W. J. & W. H. CLARK.

FOUNTAIN.

No. 192,152. Patented June 19, 1877.

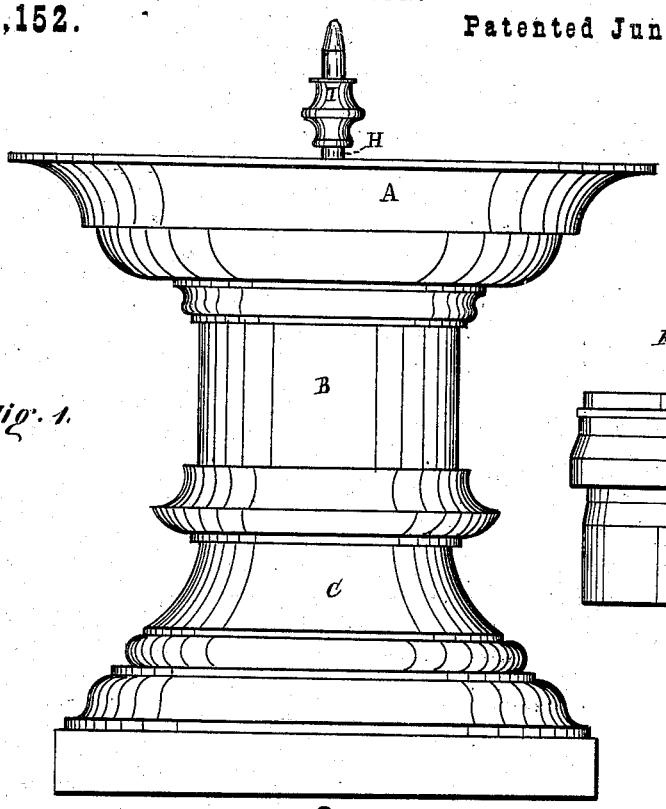


Fig. 1.

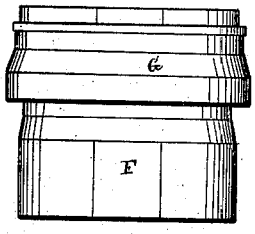


Fig. 3

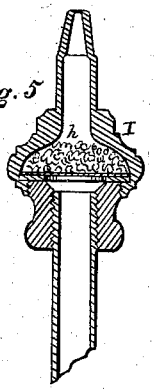


Fig. 5

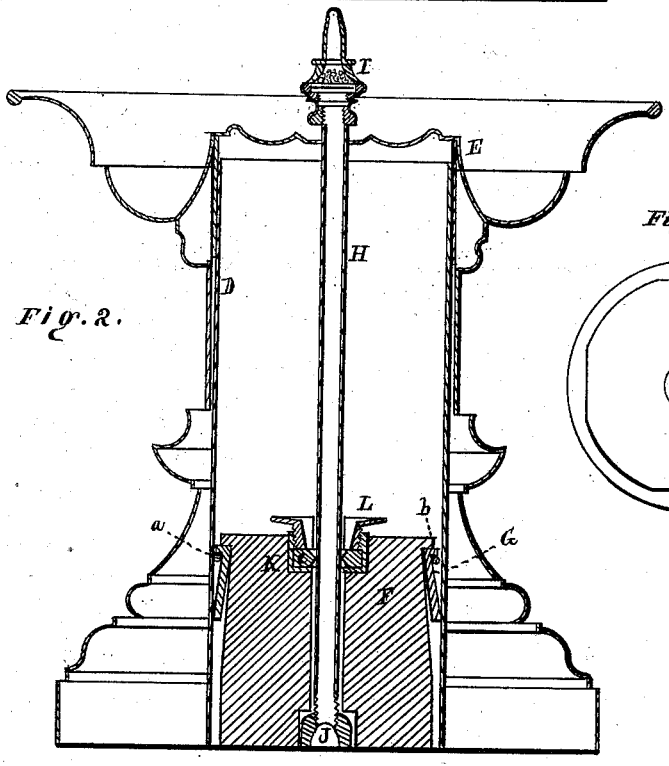


Fig. 2.

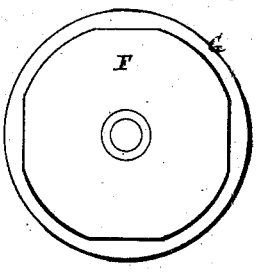


Fig. 4.

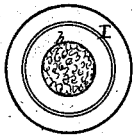


Fig. 6

Witnesses.
John B. Burton
Julius Schuldt

Inventor.
W. J. & W. H. Clark.
Per Burridge & Co.
Attys.

W. J. & W. H. CLARK.

FOUNTAIN.

No. 192,152. Patented June 19, 1877.

Fig. 1.

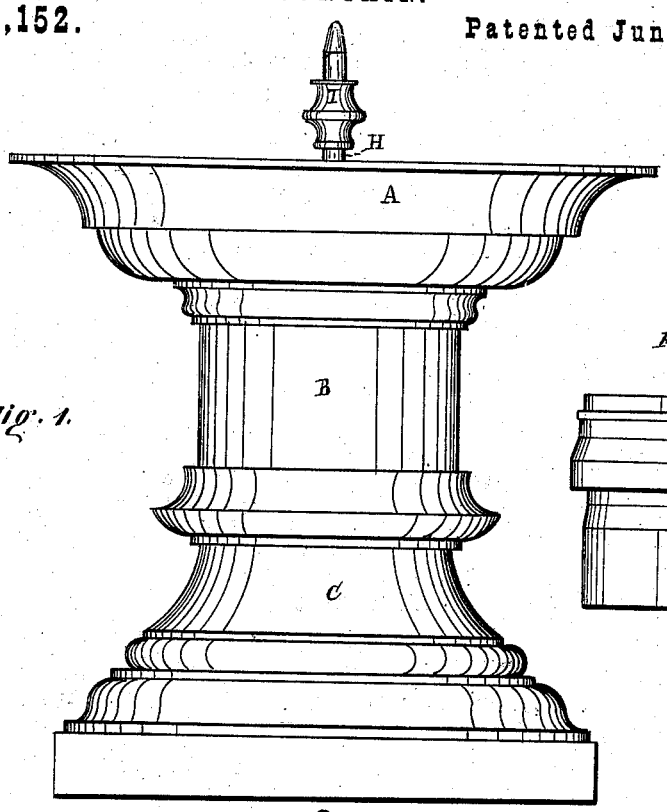


Fig. 3

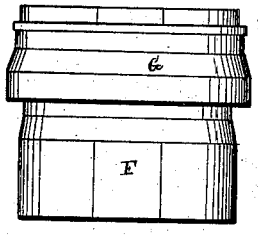


Fig. 5

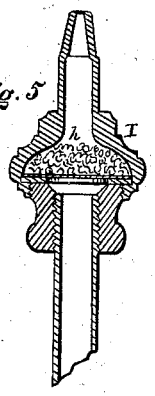


Fig. 2.

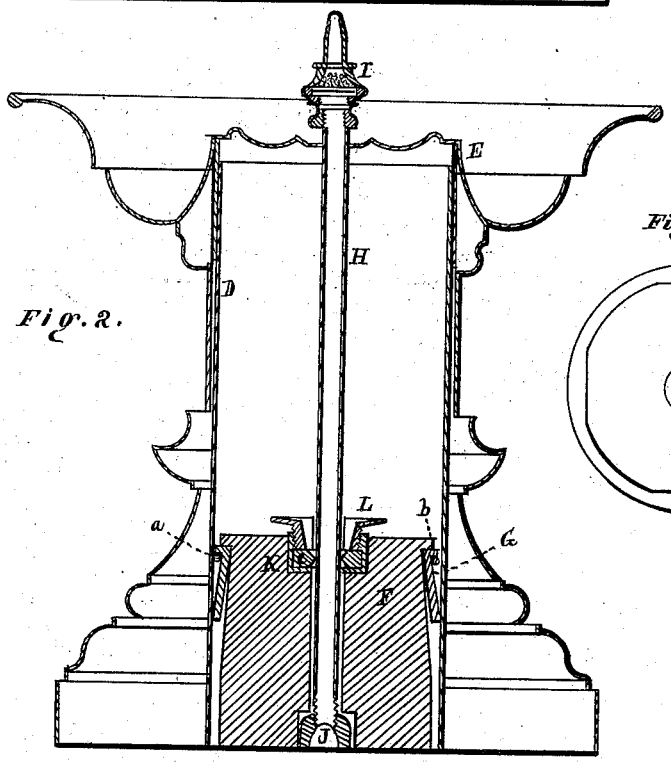


Fig. 4.

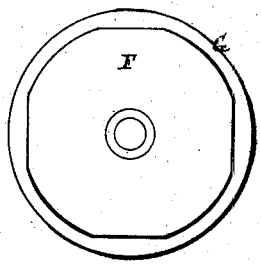
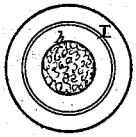


Fig. 6



Witnesses.
John B. Burton
Julius Schmidt

Inventor.
W. J. & W. H. Clark.
By Burridge & Bro.
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM J. CLARK AND WILLIAM H. CLARK, OF SALEM, OHIO.

IMPROVEMENT IN FOUNTAINS.

Specification forming part of Letters Patent No. **192,152**, dated June 19, 1877; application filed December 16, 1876.

To all whom it may concern:

Be it known that we, WM. J. CLARK and WM. H. CLARK, of Salem, Columbiana county, and State of Ohio, have invented new and useful Improvements in Fountains, of which the following is a full and complete description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a side view of the fountain. Fig. 2 is a vertical transverse section. Figs. 3, 4, 5, and 6 are detached sections.

Like letters of reference refer to like parts in the several views presented.

This invention is a fountain the construction and operation of which are substantially as follows: The fountain referred to consists of a basin, A, supported on a standard, B, and base C. The holding capacity of the basin may be more or less, as the size of the fountain may require. Within the standard is secured a cylinder, D, Fig. 2, made water-tight at the bottom. The upper end thereof extends above the bottom of the basin, and is covered with a cap, E, fitting closely on over the outside, as shown in the drawing. In said cylinder is a piston, F, which, as will be seen, does not fill the diameter of the cylinder, there being a space between it and the sides thereof for a water-passage. Around the upper end of the piston is an elastic band or valve, G, having a peripheral projection, *b*, at its upper end, which holds in place a wire, *a*, wrapped immediately below it around the band or valve, to secure a water-tight attachment of the valve to the piston. The upper end of the valve is gained into the piston so as not to obstruct the water-passage between it and the sides of the cylinder, the lower end being loose to spread out laterally to the sides of the cylinder, or to contract around the piston, constituting a valve to open and close the water-passage. H is a jet-pipe passing vertically through the piston and cylinder, and through the cap to the outside, and terminates in a nozzle, I, within and at the center of the basin. The lower end of the pipe terminates in an open foot or rest, J, whereby the end of the pipe is prevented from being drawn through the bore in the piston, and is also raised from the bottom of the cylinder for the admission of water into the pipe through the openings in the foot or rest.

A sponge, *h*, or similar porous substance, is placed within the nozzle I, (in a removable manner to facilitate cleaning or renewal,) whereby particles of dirt that would otherwise clog the jet-opening are arrested without retarding the flow of water to the jet-opening. The sponge or its equivalent may be placed within the jet-pipe or at its lower end with a similar good result for convenient access. However, its location within the nozzle is preferred. It will be seen, on examination of Fig. 2, that the pipe does not wholly fit the bore in the piston, but is loose therein, so that it may slide freely through, but which, however, is made water-tight in the piston by a packing, *c*, fitting around the pipe and secured in a stuffing-box, K, of which L is the screw-follower for compressing the packing in the box and around the pipe, as shown in Fig. 2, wherein it will be seen that the inner edge of the packing is beveled from each side to the center, thereby presenting an annular projection or rib to the pipe; hence, the contact of the packing with the pipe is but a line of surface, and, therefore, the packing offers but little frictional resistance to the movement of the pipe in the piston. The packing may be rounded or beveled on one side only. The shape shown in Fig. 2 is preferable, however.

The practical operation of the above-described apparatus is as follows: The piston is adjusted in the cylinder, as shown in Fig. 2, with the jet-pipe projecting through the cap and the nozzle attached thereto, as seen in said Fig. 2. Water is now poured into the basin until it and the cylinder are both filled. The water flows into the cylinder through an opening in the cover around the jet-pipe. The piston is then pulled upward by the jet-pipe until it is felt to touch the cap of the cylinder. The jet-pipe is then pushed down to its former position—that is, with the foot J standing on the bottom of the cylinder. The piston, being made of lead, will descend in the cylinder of its own gravity, and in so doing forces the water below in the cylinder into the pipe, up through which it passes into the basin above. The piston is followed in its descent by the water in the basin, and thus a

uniform height of water is maintained in the basin at all times. The piston, having descended to the bottom of the cylinder, is again drawn up as before, and will again descend, forcing the water below it up the pipe into the basin. While the piston is descending, the water below it forces the valve G outward to the sides of the cylinder in such a manner as to prevent the passage of water from below up around the piston, it being forced through the jet-pipe. On the ascent of the piston the valve G will contract around it and allow the piston to be lifted through the water above. Water-passages through the piston, and valves to open and close the same, are thereby dispensed with, the bore in the piston being solely to accommodate the passage of the jet-pipe through the piston, the passage of water through the bore being prevented entirely by the packing *c*.

The arrangement of the jet-pipe makes it a convenient means of lifting the piston to start the fountain, and dispenses with the necessity of special devices for that purpose. It also enables us to deliver the jet within and at the center of the basin, and yet avoid bends or angles in the pipe, which retard the flow of water through it, rendering it difficult to clean, and making it necessary to provide slip-joints or couplings in the pipe to accommodate the removal of the piston from the cylinder. These slip-joints or couplings in pipe are objectionable on account of their liability to leak, and thereby diminish the running-time of the fountain.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The piston F and expansive valve G, secured thereto in the manner as described, in combination with the cylinder D, substantially as herein set forth, and for the purpose specified.

2. The movable jet-pipe H, constructed and arranged to operate in combination with the piston F and cylinder D, substantially in the manner described, and for the purpose herein specified.

3. The packing *c* or its equivalent, in combination with the jet-pipe H and piston F, substantially as herein set forth, and for the purpose specified.

4. In combination with the jet-pipe H, the foot J or its equivalent, substantially as herein described, and for the purpose specified.

5. The combination of the piston F, the valve G, the packing *c*, the jet-pipe H, the cylinder D, and basin A, substantially as herein described, and for the purpose specified.

WILLIAM JARED CLARK.
WILLIAM H. CLARK.

Witnesses:
L. M. BAUN,
LUCIEN L. GILBERT.