

Jan. 8, 1924.

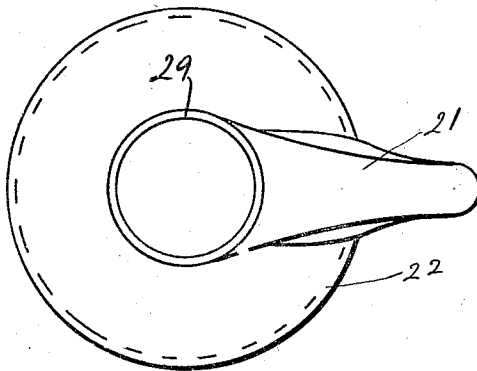
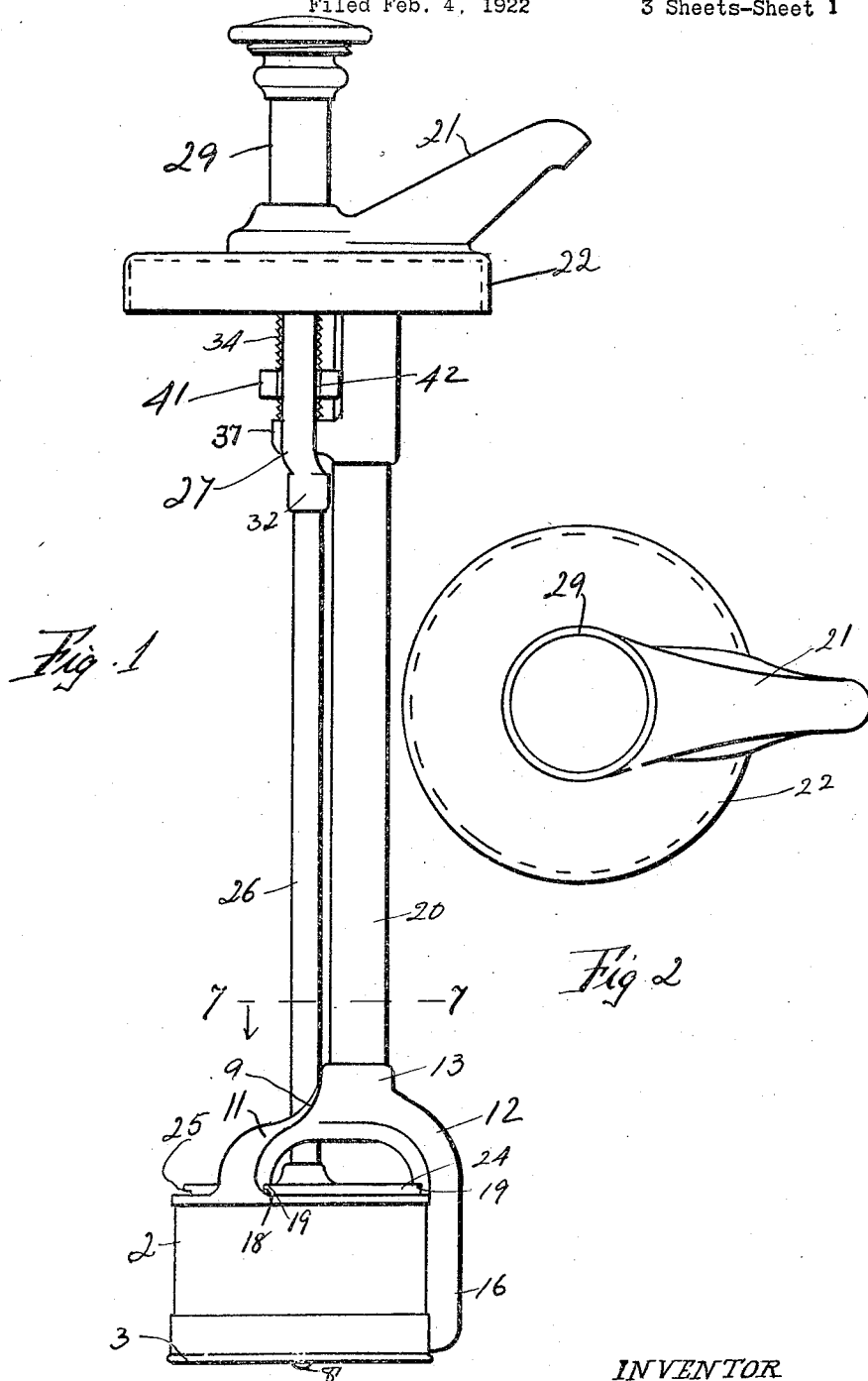
W. MORLOK.

1,480,097

SIRUP PUMP

Filed Feb. 4, 1922

3 Sheets-Sheet 1



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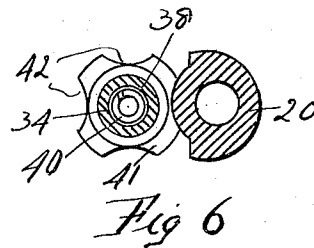
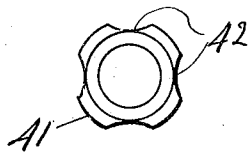
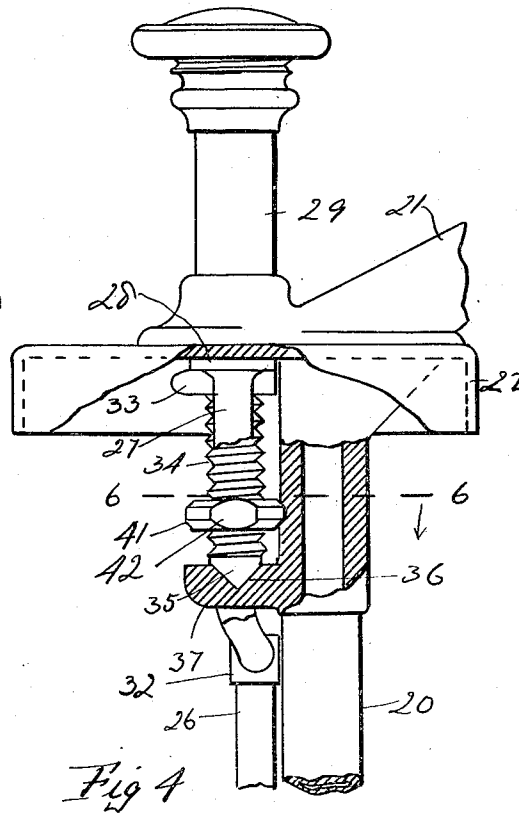
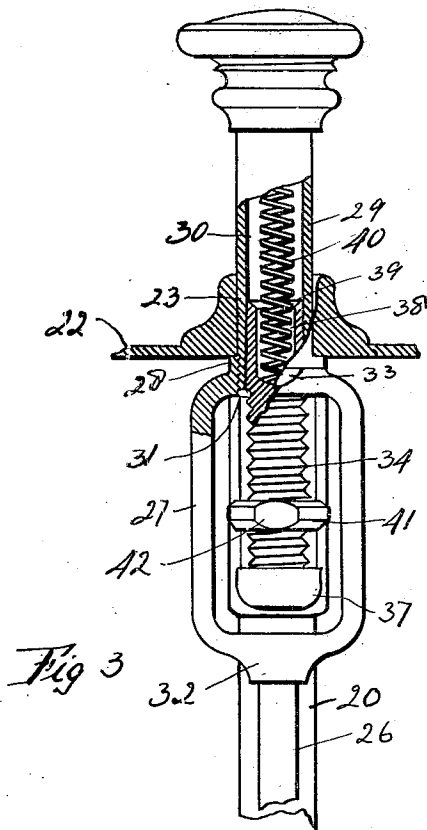
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SIRUP PUMP

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3 Sheets-Sheet 2



INVENTOR

William Morlok

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SIRUP PUMP

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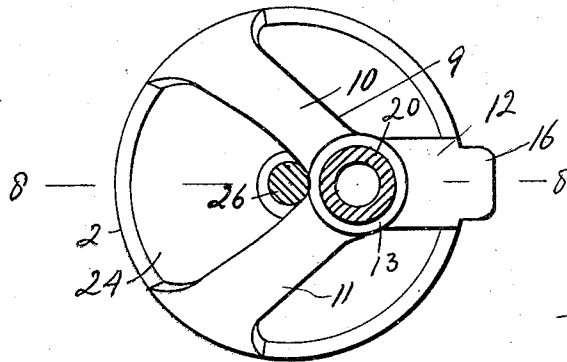


Fig. 7.

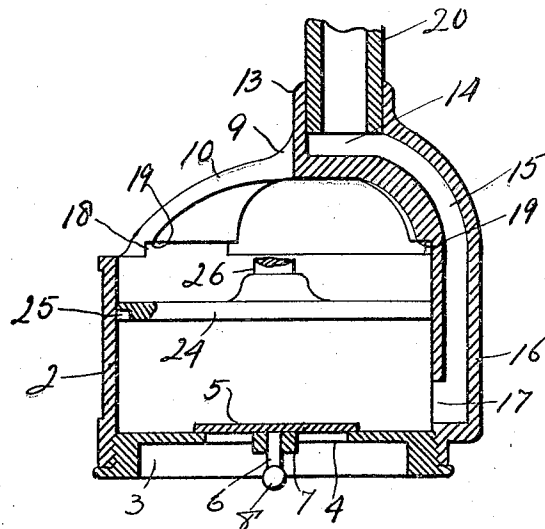


Fig. 8.

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UNITED STATES PATENT OFFICE.

WILLIAM MORLOK, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO L. A. PROUTY CO., OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SIRUP PUMP.

Application filed February 4, 1922. Serial No. 534,130.

To all whom it may concern:

Be it known that I, WILLIAM MORLOK, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in a Sirup Pump, of which the following is a specification.

My invention relates to new and useful improvements in a sirup pump, and has for its object to provide a device of this character for dispensing liquids in predetermined quantities so constructed as to be compact, strong and durable, noiseless in operation, having no complicated parts to bind, clog or get out of order and which will be absolutely sanitary and very easy to clean and maintain in a cleanly condition.

Another object of my invention is to provide in combination, a valved sirup cup, a cap provided with a spout and a sirup tube connecting the cup and cover and acting as a single support therefor, said sirup tube having feet so associated with said tube and the cup as to thoroughly brace the parts and prevent the likelihood of the cup being broken from the sirup tube or forced out of proper alignment.

Another object of the invention is to provide in combination with a valved cup, a plunger having an outlet notch in the edge thereof whereby any liquid within the cup may be poured therefrom when the pump is removed from a jar.

A further object of the invention is to provide means for throwing the plunger rod and its yoke out of alignment should the plunger and its rod be wrongly positioned when being assembled.

A still further object of the invention is to provide an improved means for regulating the movement of the plunger rod and the plunger carried thereby in order to regulate the quantity of liquid to be dispensed and to provide means for absolutely holding the parts in their adjusted positions.

Other objects of the invention are to provide for limiting the upward or outward movement of the plunger, to provide for housing the spring in order that the liquid or foreign substances cannot reach the same and to so connect the parts that they may be readily disassembled when necessary without the use of tools.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains, may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:—

Fig. 1, is a side elevation of a sirup pump made in accordance with my invention.

Fig. 2, is a plan or upper-end view thereof.

Fig. 3, is an enlarged fragmentary side elevation of the upper portion of the pump with parts broken away and shown in section to clearly illustrate certain details of construction.

Fig. 4, is a similar view at right angles to the view illustrated in Fig. 3, some of the parts being broken away and shown in section to illustrate other details of construction.

Fig. 5, is a face view of the adjustable lock nut.

Fig. 6, is a section at the line 6—6 of Fig. 4 with the parts below this line with the exception of the lock nut, being eliminated.

Fig. 7, is an enlarged sectional view at the line 7—7 of Fig. 1.

Fig. 8, is an enlarged vertical section of the sirup cup and adjacent parts at the line 8—8 of Fig. 7 with some of the parts illustrated in elevation.

In carrying out my invention as here embodied, 2 represents a cup generally termed in the trade as a sirup cup, to the lower end of which is detachably connected a bottom 3 having threaded connection with the said cup and this bottom has an inlet opening 4 controlled by the vertically movable valve disc 5 which has a post 6 passing through the hub 7 and which is a part of a spider disposed across opening 4, the said post being headed as at 8 to prevent the accidental displacement of the valve disc. With the upper end of the cup 2 is formed the bracket 9 preferably consisting of three legs 10, 11 and 12 and an integral boss 13 having a recess 14 in communication with a channel 15 formed in one of the legs, as 12, of the bracket and through the exten-

sion 16 of the leg 12 the lower end of said channel communicating with the interior of the cup 2 through an opening or duct 17 through the walls of said cup. The lower portions of the legs of the bracket have notches 18 which produce shoulders 19 to act as stops for limiting the outward movement of the pump plunger as will be hereinafter described.

The boss 13 is offset from the vertical center of the cup 2 as plainly shown in Fig. 1 and in this boss is fixed the lower end of the tube 20, the upper end of which communicates with the spout 21 carried by the flanged cover 22, said cover having a hole 23 therethrough which is offset from the center of the cup and cover diametrically opposite the tube 20.

In the cup 2 is mounted for vertical movement a plunger 24 having a notch 25 in one edge which when the plunger is in its uppermost position and in contact with the shoulders 19 a portion of said notch projects above the upper edge of the side walls of the cup so as to form an outlet from said cup permitting the contents of said cup to be poured therefrom when the same is tilted the proper distance, or in other words partially inverted. To this plunger is fixed in any suitable and well known manner a piston rod 26 which lies in close proximity to the outer surface of the boss 13 where it passes said boss and this piston rod parallels the tube 20, as plainly shown in Fig. 1. To the upper end of the piston rod 26 is secured a yoke 27 having an internally threaded hub 28 into which is threaded the lower end of the handle 29 provided with a spring chamber 30 and said lower end of the handle 29 is beveled as at 31 so as to form a flaring mouth which will freely pass over a coacting part to be later described.

As the arms or uprights of the yoke 27 are in vertical alignment with the handle 29, as shown in Fig. 1, and as the piston rod 26 is out of line with said parts the lower hub 32 of the yoke is offset or out of vertical alignment with the arms or uprights of said yoke so as to properly align with the piston rod and when the parts are assembled said lower hub 32 lies in close proximity to the tube 20 thus preventing the piston rod from being bent out of line to any great extent or otherwise damaged should the pump be grasped by means of the tube 20. With the upper end of the yoke or the upper hub thereof is formed an enlargement 33 which projects away from the tube 20 after the parts have been assembled and said enlargement is of sufficient size that should an attempt be made to install the piston rod and its component parts in the wrong position said enlargement will contact with the tube 20 and prevent the upper hub 28 from being moved into alignment with the hole 23

through the cover and thus prevent the improper assembling of the parts.

The spring casing 34 is externally threaded and provided with a wedge shaped end 35 for registration with a V shaped socket 36 in a projection or lug 37 carried by the upper portion of the tube 20 and when the wedge shaped end of said spring casing is in the socket said casing will be prevented from rotating. The spring casing 34 is provided with a chamber 38 and the upper end of this spring chamber is beveled from its inner face outwardly as at 39 so as to form a flaring mouth to prevent the spring 40 catching on the edge of said spring casing, the said spring being housed in the chamber 38 in the spring casing and the chamber 30 in the handle 29 so as to normally force said elements apart and as the spring casing is stationary or rests upon the projection 37 said spring will normally force the handle 29 upward or outward. The handle 29 telescopes over the spring casing 34 as plainly shown in Fig. 3 and the beveled end 31 of the handle 29 prevents it from engaging or biting into the exterior threads of the spring casing as will be obvious.

On the spring casing is adjustably mounted the regulating nut 41 in the form of a notched ring, the notches 42 thereof adapted to register with the upper end of the tube 20, as plainly shown in Fig. 6, to prevent rotation of said nut after being properly adjusted. This regulating nut regulates the movement of the parts in one direction or downward so as to regulate the amount of liquid forced from the cup through the tube 20 and out of the spout 21 and this regulation has a range from zero to two ounces in liquid measurement. The regulation is accomplished as follows:—

By forcing the casing 34 upward against the action of the spring 40 so as to remove the wedge end of said casing from the socket 36 and throwing the lower end of said casing outward a slight distance the regulating nut will be disengaged from the tube 20 so that it may be rotated to run it up or down on the spring casing. After the proper adjustment has been obtained the spring casing is replaced so that the wedged end enters the socket 36. By pressing downward upon the handle 29 the yoke, the piston rod and piston will be likewise forced downward the distance between the lower face of the upper hub 28 of the yoke 27 and the regulating nut 41 with which said upper hub of the yoke contacts and therefore it will be obvious that the position of said regulating nut upon the spring casing will regulate the movement of the piston 24 to gage or regulate the quantity of liquid forced from the cup 2 and when the regulating nut has been adjusted it cannot be accidentally moved out of adjustment be-