B. V. DAVIS.

HAND OILER.

APPLICATION FILED JAN. 8, 1919.

1,331,004.

Patented Feb. 17, 1920.

Fig. 2.

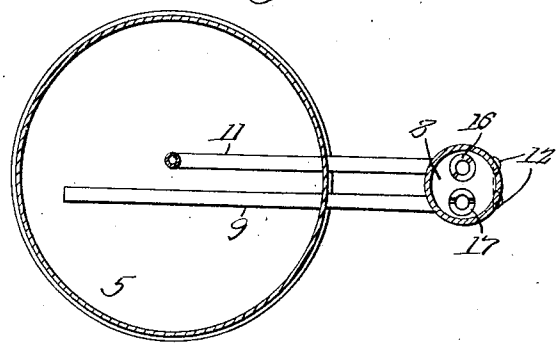


Fig. 1.

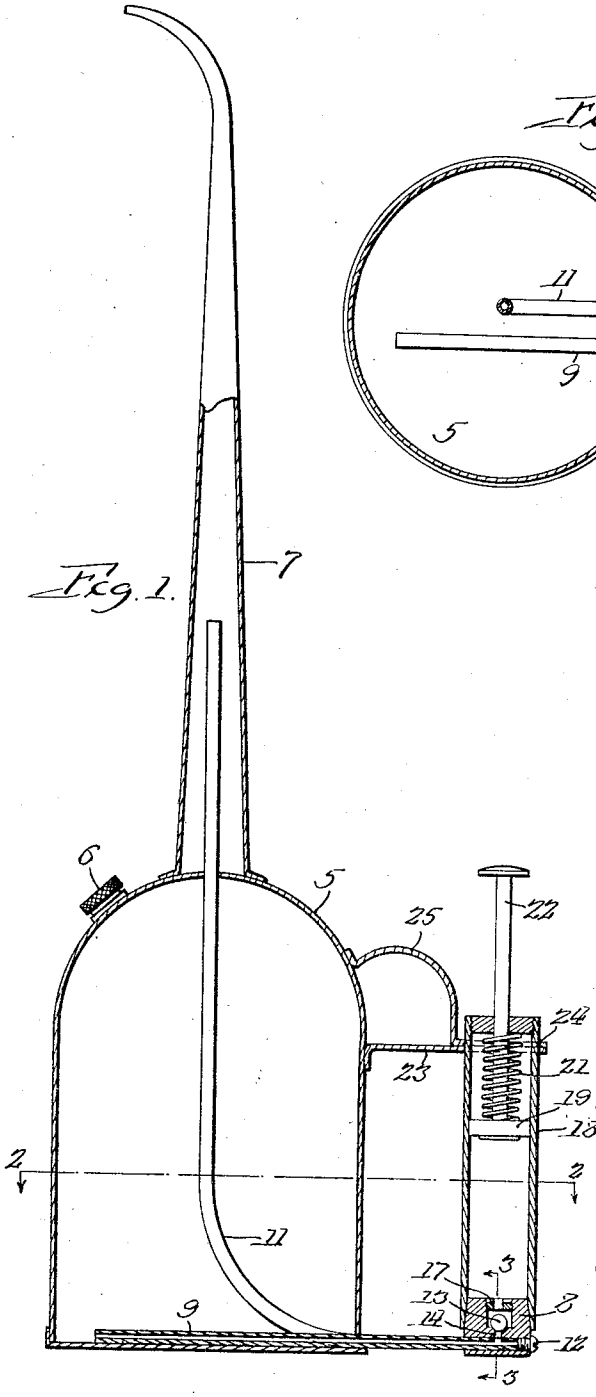
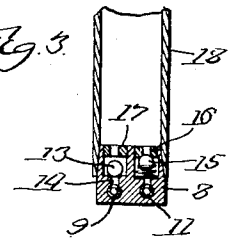


Fig. 3.



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UNITED STATES PATENT OFFICE.

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HAND-OILER.

1,331,004. Specification of Letters Patent. Patented Feb. 17, 1920.

Application filed January 8, 1919. Serial No. 270,156.

To all whom it may concern:

Be it known that I, BUDD VIRGIL DAVIS, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Hand-Oilers, of which the following is a specification.

This invention relates to hand oilers having force feed pumps, and the primary object is to provide a generally improved oiler of this type, especially with regard to the construction and arrangement of the valves and pump.

The average hand oiler of this character now on the market has little or no provision for conveniently cleaning the valves and oil passages, consequently when these oilers are used under certain conditions such as with threshing machinery, mills, mining machinery, etc., they become clogged and inoperative in a comparatively short time and invariably, because of the lack of facility for cleaning, the oiler is rendered useless and must be replaced by a new one. In the present invention I have provided a hand oiler of novel construction whereby the parts subject to clogging may be quickly and easily cleaned and put in the best of working condition.

Another object resides in the provision of a pump arranged in such relation to the oil container or body as to constitute the handle therefor and which shall be detachable to afford access to the valves.

A further object is to provide a valve structure and intake and feed tubing therefor so arranged as to afford quick and easy cleaning.

Referring to the drawing:

Figure 1 is a vertical sectional view through a hand oiler embodying my improvements;

Fig. 2, a plan sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3, a detail sectional view taken on the line 3—3 of Fig. 1.

The oil container proper may be of any suitable shape or size, and in the present instance is of the usual shape given to oilers of the character in mind. The container designated by character 5 carries the usual filling cap 6 and spout 7. A force-feed is employed for lifting the oil from the container 5 into the spout compartment and for forcing the oil from the spout in a fine stream.

My invention contemplates the provision of a pump so arranged as to constitute the handle by which the container is carried. I have also provided a novel valve arrangement including a valve casing in permanent relation to the oil container and serving as a base upon which the pump is detachably mounted. Thus the pump may be quickly removed at any time affording ready access to the valves. The valve-casing is further constructed in such manner that the intake and feed tubes communicating with the oil container and spout respectively, are accessible for cleaning.

In the present exemplification of my improvements, the valve casing designated by character 8, is secured in permanent relation to the container through the agency of the intake and feed tubes 9 and 11 respectively. These tubes, it will be noted are secured in the valve casing in spaced relation and in the present case constitute passages extending entirely through the valve casing, which are closed at one end by screw caps 12. The tube 9 rigidly secured to the container 5 terminates within the same at the bottom thereof and through this tube the oil is drawn to the valve casing. The feed tube 11 also enters the container 5 and directed upwardly, terminates within the spout compartment, it being noted that this compartment is separated from the main oil compartment of the container. The valve casing 8 houses a check valve 13 adapted to close the port 14 communicating with the intake tube 9 and also houses a spring-pressed check valve 15 normally closing the port 16 between the cylinder and feed tube 11. The valve chambers are closed at their upper ends by threaded caps 17 having central apertures or ports as shown.

The pump cylinder 18 is detachably fitted at its lower end to the valve casing, and this connection may be effected in any suitable manner as by a threaded joint or a tapered wedge fit, the latter being shown in the present instance. A piston 19 disposed within the cylinder and constantly urged upwardly by a contractile spring 21, is adapted to be pressed downward by means of a piston rod 22.

The upper end of the cylinder is held in operative relation to the container 5 by means of a bracket or arm 23 fixed to and extending laterally from the container and having an opening 24 through which the

cylinder is freely slidable. This bracket is also shaped to provide an upper curved portion 25 serving as a finger grasp.

In use, the operator carries the oiler by grasping the cylinder 18 which manifestly serves as a handle, the forefinger being inserted through the opening afforded by the bracket structure 22—23. This leaves the thumb free to manipulate the piston rod or plunger 22. By working the piston, oil will be drawn through the tube 9 on the up stroke until the cylinder is filled and will then be forced through the tube 11 to fill the spout compartment 7. When this is filled, further depression of the piston will deliver the oil from the spout.

From the foregoing, it will be manifest that the construction thus provided affords a convenient handle and hand grasp structure with a piston or plunger so arranged that the oiler may be conveniently handled and manipulated. When for any reason it is desired to clean the cylinder or the valve, the cylinder may be quickly and easily detached from the valve casing and withdrawn through the opening 24. This exposes the top of the valve casing, permitting the caps 17 to be removed for access to the valves. Should the tubes 9 or 11 become clogged the screw caps 12 may be removed, thus affording immediate access to both tubes for cleaning either by means of a wire or the like, or by air or fluid under pressure. This construction while comparatively simple, is well adapted and thoroughly practical for the needs of a hand oiler of this character and will give exceptional service under all conditions, because of the special provision for cleaning. In addition to these advantages the parts are so constructed that the improvements may be produced at a comparatively low cost.

While I have illustrated and described but a single embodiment of my improvements, it should be understood that changes might be made in details of construction without departing from the spirit and scope of the invention as expressed in the appended claims, in which—

I claim:

1. A hand oiler comprising a container having a spout, a feed tube and an intake tube emanating from the bottom portion of the container, a valve casing mounted on the ends of said tubes and having intake and feed valves controlling the passages communicating with said tubes, and a cylinder pump detachably mounted on the valve casing and serving as a handle for the oiler.

2. A hand oiler comprising a container having a spout, intake and feed tubes emanating from the lower portion of the container, a valve casing mounted on the ends of said tubes at the exterior of the container, a pump mounted on the valve casing, and removable stops closing the ends of the tubes and permitting access thereto for cleaning.

3. In a hand oiler of the character described, the combination of a container having a delivery spout, a valve casing having horizontally spaced intake and delivery valves, means supporting the casing in spaced relation from the container and having associated therewith a passage between the intake valve and the container and another passage between the delivery valve and the spout, a cylinder pump detachably supported on said valve casing and with both of said valves communicating with the interior of the cylinder, and means connecting the upper end of the cylinder pump with the container and permitting free removal of the pump after it is detached from said valve casing.

BUDD VIRGIL DAVIS.