(No Model.)

G. W. BLAIR & W. BUTTLER.

GLASS MOLD.

No. 342,318. Patented May 25, 1886.

Fig. 2.

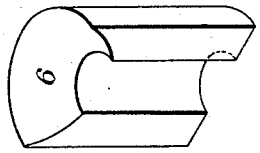
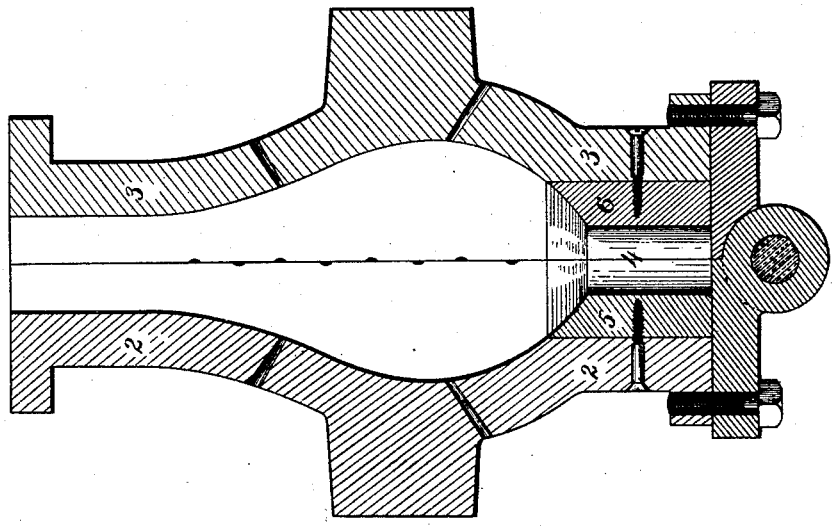


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE W. BLAIR AND WILLIAM BUTTLER, OF PITTSBURG, PA.

GLASS-MOLD.

SPECIFICATION forming part of Letters Patent No. 342,318, dated May 25, 1886.

Application filed October 26, 1885. Serial No. 180,886. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. BLAIR and WILLIAM BUTTLER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Glass-Molds; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a glass-mold constructed according to the principles of our invention. Fig. 2 is an outline view of a part.

In the manufacture of mold-blown articles having open ends—such, for example, as lamp-chimneys—a patent has been granted to George W. Blair, one of the applicants for this patent, which covers the following operations: The workman takes a lump of molten glass upon the end of his blowing-tube, and, after forming it into a pear shape, with a teat or knob of glass depending at the lower end, inserts it into a sectional metal mold, which has at the bottom a well or cavity. The knob of glass fits within the well, and as the latter is of contracted area the knob does not expand very greatly in blowing. When the chimney is taken from the mold, the workman seizes the pendent knob of glass with his pinchers and draws it out to form the tube, which is afterward opened out into the annular base or seat of the chimney. The end of the knob is then knocked off, and the base of the chimney, which the presence of the knob renders thicker than the already blown sides, is opened into the proper form in the usual manner. In this process we have found that in inserting the tube into the mold it is practically impossible to make the knob at its end to touch the side of the mold at all points at once. The result is, that the part touching the metal mold first becomes chilled, and therefore less plastic than the remainder, so that when blown into a bulb the chilled portion remains thicker than the rest. Then when the knob is drawn out by the pinchers it draws unevenly, because the thinner part draws more easily and rapidly than that which has been chilled. The chill of the metal mold on the knob is, in fact, so great as often to necessitate the reheating of the chimney previous to drawing it out; but this, while it allows the knob to be drawn, cannot restore the shapeliness of the bottom of the chimney, which in either case will be of such irregular thickness and strength as to impair the value of the article, if not to make it worthless.

It is the object of our invention to obviate these difficulties, and to perfect a mode of manufacture which is otherwise of great value.

The drawings represent a two-part metal glass mold, the sections 2 and 3 of which are hinged together at the base, so as to be capable of opening and shutting in the usual way. At the bottom of the mold-cavity is the well or neck 4, before referred to. Instead, however, of making this of metal, we line it with a wooden lining of proper thickness. The latter consists of two semicircular wooden blocks, 5 and 6, made concave on the inner side, so that when placed together they may form a hollow annulus. One of these blocks is placed in each part 2 and 3 of the mold in the neck 4, opposite to each other, so that when the mold is shut they may join, as shown, to make a complete lining for the neck. The non-conducting properties of the wood make it practically immaterial whether or not the knob at the base of the glass touches all parts of the well at first, because the chilling influence of the wood is so slight as to be inappreciable; and hence when the knob is blown in the well the resulting bulb will be of uniform thickness and plasticity. When, therefore, the knob is drawn, it will draw evenly at all points, and the same regularity will be apparent in the base of the chimney when it has been opened.

We have reduced our invention to actual use, and have found it to be of the greatest utility, because it saves both labor and time. The wooden blocks will last for a considerable length of time, and when burned may be readily replaced with trifling cost.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A metal glass-mold having a well or

cavity, 4, lined with wooden blocks, substantially as and for the purpose specified.

2. A metal glass-mold having a well or cavity, 4, lined with a substance which is a non-conductor of heat relatively to the metal, substantially as and for the purposes described.

In testimony whereof we have hereunto set our hands this 23d day of October, A. D. 1885.

GEORGE W. BLAIR.
WILLIAM BUTTLER.

Witnesses:
THOMAS W. BAKEWELL,
W. B. CORWIN.