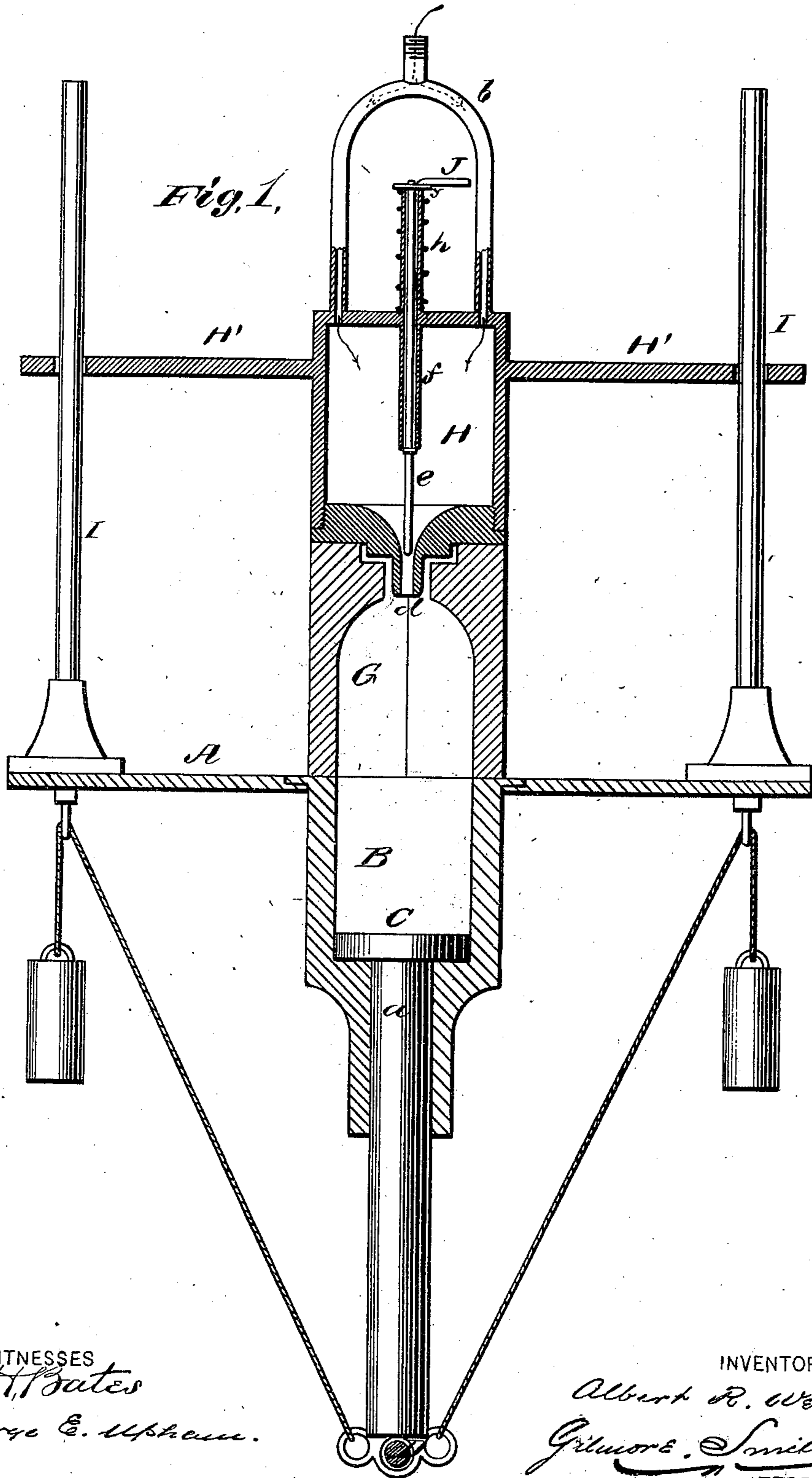


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MOLDING-BOTTLES.

No. 178,819.

Patented June 13, 1876.



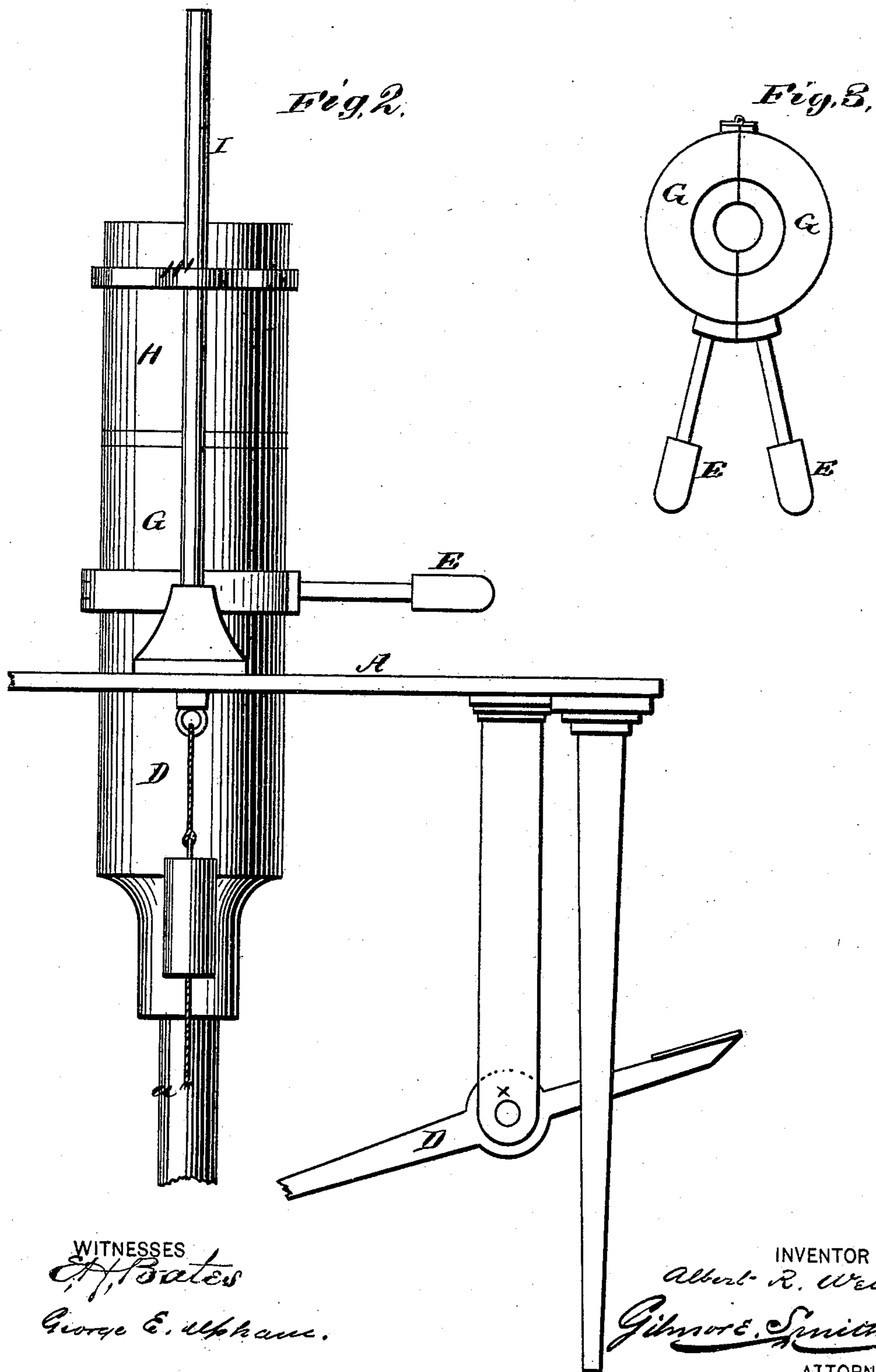
WITNESSES  
*E. H. Bates*  
*George E. Upham.*

INVENTOR  
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ATTORNEYS.

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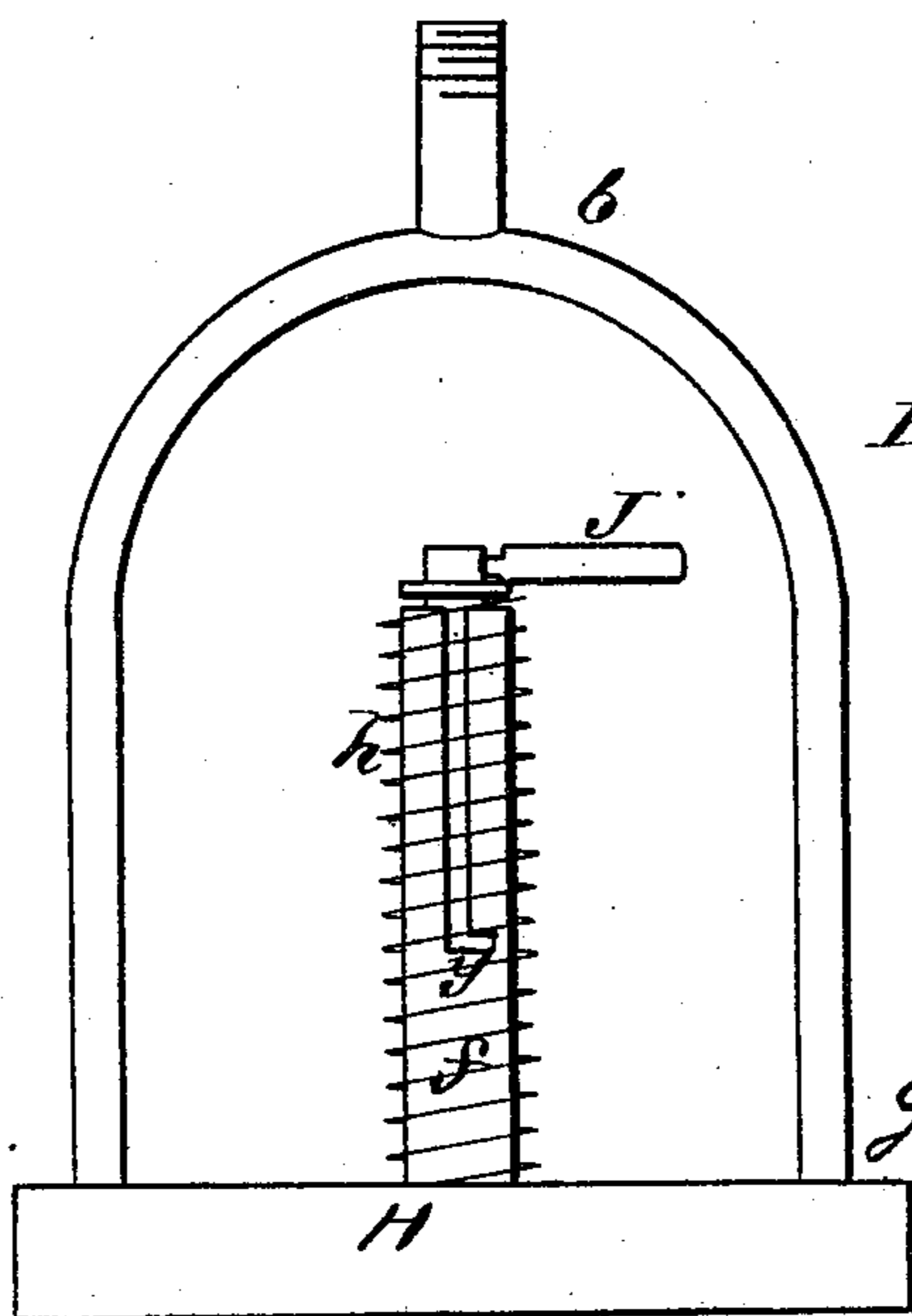
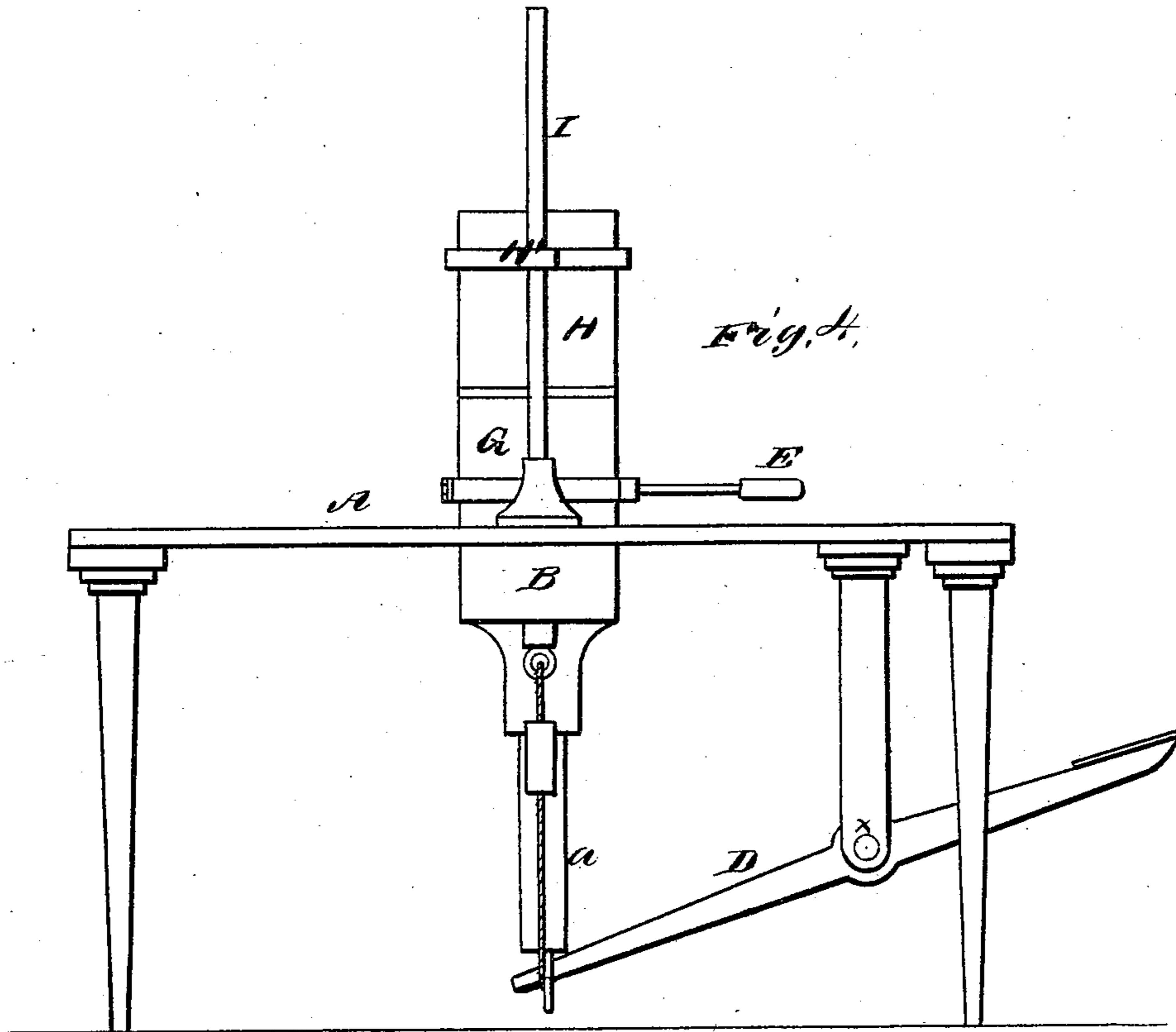
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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ALBERT R. WEBER, OF PITTSBURG, PENNSYLVANIA.

## IMPROVEMENT IN MOLDING BOTTLES.

Specification forming part of Letters Patent No. 178,819, dated June 13, 1876; application filed April 22, 1876.

*To all whom it may concern:*

Be it known that I, ALBERT R. WEBER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and valuable Improvement in Molding Bottles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my machine for molding bottles; and Fig. 2 is a side elevation, and Fig. 3 is a plan view, of the mold. Fig. 4 is a side view of my machine for molding bottles; and Fig. 5 is a detail view thereof.

The nature of my invention consists in the construction and arrangement of a machine for molding bottles and other like articles, as will be hereinafter more fully set forth.

In the annexed drawings, A designates the bed of my improved machine supported by suitable legs or supports. In this bed is secured a hollow guide-mold, B, of about one-half the length of the bottle to be molded. Within this guide-tube mold is a movable plunger, C, attached to, or formed on the upper end of a rod, *a*, the lower end of which is connected to the inner end of a treadle, D, arranged under the bed or table A, and having its fulcrum at *x* in a part depending from the bed of the table A. The plunger C should be of such diameter as to play freely in the guide-mold B. Over the guide-mold B on the table A rests the mold G. G bisected vertically in equal parts, the two parts being hinged together at one side, and provided on the other side by handles E E.

Above the mold is a cylinder, H, which slides up and down upon guides I I by means of arms H'. This cylinder receives the air from any compressing or blowing apparatus through a branch pipe, *b*, and discharges it at the bottom through a blower, *d*, which forms the nose or neck of the bottle. Through this nozzle passes freely a rod, *e*, to prevent the glass from closing the same, which would prevent the air from getting in in the process of forming the bottle.

The rod *e* extends up through a slotted tube, *f*, at the top of the cylinder H, and has

a handle, J, attached to its upper end, said handle projecting through the slot in the tube. During the operation of molding, the handle is pressed down and turned into a notch, *y*, in the tube *f*, thereby holding the rod *e* projected through the nozzle or blower *d*.

By unlocking the handle J a helical spring, *h*, around the tube *f* raises the said handle, and withdraws the rod *e* from the nozzle or blower *d*.

The melted glass is dropped into the mold B, after which the cylinder H is lowered and the nozzle *d* is inserted into the mold G. A pressure of air is then brought to bear on the glass, which forces it into bottle shape, and the plunger C is then raised, which forces the glass up to give proper shape to the neck.

The glass is received in the stationary mold B, and forced up into the mold G by the plunger C, which latter is worked by the foot applied on the treadle D, and may be regulated by a spring, a screw, or a weight.

The bottle is blown by means of an air-engine, thus dispensing with blowing from the lungs.

The entire bottle, including the neck or nose, is finished in this mold at one process of blowing.

Window-glass rollers may be formed by the same process, using suitable molds for that purpose.

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

1. The combination of the air-cylinder H, branch pipe *b*, removable base having the blower *d*, arms H' H', and guides I I, substantially as described, and for the purpose set forth.

2. The air-cylinder H, constructed as set forth, and provided with the blower *d*, in combination with the removable rod *e*, substantially as described, and for the purpose set forth.

3. The combination of the rod *e*, air-cylinder H with nozzle *d*, the slotted and notched tube *f*, handle J, and spring *h*, as herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALBERT ROBERT WEBER.

Witnesses:

GEORGE W. MILLER,  
JAMES E. FLINN.