F. BUCHHORN.
Parlor-Fountain.

No. 200,126. Patented Feb. 12, 1878.

Fig. 2.

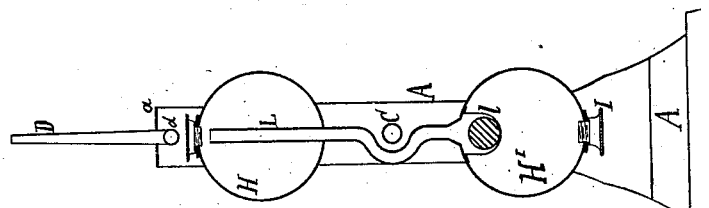


Fig. 3.

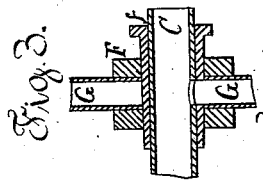


Fig. 4.

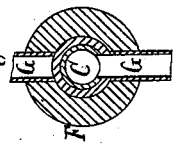
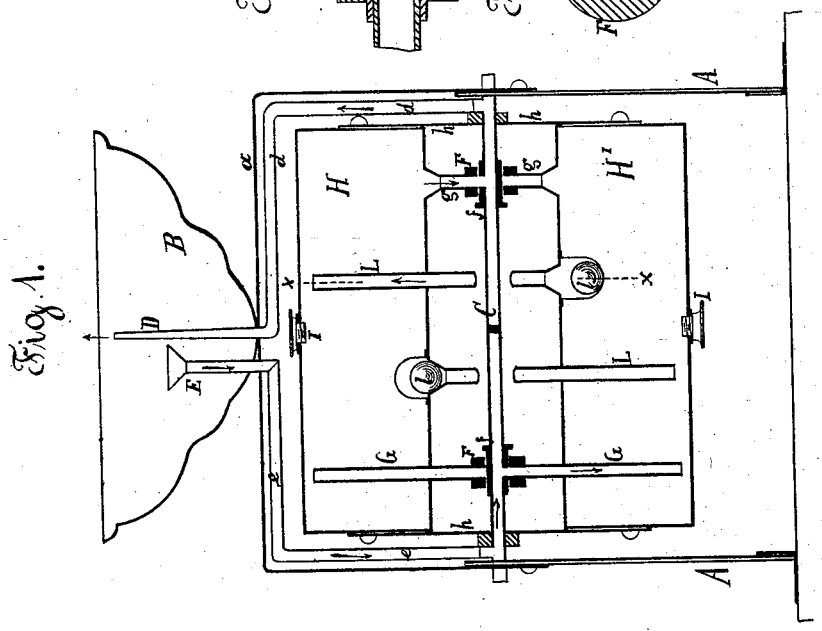


Fig. 1.



Attest.
Warren Seely.
James A. Payne

Inventor.
Fritz Buchhorn
by Geo. W. Dyrod
attys.

UNITED STATES PATENT OFFICE.

FRITZ BUCHHORN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN PARLOR-FOUNTAINS.

Specification forming part of Letters Patent No. **200,126**, dated February 12, 1878; application filed January 17, 1878.

To all whom it may concern:

Be it known that I, FRITZ BUCHHORN, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Parlor-Fountain, of which the following is a full and exact description, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal vertical section through the center. Fig. 2 is a vertical cross-section on line *x x*. Fig. 3 is an enlarged longitudinal vertical section of one of the water-valves, and Fig. 4 is a cross-section of the same.

The nature of my invention relates to fountains the principle in which is the transmission of the pressure sustained by a body of water in one vessel to that in another more elevated one by means of the elasticity of air, and which are technically known as "The Fountains of Hero of Alexandria;" but in these fountains heretofore in use, at intervals the lower vessel had to be emptied and the upper one refilled through faucets whenever the water from the upper vessel had passed into the lower one, and thereby the pressure had been exhausted, which was tedious and troublesome, and which to avoid is the object of my invention.

My invention consists in two vessels, which, opposite each other and at equal radius, will swing around a hollow shaft or trunnions, and which communicate together and through the shaft or trunnions with the nozzle and overflow of the fountain, and have suitable valves, opening and closing automatically whenever the position of the vessels is interchanged, so that only such communications with and between the vessels are open, which will bring about the desired result as long as the upper vessel is filled or partly filled with liquid and the lower one is proportionally empty. Whenever the reverse is reached, and the power is exhausted, the relative position of the two vessels is interchanged by swinging the same around their fulcrum one-half of a revolution, whereby the empty vessel is brought into the lower position and the filled one is elevated.

The frame, table, or stand in which my apparatus is arranged consists of the two standards A and the top *a*, upon which is rested the basin B, and on which may be provided galleries for placing flowers. C is a horizontal pipe or hollow shaft, fixed between the two standards A, the ends of which are closed, and its center portion is plugged up. One end of this pipe communicates with the fountain-nozzle D through a branch pipe, *d*, and the other end communicates with the overflow-funnel E through a branch pipe, *e*. Said pipe C, near each end, is interposed by a faucet-plug, *f*, having a port which communicates with the interior of said pipe, and these ports are so placed that the one at the side of pipe communicating with the nozzle D faces the top, and that the port in the pipe and communicating with the overflow-funnel E faces the bottom of its respective plug. These plugs *f* are sleeved by rings F, which have two ports, each of corresponding size with the ports in the plugs, opposite each other, and each continued by a radial pipe, G and *g*. H and H′ are two cylindrical vessels, opposite each other, and suspended at equal distance from the fulcrum-pipe C by radial arms *h*, projecting from sleeves loosely fitted upon the ends of pipe C, so that said vessels H H′ can be swung around said shaft or pipe C, and will counterbalance each other, a suitable locking device being provided for holding the same in a vertical position to each other and to said pipe C. Each vessel has a vent, closed by a screw-stopper, I, for filling the same with liquid or for emptying. The pipes G, communicating with the fulcrum-pipe C through the port in faucet-plug *f*, are extended through and into the vessels H and H′ to near the extreme inner wall of the shell, while the pipes *g* are jointed to the shell of said vessels H and H′ at a point nearest to the swing-fulcrum; and because one of the pipes G or *g* only has communication opened through each faucet-plug *f*, the lower vessel only will communicate with the overflow-funnel E, while the upper vessel only will communicate with the nozzle D, no matter which of the vessels is above and which below.

A ball or other suitable valve, *l*, is arranged against the inner shell of each vessel, at a point nearest to the swinging fulcrum, in such a manner that said valve will be open while the respective vessel is in the lower position, and will close hermetically when said vessel is elevated. To each seat of said valves *l* is connected a pipe, L, which enters the opposite vessel and extends to near the shell at a point

most distant from the swinging fulcrum. These pipes alternately form the communicating-channel between the air-spaces in the two vessels H and H′.

The *modus operandi* of this apparatus is as follows, to wit: The upper vessel H being filled with water through the vent I, so much water is poured into the basin B until the overflow through funnel F into vessel H′ has caused a sufficient compression of the atmospheric air therein and in the air-space in vessel H, communicating therewith by pipe L, to cause the jet of water from the nozzle D to issue and rise to a height nearly equal to the difference of water-column between the distance of the overflow-funnel to the water-level in vessel H′, and of the nozzle-spout to the water-level in vessel H, so that the height of the fountain-jet will increase proportionally with the distance the vessels are placed apart. The jet will continue to flow until the vessel H is emptied and the vessel H′ is filled, since a continual overflow is kept up as long as the fountain is operating, which will keep up a continuous pressure.

After all the water from vessel H has passed thus into vessel H′, the relative position of the two cylindrical vessels is interchanged by swinging the same around their fulcrum one-half a revolution, when at once new power is obtained. Thus the same water can be used over and over again without handling the same, only so much having to be added from time to time as will be lost by evaporation.

What I claim as my invention is—

1. A parlor-fountain, and, in combination therewith, the vessels H and H′, so connected with each other and with the nozzle D and funnel E by pipes and valves that their relative positions can be interchanged without disconnection, and without impairing the operating faculties of the same, substantially in the manner and for the purpose set forth.

2. The vessels H and H′, arranged to swing around a hollow shaft or trunnion, C, connected with nozzle D and funnel E, and having faucets or valves F *f*, pipes G *g*, valves *l l*, and pipes L L, all constructed, arranged, and operating substantially in the manner described and shown.

FRITZ BUCHHORN.

Witnesses:

CH. BENZING,

WM. H. LOTZ.