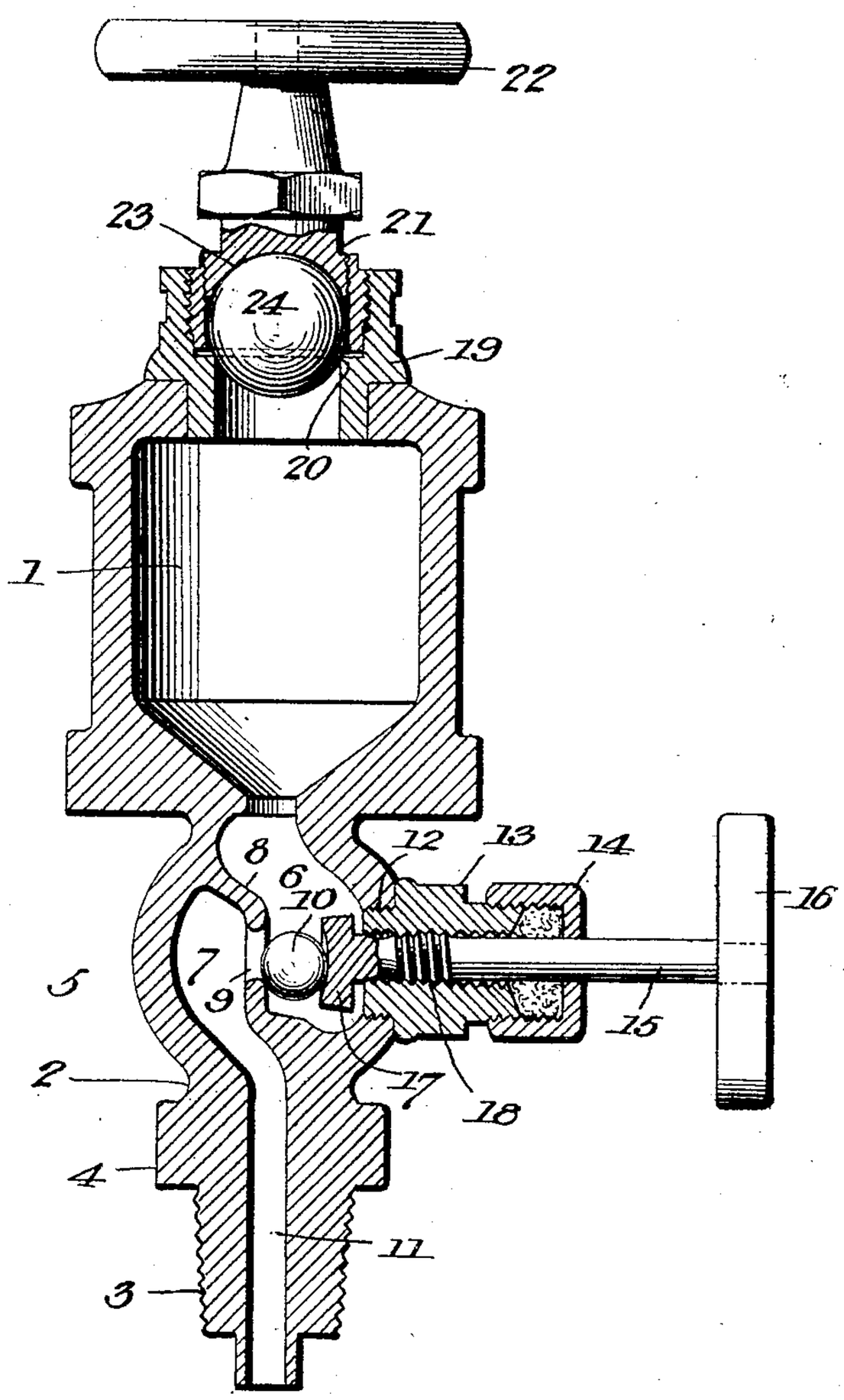
No. 803,609. PATENTED NOV. 7, 1905.

F. W. LEIDECKER.

LUBRICATOR.

APPLICATION FILED MAR. 27, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

FRANK WALLACE LEIDECKER, OF MARIETTA, OHIO, ASSIGNOR TO LEIDECKER GAUGE COMPANY, OF MARIETTA, OHIO.

LUBRICATOR.

No. 803,609. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed March 27, 1905. Serial No. 252,302.

To all whom it may concern:

Be it known that I, FRANK WALLACE LEIDECKER, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented a new and useful Lubricator, of which the following is a specification.

This invention relates to that class of lubricators for various parts of engines or machinery in which the lubricating material has to be introduced to the parts to be lubricated against pressure, as that of steam, or wherever the normal pressure on the lubricating material in the reservoir of the lubricator differs from the pressure to which it is exposed at its discharge-aperture; and the invention consists in the improved construction and novel arrangement and combination of parts to be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of embodiment of a lubricator constructed in accordance with the principles of the invention.

In said drawing the single figure represents a vertical sectional elevation of a lubricator constructed in accordance with the principles of the invention.

The lubricating-cup 1 is provided with a downward-extending stem 2, the lower end of which is externally threaded, as at 3, to enable the device to be mounted in position for operation. The stem 2 is also provided with a wrench-seat 4 and with an expanded globular portion 5, which latter is adjacent to the bottom of the cup.

Within the expanded portion 5 of the stem 2 are formed two passages 6 and 7, which are separated by means of a wall or web 8, provided with an aperture 9, constituting a seat for a ball-valve 10, which latter—the apertured portion of the web or wall 8—being normally in a vertical position will normally gravitate from its seat, said valve being usually constructed of metal which is of greater specific gravity than the lubricant. The passage 6 communicates with the interior of the cup or reservoir 1 through the bottom of the latter, and the passage 7 communicates with a bore or passage 11, extending through the lower portion of the stem 1.

The wall of the bulbed portion 5 is provided with a threaded aperture 12 for the reception of a plug 13, having a packing-box 14, through which extends a valve-operating stem 15, provided at its outer end with a handle 16 and at its inner end with a head 17, adapted to engage the ball-valve 10 and to force the latter to its seat, the stem 15 being threaded in the plug 13, as shown at 18.

The cup or reservoir 1 is provided with a filling-plug 19, provided with a valve-seat 20 and threaded for the reception of a head 21, having a handle 22. The head 21 is recessed, as shown at 23, for the reception of a ball-valve 24, which is loosely seated in said recess, where it may be confined by swaging or upsetting the material of the head, as will be readily understood. By tightening the head 21 the valve 24 will be forced against its seat in such a manner as to form an extremely-tight closure.

In operation the ball-valve 10 may be forced to its seat by tightening the stem 15, thus cutting off communication between the cup 1 and the steam-pressure in the valve-chest or other part of an engine with which the device has been connected for operation. When the valve 10 is thus closed, the head 21 may be removed for the purpose of filling the cup or reservoir 1 with lubricating material. When the head 20 has been replaced and the valve 24 tightened against its seat, the stem 15 is rotated to move it slightly in an outward direction, thus unseating the valve 10. Steam passing from below through the passages 11, 7, and 6 will rise through the lubricating material contained in the cup until an equal pressure exists above and below said lubricating material, which latter will then be fed by gravity through the passages 6, 7, and 11 and to the steam-chest or other part to be lubricated. The passage of the lubricating material through the aperture 9, between the passages 6 and 7, will operate to carry the ball-valve 10 to its seat, thus checking further flow until the steam above the lubricating material condenses, when the excess of pressure from below will operate to unseat the valve 10 for a repetition of the operation.

The construction and operation of this improved device is, as will be seen, extremely

simple, and the improved lubricator may be constructed and installed at a moderate expense.

Having thus described the invention, what is claimed is—

1. A lubricant-receptacle having an exit-passage, an approximately vertical wall in said passage having an aperture forming a valve-seat, a ball-valve adapted to engage said seat, and means, capable of regulation, for supporting said ball-valve in the unseated position to which it normally gravitates.

2. A lubricant-receptacle having an exit-passage, an approximately vertical wall in said passage having an aperture forming a valve-seat, a ball-valve adapted to engage said seat on the flow of lubricant, and means for forcing said valve to its seat.

3. A lubricant-receptacle having an exit-passage, an approximately vertical wall in said passage having an aperture forming a valve-seat, a ball-valve adapted to engage said seat, and means for supporting said ball-valve in the unseated position to which it normally gravitates and for forcing said valve to its seat.

4. A lubricant-receptacle having an exit, and a valve of greater specific gravity than the lubricant in the receptacle and movable laterally to an obstructing position in the exit by the passage of lubricating material therethrough in a downward direction.

5. A steam-tight lubricant-receptacle having an exit constituting also an inlet for steam under pressure, an approximately vertical wall in the way constituting said exit and inlet said wall having an aperture constituting a valve-seat, a ball-valve adapted to engage said seat and normally occupying an unseated position on the lubricant side of the wall, and means for forcing said valve to its seat.

6. A steam-tight lubricant-receptacle having an exit-way constituting also an inlet for steam under pressure, an approximately vertical wall in said way, said wall having an aperture constituting a valve-seat, and a ball-valve adapted to engage said seat and normally occupying an unseated position on the lubricant side of the wall.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK WALLACE LEIDECKER.

Witnesses:

H. H. HILTON,

SMITH D. TURNER.