

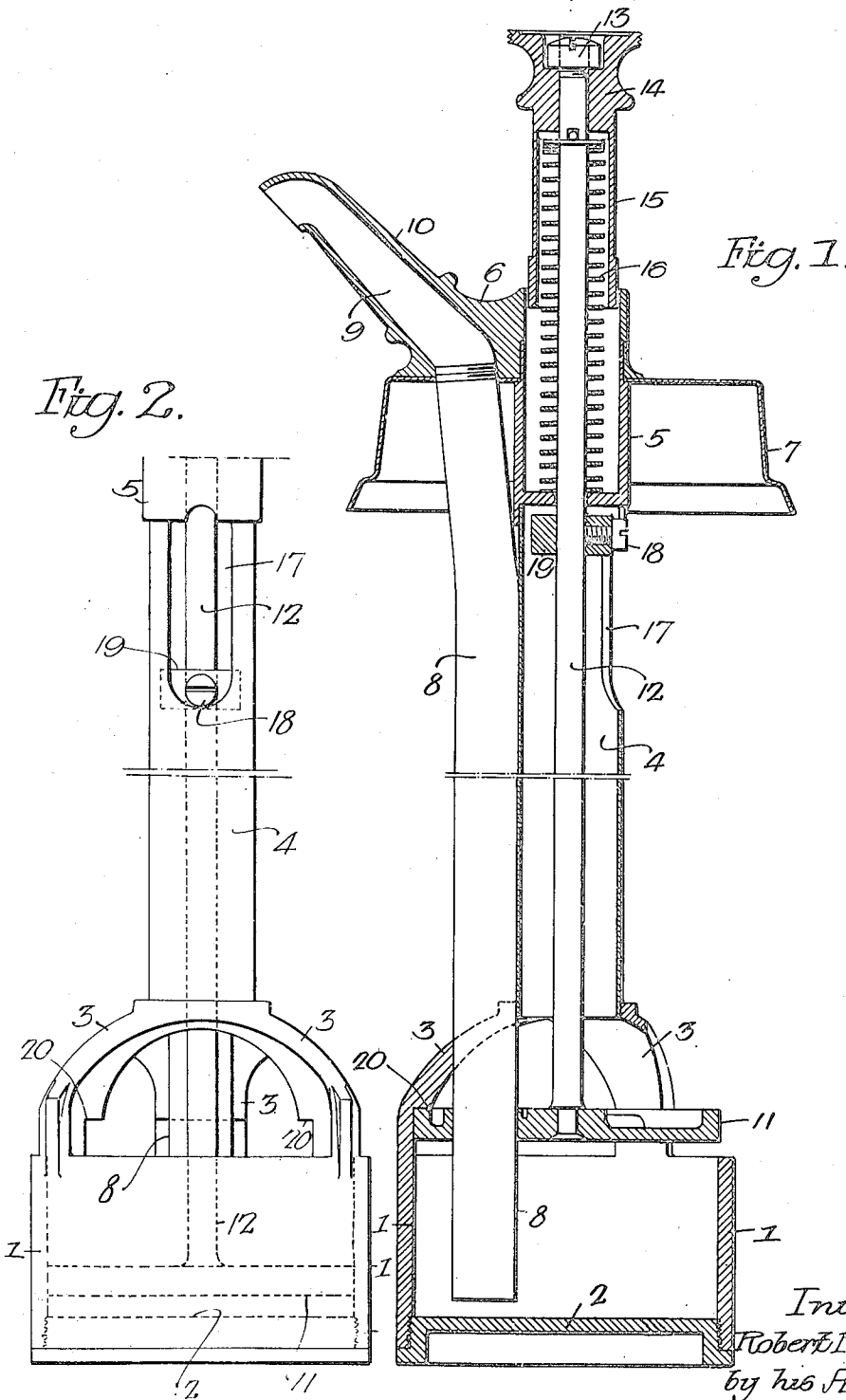
March 11, 1924.

1,486,656

R. M. GREEN, JR

SIRUP PUMP

Filed Dec. 2, 1920



Inventor

Robert M. Green, Jr.

by his Attorneys

Houson & Houson

## UNITED STATES PATENT OFFICE.

ROBERT M. GREEN, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ROBERT M. GREEN & SONS, OF PHILADELPHIA, PENNSYLVANIA, A FIRM CONSISTING OF ROBERT M. GREEN, JR., OF PHILADELPHIA, PENNSYLVANIA, AND EDGAR L. GREEN, OF DEVON, PENNSYLVANIA.

## SIRUP PUMP.

Application filed December 2, 1920. Serial No. 427,739.

*To all whom it may concern:*

Be it known that I, ROBERT M. GREEN, JR., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented  
5 Sirup Pumps, of which the following is a specification.

One object of this invention is to provide a pump of the general type described and claimed in patent to L. G. Green #1,003,449,  
10 dated September 19, 1911, with novel means for conveniently adjusting the stroke of its piston rod and hence the movement of the piston, in order to regulate the amount of sirup delivered when the plunger head of  
15 said pump is depressed;—the construction being relatively simple, inexpensive and of such a nature that the adjustable element is not exposed although it is easily accessible.

Another object of the invention is to provide a stroke-adjusting device for a pump of the character noted, which shall permit of any desired range of movement of the piston without causing an alteration in the height or relative position of the plunger  
20 head when this is at rest.

These objects and other advantageous ends I attain as hereinafter set forth, reference being had to the accompanying drawings, in which,

30 Fig. 1 is a longitudinal vertical section of a sirup pump constructed in accordance with my invention; and

Fig. 2 is a fragmentary side elevation of that portion of the pump to which my invention is applied.

In the above drawings 1 represents the cylindrical body of the pump into whose lower end is threaded a head 2 and whose otherwise open top has upwardly extending  
40 integral arms 3 provided with a central opening into which is brazed or sweated a tubular member 4, preferably of sheet metal having soldered or otherwise fastened to its upper end a cylindrical casing 5 closed  
45 at the bottom and having mounted on its upper end a casting 6 having a cylindrical passage receiving the upwardly projecting end of the element 5.

Confined between a suitable shoulder on the member 5 and the casting 6 is a flanged  
50 cover 7 of sheet metal designed to fit over the top of a sirup containing jar, and a delivery tube 8 extends from a point adjacent

the bottom of the pump cylinder 1 through one of the arms 3 and the cover 7, beyond  
55 which it is fixed into the lower end of the passage 9 formed in a delivery nozzle 10.

A piston 11 in the form of a flat plate is mounted to reciprocate within the pump cylinder 1 and is loosely slidable on the lower  
60 end of the delivery tube 8, having fixed to its center a piston rod 12 which extends through and is guided by the closed lower end of the member 5 into which it extends  
65 upwardly and above the casting 6 where it is threaded for the reception of a nut 13. The latter holds in place a plunger head 14 having a tubular body 15 designed to slide within the passage provided by the casting 6 and  
70 tubular member 5, and there is a coil spring 16 confined between the bottom of the member 5 and the upper end of the tubular extension 15 of the plunger head 14.

The upper end of the tubular supporting structure 4 is formed with an elongated slot  
75 17 in which is reciprocable the head of a screw 18 employed to adjustably hold a collar 19 to the piston rod 12.

Under conditions of operation the pump cylinder is placed within a jar or other container over whose mouth the cover 7 is  
80 designed to more or less closely fit. Any fluid to be dispensed within said jar naturally flows under the action of gravity into the interior of the cylinder 1, since the  
85 spring 16 normally supports the piston 11, through the rod 12 and head 14, in engagement with shoulders 20 formed on or provided by the arms 3, so that its lower face is above the top edge of said cylinder.  
90

If now the piston be depressed by pressure exerted upon the head 14, it will move downwardly within the cylinder 1 and cause the liquid trapped therein to be forcibly delivered through the tube 8 and nozzle 9. The  
95 amount of liquid so delivered will obviously depend upon the diameter of the cylinder and the distance the piston 11 moves below the top edge of said cylinder and this latter distance is regulated by the position of the  
100 collar 19. Regardless of the possible length of stroke of said piston, it is normally maintained in engagement with the shoulders 20 by the spring, and the collar 19 is so positioned on the rod (where it is held by the  
105 screw 18) that the desired quantity of sirup

shall have been delivered from the nozzle when the head of the screw strikes the bottom of the slot 17. Obviously the head of the screw is conveniently accessible to permit of the above adjustment of the collar, since the lower edge of the flange of the collar 7 is preferably though not necessarily in a plane above said screw. Not only is the construction of the device relatively simple, but it is substantial and durable and its nature is such as to permit of the adjustment of the collar and the regulation of the piston stroke with the utmost ease and convenience.

While I have shown a collar and a screw therein acting as a stop, the collar may be provided with any suitable stop and held in place by any suitable fastening and I preferably notch the rod so as to more firmly hold the collar in position after adjustment.

I claim:

1. The combination in a sirup pump of a cylinder; a piston therein; a jar cover; a tubular member connecting said cylinder with the cover and having a slot adjacent the latter; a delivery pipe for the cylinder; a piston rod extending through the tubular member; a head for said rod; a spring normally holding the piston and rod in a raised position; a collar on the rod; a screw adjusta-

bly connecting the collar to the rod and projecting therefrom into the slot of the tubular member in position to engage the lower end thereof to limit the downward stroke of the piston; means for limiting the upward movement of the piston under the action of the spring.

2. The combination in a pump for liquid of a cap, a cylinder; a piston therein; a delivery pipe from the cylinder; a member connected to the cylinder and to the cap; a piston rod; means for normally holding the piston and rod in a raised position; and adjustable means located beneath the cap for regulating the downward stroke of the piston so as to regulate the supply of fluid delivered by the pump.

3. The combination in a pump for liquid of a cap; a cylinder; a piston therein; a delivery pipe for the cylinder; a member connected to the cylinder and to the cap; a piston rod; a collar adjustably mounted on the rod, arranged to come into contact with the member connected to the cylinder and cap so as to limit the downward movement of the plunger which regulates the amount of fluid discharged from the cylinder.

ROBERT M. GREEN, JR.