

No. 743,798.

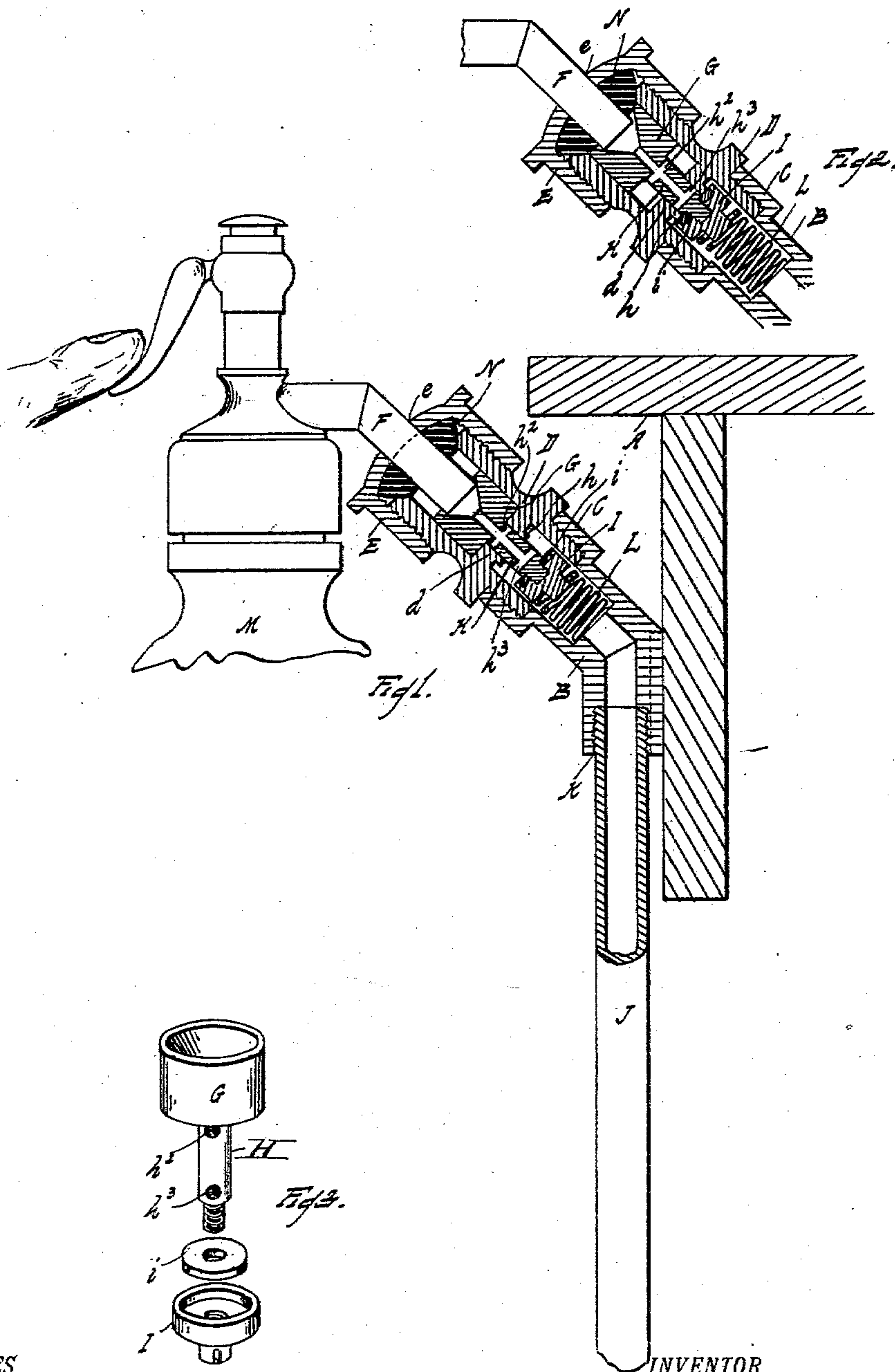
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H. A. ALLWARDT.

SIPHON FILLER.

APPLICATION FILED NOV. 10, 1902.

NO MODEL.



WITNESSES

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SIPHON-FILLER.

SPECIFICATION forming part of Letters Patent No. 743,798, dated November 10, 1903.

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To all whom it may concern:

Be it known that I, HENRY A. ALLWARDT, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Siphon-Fillers; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to siphon-fillers, and has for its object an improved fixture to be attached to a tank or barrel which contains aerated fluid and which will enable one to transfer the fluid from the tank to a siphon-bottle easily and readily. The fixture itself is intended to be secured to any permanent framework and to be connected to a more or less distant tank by a pipe, and it constitutes a terminal valve with which the nozzle of an ordinary siphon-bottle may be engaged and through which the aerated liquid is transferred from the tank to the siphon-bottle.

In the drawings, Figure 1 is a longitudinal section of a fixture embodying my invention, the same being secured in place to a framework and a siphon-bottle being shown in engagement with it. The parts are shown in the position which they take when the siphon is being filled. Fig. 2 is a longitudinal section of the valve-casing, the parts being in the position which they take when the nozzle of the siphon is being withdrawn. Fig. 3 is a perspective of the valve, its parts being shown separated.

A is the framework, and B is a tubular coupling secured by a flange (indicated in dotted lines in Fig. 1) to the framework A. At the upper end of the coupling B is an internally-screw-threaded enlargement C.

J is a part of a pipe engaged at K to the lower end of the coupling B and extending to the reservoir from which the liquid is to be drawn.

D is a valve-casing having screw-threads at its lower end which engages to form a tight joint with the threads of the enlargement C. The interior of the valve-casing D is divided

into two parts by a partition *d*, through the center of which is a cylindrical aperture.

G is a piston adapted to reciprocate in the upper part of the casing D, in which it is fitted so as to be tight.

H is a cylindrical stem extending from the piston G through the aperture in the partition *d*. The upper end of the piston G is formed so as to present a hollow conical surface. A cylindrical hole is bored through the center of the piston G and nearly through the stem H.

h^2 h^3 are holes extending laterally through the walls of the stem H. The hole h^2 is located adjacent to the lower surface of the piston G, and the hole h^3 near that end of the stem H to which the piston I is secured. The distance along the stem H between the holes h^2 and h^3 is so proportioned with reference to the thickness of the partition *d* that there is a clear passage from the lower chamber through the stem and the piston when the parts are in the position shown in Fig. 1, and there is a clear passage through the piston G between the opposite parts of the chamber in which this piston rests when the nozzle of the siphon-bottle is withdrawn or is withdrawing and the parts are taking the position shown in Fig. 2.

I is a disk or piston secured to the lower end of the stem H and adapted to fit loosely in the lower part of the cavity of the valve-casing D.

E is a cap having a central aperture *e*. The cap E is adapted to screw on the upper end of the casing D.

N is a rubber washer between the upper end of the casing D and the cap E. The washer N has a central aperture formed through it, and this aperture may be contracted by screwing down upon the cap E, so as to compress the material of the washer between said cap and the casing D.

h is a valve-seat formed around the stem H upon the inner side of the partition *d*. The upper surface of the piston I is formed, as by a washer *i*, to seat against the partition *d*, as a valve, and to form a tight joint.

M is a siphon, and F is the nozzle thereof.

The method of using the above-described

device is as follows: The liquid being under considerable pressure, the piston I being seated against the valve *h*, as indicated in Fig. 2, the nozzle F of the siphon is passed
 5 through the aperture in the cap E and washer N, which forms a tight joint therewith. The end of the nozzle is forced against the piston G, pressing it down to the position indicated in Fig. 1. The end of the nozzle forms a
 10 tight joint with the conical surface of the piston G. When said piston is pressed down, it forces the piston I away from its seat, leaving a free passage for the liquid through the pipe J, past the piston I, through the hole *h*³
 15 and the aperture, through the piston G and the stem therefrom, through the nozzle F of the siphon, and into the body of said siphon, the siphon-valve being held open, as indicated in Fig. 1.
 20 When it is desired to withdraw the siphon, its valve is allowed to close, and the nozzle F is pulled out from the cap, the pressure of the liquid and the spring L causing the piston G to follow the nozzle until the piston I
 25 rests against the partition *d*. It will be noticed that as the piston G rises a chamber is formed beneath it, into which the liquid from the nozzle F will flow. This chamber is contracted as the nozzle of the siphon-bottle is
 30 pushed into place and is practically reduced to nothing when the parts are in the position shown in Fig. 1, at which time there is free communication from the chamber below the partition *d* into the siphon-bottle. When the
 35 nozzle is withdrawn and the parts assume the position shown in Fig. 2, the capacity of the chamber is increased, and there is free communication between it and the nozzle of the siphon-bottle, but no communication between
 40 the chambers on the opposite sides of the partition, and at this time the excess fluid that has traveled past the valve I but has not yet entered the siphon-bottle is free to run back into the chamber. The first action on insert-
 45 ing the siphon-nozzle again into the fixture is followed by a pushing back of the piston G, contracting the chamber underneath it

and forcing the liquid that was in the chamber either into the siphon-nozzle or back into the chamber underneath the partition.

What I claim is—

1. In a fixture for filling siphon-bottles, the combination of a casing, a perforated partition across said casing arranged to form two communicating chambers therein, a piston-stem arranged to reciprocate in the communicating passage, provided with a head at each end, the head at the upper end forming a piston in the upper chamber, said stem being provided with a central longitudinal pas-
 60 sage with an opening from said longitudinal passage adapted to communicate with the lower of said chambers, a second opening from said central passage through the stem adapted to communicate with the upper of
 65 said chambers underneath the piston therein, said piston being provided with an opening therethrough, substantially as described.

2. In a fixture for filling siphon-bottles, the combination of a casing having an aperture
 70 for the reception of the siphon-nozzle, a reciprocatory piston in the casing arranged to be engaged by the siphon-nozzle, a passage through the piston having an inlet-opening, means for closing the inlet-opening, a cham-
 75 ber to receive the excess of fluid, and means for automatically opening a passage into said chamber, substantially as described.

3. In a fixture for filling siphon-bottles, the combination of a casing having an opening
 80 therethrough, a valve arranged to close the opening, a reciprocating piston, a passage connecting the spaces at the ends of said piston, means whereby said passage is open when the valve is closed, and means whereby said
 85 passage is closed when the valve is open, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY A. ALLWARDT.

Witnesses:

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