

E. B. CHAMNESS.
Improvement in Soda-Fountains.

No. 130,897.

Patented Aug. 27, 1872.

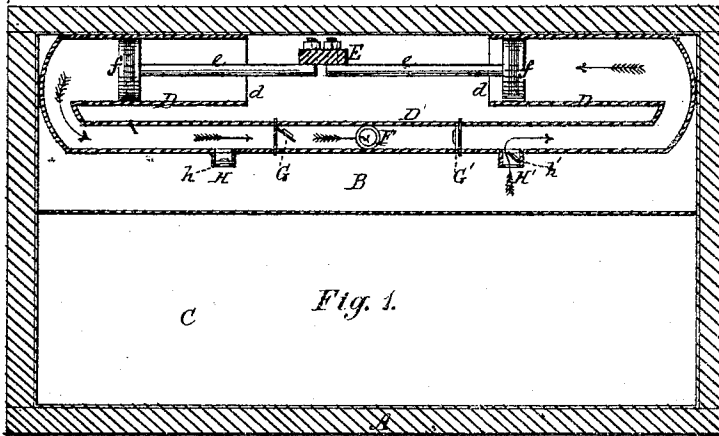


Fig. 1.

Fig. 2.

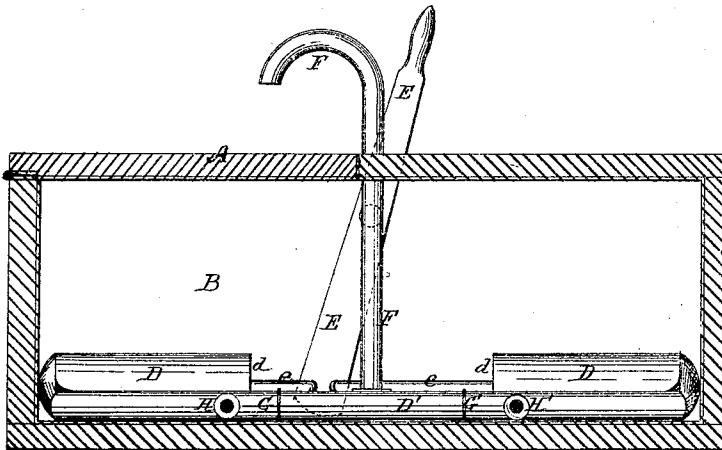
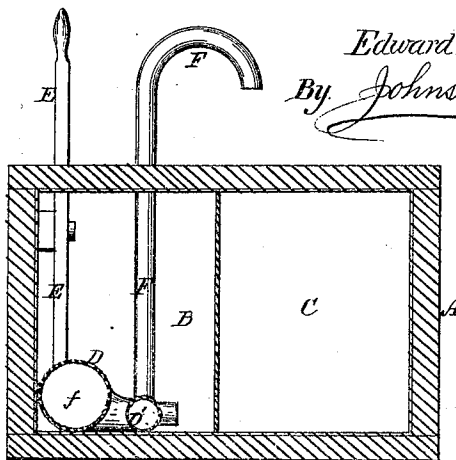


Fig. 3.



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Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD B. CHAMNESS, OF MARTINSVILLE, INDIANA.

IMPROVEMENT IN SODA-FOUNTAINS.

Specification forming part of Letters Patent No. 130,897, dated August 27, 1872.

I, EDWARD B. CHAMNESS, of Martinsville, in the county of Morgan and State of Indiana, have invented a new and useful Improvement in Soda-Fountains, of which the following is a specification:

My invention consists of a continuous tube with valves so arranged that by the motion of a lever operating pistons, either backward or forward, a continuous stream is produced, the tube forming the pump-cylinders and supply-tube, the former being of a larger diameter than the latter, and constituting a double plunger force-pump and valved supply-pipe from one and the same bent tube, which communicates with both the soda-chamber and discharge-pipe.

In the drawing, Figure 1 is a horizontal section through the fountain and the valved bent tube with its double-acting plungers. Fig. 2 is a longitudinal central vertical section of the same, and Fig. 3 is a vertical cross-section of the same.

A in the drawing represents a box or tank lined with zinc, and which is divided longitudinal by a zinc partition into two compartments, B and C, the former of which is the soda-tank proper, while the latter serves as an ice or sirup box, or both. The soda is forced out by means of a pump, the construction of which produces a continuous stream. It consists of a metal tube, D, bent into C-form, the two open ends *d* of which face each other in the same horizontal line, and are about double the diameter of the main stem D' of tube D. To the lower end of a lever, E, pivoted to the tank A, and extending downwardly to between the enlarged ends *d* of tube D, are pivoted piston-rods *e*, which, at their free ends, carry solid pistons *f*, without valves, which pistons move on the ends *d* of tube D. From the center of tube D' extends upwardly a discharge-pipe, F, which, passing through an opening in the lid, may extend above the

counter, if the tank is placed below one. At each side from the opening into said discharge-pipe F in tube D' is a valve, G G', these valves opening toward each other and closing in the opposite direction; and at a suitable distance from these valves G G' the tube D' is provided with openings H H', closed by valves *h h'*, by which their communication with the soda-chamber is effected.

If, therefore, the lever E is reciprocated the valve G, on that side of tube D toward which the lower end of the lever moves, opens and the valve *h* closes, while on the opposite side, by means of the suction of the solid piston *f*, the valve G' closes and the valve *h'* opens; and, as the diameter of the ends *d* is about double that of the main supply-stem of tube D, a much shorter movement of the pistons is required, while at the same time the force of suction and of expulsion of the liquid is increased. In this manner a continuous stream of the soda is forced into the discharge-pipe F by the reciprocating motion of the lever E.

The soda-water may be made in the tank B; or the openings H H' may, by suitable pipes, connect with the reservoir in which the soda is kept, while the ice-chamber C keeps it cool.

By my improvement I produce a continuous stream of soda-water by very simple and effective means, which cannot easily get out of order, and which are cheaply and conveniently made.

Having described my invention, I claim—

In a soda-fountain the pump D D' *d*, formed of one continuous pipe, provided with induction and eduction valves, located and arranged with respect to the soda-reservoir and the discharge-pipe, as described.

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Witnesses:

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