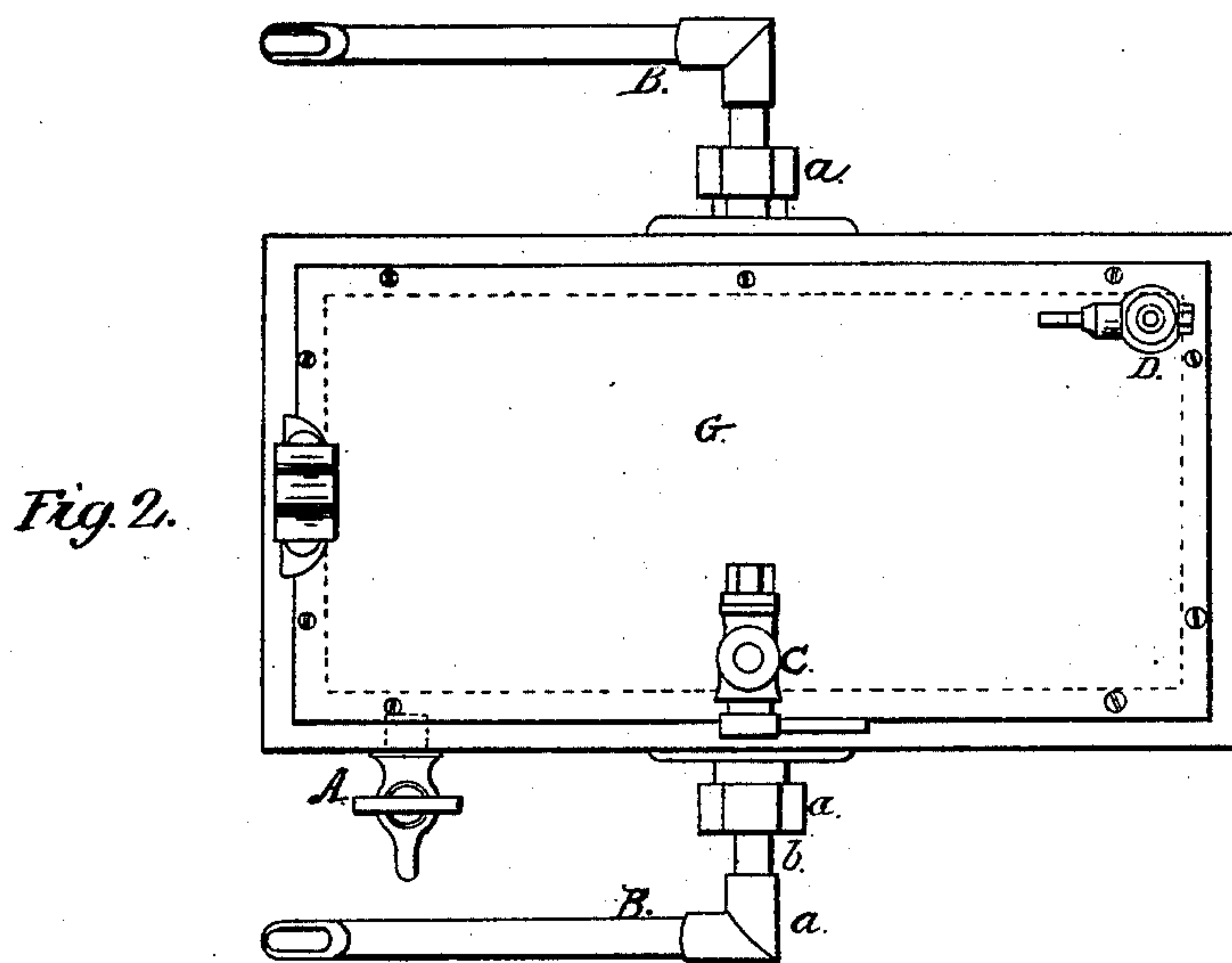
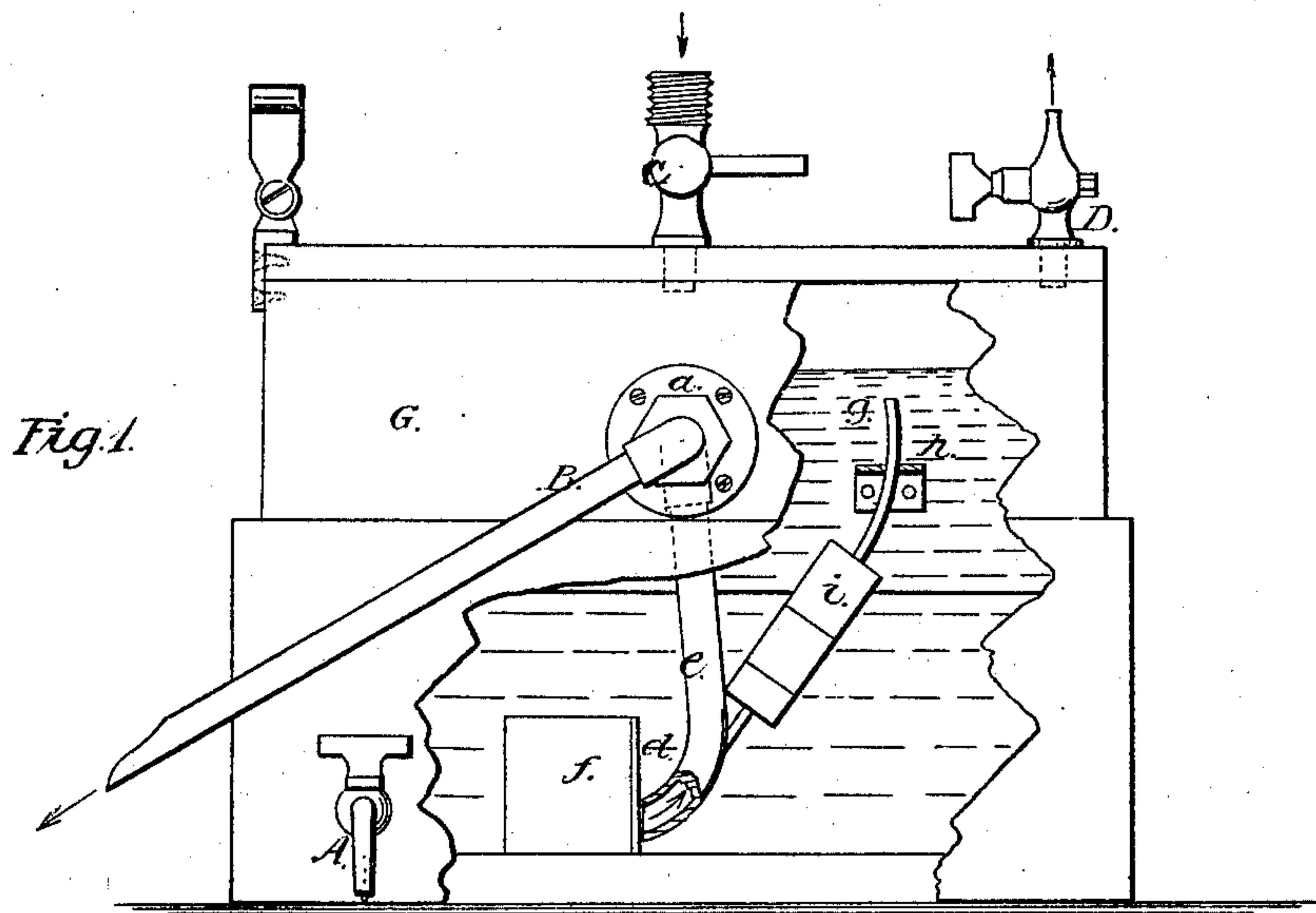


J. Alcorn.
Bottle-Filling Mach.

N^o 86,721.

Patented Feb. 9, 1869.



Witnesses:

E. Wolff
Wm. A. Morgan

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United States Patent Office.

JAMES ALCORN, OF CHARLESTOWN, MASSACHUSETTS.

Letters Patent No. 86,721, dated February 9, 1869.

IMPROVEMENT IN BOTTLE-FILLING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES ALCORN, of Charlestown, in the county of Middlesex, and State of Massachusetts, have invented a new and improved Machine for Filling Bottles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of my invention, with a portion of the box removed, to exhibit the internal mechanism thereof.

Figure 2 is a top view of the same.

Similar letters of reference indicate like parts.

The object of this invention is to afford a simple and effective means for filling bottles with fluid, whether the latter is under pressure or not, as the circumstances of the case may render most convenient.

It consists of a box, or case, provided with devices conducing to the perfect operation as a bottle-filling apparatus, which devices are herein fully set forth.

G is the box, having one or more metal stuffing-boxes, *a*, affixed to the sides thereof, as shown.

A pipe or pipes, *b*, pass through the stuffing-boxes, and connect the external pipes, B, affixed by elbows *d* to the said pipe *b*, with the internal pipes *e* arranged at or near a right angle with the pipes *b*.

The lower ends of the internal pipes are bent, to bring their orifices flush against a pad or cushion, *d*, of rubber or other analogous elastic substance, affixed to blocks *f*, arranged within the box, as shown, so that when the orifices of the said pipes are pressed against the said elastic pads, the discharge of fluid from the box through the pipes *e* will be shut off.

The external pipes B are arranged obliquely with respect to the pipes *e*, which latter hang vertically, or nearly so, and as the pipes *b* have a partial rotation within the stuffing-boxes, they serve as axes, on which the pipes B and *e* vibrate.

Wire stems *g* are affixed to the pipes *e*, behind their

orifices, and extend upward through a guide-plate, *h*, through which plate the said stems play loosely, as the pipes *e* are moved to or from the blocks *f*.

These stems bear weights *i*, which serve to press the pipes *e* against the blocks when free to do so.

In operation, the bottles are held with their mouths to the end of the external pipes B, which latter, being pressed downward, remove the orifices of the pipes *e* from contact with the cushions or pads *f*. When the downward pressure is removed from the external pipes, the weights *i* return the orifices again in contact with the pads *f*, as described.

The stuffing-boxes *a* may be of any suitable construction, that will prevent the escape of the fluid or compressed air within the box, and yet permit the pipes *b* to oscillate in them.

C is a stop-cock, for charging the box with fluid or compressed air.

A is a discharge-cock, for drawing off the residual fluid when the apparatus is not in use.

D is a vent-cock, which is opened when the fluid in the box is not submitted to pressure, but is drawn off by the siphon-action of the pipes B.

This machine is designed for any fluid, as soda-water, wine, medical liquids, and the like, and will be found simple, effective, and convenient for the purpose designed.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The combination of the box G, pipes B *b* *e*, stuffing-boxes *a*, orifice-pad *f*, weights *i*, arranged to operate substantially as herein described, and for the purpose specified.

2. The cocks C, D, and A, in combination with the above, substantially as set forth.

JAMES ALCORN.

Witnesses:

GEO. P. KETTELL,
G. A. PILLSBURY.