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PUMP AND BARREL ATTACHMENT

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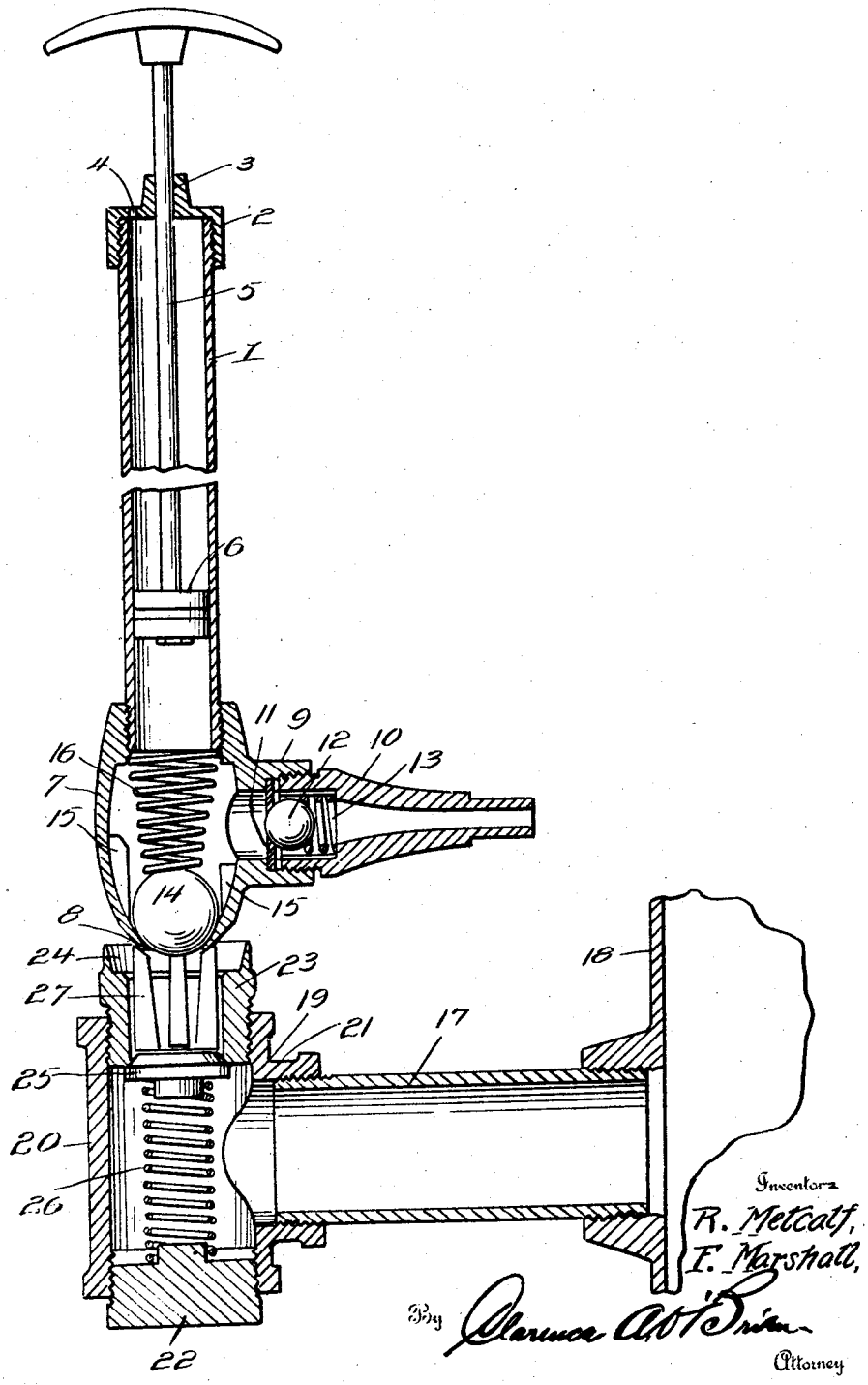

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PUMP AND BARREL ATTACHMENT.

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The present invention relates to an improved pump structure and a barrel attachment, and has for its prime object to provide a structure for pumping heavy oil or grease from a barrel.

Another important object of the invention is to provide an attachment which may be communicated with the barrel and has a valve structure therein for preventing oil from flowing through the attachment normally, said valve being releasable by the insertion of my improved pump in engagement with the attachment.

A still further very important object of the invention is to provide a simple structure of this nature which is exceedingly efficient and reliable in its operation, inexpensive to manufacture, not likely to easily become out of order, convenient to manipulate, and otherwise well adapted to the purpose for which it is designed.

With the above and various other objects in view, as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawing:

The figure is a vertical section view through the structure embodying the features of our invention.

Referring to the drawing in detail, it will be seen that 1 designates a pump barrel having a guide cap 2, at one end, which is provided with the central guide opening, 3, and the offset vent opening 4. A rod 5 is slidable through the opening 3 into the barrel 1 and has a plunger 6 on its inner end slidable in the barrel 1. On the lower end of the barrel 1 there is threaded a valve casing 7, having its lower end tapered, inwardly and provided with the opening 8. A branch 9 extends transversely and outwardly from the casing 7 and is internally threaded to receive a nozzle 10. A ring seat 11 is disposed in the branch 9 and a ball valve 10 is associated therewith, being normally held thereagainst by the spring 13 in the nozzle.

A ball valve 14 is associated with the opening 8, and is guided in the casing or housing 7 by the ribs 15. A spring 16 bears against the lower end of the valve 1, and is tensioned to normally hold the valve 14 closed over the opening 8. The barrel attachment is shown in the lower portion of the drawing.

The numeral 17 designates a tube, communicated with the barrel 18 containing the grease or heavy oil. A T-head 19 is formed with a body portion 20, and laterally and outwardly extending branch 21, which is threadedly engaged with the tube 17. A plug 22 is threaded in the lower end of the body 20, while a collar 23 is threaded in the upper end thereof. An annular seat 24 is formed in the outer end of the collar 23, for the reception of the tapered lower end of the casing 7. A valve 25 is closable over the inner end of the collar 23, and is held normally closed by the spring 26, which is tensioned to impinge against the valve 25, and against the plug 23. A plurality of fingers 27 extend through the collar from the valve 25 and are arranged to be engaged by the tapered end of the casing 7, when the same is inserted to seat in the seat 24, so as to move the valve 25 away from the inner end of the collar 23 so that oil may pass through the attachment.

It will thus be seen that upon the upstroke of the plunger 6 a vacuum is formed in the lower portion of the barrel 1, and in the casing 7 thereby lifting the barrel 14 and insuring the closing of the valve 12, so that when the casing 7 is disposed in the seat 24, oil will be sucked up through the attachment into the barrel 1. Upon the downstroke of the plunger 6, the oil or grease is forced downwardly, thereby causing the closing of valve 14 with the aid of spring 16, and the opening of valve 12, so that the oil will flow through the nozzle 10.

It is thought that the construction, operation, and advantages of this invention will now be clearly understood, without a more detailed description. It is desired, however, to point out that numerous changes in the details of construction, and in the combination and arrangement of parts may be resorted to, without departing from the spirit or scope of the invention, as hereinafter claimed or sacrificing any of its advantages.

Having thus described our invention, what we claim as new is:

A barrel attachment including a cylindrical hollow body and a laterally disposed cylindrical hollow branch formed integrally therewith, a plug threaded in one end of the body, a collar threaded in the other end of the body, a valve in the body closable to the inner end of the collar, inwardly dis-

posed extensions formed on the valve and the plug, a helical spring having its end convolutions disposed about said extensions and being tensioned to impinge against said valve and said plug to normally hold the valve in its closed position, said spring being disposed the sole supporting means for said valve, fingers extending outwardly from the valve through the collar, and the outer end of the collar flared to provide an annular seat for receiving a pump.

In testimony whereof we affix our signatures.

ROY METCALF.
FRED MARSHALL.