

927,245.

Fig. 3.

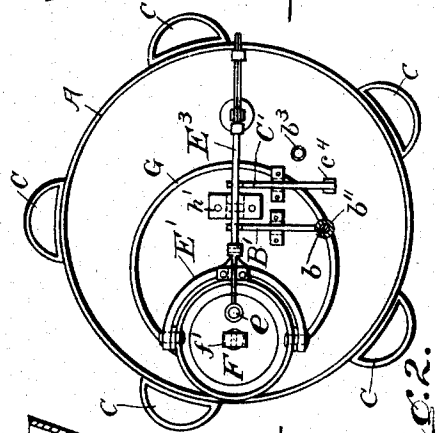


Fig. 2.

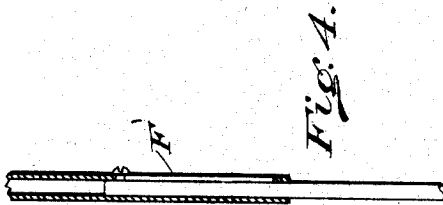


Fig. 4.

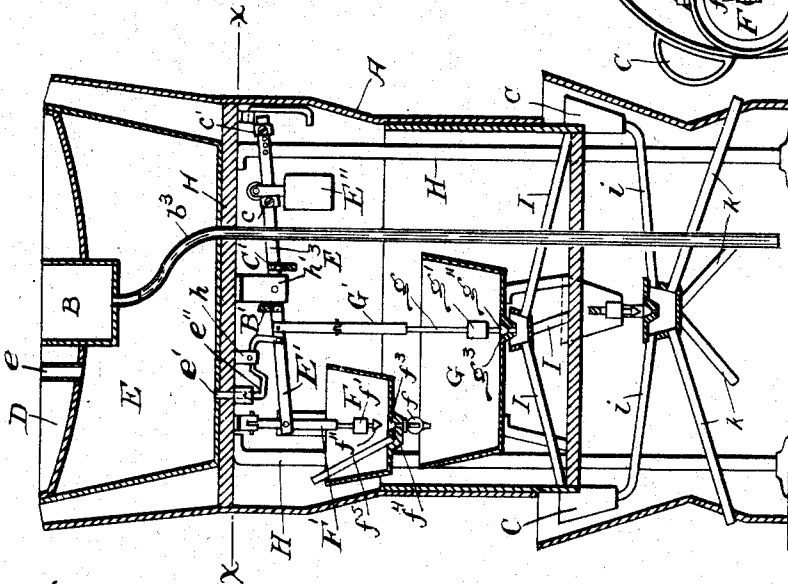


Fig. 1.

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SELF-WATERING FLOWER-VASE.

No. 927,245.

Specification of Letters Patent.

Patented July 6, 1909.

Application filed September 14, 1908. Serial No. 453,047.

To all whom it may concern:

Be it known that I, CARRIE D. JACKSON, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Self-Watering Flower-Vase, of which the following is a specification.

This invention relates to self-watering flower vases and particularly to a vase having automatically controlled valves for admitting and shutting off the supply of water.

An object of this invention is to provide novel means having a weighted lever for operating the parts of the water controlling valves.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification wherein like characters denote corresponding parts in the several views, in which—

Figure 1, is a vertical sectional view of a watering vase embodying the invention; Fig. 2, illustrates a plan view of the mechanism under the partition and on the line $x-x$, Fig. 1; and Fig. 3, is a view in elevation, partly in section of the mechanism within the casing, the casing being shown in elevation and broken away to expose the interior. Fig. 4 is a sectional view of an arm with the valve stem applied thereto.

In these drawings A, denotes the casing B, a flower pot set in the bottom of a tank D. Flower vases or receptacles C, are supported by pipes i , which pipes i , communicate with a cup C^2 , for the purpose of drawing water from the vases C, in order that fresh water may be delivered to said vases C, by the pipes I, which receive their water from the vessel G. The vessel G, has a valve seat g^3 , engaged by a valve g'' . The valve stem g , of the valve g'' , has a weight g' . The upper end of the valve stem is coupled to an arm G' , depending from the lever E^3 , and the lever is pivoted to the brackets h' .

The cup C^2 , has a valve c^8 , which is provided with a weight c^7 , and said valve is moved by a lever c^5 , pivoted in the bracket c^6 . The lever c^5 , is connected to a link C^4 , which has its upper end connected to a lever C' , extending from the lever E^3 , and pivoted

to the bracket B'' , hence as said lever E^3 , is oscillated, the valve c^8 is controlled.

Water is delivered into the receptacle G, from the vessel F, and the vessel F, has a valve seat f^3 , to receive a valve f'' , and said valve f'' , has a weight f' . The vessel F, is suspended from the lever E^3 , and moves the said lever in one direction when it is full of water, whereas the weight E'' , moves the lever in an opposite direction when the vessel F, is empty, or nearly so. The valve f'' , is supported by an arm F' , depending from the partition H, and serves to close the opening in the vessel F, when it rises under the influence of the weight E'' .

The weight E'' , travels on the lever between the stops or collars c and c' , and by reason of said action, the vessel F, is allowed to fill or empty before the weight acts or is acted upon, since the distance it travels changes the leverage and hence its influence on the lever. The vessel F has a duct f^4 , controlled by a valve f^5 , the said duct acting as a vent to permit the valve f^3 , to empty completely.

The lever E^3 , has an angular lever e'' , connected to it, said lever being pivoted to ears h . The end of the angular lever remote from the lever E'' , forms a valve for controlling the duct e' , leading from a tank E, which is in the casing, which tank E, may be supplied with water through the nipple e .

The flower pot B, has a drain pipe b^3 , leading from it and the said pot B, has a pipe provided with a valve b' , controlled by a valve on the goose neck rod b , which rod is slidable in a sleeve b'' , and has its lower end connected to a lever B' , pivoted to the bracket B'' , and taking motion from the lever E^3 .

The casing is provided with a frame H, H, consisting of the legs and the horizontally disposed portion supported by the legs, the said casing being connected to the horizontally disposed portion in any suitable manner.

The operation of this device is as follows: The water having been delivered to the tanks or water receptacles D and E, the said water is delivered automatically to the pot B, and to the vases C, through the automatically controlled mechanism heretofore described, that is to say, when the vessel F, has been filled with water or contains a sufficient quantity of water to overcome the weight

E'', on the lever E³, the said vessel will travel away from the valve f'', to the position shown in Fig. 1 and when it is in that position the water from the vessel will flow
 5 into the vessel G and this flow will continue so long as the vessel F, is in the position shown, but when the said vessel becomes empty or the water therein does not overcome the weight E'', the said vessel will rise
 10 and the valve f'', will be seated again and the vessel F, can then be refilled. So long as the vessel F, is in the position shown in Fig. 1, however, the vessel G, has its valve g'', seated and the water delivered to it from the
 15 vessel F, will not escape, but when the vessel F, is raised by the weight E'', the valve g'', is raised and the water that has been delivered to the vessel G, is then free to flow into the coupling with which the pipes I, communicate and the water then flows from the
 20 vessel G, through the pipes I, into the vases C, and from the vases C, water may be drained through the pipes i, through the chamber C², and through the pipes k. The lever E³, in its oscillation controls the angular lever e'', and the valve on the end thereof alternately seals and unseals the discharge port or opening e', leading from the tank E, and it will be seen from the drawing that
 30 as the vessel F, rises the port or opening e', is unsealed and water in the tank is discharged into the vessel whereas when the vessel F, becomes filled and descends, the valve on the angular lever e, seals the discharge opening e', and prevents further discharge of the water from the tank E. The lever E³, further controls a valve e^s, which operates in conjunction with the chamber C², and the said valve is operated by a link
 40 and lever which lever is actuated by the lever E³, hence as the end of the lever E³ containing the weight, is elevated, the lever C', has its inner end elevated thus operating the link e^t, to unseat the valve e^s, as shown in
 45 Fig. 3. The lever E³, further operates a rod B', which rod actuates the rod b, which carries the valve for controlling the pipe which communicates between the tank D, and the flower pot B, hence as the end of the lever
 50 containing the vessel F, descends, it actuates the lever B, and causes it to unseat the valve just mentioned to permit the flow of water from the tank D, to the flower pot B, and the said flower pot is drained through the medium of the pipe b². It will be seen that
 55 through the medium of the weight E'', and the vessel F, the lever E³, is oscillated and that the motion of this lever is communicated to the several valves for controlling
 60 the several tanks and discharge openings.

I claim—

1. In a self watering flower pot, a casing having tanks, a flower pot in communication with one of the tanks, means for controlling
 65 the means of communication between the

tank and the pot, means for draining the pot, a lever, a vessel having a valved opening suspended from one end of the lever, a weight on the other end of the lever, a valve adapted to close the opening when the vessel is elevated, means of communication between one of the tanks and the said vessel, means operated by the lever for controlling the said means of communication, a vessel positioned to receive liquid from the first mentioned
 70 vessel, said second mentioned vessel having a valved opening, a valve carried by the lever for closing the opening, vases, and means of communication between the vases and the second mentioned vessel.

2. In a self watering flower pot, a casing having tanks, a flower pot in communication with one of the tanks, means for controlling the means of communication between the tanks and the pot, means for draining the
 85 pot, a lever, a vessel having a valved opening suspended from one end of the lever, a weight on the other end of the lever, a valve adapted to close the opening when the vessel is elevated, means of communication between one of the tanks and the said vessel, means operated by the lever for controlling the said means of communication, a vessel positioned to receive liquid from the first mentioned vessel, said second mentioned vessel
 90 having a valved opening, a valve carried by the lever for closing the opening vases, means of communication between the vases and second mentioned vessel, means for draining the vases, a valve operating in conjunction with the valve draining means, and means operated by the lever for actuating the valve.

3. In a self watering flower pot, a casing having tanks, a flower pot in communication with one of the tanks, means for controlling the means of communication between the tanks and the pot, means for draining the
 105 pot, a lever, a vessel having a valved opening suspended from one end of the lever, a weight on the other end of the lever, a valve adapted to close the opening when the vessel is elevated, means of communication between one of the tanks and the said vessel, means operated by the lever for controlling the said means of communication, a vessel positioned to receive liquid from the first mentioned vessel, said second mentioned vessel
 110 having a valved opening, vases, means of communication between the vases and second mentioned vessel, means for draining the vases, a valve operating in conjunction with the vase draining means, and means operated by the lever for actuating the valve of the vase draining means and the means for
 115 controlling the communication between the tank and the flower pot.

4. In a self watering flower pot, tanks for containing water, a flower pot in communication with one of the tanks, a vessel having
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a valved opening adapted to receive liquid from the other tank, a tank discharging into the vessel having a discharge opening, a valve for controlling the discharge opening, 5 a lever from which the vessel is suspended, valve actuated means carried by the lever adapted to control the discharge opening of the tank, a valve stationed in the path of travel of the vessel and adapted to close the 10 valved opening, a weight on the end of the lever opposite the vessel, a second vessel having a valved opening into which the first named vessel discharges, a valve actuated by the lever for controlling the valved opening of the second vessel, vases in communication 15 with the second named vessel, drain pipes for the vases, a valve for controlling the drain pipes, means connected with the lever for actuating the valve of the drain pipe, a valve for controlling the communication be- 20 tween the tank and the flower pot, and means actuated by the lever for moving said valve.

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Witnesses:

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L. F. RATTERMAN.