

T. H. SCHUTT.

SYRUP PUMP.

APPLICATION FILED DEC. 18, 1909.

967,251.

Patented Aug. 16, 1910.

FIG. 1

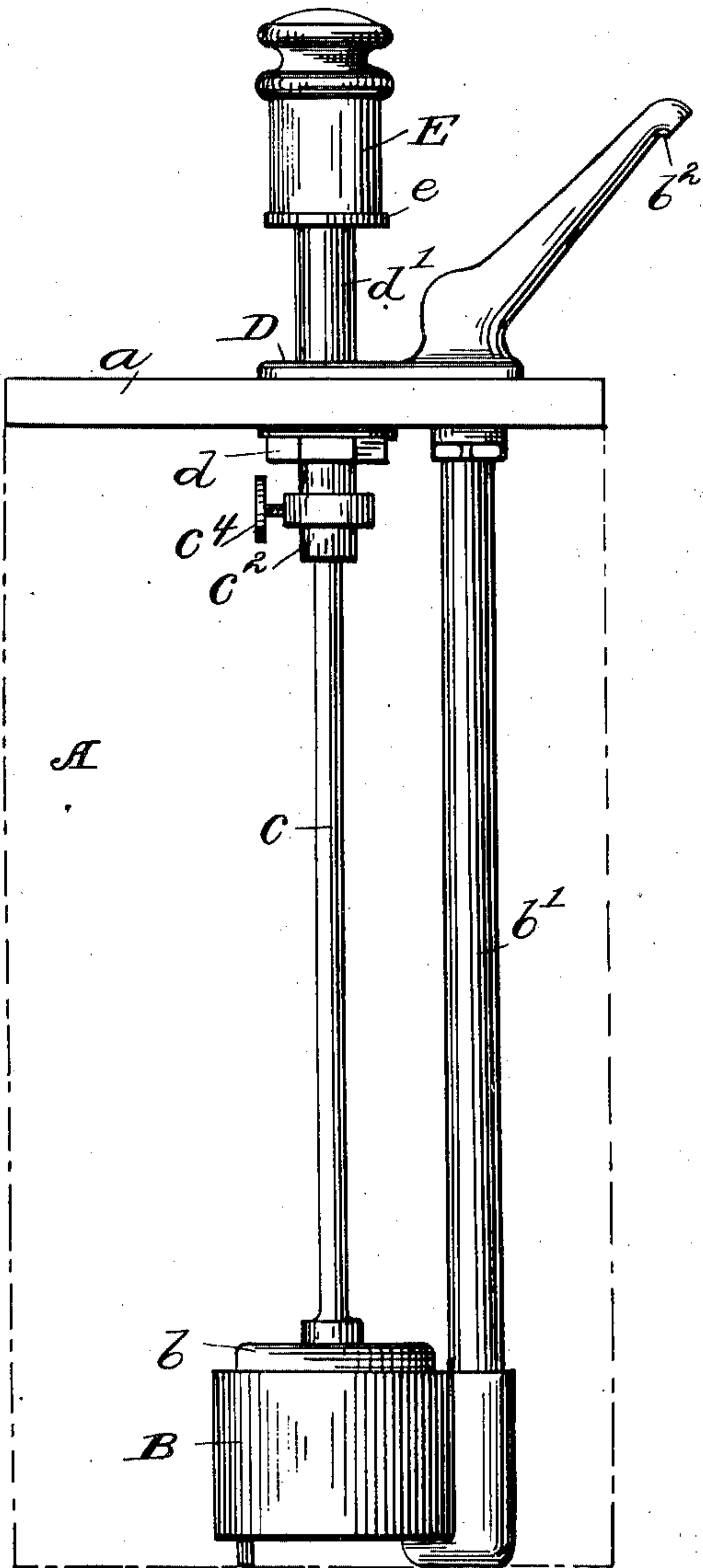


FIG. 2

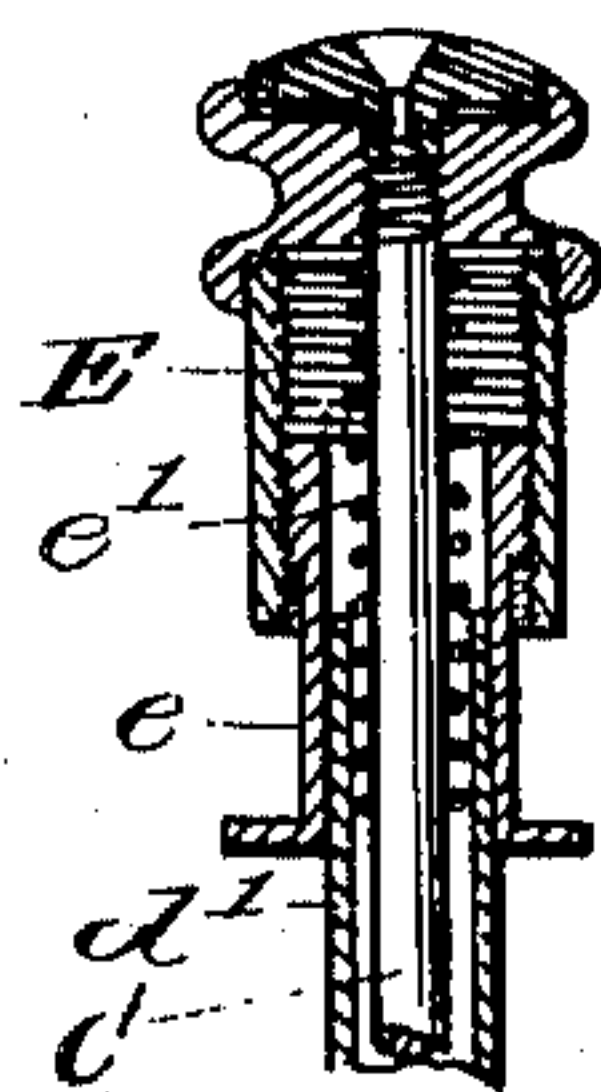
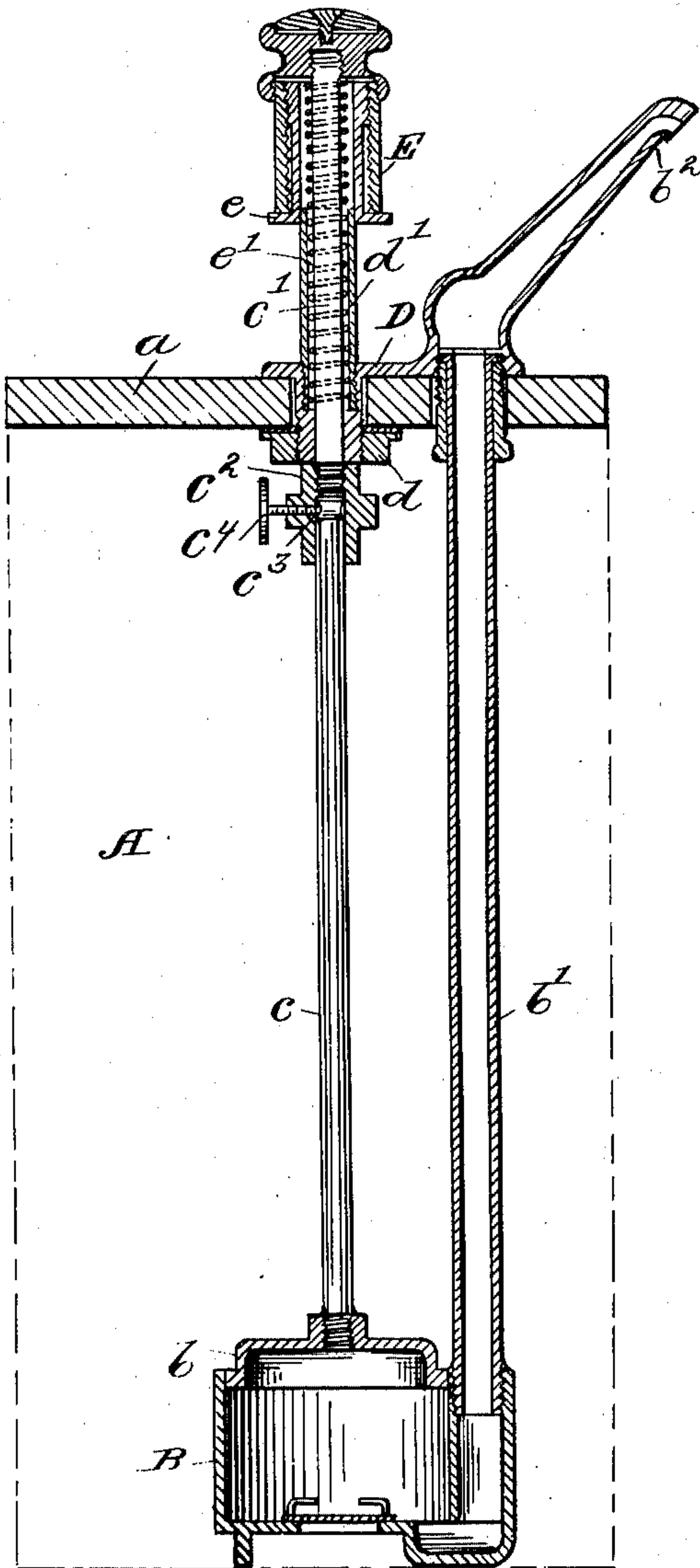


FIG. 3

Witnesses:
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UNITED STATES PATENT OFFICE.

THEODORE H. SCHUTT, OF CLEVELAND, OHIO, ASSIGNOR TO THE BISHOP & BABCOCK COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

SYRUP-PUMP.

967,251.

Specification of Letters Patent. Patented Aug. 16, 1910.

Application filed December 18, 1909. Serial No. 533,943.

To all whom it may concern:

Be it known that I, THEODORE H. SCHUTT, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Syrup-Pumps, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to pumps and has particular relation to that class of pumps which is used in soda fountains for pumping syrup from a suitable tank into a glass or similar receptacle.

The objects of the invention are the provision of a pump of more simple and effective operation than pumps of this class now on the market, to render the pump more easily cleaned, and to make it adjustable so that it may be adapted for use in varying conditions.

To the accomplishment of these and related ends said invention, then, consists of the means hereinafter described, and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain mechanisms embodying the invention, such disclosed means constituting, however, but one of the various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—Figure 1 is a side elevation of a pump embodying my invention, the tank being diagrammatically shown; Fig. 2 is a vertical section thereof; Fig. 3 is a section of a detail, showing an adjustable part in a different position than in the other figures.

It will be understood that pumps of this class are generally attached to a removable cover of a containing tank. Such a tank A is shown diagrammatically in the drawings, while the removable cover is designated by reference letter *a*. Suspended from the cover *a* is a cylinder B which has in its bottom a hole covered by a disk capable of limited upward movement, the hole and disk thus forming a valve through which the contents of the tank may be admitted into the cylinder of the pump. A discharge tube *b'* leads from the cylinder and is attached to the cover *a*, while above the cover it is connected with a discharge nozzle *b²*; it is this

discharge tube *b'* which serves to suspend the cylinder B from the cover *a* and in fixed relation thereto.

A piston *b* reciprocates in the cylinder B, and attached to the piston is a two-part piston rod, the parts of which are designated in the drawings by the letters *c* and *c'*. The part *c* has near its upper end an annular groove *c³* and over this end of the part fits a sleeve *c²* in which is an aperture which registers with the groove *c³*, so that a set screw *c⁴* may project through this aperture and engage the groove *c³*. The part *c'* is screwed into the upper end of the sleeve *c²*. The discharge nozzle *b²* is formed with a laterally extending plate D which extends partly over the cover *a*; the plate D is formed on its under side with a boss which extends downwardly through an opening in the cover *a*, the plate being secured firmly against the cover by a lock nut *d* which engages the boss below the cover. The plate D and its boss are formed with a central opening and into this opening, above the cover *a*, is screwed a sleeve *d'* which forms a bearing for the upper part *c'* of the piston rod. A knob E, attached to the upper end of part *c'*, forms a handle for operating such part. This knob E is provided with a depending interiorly threaded flange, and engaging the interior thread of such flange is a sleeve *e* which has a bearing surface on sleeve *d'*. The spring *e'* encircles the upper portion of the rod within the several sleeves, its ends respectively abutting against a shoulder formed in knob E and a shoulder formed in the boss of plate D, and this spring serves to normally retain the rod in its uppermost position.

The several advantages of my improved device may be readily understood from the drawings and the detailed description.

The spring constantly tends to raise the piston, and the upward movement of the piston is limited by contact of sleeve *c²* with lock nut *d*. The length of stroke of the piston may be varied at will, however, by varying the limit of its downward stroke. This may be easily and quickly effected by screwing the sleeve *e* a greater or less distance into the flange of knob E. The sleeve strikes the plate D when the rod is depressed so that the plate D thus is in effect a shoulder adapted to limit the downward stroke of the piston. This adjustability of the

stroke is highly advantageous in the practical use of the pump, for by varying the stroke in this manner, a greater or less amount of syrup may be dispensed by a single stroke, as described.

A further advantage of my complete pump exists in the provision of a two-part piston rod. By loosening the set screw, the part of the piston rod below the cover, together with its attached piston may be quickly removed from the device so that the cylinder and the piston may be thoroughly cleansed.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. A pump of the class described, comprising a supporting plate, a cylinder supported below the plate, a piston reciprocable therein, a fixed tubular member supported by said plate, a piston rod extending through the plate and said member, a knob secured to said rod, a fixed shoulder encircling the rod, a sleeve screwed to said knob and adapted to engage said shoulder, said sleeve having a bearing on said member, and a spring tending to move the rod, said spring being inclosed by said sleeve and member.

2. A pump of the class described, comprising a supporting plate, a cylinder supported below the plate, a piston reciprocable therein, a fixed tubular member extending upwardly from the plate, a piston rod extending through the plate and said member, a knob secured to the upper end of the rod, a fixed annular shoulder encircling the rod, a sleeve screwed to said knob and adapted to engage said shoulder, said sleeve having a bearing on said member, and a spring tending to move the rod, said spring being inclosed by said sleeve and member.

3. A pump of the class described, comprising a supporting plate, a cylinder supported below the plate, a piston reciprocable therein, a fixed tubular member extending upwardly from the plate, a piston rod extending through the plate and member, a hollow knob secured to the upper end of the rod, a fixed annular shoulder encircling the rod, a sleeve screwed into said knob and adapted to engage said shoulder, said sleeve having a bearing on said member, and a spring tending to move the rod, said spring being inclosed by said sleeve and member.

4. A pump of the class described, comprising a supporting plate, a cylinder supported below the plate, a piston reciprocable therein, a fixed tubular member extending upwardly from the plate, a piston rod extending through the plate and said member, a hollow knob secured to the upper end of the rod, a fixed upwardly facing annular shoulder encircling the rod, a hollow sleeve screwed into said knob and adapted, on depression of the rod, to engage said shoulder, said sleeve having a bearing on said member, and a spring inclosed by the knob and the sleeve and the tubular member and tending to elevate the rod.

5. A pump of the class described, comprising a supporting plate, a tube depending therefrom, a cylinder supported at the lower end of said tube and connected therewith, a piston reciprocable in the cylinder, a rod attached to the piston and provided with an annular groove near its upper end, a sleeve fitting over such end and provided with an aperture in its side, a screw projecting through the aperture and engaging the groove, and a handled rod secured to said sleeve and extending through the supporting plate.

Signed by me this 14th day of December, 1909.

THEODORE H. SCHUTT.

Attested by—

E. H. VOGELPOHL,
E. McKILLEN.