

G. L. KENNEDY.
 APPARATUS FOR FILLING SIPHON BOTTLES.
 APPLICATION FILED SEPT. 2, 1909.

994,260.

Patented June 6, 1911.

Fig. 1.

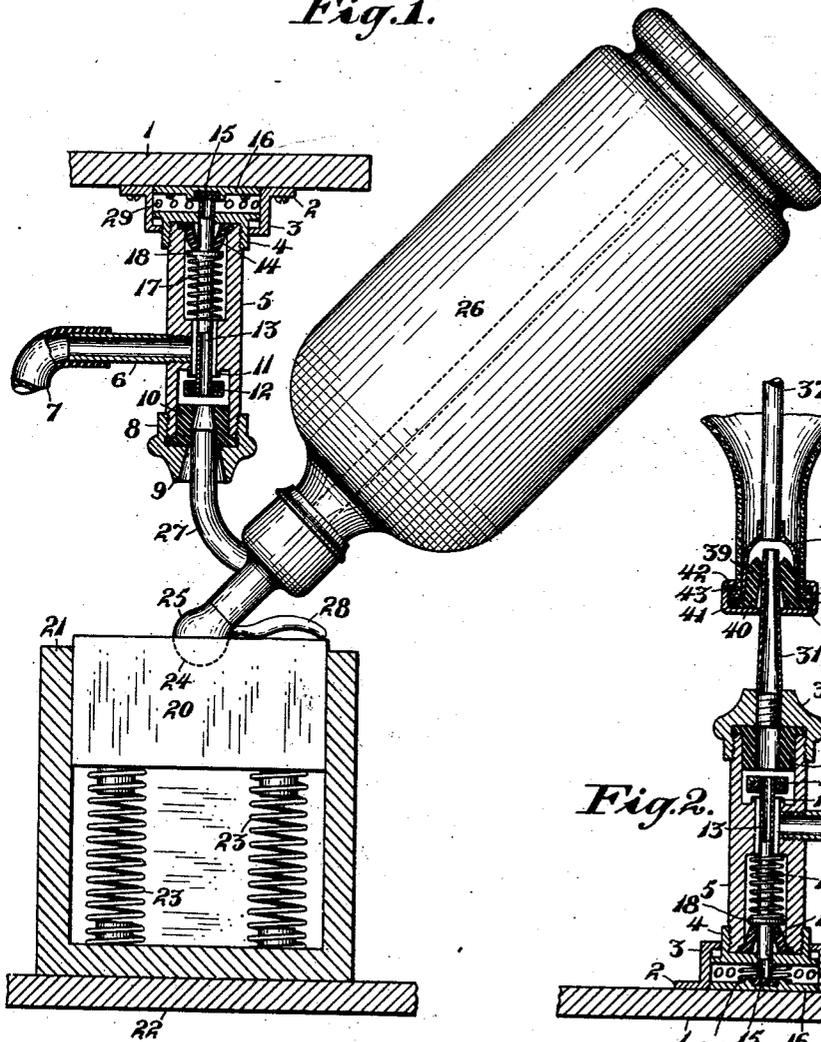
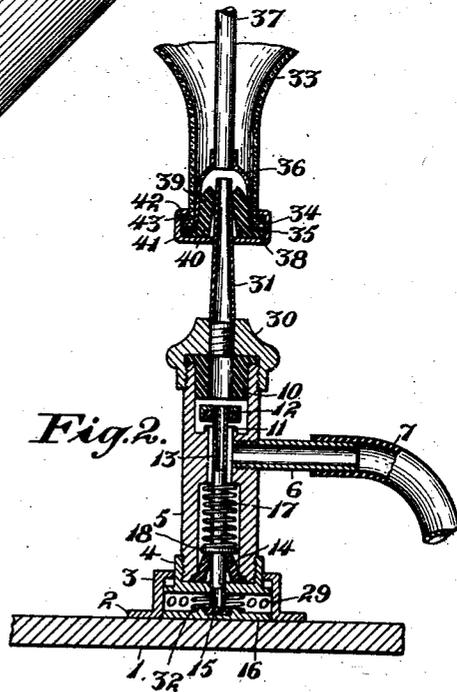


Fig. 2.



WITNESSES:

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APPARATUS FOR FILLING SIPHON-BOTTLES.

994,260.

Specification of Letters Patent. Patented June 6, 1911.

Application filed September 2, 1909. Serial No. 515,985.

To all whom it may concern:

Be it known that I, GUY L. KENNEDY, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Apparatus for Filling Siphon-Bottles, of which the following is a specification.

The object of the present invention is to provide an apparatus for filling siphon bottles conveniently and rapidly.

In the accompanying drawing, Figure 1 is a vertical section of one form of the apparatus, the siphon being shown in side elevation; and Fig. 2 is a vertical section of another form of the apparatus.

Referring to the drawing, and especially to the form of the invention shown in Fig. 1, 1 indicates a suitable support, to the under side of which is secured a flange 2 of a guideway 3 for a cap 4 screwed upon the upper end of a cylindrical casing 5, into the side of which is screwed a pipe 6, adapted to be connected by a flexible tube 7 with a source of supply of aerated liquid. On the lower end of said casing 5 is screwed a cap 8, formed with an outwardly flaring mouth 9, and between said latter cap and the casing is clamped the flange of a centrally apertured rubber gland 10.

The supply pipe 6 is connected to a part of the cylinder, the interior of which is contracted in diameter, to form a neck, the lower end of which forms a valve seat 11 for a valve 12, upon the lower end of a sniff tube 13, open at both ends which passes at its upper end, first, through a rubber packing 14, and then through the upper cap 4, its upper open end being adapted to contact with a rubber seat 15 in a seat plate 16, secured to said support 1. A coiled spring 17 around said tube 13 presses at the upper end against a disk 18 secured to said tube, and at the lower end against the upper end of the contracted neck in the casing.

Located beneath the above described apparatus is a movable block 20, which is guided in a guideway 21, supported upon a suitable base 22, and is normally pressed upward by springs 23. In the upper surface of said block, immediately beneath the flaring mouth 9, is formed a socket 24 adapted to receive the extreme end of the head 25 of a siphon bottle, shown at 26 having a spout 27 and a lever 28 of the usual

form. The guideway 3 is formed with suitable apertures 29 for the purpose of "sniffing" the bottle as hereinafter explained.

The following is the mode of using the above described apparatus. The siphon bottle is inverted, and the knob on the extremity of its head is inserted into the socket 24 in the block, and the block is then depressed against the action of the springs, until the outer end of the spout 27 can pass beneath the edge of the outwardly flaring mouth 9. Then said siphon is moved angularly until the end of its spout is centrally beneath said mouth, and then the springs 23 are allowed to press said siphon and spout upward. The opening through the gland is of smaller diameter than said spout, so that, as said spout is pressed upward by the action of said springs, the upper end of said spout impinges against the rubber surface of said gland and moves said gland and the casing upward, its upper cap 4 sliding in the guideway 3. Thereby the seat 11 is raised from the valve 12. Immediately the aerated liquid flows from the filling pipe through said contacted neck, past said valve, through the gland, and into said siphon spout. The parts are so arranged that, when the siphon is in the angular position in which the valve 12 is thus opened, the siphon valve lever 28 is pressed by said block toward the siphon head, so that the siphon valve is opened, and the aerated liquid can pass from said spout through said valve and through the siphon tube and fill the siphon bottle.

When the bottle has been filled to such an extent that the pressure of the air confined therein prevents the further entrance of aerated liquid, it is necessary to "sniff," or discharge the compressed air. This is done by depressing the siphon bottle and block the effect of which is to permit the casing and the tube 13 to descend, closing the valve 12, and the further descent of said tube removes its open upper end from the rubber seat, allowing the compressed air to escape from the siphon bottle down the siphon tube, out by the spout, through the tube 13, between the upper end of said tube and the rubber seat and out by the apertures 29 in the guideway. The bottle may be then allowed to rise by the action of said springs 23 to its former position, in which the valve 12 is opened, so that a fresh supply of aerated liquid can pass into the siphon bot-

tle by said valve. When the supply of aerated liquid has filled the siphon bottle up to the end of the siphon tube so that no air can escape therefrom by sniffing, the operation is completed.

The form of the invention shown in Fig. 2 is devised for the purpose of filling siphon bottles of novel construction, for which a separate application for Letters Patent is filed herewith. In this form, the valve mechanism of the apparatus does not differ from that shown in Fig. 1, but its position is inverted, the casing 5 now extending upward from the guideway 3. Instead of the cap 8 having a flaring mouth, there is now provided a cap 30 similar to the cap 8, except that in its center is screwed a tapering filling nozzle 31. Also on account of the inversion of the arrangement of the parts in said modification, a coiled spring 32 is arranged between the seat frame and the cap to normally raise said casing and thus perform the same function which the force of gravity performs in the first described form of the apparatus. The bottle itself is partly shown at 33, and its neck is formed with a flange 34, against which rests a flange 35 of a siphon tube holder 36 extending, in the inverted position of the bottle, upward from said flange, to the center of which is secured the siphon tube 37. Against the flange 35 rests the flange 38 of a check valve 39 the central portion of which is formed of a comparatively thick shell 40 of a general conoidal form slitted transversely through its apex. Said siphon tube holder and check valve are held in place by a centrally apertured cap 41 having a flange 42 bent inward over a rubber ring 43 and clamping said ring against the flange 34 of the neck.

In using this form of the invention, the bottle is inverted and is pressed downward, so that the upwardly extending end of the nozzle 31 passes through the central aperture in the cap and penetrates the slit in the apex of the check valve, opening said slit. The frictional pressure between said check valve and nozzle depresses the cylin-

der against the force of the springs 32 and 17. This has the effect of opening the valve 12, and permitting the liquid to flow from the filling tube into the siphon bottle. To sniff or vent the air confined in said siphon bottle, the siphon bottle is raised, whereupon the spring 32 raises the casing its full distance permitted by the guideway 3, the effect of which is, not only to close the valve 12, but also to raise said valve and the tube 13, so that the lower end of said tube is raised from off the seat 15, and the confined air can escape by the apertures 29.

I claim:—

1. An apparatus of the character described, comprising a casing, a filling tube connected to said casing, said casing being formed at one end with means for connecting it with a siphon bottle, a tube movable in said casing, a valve carried by one end of said tube and arranged to close the passage from said filling tube to the aforesaid end of the casing, a fixed guideway in which said casing is slidable, a seat for closing the other end of said tube, and a spring around said tube for holding said valve to its seat, substantially as described.

2. An apparatus of the character described, comprising a casing, a filling tube connected to said casing, said casing being formed at one end with means for connecting it with a siphon bottle, a valve arranged to close the passage from said filling tube to said end of the casing, a fixed guideway in which said casing is slidable, a spring for holding said valve to its seat, a conduit leading to the atmosphere, independent of said passage, and means whereby said conduit is automatically closed when said passage is opened, and conversely, substantially as described.

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

GUY L. KENNEDY.

Witnesses:

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