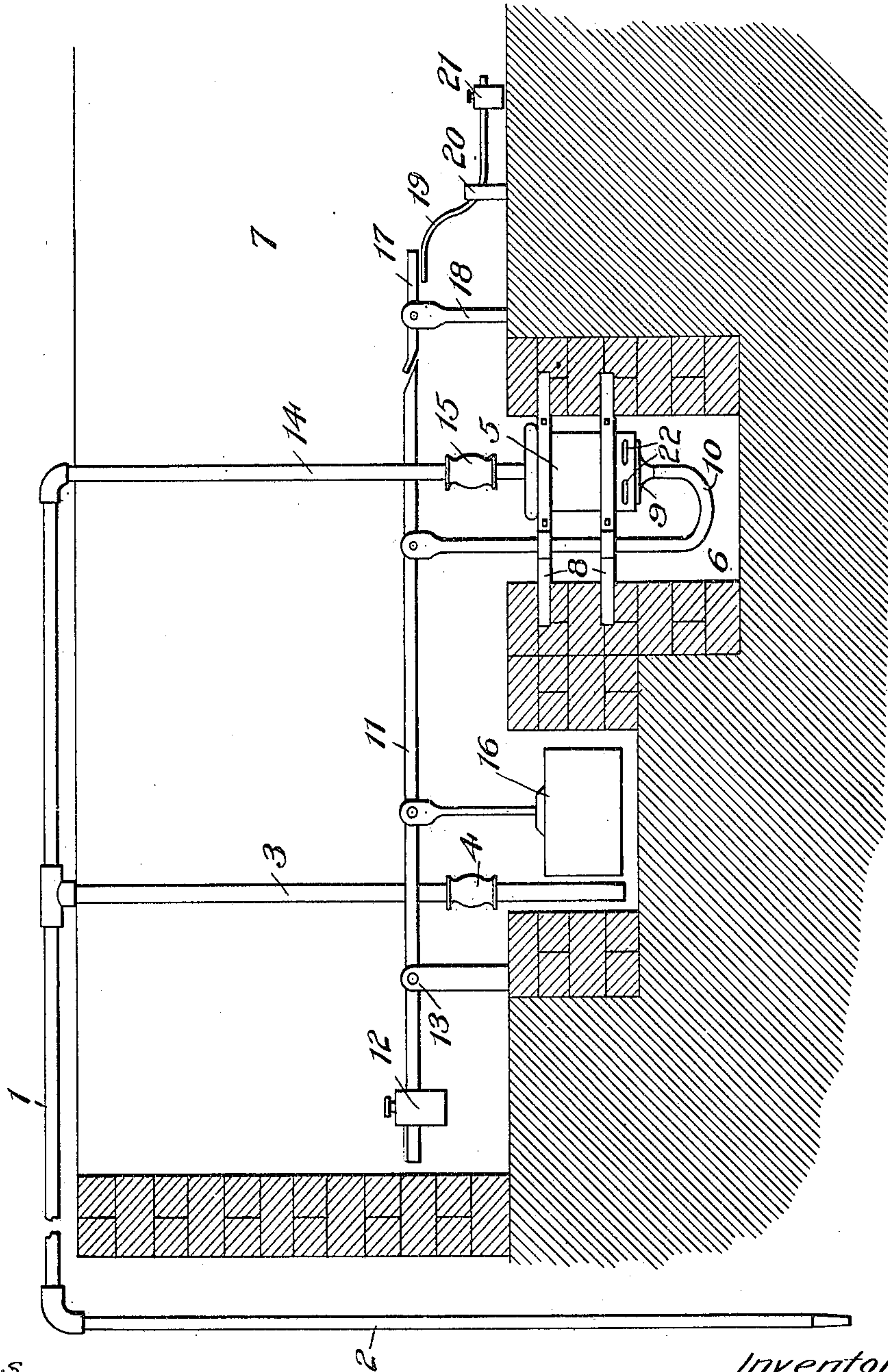


No. 831,817.

PATENTED SEPT. 25, 1906.

G. D. ACKLEY.
AUTOMATIC SIPHON.
APPLICATION FILED DEC. 6, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE D. ACKLEY, OF FORT WORTH, TEXAS.

AUTOMATIC SIPHON.

No. 831,817.

Specification of Letters Patent.

Patented Sept. 25, 1906.

Application filed December 6, 1905. Serial No. 290,629.

To all whom it may concern:

Be it known that I, GEORGE D. ACKLEY, a citizen of the United States, residing at Fort Worth, county of Tarrant, and State of Texas, have invented an Automatic Siphon, of which the following is a specification.

This invention relates to siphons and means for automatically starting the siphon to work; and the object is to provide apparatus for draining cellars, basements, and the like, which apparatus will operate automatically whenever there is a cumulation of water in the location to be drained, so that the water will be drained from such cellar or basement or the like without the attention of a person.

Other objects and advantages will be fully explained in the following description, and the invention will be more particularly pointed out in the claims.

Reference is had to the accompanying drawing, which forms a part of this application and specification.

The drawing consists of a diagrammatic view showing the apparatus located in a basement and showing a broken section of a basement.

The siphon 1 is of the usual form, having a long leg or discharge 2 and a short leg or receiver 3. The short leg or receiver 3 has a check-valve 4 in the lower part thereof to prevent the pipe or receiver 3 from interfering with the starting of the siphon to work by the starting-pump hereinafter explained. A pump 5 is located in a cavity 6 in the basement 7 and made rigid by suitable braces 8, which engage the pump-cylinder and extend into the walls of masonry. The pump is provided with a piston 9 and a gooseneck-stem 10, which is pivotally connected to a lever 11. The stem 10 may extend up through the braces 8 for guides. The lever 11 is provided with a fulcrum 13, and an adjustable weight 12 may be located on an extension of the lever 11. The pump 5 is provided with a starting-pipe 14, which connects with the siphon 1. The pipe 14 has a check-valve 15 in the lower part thereof for purposes hereinafter explained.

A float 16 is pivotally connected to the lever 11 for the purpose of lifting the lever 11 to start the pump to work when water accumulates in the basement. Means are provided for holding the lever down for some time after the water commences to press the

float upward. A bar 17 is fulcrumed in a support 18 and has one end projecting slightly over the end of the lever 11. The other end of the detent-bar 17 is engaged by a lever 19, which is provided with a suitable fulcrum 20 and an adjustable weight 21. As the lever 11 presses upward it will press the end of the detent-bar upward, and the other end of the detent-bar will press on the lever 19. This pressing will continue until the float has accumulated enough power to force the lever 11 up past the bar 17. While this is being done, the pump commences to force water through the pipe 14 and through the siphon 1 and down the leg 2. When this is done and the piston has been forced as high as it can go, the flowing of the water through the pipe 2 will start the water to flowing up the leg 3 and force the check-valve 4 open, so that water will run out the siphon until the water is lower than the end of pipe 3. Water will continue to flow through the siphon, although the piston 9 may descend to its normal position. The check-valve 15 will close when the piston starts downward, and thus prevent the falling of the piston from interfering with the flow of water out the siphon. The check-valve 15 should be larger than the check-valve 4, so that valve 15 will stand closed and not be affected by the flow of water through the leg 3 and siphon 1. When the pump starts, the check-valve 4 will prevent the water from running down pipe 3, and thus cause the water to pass on to leg 2 and be discharged. When the lever 11 goes down, the detent-bar 17 will tilt and let the lever pass.

By means of weights 12 and 21 the power of the apparatus may be varied. The power may also be varied by the location of the fulcrum 13 and the disposition of the float.

The pump-cylinder has circumferential slots 22 to receive water above the piston 9. The slots are extended horizontally, so that when the piston commences to rise it will not have to rise far before it closes the slots 22.

The pipe or discharge 2 should be smaller than either pipe 3 or 14, so that the flow of water will not be interrupted until the water is all drained from the basement or cellar.

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

1. An automatic siphon comprising receiving and discharging legs, a pump provided

with a discharge-pipe connected to said siphon, and a float for actuating said pump to start siphonic action.

5 2. An automatic siphon comprising receiving and discharging legs, a pump, a pipe provided with a check-valve and connecting the discharge of said pump with said siphon, said pump having a suitable piston, and means for automatically starting said pump.

10 3. An automatic siphon having receiving and discharging legs, a pump provided with a discharge-pipe connected to said siphon, said pump being provided with a suitable piston, and a float operatively connected to said piston.
15 ton.

4. An automatic siphon having receiving and discharging legs, a pump provided with a suitable piston and a discharge-pipe connected to said siphon, a lever operatively connected to said piston, and a float for operating said lever.
20 ing said lever.

5. An automatic siphon having receiving and discharging legs, a pump provided with a piston and having a discharge-pipe connected to said siphon, a lever operatively connected to said piston, an adjustable weight mounted on said lever, and a float pivotally connected to said lever.
25 ed to said siphon, a lever operatively connected to said piston, an adjustable weight mounted on said lever, and a float pivotally connected to said lever.

30 6. An automatic siphon having receiving and discharging legs, a pump provided with a

suitable piston and a discharge-pipe connected to said siphon, a lever operatively connected to said piston, a float for operating said lever, and a yielding detent for said lever.
35 ver.

7. An automatic siphon having receiving and discharging legs, a pump provided with a suitable piston and having a discharge-pipe connected to said siphon, a lever operatively connected to said piston, means for operating said lever, and a yielding detent for said lever consisting of a pivoted bar and a weighted lever for controlling the movement of said pivoted bar.
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8. An automatic siphon having receiving and discharging legs, a pipe connected to said siphon for starting water therethrough, a float-actuated pump for forcing water through said pipe and a check-valve mounted in said receiving-leg for preventing water from running down through said leg while the siphon is being started.
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In testimony whereof I set my hand, in the presence of two witnesses, this 24th day of November, 1905.

GEO. D. ACKLEY.

Witnesses:

A. L. JACKSON,
E. WALLINGTON.