(No Model.)

W. BECK.

GLASS MOLD.

No. 301,427. Patented July 1, 1884.

Fig. 1.

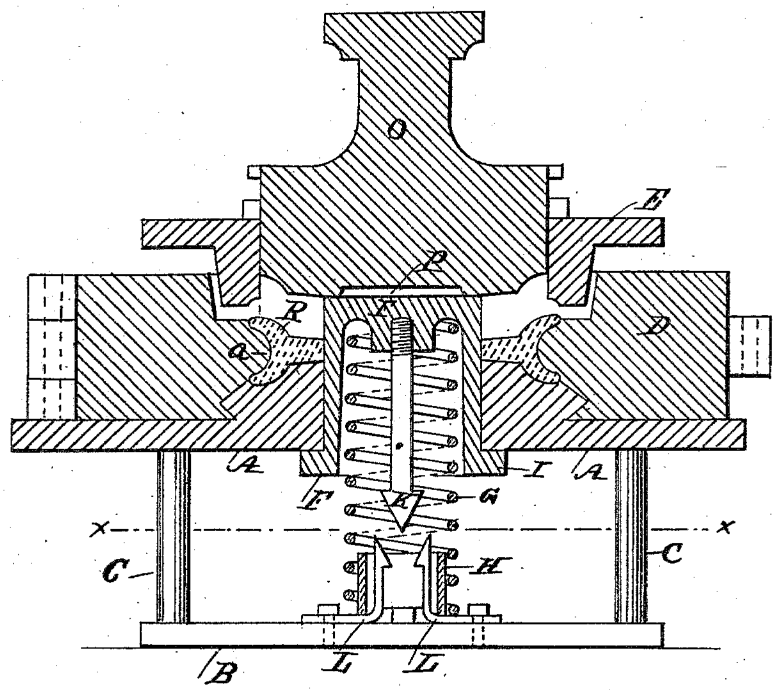
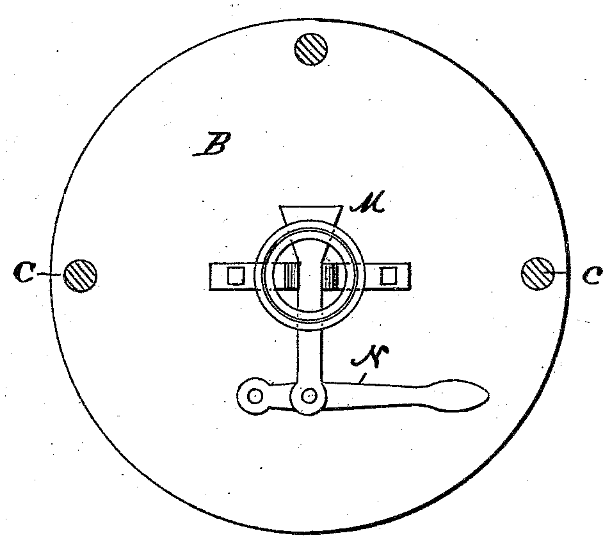


Fig. 2.



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WASHINGTON BECK, OF PITTSBURG, PENNSYLVANIA.

GLASS-MOLD.

SPECIFICATION forming part of Letters Patent No. 301,427, dated July 1, 1884.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, WASHINGTON BECK, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Glass-Molds, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in molds for pressing glassware with a hole therethrough, and belongs to that class of devices in which the main compression-plunger in its descent into the mold to give shape to the glass comes in contact with the top of a movable plug located in the bottom of the mold, and forces the said plug down with it, thus leaving the article with an aperture or apertures through it.

My invention consists in providing the plug or plunger in the bottom of the mold with a spear-headed projection, which, when the plug is depressed, engages with catches which hold the plug in a depressed position until the article is removed from the mold, when the catches are separated, and the plug released and forced upward by the action of a spring.

My invention consists, further, in providing the upper or main compression-plunger with a recess or cavity, so that the edges will impinge on the edges of the upper end of the plug, and thus prevent any dirt or fragments of glass from keeping the plunger from coming in immediate contact with the plug, as will more fully appear.

Figure 1 is a vertical sectional view. Fig. 2 is a top or plan view of the base, taken on the line *x x* of Fig. 1.

In the drawings I have shown a mold and plunger adapted to form a glass rim or ring for pulley-wheels, and in my description will confine myself to the devices shown; but it is obvious that the molds can be changed to form other articles in which an aperture or apertures are desired, and my improvements used thereon without departing from the spirit of my invention.

A is the base or bottom of the mold, mounted on a bed-plate, B, and secured thereto by the posts or standards C.

D is the mold proper, divided into two or more sections hinged together in the usual manner and adapted to be held onto the base or bottom A of the mold by means of dovetailed projections and recesses, as is the common practice with this class of molds.

E is the usual mold-ring, which arrests the upward flow of the glass and gives form to a portion of the article.

F is a metal plug, which fits snugly within and through a perforation in the base A. The plug F is made hollow on its lower side in order to receive and retain the upper end of a spiral spring, G, the lower end of said spiral spring being held in position by a projecting rim or flange, H, secured to the base-plate B. The lower end of the plug is provided with a flange, I, which limits the upward travel of the plug by coming in contact with the under side of the mold-bottom A.

K is a spear-headed pin or bar secured to the interior of the plug F, which, when the plug is forced down by the plunger, engages with spring-catches L L, and holds the plug in the lowered or depressed position until the spring-catches are forced apart by the wedge-shaped block M and lever N, when the plug will be released and forced upward into the mold-cavity by means of the spring G.

O is the plunger, which is secured to the piston or cross-head of the press in the usual manner. The lower face of the plunger is provided with a recess or cavity, P, so that the upper edge of the plug F will come in contact with the plunger around the edges of this cavity P, by which construction the plunger and plug are less liable to be kept separate by dirt or fragments of glass during the pressing operation.

From the foregoing description the operation of my device will be apparent to those skilled in the art. Suffice it to say, however, that the molten glass is placed in the mold around the plug F when said plug is in an elevated position. The mold is then pushed under the plunger, and the plunger depressed, which, coming in contact with the plug F, forces it down, and gives shape to the article. The plug is held in this depressed position by the devices already described until the plunger has been withdrawn and the article removed from the mold, when the plug is released and rises to its upward position again.

R is the ring or rim of a pulley-wheel adapt-

ed to be used on cable-railways, and is provided with a groove, *a*, in which the rope or cable travels.

Instead of the spear-headed projection and catches to hold the plug in a depressed position, I may form cavities in the sides of the plug, in which pins or bolts located in or on the base or bottom of the mold, operated either by hand or by springs, will be thrust, to hold the same in a depressed position until the article has been removed from the mold.

I have also described the mold as a sectional one; but I do not wish to limit myself to this construction, as it is obvious that in forming tapering articles—as lamp-shades, shade-holders, &c.—they can be formed in a solid mold—that is, a mold in one piece—or, in making certain other articles, a portion of the mold can be made solid or in one piece and the other portion hinged in sections.

It will also be apparent that by the use of my devices, as above described, picture-frames, lamp-shades, lamp-globes, illuminators, clock-frames, and an endless number of articles of this class can be made by the devices described.

It is also an important feature of my invention that the spear-headed projection should be centrally located—that is, on a direct line with the axis of the plunger; or, if the spring bolts or pins are used instead of the spear-headed projection, that they should operate perfectly, so that the plug will be caught and held accurately and in a perpendicular line, in order that the article will not be broken by the twisting or deviating of the plug from a perpendicular line.

In pressing small articles a solid plug may be used; but for large articles of the class shown a hollow plug is desirable, for the reason that it can be more readily kept at a proper degree of heat for pressing the article without crizzeling or cracking the same.

Having thus described my invention, what I claim is—

1. In molds for pressing open glassware, a plug movable through the bottom of said mold, operated by a spring to hold said plug in an elevated position, and a spear-headed pin or its described equivalent for catching and holding said plug in its lowered position when depressed by the plunger, as set forth.

2. In molds for pressing open glassware, a plug movable through the bottom of said mold, operated by a spring to hold said plug in an elevated position, and provided with a spear-headed pin for engaging with catches secured on the base-plate of the mold, whereby when the plug is depressed it will be held in such depressed position until the article has been removed from the mold.

3. In a glass-mold, the plug F, provided with the flange I and spear-headed pin K, in combination with the spring G and catches L L, as and for the purpose set forth.

4. In a glass-mold of the character described, the spring-actuated plug F, provided with the spear-headed pin K, in combination with the catches L, wedge-shaped block or bar M, and lever N, as and for the purpose set forth.

5. The plunger O, provided with the cavity P, in combination with the yielding plug F, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WASHINGTON BECK.

Witnesses:
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GUY L. DEMOTTE.