W. BECK.

MANUFACTURE OF HOLLOW PRESSED GLASSWARE.

No. 179,673. Patented July 11, 1876.

Fig. 1.

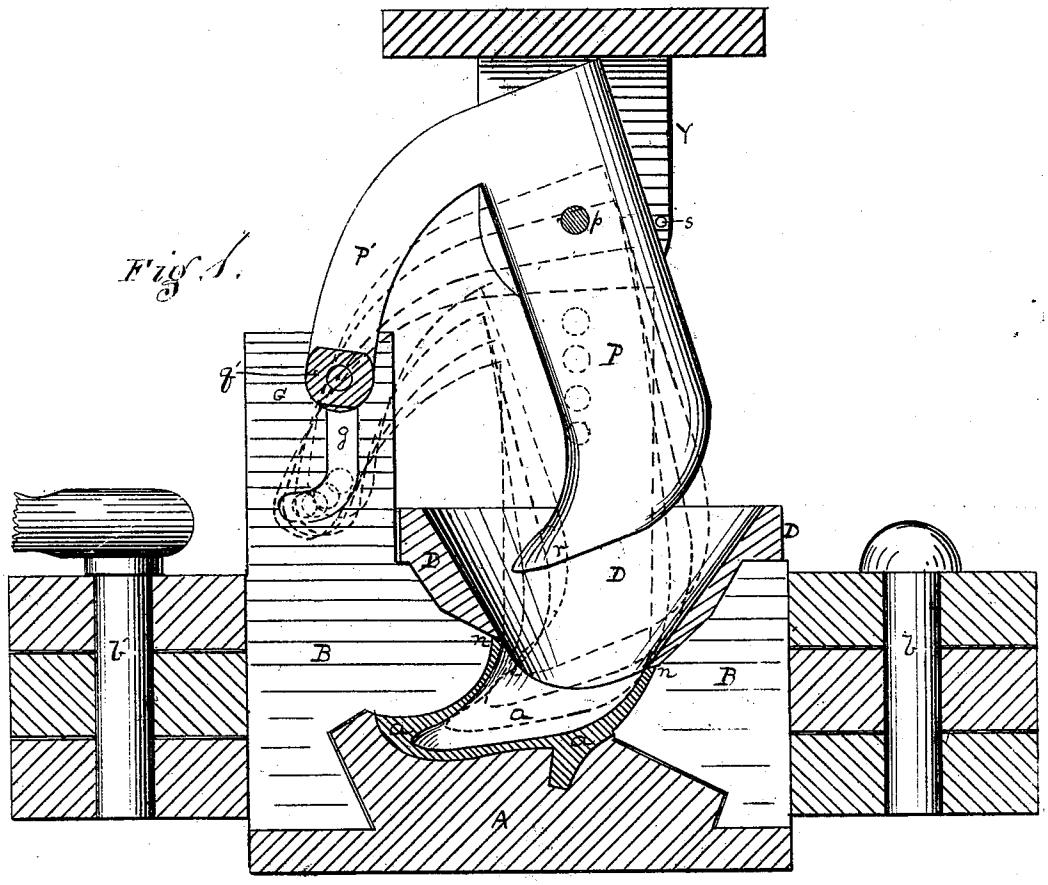
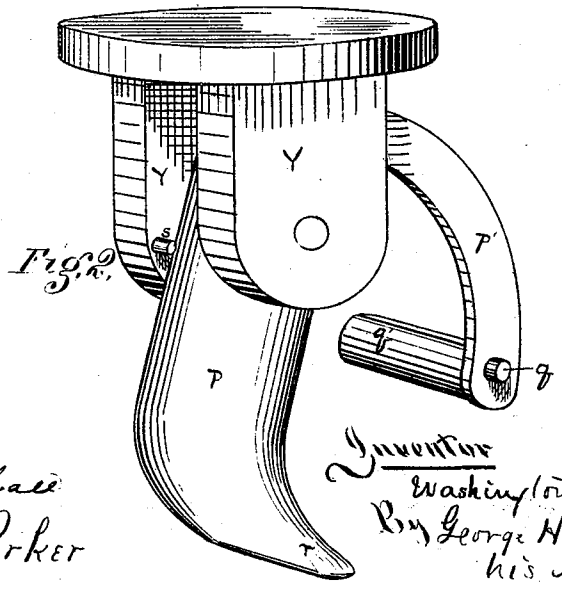


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WASHINGTON BECK, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN THE MANUFACTURE OF HOLLOW PRESSED GLASSWARE.

Specification forming part of Letters Patent No. **179,673**, dated July 11, 1876; application filed June 9, 1876.

To all whom it may concern:

Be it known that I, WASHINGTON BECK, of Pittsburg, county of Allegheny, State of Pennsylvania, have invented or discovered a new and useful Improvement in the Manufacture of Hollow Pressed Glassware; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—like letters indicating like parts—

Figure 1 is a longitudinal vertical sectional view of a mold and article pressed therein, with plunger in elevation, illustrative of my invention in one of the many forms of its application and use; and Fig. 2 is a view, in perspective, of the plunger, with its yoke and guide.

My invention relates to the manufacture of hollow pressed articles of glassware, in which the cavity or some part of the same extends laterally out beyond the vertical line of the wall above such cavity, or beyond what it would be if the plunger made only a direct straight stroke into and out of the mold.

In the drawing I have shown my improvement as applied to the pressing of a glass slipper-shaped disk or receptacle, (shown at *a*.) The bottom plate A contains the cavities for the bottom and heel parts, as shown, and the residue of the pressing-cavity is made of the exterior form of the article to be produced, one-half in each half of a two-part mold, B, the parts of which are hinged, as at *b*, and when closed secured by a pin, as at *b'*. The ring-plate D is of a hopper or other suitable shape, but closes the top of the cavity around its outer edge, in the usual way, as at *n n*. The plunger P is pivoted, as at *p*, to a plunger-head, Y, which is securely attached to the piston or follower of the press, so as to move in a direct line. The lower or operative end of the plunger is made of the interior form of the cavity desired, and it is so hung to the plunger as to enable it to pass through the opening *n n* at its downward stroke. To hold it in this position it is provided with an arm, P', on which is a wrist, *q*, which latter enters a guiding-groove, *g*, of the post G. To bring and keep the plunger P in position, so that the wrist *q* may always enter this groove on its down-stroke, I attach a weight, *q'*, to the end of the arm P', which will operate to swing the lower end of the plunger backward to the position desired, and a stop, *s*, is employed to limit such backward motion at the proper point. With the downward stroke of the plunger the projecting side or part *r* of the latter passes through the opening *n n* of the ring-plate. The wrist *q* then enters an inclined part of the groove *g*, by which it is guided laterally out, so as to give the plunger a forward movement simultaneously with the completion of its downward stroke, or, in other words, so as to cause it to move laterally from the direct line of the motion of the follower which impels it. This compound motion is continued till the desired cavity is made, and the article is pressed, part of said cavity being in the direct line of the pressing movement from above, and a part being laterally outside of the path of such direct pressing stroke.

The position of the plunger, and of the devices connected therewith, is represented at different points by dotted lines in Fig. 1. The plunger is withdrawn by a reverse movement, so as to follow, in leaving the mold, substantially the same path as when entering it.

In the use of a plunger having a compound motion I do not limit myself to the specific construction of guide shown and described, since guiding devices of other forms and constructions may be employed, and may be adapted or fitted up by the skilled mechanic, so as to give such plunger a lateral or side motion within the pressing-cavity simultaneously with the direct motion imparted by the piston of the press; and the features of novelty in my invention I claim in their application to making other hollow articles of pressed glassware, and to molds therefor, the article shown being introduced chiefly for illustration. The mold also may be made in more than two parts, or be of other suitable construction.

I claim herein as my invention—

1. In a press for pressing hollow articles of glassware, a plunger having a direct motion into the mold-cavity, and a lateral motion in such cavity, substantially as and for the purposes set forth.

2. A pivoted plunger, P, having a guiding-arm, P′, so as, by a wrist and slot, to be guided vertically into the pressing-cavity, and laterally therein to one side of what would otherwise be its direct stroke, substantially as and for the purposes set forth.

3. The wrist *q*, groove *g*, weight *q′*, and stop *s*, in combination with plunger P and arm P′, substantially as and for the purposes set forth.

4. The combination of plunger and lateral guides, ring-plate, bottom plate, and divided mold, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WASHINGTON BECK.

Witnesses:
J. J. McCORMICK,
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