J. C. GILL.

Manufacture of Glassware.

No. 167,608. Patented Sept. 14, 1875.

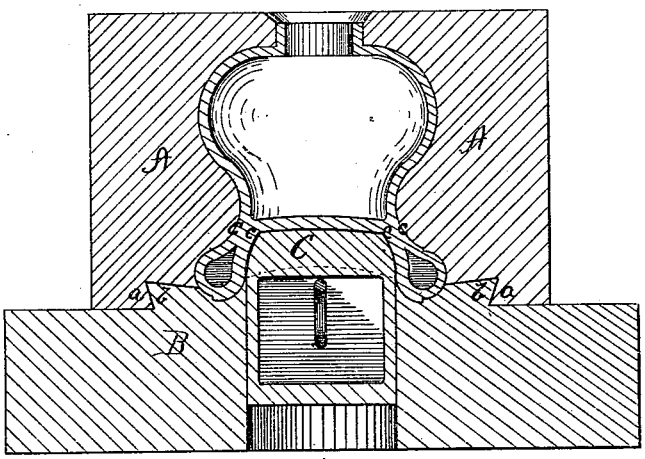

Fig. 1.

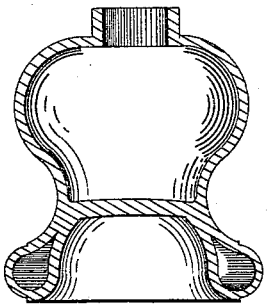

Fig. 2.

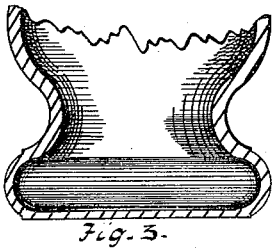

Fig. 3.

WITNESSES.

James L. Kay

L. C. Fitler.

INVENTOR

James C. Gill

By Bakewell & Kerr

Attys

UNITED STATES PATENT OFFICE.

JAMES C. GILL, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO JOHN ADAMS & CO., OF SAME PLACE.

IMPROVEMENT IN THE MANUFACTURE OF GLASSWARE.

Specification forming part of Letters Patent No. **167,608**, dated September 14, 1875; application filed July 6, 1875.

To all whom it may concern:

Be it known that I, JAMES C. GILL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Manufacture of Glassware; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a section of a mold that may be employed in carrying out my invention. Fig. 2 is a section of a blown glass-lamp formed in accordance with my method. Fig. 3 is a section of a blown glass-lamp base as commonly made.

Like letters refer to like parts whenever used.

My invention relates to the manner of forming the base and foot of hollow blown glassware; and it consists in folding or pressing together parts of a blown-glass article while within the mold, and when at a temperature that will cause the glass to reunite.

Heretofore in the manufacture of hollow blown glassware where the base and bowl of an article have been blown at the same time in a mold, the base has been necessarily formed hollow and communicated with the bowl, so that any liquid put in the article will pass through into the foot or base, injuring the appearance when in use and rendering the article difficult to clean.

To avoid this objection to the hollow base or foot it is the common practice to first press up the foot separately, and then secure it in a mold and blow the bowl onto the foot; but such a method requires that the foot or base be in a heated condition at the time the bowl is blown.

It has also been proposed in forming lamps and similar ware to press up the bowl and foot or base at the same time, as is commonly practised in forming goblets, and then to complete the article by warming-in and forming the neck.

These methods, as above noted, have each their respective objections, either as to the article itself, or the cost of producing, and such objections I seek to obviate by the method hereinafter set forth.

I will now proceed to describe my method by referring to the drawing, which illustrates a lamp and mold, and while showing devices useful in carrying out my invention yet does not form a part thereof.

A A indicate the sections of a hinged mold in which the bowl of the article is formed, and B the bottom plate or base, through the center of which passes a plunger, *c*, operated from below. The several parts of the mold may be secured by pins, and by projections and recesses, as shown at *a b*, or in any of the well-known ways employed for retaining the parts of glass-molds in position while the article is being formed.

In forming an article, as, for instance, the lamp shown in Fig. 2, the plunger *c*, or movable part of the mold, is retracted, so that the face toward the cavity of the mold is flush therewith, as shown by the dotted line in Fig. 1.

The mold then corresponds to the usual molds employed, and the operator proceeds to blow the article in the usual manner, filling the outline as shown in Fig. 3, which is to this extent the old form; but while the glass is still in a condition to weld or unite, and before the workman has entirely finished the article, an assistant operates the plunger C, which folds in or forces up a portion of the article until two surfaces, such as *c c*, are brought together and unite, forming, in the present instance, the base or foot of a lamp, in which the cavity in the base is closed so as to have no connection with the lamp-bowl.

Thus an article of blown glass is produced having a bowl and base or foot, the two parts formed at one operation and in one piece, and the cavities so separated that liquids cannot pass from one to the other.

The advantages are the cheapness and facility with which the article can be produced, and the ease with which the bowl may be cleaned.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The method, herein described, for forming blown-glass articles, consisting in folding or pressing together parts of a blown-glass article while within the mold, and at a welding temperature, or such a temperature as will cause the glass to reunite.

2. A blown-glass article having a bowl and base or foot formed in a single piece and at one operation, the cavities of the bowl and base having no connection one with the other, substantially as specified.

In testimony whereof I, the said JAMES C. GILL, have hereunto set my hand.

JAMES C. GILL.

Witnesses:
T. B. KERR,
F. W. RITTER, Jr.