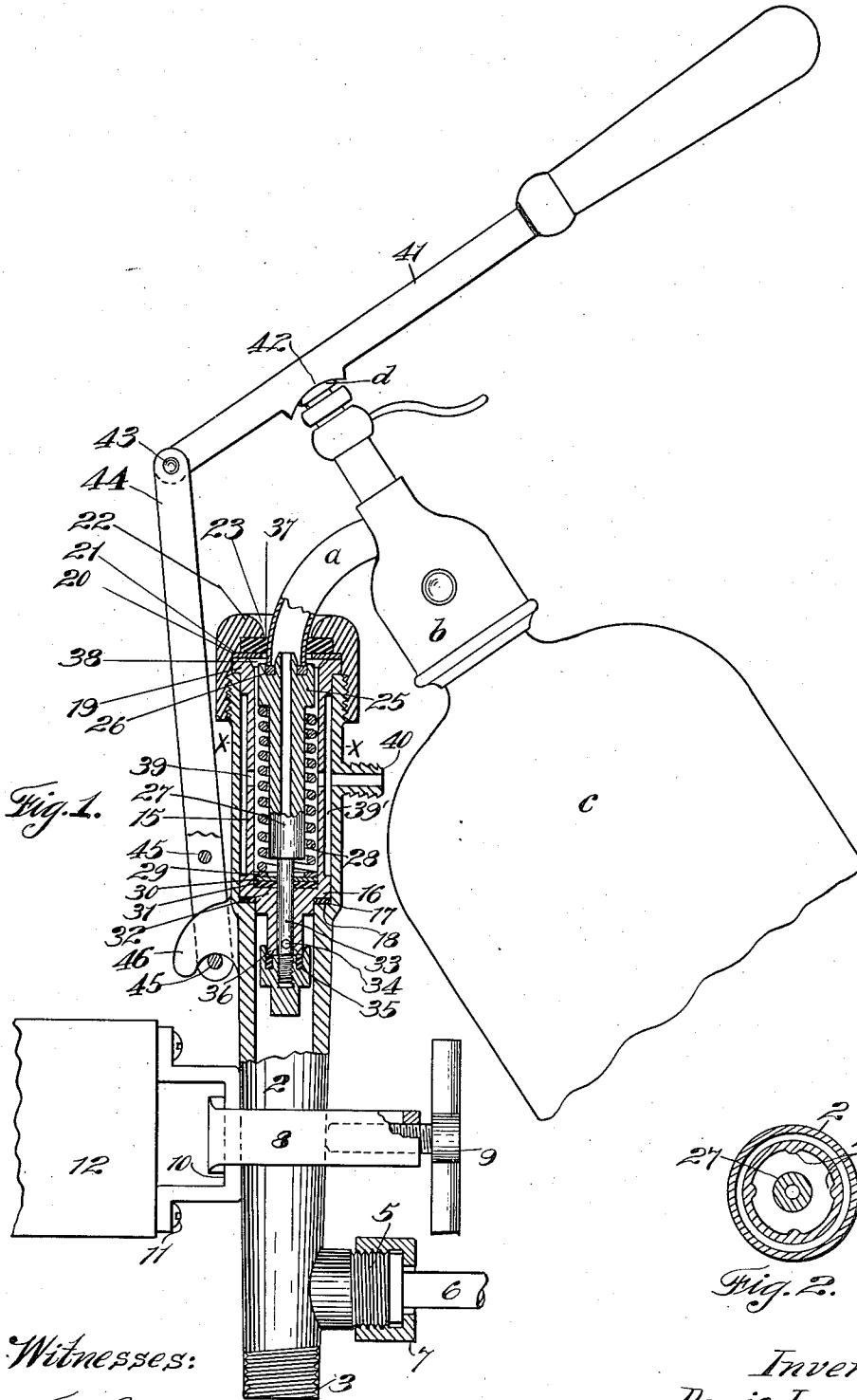


D. LANDAU.
SIPHON FILLER.

APPLICATION FILED JAN. 12, 1911.

1,034,628.

Patented Aug. 6, 1912.



Witnesses:

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UNITED STATES PATENT OFFICE.

DEWIS LANDAU, OF SAN FRANCISCO, CALIFORNIA.

SIPHON-FILLER.

1,034,628.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed January 12, 1911. Serial No. 602,352.

To all whom it may concern:

Be it known that I, DEWIS LANDAU, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Siphon-Fillers, of which the following is a specification.

This invention relates to an apparatus for filling receptacles with liquids, and is particularly useful for filling siphons of various construction.

The object of my present invention is to provide an improved apparatus by which a siphon bottle or other liquid receptacle may be conveniently and quickly filled; to provide in combination a siphon or other receptacle filling apparatus, and means for conveniently mounting the apparatus so that ready access may be had to the same; to provide means whereby the siphon filler may be readily connected to a fluid container, or a gas tank when necessary or desired; to provide a substantial, effective and reliable valve for the filler; to provide means whereby ready access may be had to the interior devices of the filler; and to provide a means permitting a large range of adjustment of the device to various conditions of service.

My invention is an improvement of the apparatus for filling receptacles with liquids described in a prior patent issued to me July 13, 1909, No. 927,983, and my invention consists of the parts and the construction and combination of parts, as hereinafter more fully described and claimed, having reference to the accompanying drawings in which—

Figure 1 is a partial sectional view of the filling apparatus showing a fragment of a siphon bottle placed in position upon the filler. Fig. 2 is a transverse section on the line X—X of Fig. 1, showing the filler valve and sleeve or cylinder.

In that embodiment of my invention represented in Fig. 1, 2 is a tube of suitable proportion and design adapted to be connected in any appropriate manner to a liquid containing vessel, not here shown, to which it may be screwed by threads 3 at its lower end.

Since it is sometimes necessary to increase the pressure within the container or siphon, suitable connection may be made with a pressure tank, not shown, by the connection or pipe 6 which may be provided with a nut

7 adapted to clamp the pipe 6 against the thread portion 5 of the tube.

When the apparatus is to be used frequently, as in restaurants, cafés, kitchens and other places, it is desirable to temporarily support the filler tube 2 in some convenient position, and this is accomplished by means of a suitable clamping device, shown in Fig. 1 as comprising a yoke 8 embracing the tube, and provided at its outer portion with a screw 9 which may be advanced against the tube 2 to press it firmly against a bracket 10 secured by means of screws 11 to a convenient table, counter or other support or shelf 12. The yoke 8 is drawn outwardly into snug engagement with the bracket 10 as the screw 9 is turned to force the tube 2 against the face of the bracket.

Within the upper portion of the filler tube 2 is removably mounted a cylinder or sleeve 15, having at its lower portion a shoulder 16 adapted to seat upon a washer 17 which is placed against a seat 18 formed upon the interior of the tube. The upper portion of the cylinder 15 is outwardly flanged, as at 19, to project slightly over the end of the tube 2. Against the upper end of the cylinder 15 is forced a washer 20 resting against a shoulder 21 formed in an appropriate cap 22 having a central opening or perforation 23, the cap being adapted to be screwed over the upper end of the filler body or tube 2.

The interior surface of the cylinder 15 is provided with a series of ribs or projections 24, between which is centrally sustained a tubular shoulder 25, upon the upper end of which is appropriately fastened a gasket or other packing device 26, the upper surface of which is exposed below the orifice 23 of the cap 22, and against which packing 26 may be placed the spout *a* formed upon the neck *b* of the vessel to be filled, here shown as a siphon bottle *c*.

The shoulder 25 is connected to a spindle 27, surrounded by a spring 28, reactive against the head portion of the shoulder 25, and a suitable washer 29 supported upon suitable packing members 30 and 31 rests upon a seat 32 formed upon the interior of the cylinder 15. The seat 32 is perforated to receive a tubular stem 33 of the shoulder 25, which stem 33 is perforated at 34 to allow the inflow of liquid or gas through the shoulder 25 when the latter is depressed by the siphon spout *a*, so as to carry a valve

member 35, mounted at the lower end of the valve stem 33, away from an annular valve seat 36 formed upon the lower reduced portion of the cylinder 15. The shoulder 25 is normally projected upwardly by the expansion of the spring 28, thus closing the valve 35 against the annular valve seat 36 of the cylinder 15, and preventing the access of fluid to the interior of the tubular valve.

10 In operation, when the siphon bottle spout *a* is passed through the cap 22 and placed upon the gasket 26 of the shoulder 25 and sufficient pressure is exerted by the spout *a* against the valve, the latter will
15 move downwardly compressing the spring 28, and open the closure formed by the valve 35 and allow fluid under pressure to pass upwardly through the tube 2 and into the shoulder 25, thence to the vessel *c*. Having
20 thus filled a vessel, when the latter is removed from the gasket 26 and the valve 35 closed upon its seat 36, there will be a tendency of a small quantity of fluid contained in the spout *a* to immediately escape downwardly, and, if means were not provided,
25 this escaping quantity of fluid would flow over the cap 22 and keep the filling apparatus in a soiled and unsightly condition. It is, therefore, necessary to provide a practical, reliable and effective means for preventing this uncleanly spilling of the surplus fluid from the spout *a*. To accomplish this,
30 I insert in the cap 22 a suitable gasket 37, having an opening of sufficient size to allow the insertion of the vessel spout *a* and sufficiently embrace the spout to prevent the escape upwardly of surplus fluid.

Preferably the diameter of the packing member 37 is somewhat less than the washer
40 20 which is supported against the shoulder 21 in the cap 22. The particular reason for making the exterior diameter of the gasket 37 less than that of the washer 20 is to prevent the washer from exerting pressure upon the gasket 37 when the cap 22 is
45 screwed down upon the upper end of the tube 2. The upper transverse end of the valve spindle shoulder 25 is not permitted to come up into contact with the lower surface of the washer 20, thus insuring a vent
50 or passageway, indicated at 38, between the washer and the valve, and allowing the flow of surplus fluid from the spout, as it is lifted between the washer 20 and the valve
55 head 25, and around the shoulder 25 into the interior of the cylinder 15. From the interior chamber in the valve cylinder 15 the surplus fluid will pass outwardly through perforations 39 in the cylinder wall and thence outwardly through a perforated stem
60 40 of the tube 2. The escaping fluid passing outwardly through the stem 40 may be conveyed to any point desired, by a connection not shown, which may be secured to the
65 stem 40.

To secure a rapid and free discharge of the water from the interior of the cylinder 15, I have shown the exterior of this cylinder reduced slightly between its flange 19 and the shoulder 16, forming an annular chamber 39' between the exterior surface of the cylinder 15 and the interior of the cylinder receiving portion of the tube 2. This provision of means for safely conducting away the surplus fluid from the spout *a* after the vessel has been filled, insures that at all times the apparatus will be kept clean and dry, as none of the fluid is permitted or caused to flow over the exterior surface of the apparatus. The passageway 38, formed between the washer 20 and the valve shoulder 25, is sufficiently large to freely conduct the fluid to the interior of the chamber 15, and by providing the ribs or projections 24 upon the interior of the cylinder 15, there is always insured ample room between the shoulder 25 and the interior of the cylinder for the escape of the surplus fluid, the ribs, 24, having the primary functions of centering the shoulder, 25, and its surrounding spring 28.

An important provision of my present invention is the means whereby the siphon spout *a* may be firmly and easily applied against the gasket 26 to open the valve member 35. This means in the present instance comprises a lever 41 provided with a suitable seat 42 to receive an upwardly projecting valve-actuating stem *d* of the siphon *c*. The lever 41 is pivoted at 43 to the upper end of a link 44 adjustably connected by pins or other equivalent devices
45 to a projection 46 which may be appropriately mounted upon, or formed with the filler tube 2.

In operation the operator lifts the lever 41 about its fulcrum 43 and places the spout *a* of the siphon in position upon the washer 26 of the shoulder 25, and then brings the lever seat 42 down upon the stem *d* and applies sufficient pressure to the lever 41 to gradually, by firmly depressing the shoulder 25, open the closure at the annular valve seat 36 and thus permit the flow of fluid or gas into the siphon *c*. After this has been sufficiently charged, pressure is relieved from the lever 41, when the siphon spout can then be lifted from the seat 26, at which instant the surplus fluid contained in the spout *a* will percolate through the passageway 38 into the chamber or interior of the cylinder 15 from which it will eventually escape through the waste stem 40.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. The combination in a siphon filler, of a tubular body, a normally closed spring-pressed valve having a stem provided with a shoulder at one end, a cylinder within said

body against which the valve seats, said cylinder being recessed on its exterior surface to form an escape chamber and having perforations communicating with the interior of the cylinder, a washer upon the upper end of the shoulder against which a siphon spout may be pressed to move the valve, an apertured cap over the upper end of the tube to retain said cylinder therein and receive the spout, and projections upon the interior surface of the cylinder to guide therein the valve shoulder and form a channel about the same for the free flow of fluid from below the cap into the chamber.

2. The combination in siphon filling apparatus, of a tubular body, an externally recessed perforated sleeve fitted in said body and forming therewith a drain chamber, a normally closed spring-actuated valve seatable against one end of the sleeve, a shoulder connected to said valve and having a gasket to receive a siphon spout, said valve being adapted to be depressed by said spout, longitudinal ribs within the sleeve guiding the valve shoulder and forming a channel for the escape of fluid into the sleeve, a per-

forated cap securing the sleeve in position and guiding the siphon spout to said gasket, and a packing member mounted in the cap capable of embracing the spout to prevent leak of fluid.

3. The combination in a device for filling receptacles with fluid, of a tubular body having a waste stem discharging outwardly, a ported sleeve mounted within said body and recessed on its exterior to form a waste chamber communicating with the stem, a hollow valve stem movable in said sleeve, a shoulder at one end of the stem, guides forming channels around the shoulder inside the sleeve, and a cap having a packing to receive a siphon spout secured to said body and forming a space communicating with the channels thereby permitting surplus fluid to escape to the waste chamber.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DEWIS LANDAU.

Witnesses:

CHARLES EDELMAN,
DUDLEY B. VALENTINE.