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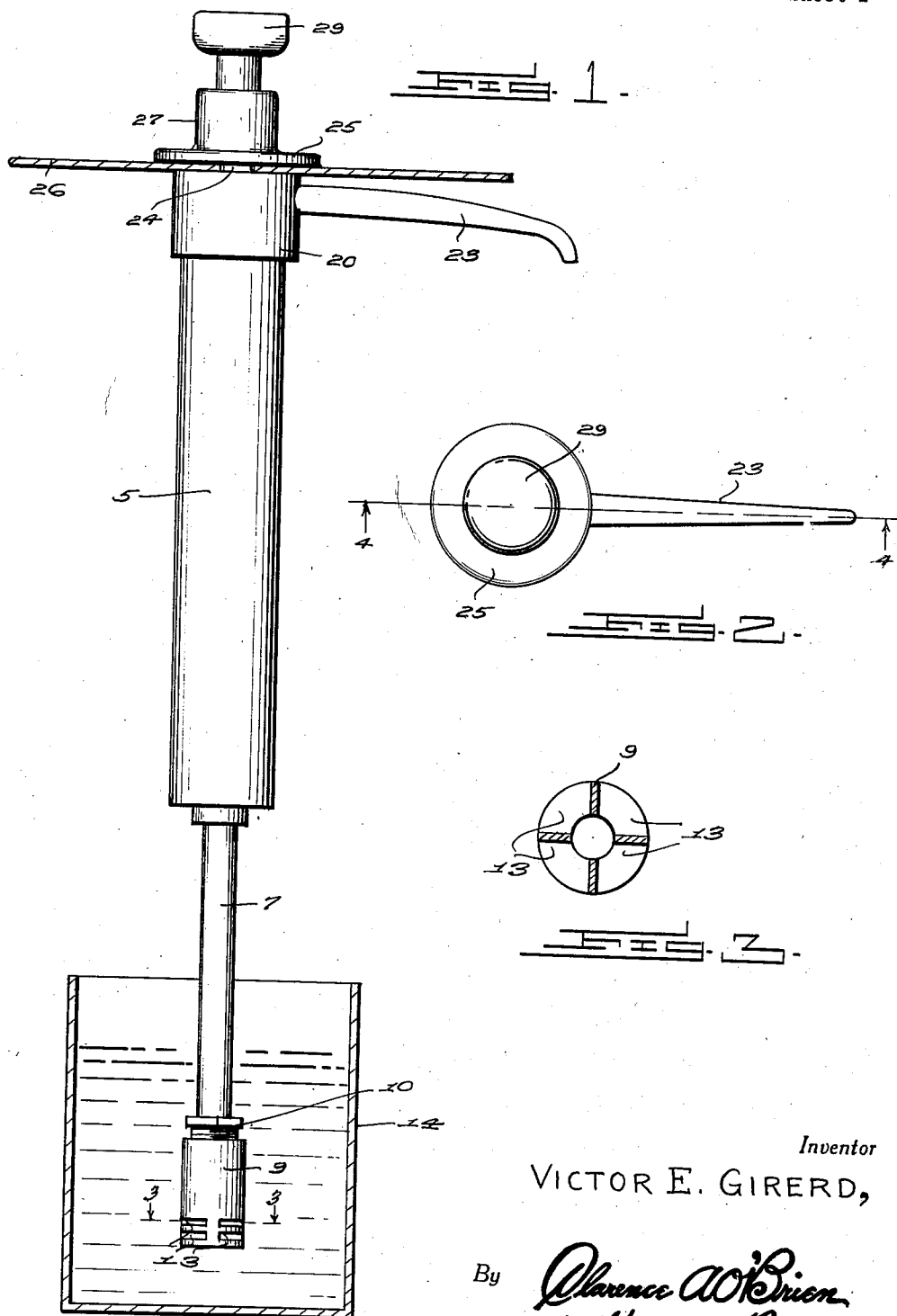
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OIL PUMP FOR POPCORN MACHINES

Filed Oct. 13, 1939

2 Sheets-Sheet 1



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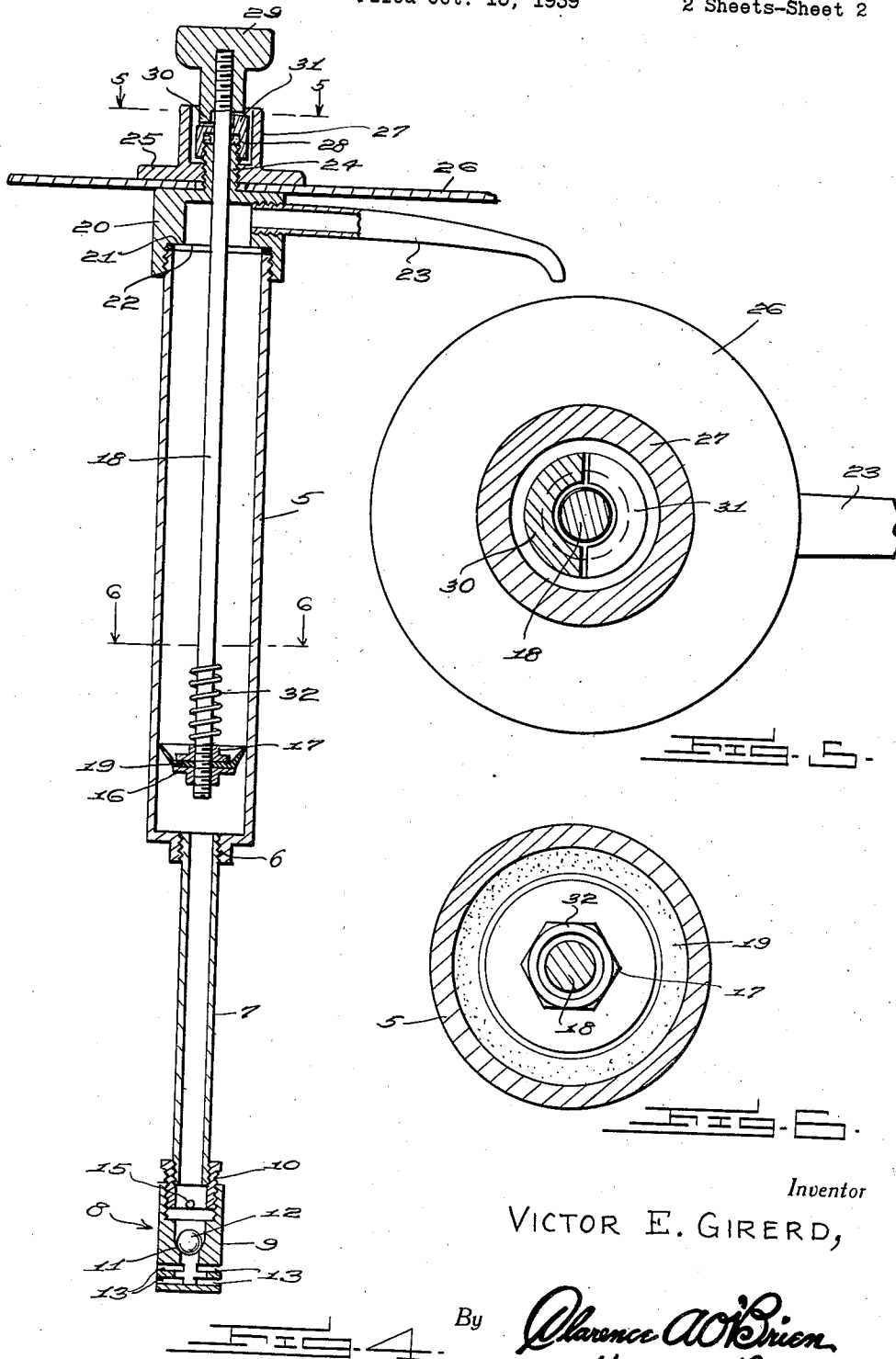
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UNITED STATES PATENT OFFICE

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OIL PUMP FOR POPCORN MACHINES

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2 Claims. (Cl. 103—218)

An object of the present invention is to provide improved means for pumping an oil known as popping oil from cans and like containers into the receptacle of the popcorn machine provided for receiving such oil.

In accordance with the present invention a pump for the purpose mentioned is provided which may be readily and easily mounted on the machine and which when so mounted serves admirably the purpose stated.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein—

Figure 1 is an elevational view showing the pump, forming the subject matter of this invention, and illustrating the application of the same.

Figure 2 is a top plan view of the pump.

Figure 3 is a detail sectional view taken substantially on the line 3—3 of Figure 1.

Figure 4 is a vertical sectional view taken substantially on the line 4—4 of Figure 2.

Figures 5 and 6 are detail sectional views taken substantially on the lines 5—5 and 6—6 respectively of Fig. 4.

Referring more in detail to the drawings it will be seen that in accordance with the present invention the pump comprises an elongated, cylindrical barrel 5 to the bottom end of which is threaded or otherwise secured as at 6 a tube 7 on the lower end of which is a valve 8.

The valve 8 comprises a casing 9 into the top of which is threaded a plug 10 that has an axial opening therethrough, and the plug 10 in turn is threaded on the lower end of the tube 7 as shown.

Casing 9 is provided with an oil passage therethrough and intermediate the ends of the passage with a valve seat 11 to accommodate a ball check valve 12.

At the lower end thereof the casing 9 is provided with upper and lower series of circumferentially spaced ports 13 through which the oil from a can or similar receptacle 14 passes into the valve.

For the ball check valve element 12 there is carried by the plug 10 at the inner end of the plug a stop rod 15 as shown.

A plunger 16 has a working fit in the barrel 5 and is detachably secured as at 17 on one end of a plunger rod 18.

The aforementioned plunger 16 embodies a cup member 19 of leather or other flexible material, the flange or wall of which will flex readily under pressure so as to permit the passage of oil up-

wardly past the plunger 16 as the latter moves downwardly in the barrel 5, as and for a purpose hereinafter more fully stated.

For the top of the barrel 5 there is provided a cap 20 that threads on the barrel 5 as shown and interposed between the ends of the barrel 5 and the internal shoulder 21 of the cap 20 is a washer or packing 22.

The cap 20 has tapped into the periphery thereof one end of an elongated spout 23 that may be of any suitable shape and design but preferably is of the shape and design illustrated.

The crown of the cap 20 is apertured to accommodate the plunger rod 18 and has also formed integral therewith a threaded pin 24.

For threaded engagement on the pin 24 and for cooperation with the cap 20 for securing the pump on the popcorn machine there is provided a nut 25.

As shown in Fig. 4 some desirable portion of the popcorn machine is apertured to accommodate the stem or pin 24, and in Fig. 4 there is illustrated fragmentarily a portion 26 of a conventional popcorn machine, which portion as shown is apertured to accommodate the stem 25 or pin 24 so that when the lock nut 25 is threaded home on the stem against the part 26 of the popcorn machine the pump will be securely held in position thereon.

The nut 25 is provided with a cylindrical formation 27 that serves as a catch-basin for catching any oil which might be drawn upwardly and through the stem 24 during the operation of the pump, thus preventing such oil from flowing over the machine 26.

The plunger rod 18 also works through a gland nut 28 threaded on the stem 24 and accommodated within the catch-basin 27.

Also threaded on the upper end of the plunger rod 18 is a knob 29. Knob 29 is provided with an integral lug or extension 30 that complements a lug or extension 31 on the gland nut 28 so that by turning the rod 18 in the proper direction lug 30 will engage lug 31 for threading the gland nut 28 on the stem 24 or for unscrewing said gland nut, as may be found desirable.

Also to prevent the cup 19 of the plunger 16 being drawn up into the cap 20 and to otherwise protect the cup 19 from damage there is provided on the rod 18 a coil spring 32 disposed above the plunger 16 and so arranged as to strike the crown of the cap 20 when the plunger is at the limit of the upstroke thereof.

In actual practice with the pump mounted on the machine as described and illustrated the

valve-equipped end of the pump may be readily placed within the can or other receptacle 14 containing the popping oil. Obviously to draw the desired amount of oil from the can 14 and feed such oil to the proper receptacle of the popping machine, the operator, grasping the knob 29, reciprocates the plunger rod 18 and plunger 16 carried thereby. Manifestly on the upstroke of the plunger suction on the ball valve 12 will cause the latter to unseat and oil from the receptacle 14 will be drawn into the valve 8, past the valve 12 and through the tube 7 to the pump barrel 5. On the down or return stroke of the plunger 16 valve 12 will seat and the oil thus drawn into the pump will pass upwardly around the cup 19 of the plunger 16 so that on the next upward stroke of the plunger the oil in the barrel 5 above the plunger will be forced outwardly through the discharge nozzle 23 into the pan or other receptacle provided for receiving the oil so pumped from the can 14.

Thus it will be seen that the oil may be transferred from its container to the receptacle of the popcorn machine provided to receive such oil without a great deal of effort on the part of the operator and in a more efficient manner than would result from the mere pouring of the oil from its can or receptacle into the oil-receiving receptacle of the popcorn machine. These and numerous other advantages of the invention will readily present themselves to those skilled in the art.

In view of the above it is thought that a clear understanding of the construction, utility, operation and advantages of the invention will be had without a more detailed description.

Having thus described the invention what is claimed as new is:

1. In combination with a fixed part of a popcorn machine, a pump for pumping popping oil, said pump including a barrel equipped at one end with a stem extending through an opening in said part of the popcorn machine, a lock nut threadedly engaging said stem and cooperable with said end of the barrel for securing the pump fixedly on said part of the popcorn machine, said stem having an axial bore therethrough and said pump including a plunger rod working through said stem; said lock nut having a catch-basin thereon to receive fluid as may pass with the plunger rod outwardly of the pump through the bore in said stem, a gland nut threaded on said stem within the confines of said catch-basin, a knob on the free end of said plunger rod, and said knob and gland nut being complementarily formed for transmitting rotative movement of said plunger rod and knob to said gland nut for effecting either a threading home or unscrewing of said gland nut relative to said stem, optionally.

2. In a pump of the character described, a barrel, said barrel being equipped at one end thereof with a stem for use in securing the barrel to a support, a lock nut threadedly engaged with said stem and cooperable with said end of the barrel for securing the latter to such support, said stem having an axial bore therethrough, a pump plunger rod working through the bore of said stem, a gland nut threadedly engaged with said stem, a knob on one end of said plunger rod, and said knob and gland nut having inter-engaging means thereon cooperable for transmitting rotative movement of the plunger rod and knob to said gland nut for threading the gland nut relative to the stem in either of two directions.

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