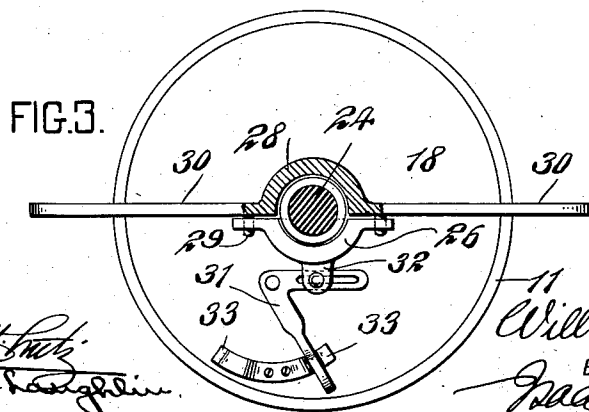
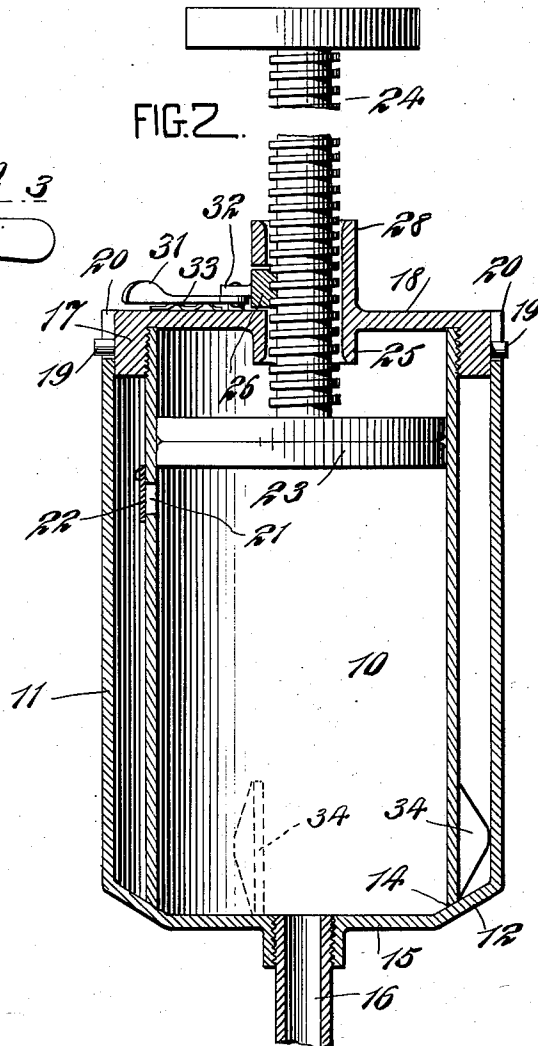
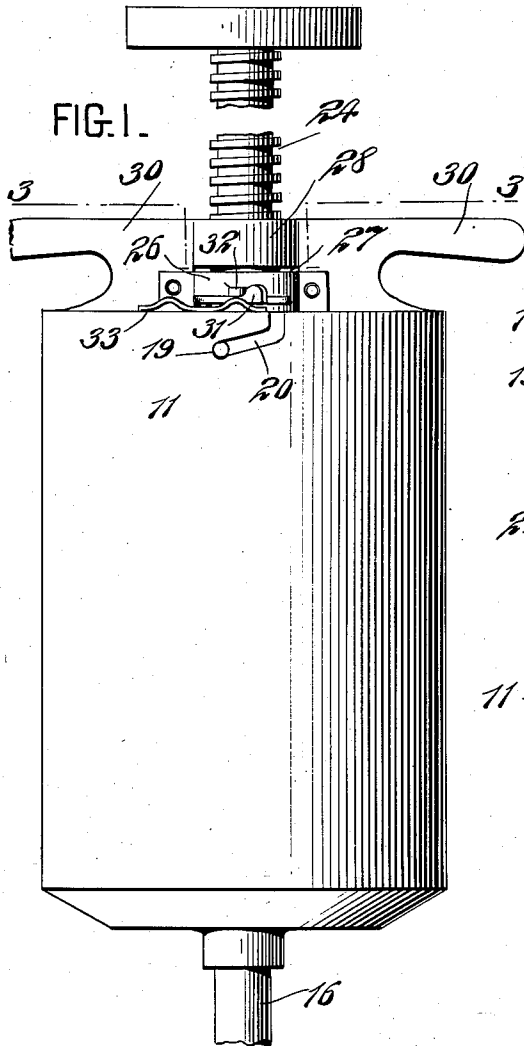


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HAND OILER.
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966,861.

Patented Aug. 9, 1910.



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WILLIAM RUBLY, OF TUCKAHOE, NEW YORK.

HAND-OILER.

966,861.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM RUBLY, of Tuckahoe, Westchester county, New York, have invented certain new and useful Improvements in Hand-Oilers, of which the following is a full, clear, and exact specification, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to what is commonly termed a "grease gun", that is to say, a form of syringe used for handling oils and grease to enable oil cups and grease cups on machinery to be readily filled. It is particularly useful in the automobile industry where gear cases and cups are to be filled with heavy lubricants such as grease, and the object of my invention is to enable these heavy lubricants to be quickly handled with the hand oiler and to avoid the difficulty heretofore experienced in filling the hand oiler with the grease. I attain this end by a peculiar construction which enables me to plunge the cylinder of the hand oiler into a body of grease and withdraw the cylinder and with it the mass of grease inclosed thereby.

My invention also involves a novel device by means of which the hand oiler may be instantly converted from a straight piston motion under direct pressure to a screw feed piston or vice versa.

The invention involves various other features of importance and all will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is had to the accompanying drawings which represent one of the various forms in which my invention may be practically embodied, in which drawings,

Figure 1 is a side elevation of the device; Fig. 2 is a central longitudinal section of the same; and Fig. 3 is a top view of the barrel of the hand oiler with the piston or follower rod in section.

10 indicates the inner barrel or cylinder proper and 11 an outer barrel which is spaced from the inner barrel and has a tapering portion 12 at the discharge end which is engaged by the beveled lower edge 14 of the inner cylinder 10. The end wall 15 of the outer cylinder 11 carries the usual discharge spout 16. At the outer end the inner cylinder 10 is screwed into an internally threaded flange 17 on the head 18 and said head is provided with two or more pins 19

which work in bayonet slots 20 in the walls of the outer cylinder 11. These slots, it will be seen, are inclined (see Fig. 1) so that by turning the head 18 relatively to the outer cylinder 11 the inner cylinder will be forced down with its inclined edge 14 engaging the inclined wall 12 and a tight connection effected. By reversing the direction of motion, the pins 19 may be disengaged from the walls of the slot 20, and the inner cylinder 10 with the head 18 completely withdrawn from the outer cylinder 11.

The inner cylinder, when withdrawn, may be plunged into a body of grease and withdrawn therefrom bringing with it a full charge of grease which may be readily expelled upon reassembling the parts as shown in Figs. 1 and 2. 21 indicates a vent opening in the inner cylinder which is covered by a check valve 22 opening outward. When the inner cylinder 10 is plunged into the grease the check valve 22 opens to allow the air to pass from the inner cylinder and upon withdrawal of the inner cylinder the check valve closes preventing the air from re-entering the cylinder and insuring the removal of the grease with the same. The check valve 22 is not absolutely essential and may be dispensed with if desired, the operator then holding his finger over the opening 21 during the withdrawal of the inner cylinder. The outer cylinder is provided to furnish a conveniently arranged outer or discharge end wall for the inner cylinder and also to prevent soiling one's hands by the necessity of grasping the inner cylinder after the same has been plunged into the grease. Upon the withdrawal of the inner cylinder from the grease a certain quantity thereof will necessarily adhere to the outer wall of the inner cylinder but this is covered by the outer cylinder when the parts are reassembled so that the device may be handled at will without greasing the hands of the user.

The inner cylinder is provided with the usual piston or follower 23 for forcing out the oil or grease and this is connected with a rod 24 having a square or V-shaped thread thereon. Said rod passes through a small guide boss 25 formed around an opening central in the top 18. Coacting with the threaded rod 24 is a substantially semi-circular nut-section 26 which may be made to engage or disengage the screw 24 at will. When disengaged, the follower may be ac-

tuated manually by a direct pushing movement; when the nut section is engaged with the screw the follower may then be operated with a rotating and progressively advancing motion due to rotation of the screw in the nut. The nut-section 26 is located in a cavity 27 formed in a tubular guide 28 mounted on and preferably cast with the head 18. At its ends the nut section has openings receiving loosely guide dowels 29 fastened to said tubular guide 28, these dowels guiding the motion of the nut section 26 toward and from the screw 24. The said guide 28 has at each side thereof a projecting, overhanging flange 30 which flanges form finger pieces for the manipulation of the hand oiler. The nut section 26 may be operated back and forth by any desired means. I have here shown an elbow lever 31 articulated to a lug 32 on the nut section and coacting with two spring catches 33 which hold the lever in either one of its two positions.

In the operation of the device, therefore, manipulation of the elbow lever 31 throws the nut section 26 in and out of action at will and converts the hand oiler from one type to another, thus adapting it for use with heavy oils and greases as well as light lubricating oils. The vent orifice 21 being immediately below the innermost position of the follower will not interfere materially with the action of the follower in sucking into the cylinder light liquid lubricants. The operation of filling the hand oiler with grease may be very easily and quickly performed, the operator grasping the outer cylinder 11 in one hand and the handles 30 in the other and by twisting the outer cylinder freeing the pins 19 from the bayonet slots 20, thus allowing the inner cylinder to be withdrawn and plunged into the grease as explained. Upon reëntering the inner cylinder into the outer cylinder and locking it by the pins 19 and slots 20, all danger of soiling the hands of the user by the grease which may be spread over the outer surface of the cylinder 10 is avoided.

It will also be seen that in some situations the inner cylinder with its piston and connections may be used without the outer cylinder, as for example, in filling gear cases on automobiles, the grease being then simply forced, by the piston, out of the open end of the inner cylinder.

The outer cylinder in addition to performing the functions described above performs the further function of protecting the inner and piston cylinder from injury due to blows tending to indent or fracture the inner cylinder.

Preferably the inner cylinder 10 is provided at its lower portion with outwardly projecting lugs 34 which serve two important functions; first, to guide the inner cyl-

inder in its movement in and out of the outer cylinder and second to form channels in the grease outside of the inner cylinder when the same is introduced into the grease, so that when such cylinder is withdrawn air may pass down these channels to break the vacuum at the base of the inner cylinder.

Various changes may be made in the form, proportions and details of the device without departing from the spirit of my invention since I do not consider myself limited to the precise details shown in the drawings, but am entitled to all variations thereof as may fall within the scope of the claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A hand oiler having an inner and an outer cylinder separable from each other at will, the inner cylinder being open at one end and constructed of metal sufficiently rigid to enable it to be plunged into a mass of stiff grease to fill the same when removed from the outer cylinder, a follower for ejecting the grease from the open end of said inner cylinder, and an air outlet for permitting the escape of air from beneath the follower during the plunging of the open end of the cylinder into the grease, the grease being prevented from passing therethrough during the major portion of the travel of the follower.

2. A hand oiler including two concentric cylinders, the inner cylinder having an open end and a closed end and the outer cylinder having an open end and an outlet or delivery end means for detachably securing the cylinders together with the open end of the inner cylinder closed by the outlet end of the outer cylinder to prevent the passage of grease from the inner cylinder to the space between the cylinder, an air outlet from the inner cylinder to the outer cylinder adjacent the closed end of the former an outwardly opening valve controlling said air outlet and a piston movable within the inner cylinder to a position between the closed end and the air outlet.

3. A hand oiler having inner and outer cylinders, a head at the upper end of the inner cylinder, means for releasably fastening together the upper ends of the two cylinders, and a piston or follower operating in the inner cylinder, the outer cylinder having at its lower end a wall engaging with the lower end of the inner cylinder and forming a bottom therefor and preventing the passage of grease to the space between the cylinders when the parts are in assembled relationship.

4. A hand oiler having inner and outer cylinders of which the inner has an open lower end and the outer has its lower end lying opposite the open lower end of the inner cylinder and means for fastening the

two cylinders together, said means exerting a downward thrust on the inner cylinder to engage its lower edge firmly with the adjacent end of the outer cylinder.

- 5 5. A hand oiler having separable inner and outer cylinders, a piston operating in the inner cylinder and an exterior lateral lip on the lower portion of the inner cylinder adapted to guide the inner cylinder in its
10 movement in and out of the outer cylinder and to form a channel in the grease when the inner cylinder is plunged therein to be filled to permit air to pass to the base of the cylinder to break the vacuum upon the withdrawal of the cylinder from the grease.

- 15 6. A hand oiler including a cylinder hav-

ing a head, a follower in the cylinder, a tubular guide on the head and having an opening in the side thereof, a threaded rod connected to the follower and extending 20 through said guide, a nut section in said opening and a lever pivoted to the head and to the nut-section for moving the latter into or out of engagement with the rod.

In testimony whereof I have signed my 25 name to this specification in the presence of two subscribing witnesses.

WILLIAM RUBLY.

Witnesses:

ISAAC B. OWENS,
E. I. McLAUGHLIN.