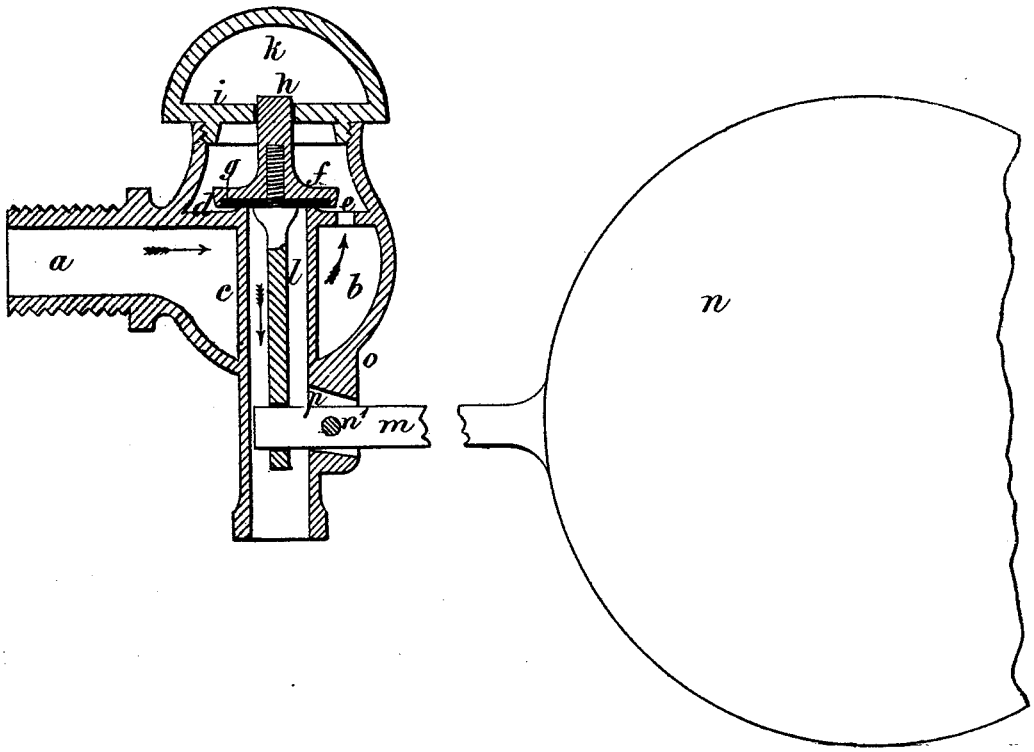
G. BUTLER.

VALVES FOR TRAPS

No. 183,125. Patented Oct. 10, 1876.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE BUTLER, OF SOUTHWARK, ENGLAND.

IMPROVEMENT IN VALVES FOR TRAPS.

Specification forming part of Letters Patent No. **183,125**, dated October 10, 1876; application filed August 21, 1876.

To all whom it may concern:

Be it known that I, GEORGE BUTLER, of Southwark, in the county of Surrey, England, engineer, have invented Improvements in Valves or Cocks, of which the following is a specification:

The object of my invention is to so construct a ball or other valve as to cause the flow of liquid to assist the action of the valve and render it steady; and this object I attain by the valve shown in the accompanying drawing, the figure in which represents a sectional view of an automatic ball-valve, although it will be evident that my invention may be applied to valves of different kinds.

Referring to the drawing, *a* is the inlet-branch, terminating in an enlarged chamber, *b*, through the center of which extends the outlet-branch *c* to above the level of the said inlet. At the upper end of the outlet-branch *c* I form a partition or diaphragm, *d*, which extends across between the exterior of such outlet-branch and the side of the chamber *b*, and is provided with one or more openings, *e*. By this arrangement a sufficient area of passage is provided by the opening or openings *e* for the flow of the liquid, while at the same time the partition *d* exercises a restrictive action upon the incoming fluid, and thereby prevents any shaking of the valve. The valve proper consists of a disk, *f*, of metal, provided on its under side with a sunken washer, *g*, of leather, india-rubber, or other suitable material, and having on its upper side a stem or projection, *h*, which passes through an opening formed in a cover, *i*, fitted to the top of the chamber. A spindle, *l*, attached to the under side of the valve, passes down the interior of the outlet-branch *c*, and is connected at its lower end to the short arm of the lever *m*, carrying the ball or float *n*. This lever, which is by preference pivoted at *n'* to a lug, *o*, formed on the exterior of the outlet-branch *c*, as shown, passes through an opening, *p*, in the outlet, and enters a slot in the lower end of the valve-spindle *l*, so that the rise and fall of the ball or float *n* in the tank operates the valve *f*.

I claim as my invention—

The combination of the valve *f*, inlet *a*, and enlarged chamber *b*, with the outlet *c* projecting through the said chamber, and with the partition *d*, having an opening or openings, *e*, as and for the purpose set forth.

In witness whereof I have signed my name to this specification in the presence of two subscribing witnesses.

G. BUTLER.

Witnesses:

FREDK. C. DYER,

JOHN JAMES.