J. RUDOLPH.

CONTROL APPARATUS FOR SIPHONS.

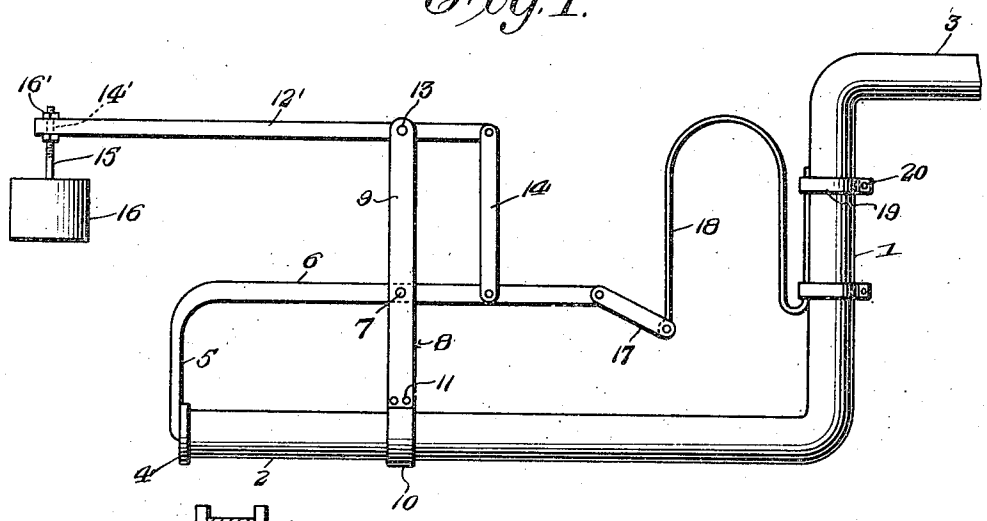
APPLICATION FILED FEB. 7, 1916.

1,250,023.

Patented Dec. 11, 1917.

2 SHEETS—SHEET 1.

Fig. 1.



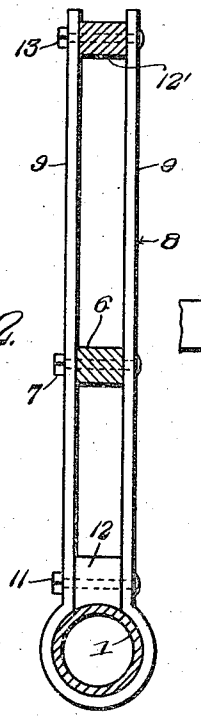




Fig. 2.

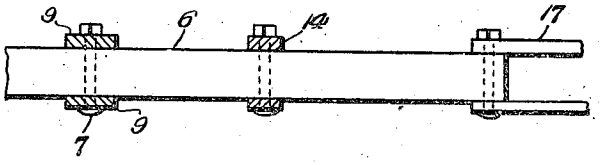



Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

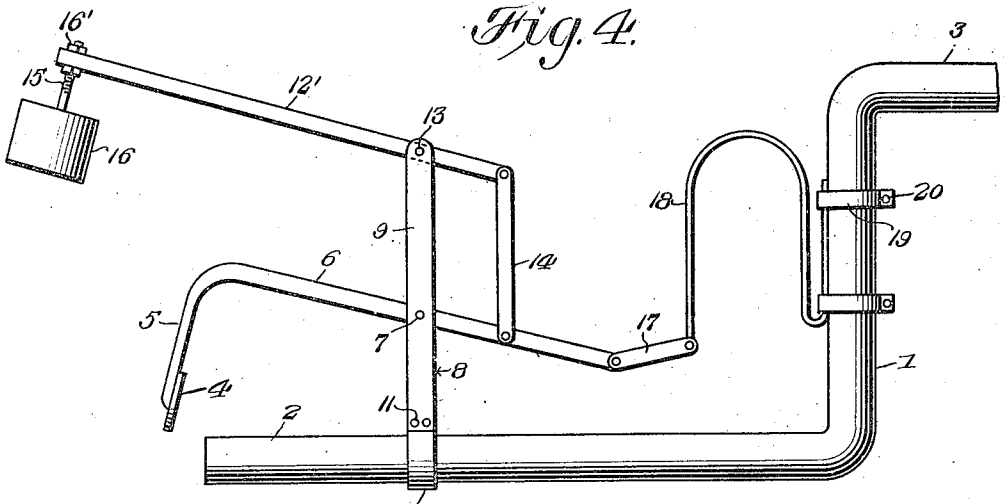



Fig. 5.

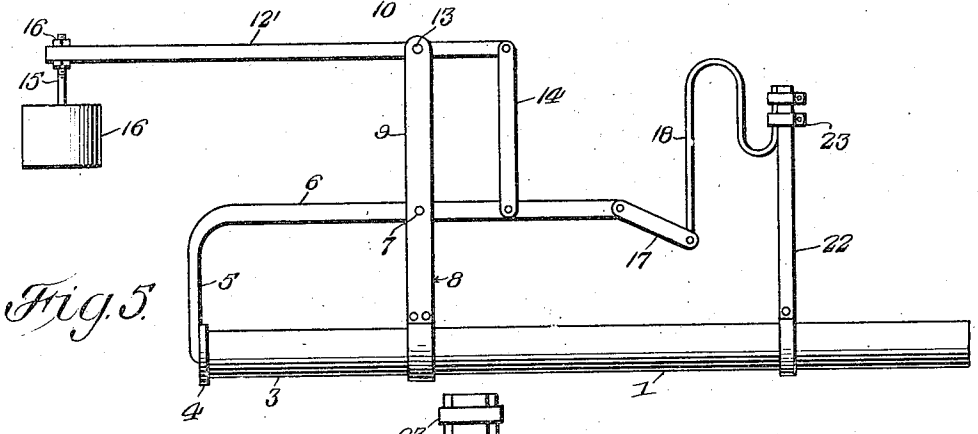
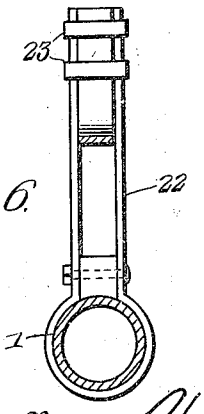



Fig. 6.




Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN RUDOLPH, OF KENSEE, KENTUCKY.

## CONTROL APPARATUS FOR SIPHONS.

1,250,023. Specification of Letters Patent. Patented Dec. 11, 1917.

Application filed February 7, 1916. Serial No. 76,825.

*To all whom it may concern:*

Be it known that I, JOHN RUDOLPH, a citizen of the United States, residing at Kensee, in the county of Whitley and State of Kentucky, have invented new and useful Improvements in Control Apparatus for Siphons, of which the following is a specification.

This invention relates to an apparatus for controlling the valve of a siphon or the like.

An object of the invention is to provide means for resiliently holding the apparatus in two of its adjusted positions, that is to say, in a position to allow the siphonage of water or in a position to stop the siphonage.

A very important feature of my invention is the novel manner of attaching one end of the leaf spring to one end of the rod to which the valve is attached so that the valve and with it the rod will be resiliently held in either of its two positions.

To the above and other ends which will appear hereinafter, my invention consists in certain features of construction in combination and arrangement of parts all of which will be fully set forth herein and particularly pointed out in the claims.

One embodiment of my invention is illustrated in the accompanying drawings which are all simply constructed.

In the drawings:—

Figure 1 is a side elevation of my invention shown applied to a siphon.

Figs. 2 and 3 are detailed sections therethrough.

Fig. 4 is a view similar to Fig. 1 showing the apparatus in another position.

Fig. 5 is a side elevation of a modified form of my invention.

Fig. 6 is a sectional view therethrough.

In the drawings, 1 designates a portion of a siphon or other section of pipe, the upper end of which is designated 3 and the lower end 2, the latter being controlled by a valve 4 of leather or other suitable material.

Rigidly secured to the disk 4 is one end of a rod 5. The major portion of the rod 5 is arranged in a horizontal plane and this portion 6 is pivotally connected as shown at 7 to a bracket 8. The bracket 8 in this particular instance, may be made of strap iron bent back upon itself to provide spaced limbs 9 and a cylindrical portion 10 that encircles the siphon 1 and passing through the limbs 9 are bolts 11 for tightly bringing into engagement the cylindrical portion 10 with the pipe, such tight engagement being limited by the spacing block 12. The rod 5 is arranged between the limbs 9 and also arranged between the limbs 9 at a higher elevation is a lever 12′. Pivotally connected to the limbs as indicated at 13 and which further has pivotal connection at its upper end with a link 14 that in turn has pivotal connection at its lower end with an intermediate portion of the rod 5, the outer end of the lever 12′ is provided with an opening 14 through which loosely passes the threaded stem 15 projecting upwardly from a suitable form of float 16. For adjusting the float 16 relative to the lever 12′ I provide nuts 16′ threaded upon the stem 15.

I will now describe the mechanism for resiliently holding the valve 4 in either of its two positions, that is to say in an open or closed position. For accomplishing this purpose I pivotally connect to the remaining free end of the rod 6 one end of a link 17 that also has pivotal connection with one end of a bowed leaf spring 18 that has one extremity so bent as to lie parallel to the vertical portion of the pipe. For holding the spring against displacement I provide clips 19 that effectively engage the vertical portion of the siphon through the action of the bolt 20.

From the foregoing description it will be seen that upon rise of water the float 16 will be elevated and through its connection with the lever 12′ one end of the latter will be lowered with the result that the lever 12′ presses downwardly upon the intermediate portion of the rod 6 with the result that the disk valve 4 is moved away from the inlet end of the siphon while at the same time the link 17 is thrown into an opposite inclined position, below the lower horizontal line through the pivotal connection between the link and one end of the spring. Thus it will be seen that before the disk valve 4 can be moved to closed position the link 17 must be forced to its normal position against the action of the spring 18. At this point attention is called to the fact that this action causes an excess pressure upon the spring 18 with the result that when the spring 18 is free to rebound to its former position it carries the disk valve 4 into close engagement with the end of the siphon and at the same time elevates the float 16 a slight distance

beyond that position into which it would be moved by the buoyancy of the water.

The modified form of my invention is the same as just described with the exception that in place of connecting the spring to the vertical portion of the siphon I secure to a horizontal portion of the siphon pipe a second bracket 22 to which the spring clips 23 of the spring is attached, similar to the attachment between the spring and the vertical portion of the siphon in the preferred form of my invention.

Having described the invention what I claim is:—

1. In a valve mechanism for siphons and the like, a tubular member, a valve adapted to close one end thereof, a pivotally mounted lever for carrying the valve, a link connected with the lever between its pivotal point and the end opposite to that carrying the valve, a weighted lever connected with the link, a second link connected with the end of the lever, a spring, and means connecting the link and spring, the combined length of the second link and the arm of the lever connected therewith being greater than the distance between said spring and the fulcrum of the lever.

2. In a valve mechanism for siphons and the like, a tubular member, a valve adapted to close one end thereof, a supporting device carried by the tubular member, a pivotally mounted L-shaped lever for carrying the valve and positioned on said supporting device, a link connected with the lever between its pivotal point and the end opposite to that carrying the valve, a weighted lever connected with the link, a second link pivoted to the end of the lever, a U-shaped spring, and means connecting the link and one end of the U-shaped spring, the combined length of the second link and the arm of the lever connected therewith being greater than the distance between the point of connection with the spring and the fulcrum of the lever.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN RUDOLPH.

Witnesses:
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T. W. SHOEMAKER.

**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."**