P. ARBOGAST.

Method of Making Glass Labels and Apparatus therefor.

No. 196,855. Patented Nov. 6, 1877.

Fig. 2.

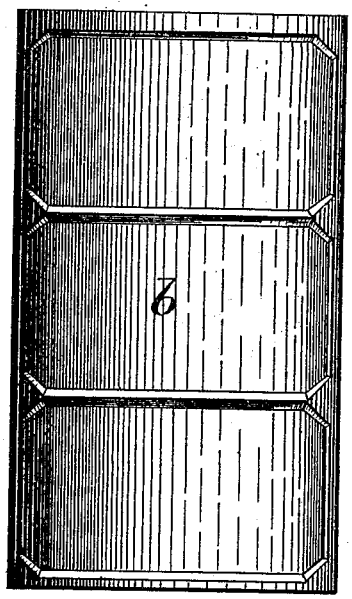


Fig. 3.

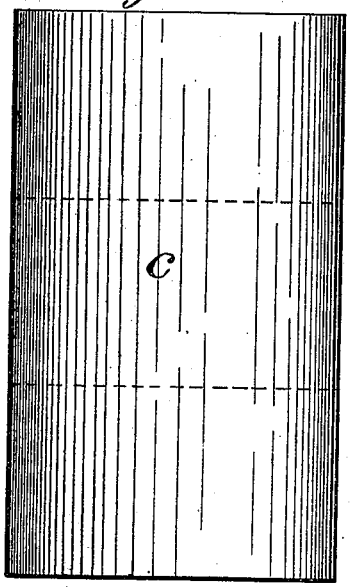
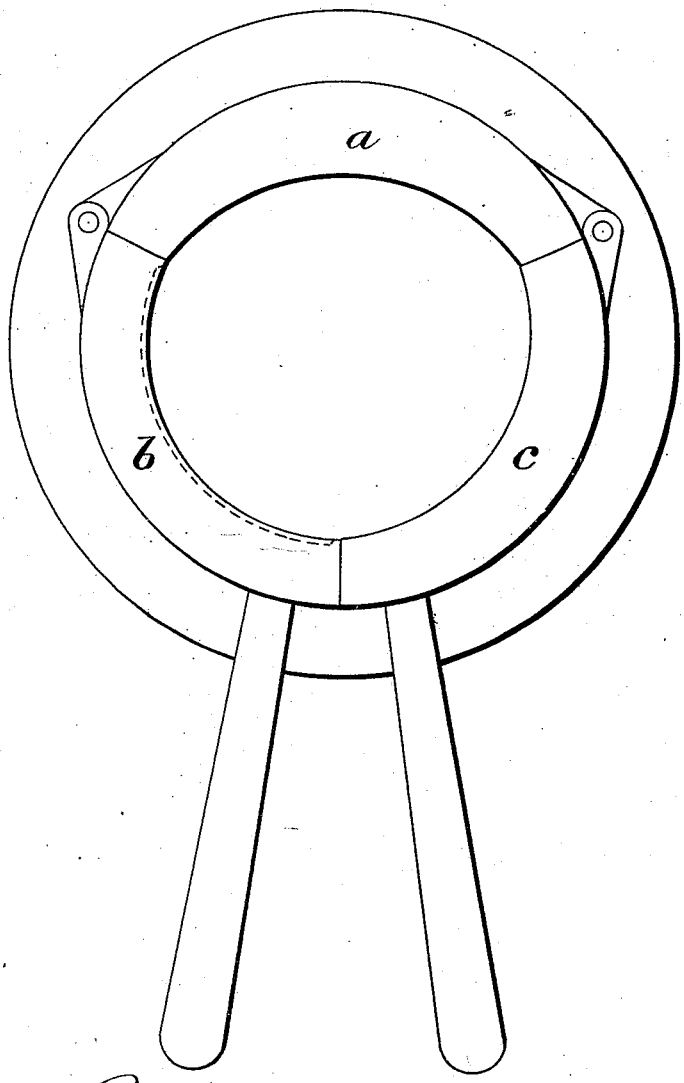


Fig. 1.



Witnesses

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UNITED STATES PATENT OFFICE.

PHILIP ARBOGAST, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN L. DAWES, SONS & CO., OF SAME PLACE.

IMPROVEMENT IN METHODS OF MAKING GLASS LABELS AND APPARATUS THEREFOR.

Specification forming part of Letters Patent No. **196,855**, dated November 6, 1877; application filed September 18, 1877.

To all whom it may concern:

Be it known that I, PHILIP ARBOGAST, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in the Method of Making Glass Labels and Apparatus therefor; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a plan view of a mold used in my method, giving three curvatures of different radii. Fig. 2 shows one of the section-faces having the described imprints. Fig. 3 shows another section, plain.

This invention relates to a method of making glass labels and analogous articles, and an apparatus therefor.

In the method now in use, the glass-blower takes his "ball" from the furnace, "prepares" it by rolling in the "block," (a piece of iron, stone, or wood, with a pear-shaped cavity on top;) then, after a slight injection of air, it is reheated, after which he takes the prepared ball, and, holding it down in vertical position, blows till it has become large enough and thin enough, having now an elongated pear shape. After cracking this off the blow-pipe, he takes a hot iron and cracks off rings of a width slightly greater than the label to be made, and then, with a templet or stencil, he cuts these rings up into labels with a diamond; but as the irregular surface thus obtained does not and cannot be made to conform to any given standard, a further step must be taken.

The irregularly-curved labels are laid across a bar of iron whose surface is cylindrical and conforms to the standard, there being a bar for each style of curvature. With the labels on it, the bar is now placed in a heating-oven, and, when the glass has again softened, is withdrawn and the labels pressed to its surface by a hand-tool. All this is a tedious and laborious process, makes the labels costly, and more or less imperfect.

My process consists in taking the prepared and reheated ball and blowing it directly in a mold whose surface is large enough to make two or more labels, and corresponds to the standard of curvature, or two or more standards, (in the latter case the mold is made up in sections, as will be shown.) This at once gives the standard of curvature required, and, after cooling, may be immediately cut into the shape desired, when, after the usual edge-grinding, they are ready for market.

My object is to diminish the cost of production, by lessening the labor and the consumption of fuel, and to decrease the liability to "sulphur" by doing away with the second reheating.

My mold is of the usual hinged type, and has its inner surface conforming to one or more of the different standard curvatures.

In the drawings I show a common open-top mold having three joints, making three part-cylindrical sections, *a b c*. The faces of the three sections are of different curvatures. When the glass is blown out in such a mold, the result is a body having three longitudinal faces of different radii. The mold-faces may have imprints, as shown in Fig. 2, so as to give guide-lines, and thereby dispense with the templet or stencil. This may be by indents or ridges.

In the same manner, glass watch-crystals and convex photograph-glasses may be molded and cut out; also, other analogous articles.

I claim as my invention—

1. The method herein described of simultaneously making two or more glass labels and analogous articles, consisting in blowing the prepared and reheated ball in a mold having the required curvature or form, and then cutting up the product into the articles required, substantially as described.

2. The method herein described of simultaneously making two or more glass labels and analogous articles of different curvatures or form, consisting in blowing the prepared and reheated ball in a mold having its inner surface constructed in the required different curvatures or forms, and then cutting up the product into the articles required, substantially as specified.

3. The described mold for glass labels, &c., constructed with its inner face in sections of relatively different curvature or form.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of September, 1877.

PHILIP ARBOGAST.

Witnesses:
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