

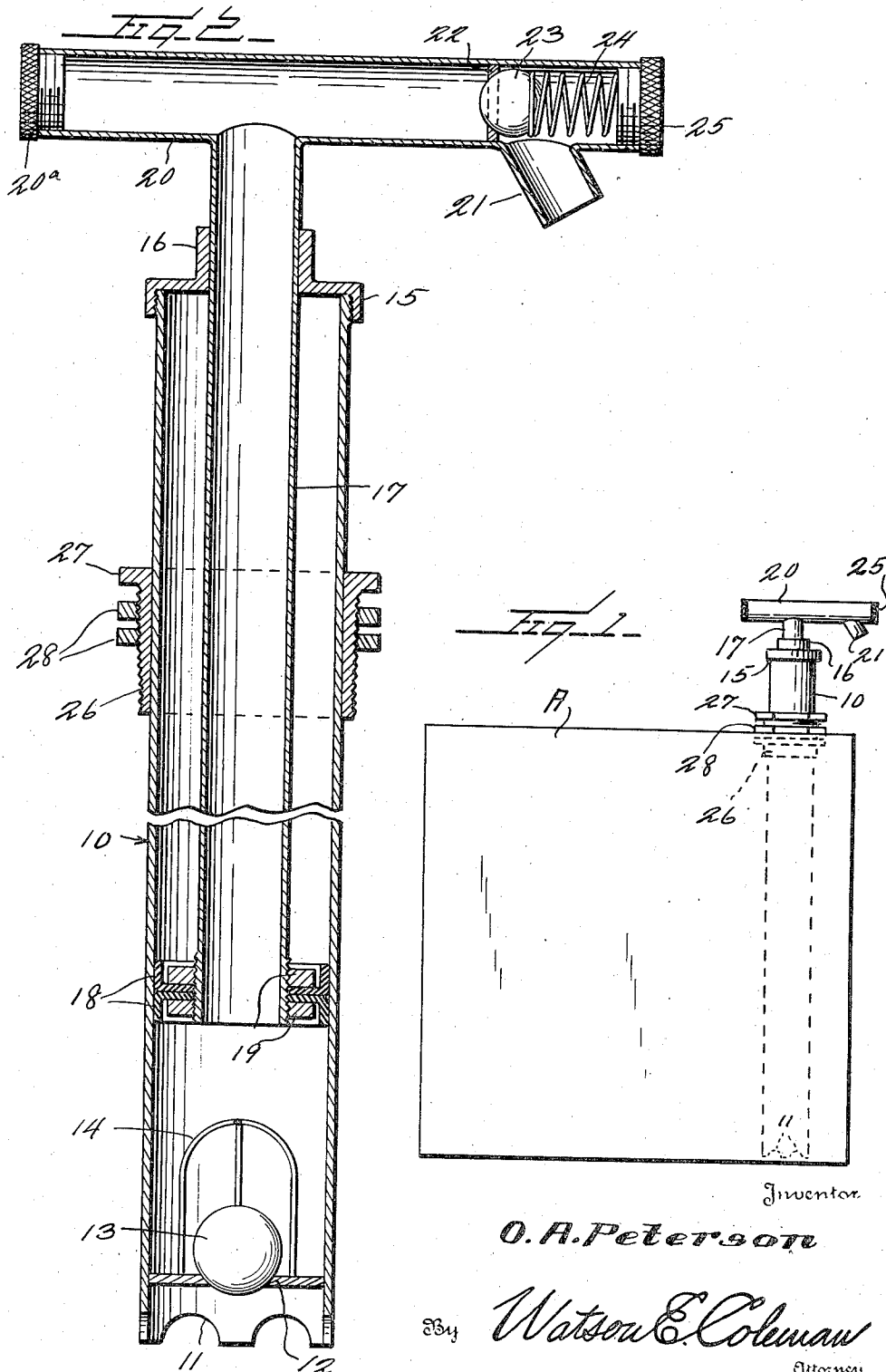
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GREASE PUMP

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GREASE PUMP

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2 Claims. (Cl. 221—47.5)

This invention relates to pumps designed for filling pressure grease guns from original shipping containers or bulk packages.

The general object of the invention is to provide a pump of this character which may be readily connected to the package or container and which as the piston of the pump is operated, will discharge grease downward from a spout carried by the handle into the grease gun.

Further objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawing wherein:

Figure 1 is an elevation of a grease container with my grease pump applied thereto.

Figure 2 is a vertical sectional view of the grease pump.

Referring to this drawing, 10 designates the barrel of the pump. This barrel at its lower end is formed with a plurality of openings or recesses 11. Above these recesses the barrel is formed with a valve seat 12 upon which a ball valve 13 is disposed, the ball valve being carried within the cage 14. The upper end of the barrel 10 is closed by a cap 15 having a central upwardly extending annular flange 16. Operating through the barrel is a tubular piston rod 17. The lower end of this piston rod is open and the lower end carries the double piston leathers or cups 18 which extend in opposite directions, one up and the other down. These are held in place upon the end of the tubular piston rod 17 by means of the lock nuts 19. The piston rod 17 passes out through the cap 15 and flange 16 and at its upper end terminates in a tubular or hollow handle 20 closed by a plug 20^a at one end.

Adjacent the other end of the tubular handle there is provided a downwardly extending spout 21 and inward of this spout there is a valve seat 22 against which the ball valve 23 normally rests, this valve being held to its seat by a spring 24 bearing against a screw plug 25 in the extremity of the handle.

Surrounding the barrel 10 is a split nipple 26 tapering towards its lower end and exteriorly screw threaded and having a head 27. Mounted upon this nipple are the two lock nuts 28. When the upper lock nut 28 is tightened the split nipple grips the pump barrel.

In the operation of this device, the barrel is inserted through an opening in the top of a container A, for instance, until the lower end of the barrel rests upon the bottom of the container. The split nipple is then forced down until the head 27 or the upper lock nut bears

against the top of the container and then the lock nuts are relatively turned so as to clamp the cover of the container A between the two lock nuts. Obviously by reciprocating the plunger or piston rod 17, the grease will be caused to pass up through the piston rod or plunger and out through the spout 21. As the plunger is raised, a fresh amount of grease will be drawn into the lower end of the barrel. As the plunger is lowered, the valve 13 will close and the grease so drawn in will be forced up through the plunger and out through the spout, the valve 23 acting to close against the seat 22 upon the upward movement of the plunger and plunger handle.

The device is preferably to be made in three sizes with an adjustable anchorage member, that is, the split nipple 26 with the lock nuts thereon to fit various sizes of containers.

This pump may also be used in the handling of oil and other liquids as much as grease.

It is to be understood that certain smaller sizes of containers have what is called a clamp cover. In inserting this grease pump, this clamp cover is detached; the proper size hole is cut in the cover for the insertion of the barrel 10; the barrel is then inserted through the hole in the cover; the lock nuts 26 and 28 are then screwed into place to clamp the cover tightly between the lock nuts, and then the cover is clamped back onto the container.

In the larger containers, however, the cover is held on by stove bolts, but here again, the cover is removed and the barrel inserted and clamped in place and then the cover replaced upon the container with the pump extending downward into the lower end of the container.

It is obvious also, however, that the cover of the container might be made with a threaded bung opening formed in the cover initially. In that case, it will not be necessary to use the nut 26 as the pump barrel may simply be inserted and screwed into place. It will thus be seen that my grease pump is adaptable for any form of container.

What is claimed is:—

1. A pump of the character described, including a barrel having recesses in its lower end constituting inlet apertures, a valve seat disposed above the apertures, a valve resting upon the upper face of the seat and opening upward, a tubular piston rod extending through the top of the barrel and open at its lower end, the piston rod being of approximately uniform diameter from end to end, a piston surrounding the lower end of the piston rod and engaging the interior

face of the barrel, a tubular handle into which the upper end of the piston rod opens, the handle having an internal diameter approximately the same as the internal diameter of the piston rod, detachable plugs closing opposite ends of the handle, the handle adjacent one end having a downwardly extending discharge spout, and a valve seat disposed immediately inward of the discharge spout, a valve coacting with said seat, and a spring disposed between the adjacent plug and said valve and urging the valve to its seat.

2. A pump of the character described, including a barrel having an inlet aperture at its lower end, a valve seat disposed above the lower end of the barrel and having a downwardly closing ball valve therein coacting with said seat, a piston operating within the barrel, a tubular piston rod of uniform diameter from end to end and entirely open at its lower end and extending through

but connected to the piston for unitary movement, the tubular piston rod extending upward through the top of the barrel and having a tubular angularly disposed handle provided with a discharge spout adjacent one end, the tubular piston rod opening into the handle and the handle having an internal diameter approximately equal to that of the piston rod, the discharge spout having an internal diameter approximately equal to that of the handle, a valve seat disposed immediately inward of the discharge spout, a valve carried in the outer end of the handle and urged against said seat, the valve when forced outward being disposed beyond the discharge spout, and means on the barrel whereby it may be clamped through the top wall of a grease package.

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