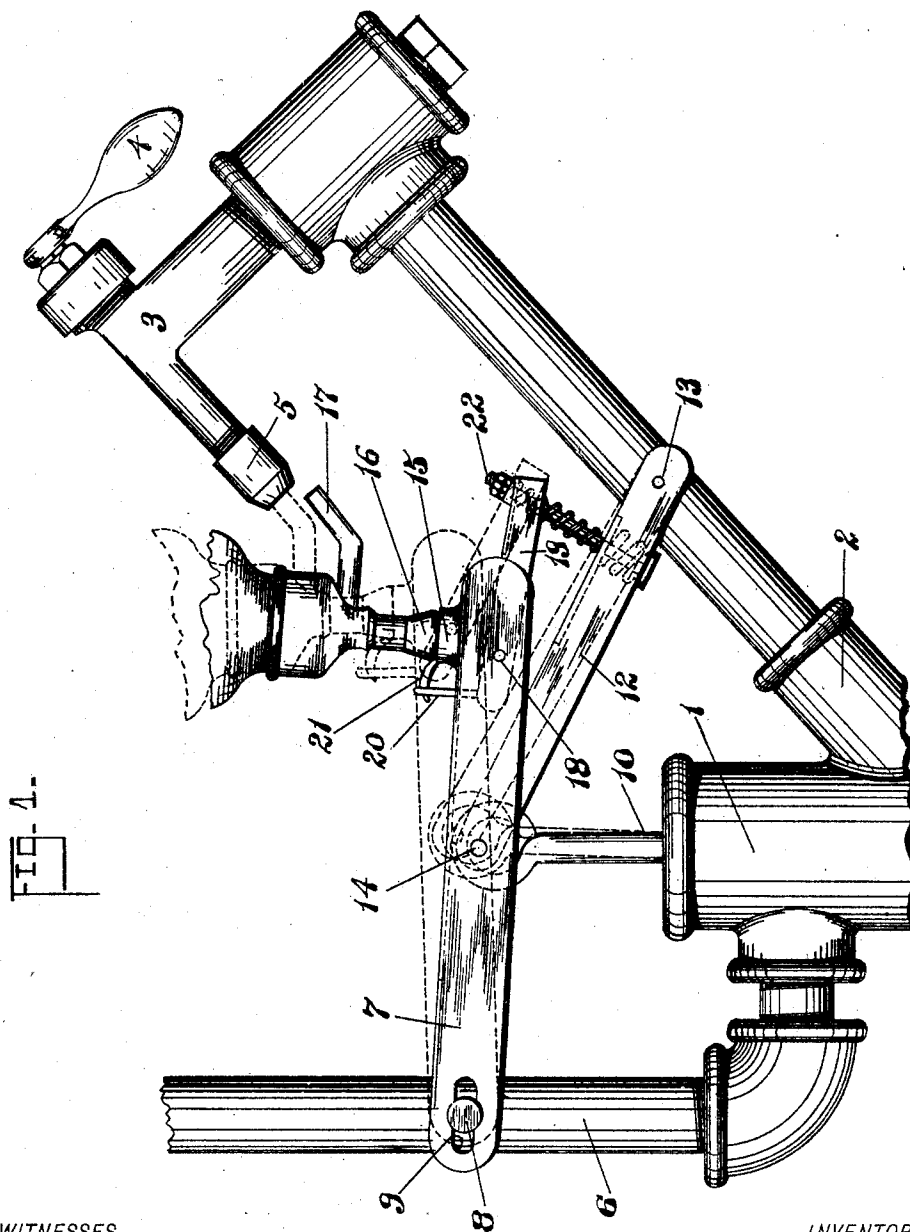


958,982.

P. VOCK.
SIPHON FILLER.
APPLICATION FILED MAY 13, 1907.

Patented May 24, 1910.

4 SHEETS—SHEET 1.



WITNESSES

Fredrick Lemann
Ethel B. Reed

INVENTOR

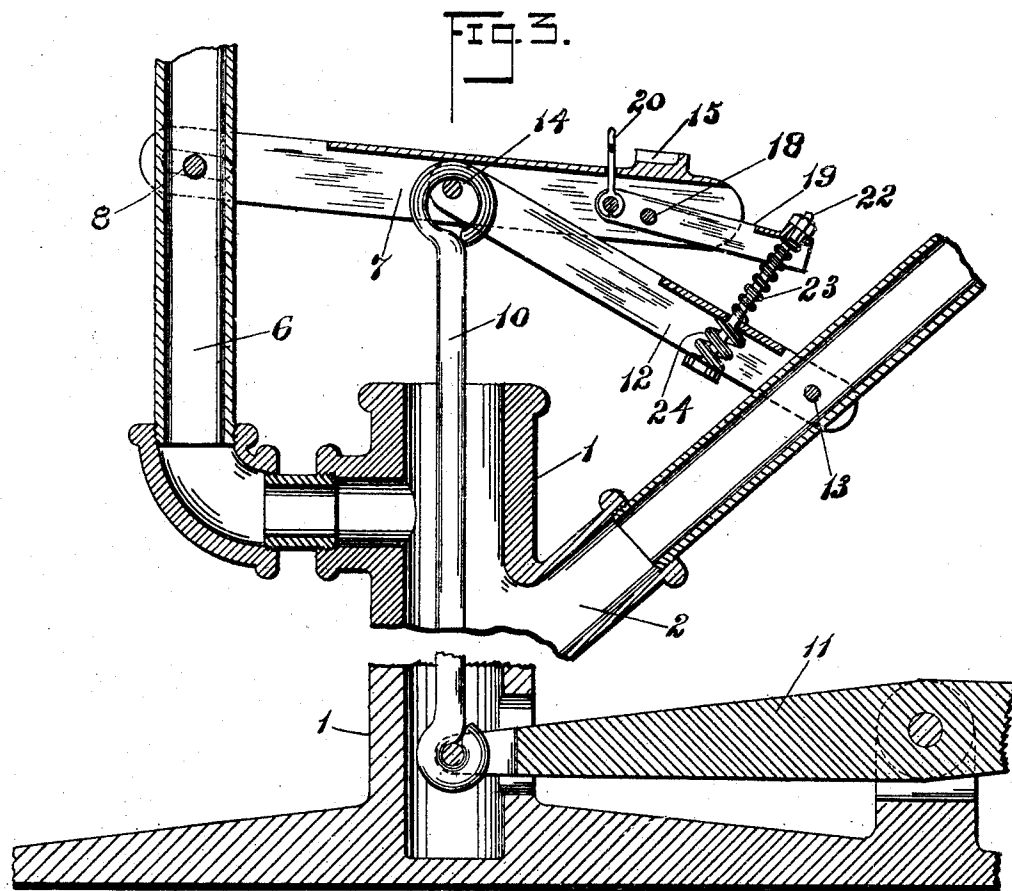
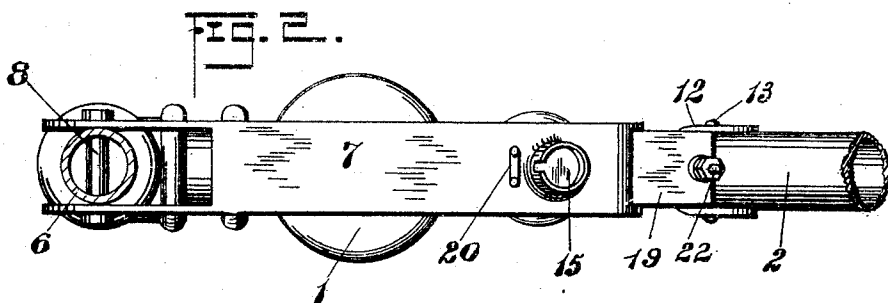
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4 SHEETS—SHEET 2.



WITNESSES

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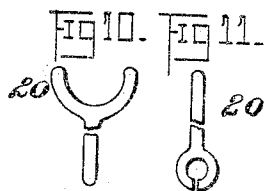
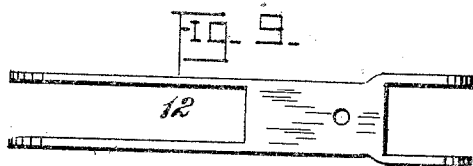
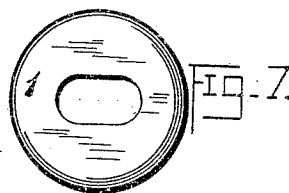
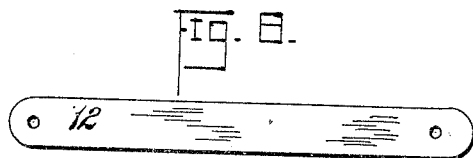
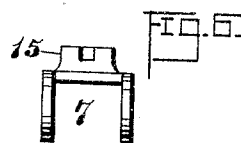
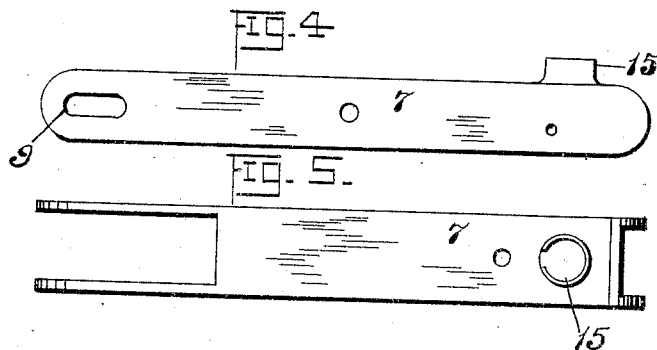
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Patented May 24, 1910.
4 SHEETS—SHEET 3.



WITNESSES

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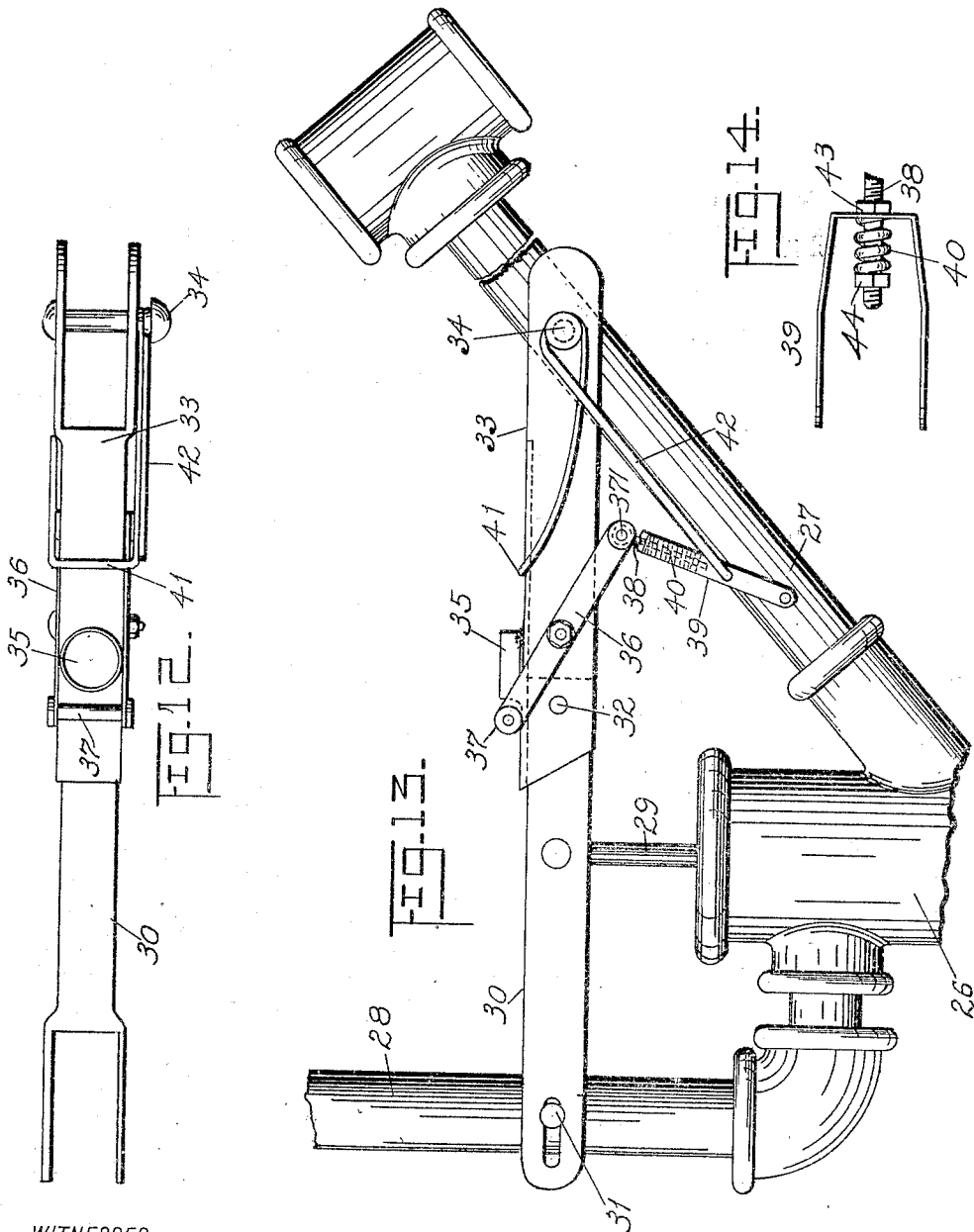
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4 SHEETS—SHEET 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SIPHON-FILLER.

958,982.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed May 13, 1907. Serial No. 373,256.

To all whom it may concern:

Be it known that I, PHILIP VOCK, a citizen of the United States, residing at New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Siphon-Fillers, of which the following is a specification.

My invention relates to improvements in siphon fillers, and comprises means for pressing a siphon into engagement with a filling head, and for automatically opening the valve of the siphon when the spout of said siphon and said filling head are in engagement.

The objects of my invention are to improve and simplify siphon fillers, and particularly to improve and simplify the mechanism required to press the spouts of siphons into engagement with the filling heads and to cause said mechanism to automatically open the siphon valve, and generally to provide a reliable, simple, compact, easily operated, and efficient machine for the purpose.

I will now proceed to describe my invention with reference to the accompanying drawings, in which siphon fillers embodying my invention are illustrated, and will then point out the novel features in claims.

In said drawings: Figure 1 shows a side elevation of the principal parts of a siphon filler embodying my invention, and shows a siphon about to be filled and (in dotted lines) a siphon in filling position. Fig. 2 shows a top view of the parts of the siphon filler shown in Fig. 1. Fig. 3 shows a central vertical section of the same parts. Figs. 4, 5 and 6 show a certain arm in side elevation, plan and end view, respectively; Fig. 7 is a plan of the top of the tubular stand. Figs. 8 and 9 show a certain link in side elevation and in plan, respectively; Figs. 10 and 11 are views at right angles to each other of the valve-lever. Figs. 12 and 13 show in plan and in side-elevation, respectively, a modified form of my invention, the supporting frame and treadle rod being removed in the plan and the filling head shown in neither figure, Fig. 14 is a detail view of a certain yoke.

In the drawings, 1 indicates the upper part of the tubular upright stand customary in siphon fillers. A branch 2 projects outward and upward from the main column of this stand and carries the usual filling head

3, provided with a handle 4 for operating the controlling valve within the head. At its end the head 3 is provided with the usual coupling-socket 5 adapted to receive, and make a tight joint with, the spouts of the siphons to be filled.

6 designates an upright branch of the column 1, located on the side opposite branch 2, and forming a support for the arm 7, pivoted to said branch 6 by pivot studs 8 working in slots 9 of said arm. This arm is arranged to be moved up and down by a rod 10 passing through the column 1 to a treadle 11 (Fig. 3) or other convenient operating device, and to be guided and braced by a link 12, pivoted at 13 to branch 2 of the column, and pivoted at 14 to arm 7. Said arm 7 is provided with a seat 15 for the head 16 of a siphon to be filled, said siphon being placed, in an inverted position, with its head in said seat and its spout 17 turned toward the filling head 3. The construction is such as will be seen, that when the treadle is pressed, arm 7 is swung upward and at the same time drawn slightly toward the right, as viewed in Fig. 1, with the result that the spout 17 is thrust into the coupling-socket 5 of the filling head and held firmly therein.

To arm 7 is pivoted, as at 18, a lever 19, carrying at one end a crotch 20 adapted to actuate the valve 21 of the siphon. The other end of lever 19 is connected by a bolt 22 with link 12, said bolt being arranged to slide freely through said link, but having on one side thereof a spring 23, and on the other side of the link a much stronger spring 24. The construction is such that the crotch 20 receives the siphon valve 21 when the siphon is first put in place on arm 7, and then as arm 7 is raised by the action of the treadle, the spout of the siphon is inserted within the coupling-socket 5 and pressed up firmly therein, lever 19 being at the same time swung so as to cause its crotch 20 to press up the valve 21 of the siphon and open the same. The flow-valve in filling head 3 is then opened by means of the handle 4, and the siphon filled, after which said valve is closed, the treadle released (the siphon valve closing automatically), and then the filled siphon is removed, an empty one put in its place, and the operation repeated.

It will be obvious that since it is not nec-

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essary for the operator to open the siphon valve by hand, one hand of the operator being free to place and remove the siphon, the other free to operate the flow-valve in the filling head, the filling device may be operated very rapidly indeed.

In Figs. 12 and 13, I have shown a slightly modified construction where 26 indicates the main column, 27 the filling head branch, 28 the upright branch and 29 the rod which extends upward through the main column from the treadle, all said parts being as before described. Pivoted to the top of said rod 29 is an arm 30 which is slotted at one end to receive the studs 31 on the upright branch 28, and at its other end is hinged as at 32 to the main arm 33 which is pivoted as at 34 to the filling head branch 27. The said main arm 33 overlies the arm 30 at their point of hinging and carries the seat 35 for the head of a siphon to be filled, as well as having fulcrumed at its opposite sides levers 36 which at their upper ends carry a cross-piece 37 adapted to actuate the valve of the siphon. The opposite ends of said levers 36 are connected by a bar 371 on which is pivoted a bolt 38 which extends through the closed end of a yoke 39 pivoted to the branch 27, the said bolt 38 carrying inside said yoke a compression spring 40, and nuts 43, 44, one above the yoke and the other below the spring, enabling said spring to be regulated. A wire spring lying as at 41 across the top of the arm 33 and being bent around the ends of the pivot 34 has its lower arms 42 connected to the arms of the yoke 39 to fold said yoke against the branch 27. Obviously therefore, the said wire spring serves to normally force the arms 30 and 33 downward into a straight line as shown in Fig. 13, and simultaneously hold the valve actuating cross piece 37 in idle position. When the arms 30, 33 are forced upward to seat a siphon against the filling head, the said cross piece 37 engages the valve substantially as in the construction first described, the spring 40 cushioning said contact independent of the movement of the arms.

What I claim as new is:

1. In a siphon filler, the combination of a frame having diverging branches, a filling head support on one of said branches, a siphon seat, means pivotally connecting said seat to one of said branches and fixing its path of movement with respect thereto, means affording a sliding pivotal connection of the siphon seat to the other branch, and means for moving said seat upward.

2. In a siphon filler, the combination of a frame having diverging branches, a filling head support on one of said branches, a siphon seat, means pivotally connecting said seat to the branch having the filling head support and fixing its path of move-

ment with respect thereto, means affording a sliding pivotal connection of the siphon seat to the other branch, and means for raising and lowering said siphon seat.

3. In a siphon filler, the combination of a frame comprising two branches one of which is adapted to support a filling head, an arm pivoted at one end to said filling head branch and providing a siphon seat, a second arm connecting said first-mentioned arm to the other branch of the frame with a slot-and-pin connection, means for swinging said arm, and valve operating means mounted on the siphon seat arm and connected to the frame.

4. In a siphon filler, the combination of a frame adapted to support a filling head, an arm fulcrumed on said frame and providing a siphon seat, a valve lever fulcrumed on said arm, a bolt at the end of said lever, a member pivoted to the frame and slidably receiving said bolt, a spring on said bolt at the opposite side of said member from the lever, and means for swinging said arm.

5. In a siphon filler, the combination with a frame adapted to support a filling head, an arm fulcrumed on said frame and forming a siphon support, a valve lever fulcrumed on said arm and extending at one end beneath the same, means pivotally connecting said end of the valve lever to the frame, a spring mounted on said frame and adapted to both tend to throw the valve lever into alinement with the arm and to lower said arm, and means for raising said arm.

6. In a siphon filler, the combination of a frame having diverging branches, a filling head support on one of said branches, an arm hinged to said branch with the filling head support and having a siphon seat near its free end or end away from the branch, a second arm extending from said free end of the first arm to the other branch of the frame and forming a sliding pivotal connection therebetween, and means for swinging said second arm.

7. In a siphon filler, the combination of a frame having diverging branches, a filling head support on one of said branches, an arm hinged to said branch with the filling head support and having a siphon seat, a second arm extending from the free end of the first arm to the other branch of the frame and forming a sliding pivotal connection therebetween, means for swinging said second arm, a lever fulcrumed on the first arm and adapted at one end to engage a siphon valve, and means connecting the other end of said lever to the branch of the frame having the filling head support.

8. In a siphon filler, the combination with a frame, a filling head support on said frame, an arm hinged to said frame and

having a siphon seat near its free end, means for swinging said arm, a lever fulcrumed on said arm adapted at one side of its fulcrum to engage the valve of a siphon, and means positively connecting said valve lever at the opposite side of the fulcrum to the frame.

9. In a siphon filler, the combination of a stationary frame, a support for a filling head on said frame, a swinging arm fulcrumed to said frame and providing a siphon support, means for swinging said arm, means for opening the siphon valve mounted on said arm, and means connecting said valve-opening means to a point of the stationary frame at a distance from the fulcrum of the said swinging arm thereon, whereby said valve opening means is moved with respect to the siphon support arm by swinging said arm on its fulcrum.

10. In a siphon filler, the combination of a stationary frame, a support for a filling head on said frame, a swinging arm fulcrumed to said frame and providing a siphon support, means for swinging said arm, means for opening the siphon-valve

mounted on said arm, and a resilient positive connection between said valve-opening means and a point of the stationary frame at a distance from the fulcrum of the said swinging arm thereon, whereby said valve-opening means is moved with respect to the siphon-supporting arm by swinging said arm on its fulcrum.

11. In a siphon filler, the combination of a stationary frame, a support for a filling head on said frame, an arm fulcrumed on said frame and providing a siphon support, means for swinging said arm, a lever fulcrumed on said siphon-support arm adapted at one end to engage a siphon valve to open the same, and means limiting movement of the other end of said lever away from the frame, whereby said valve-opening lever is swung with respect to the siphon-support arm by swinging said arm on its fulcrum.

PHILIP VOCK.

In the presence of—

GEORGE W. MEYER,

FRANK H. SCARDEFIELD.