

March 31, 1925.

1,531,415

H. SAID

MOLD

Filed Nov. 22, 1922

Fig. 2.

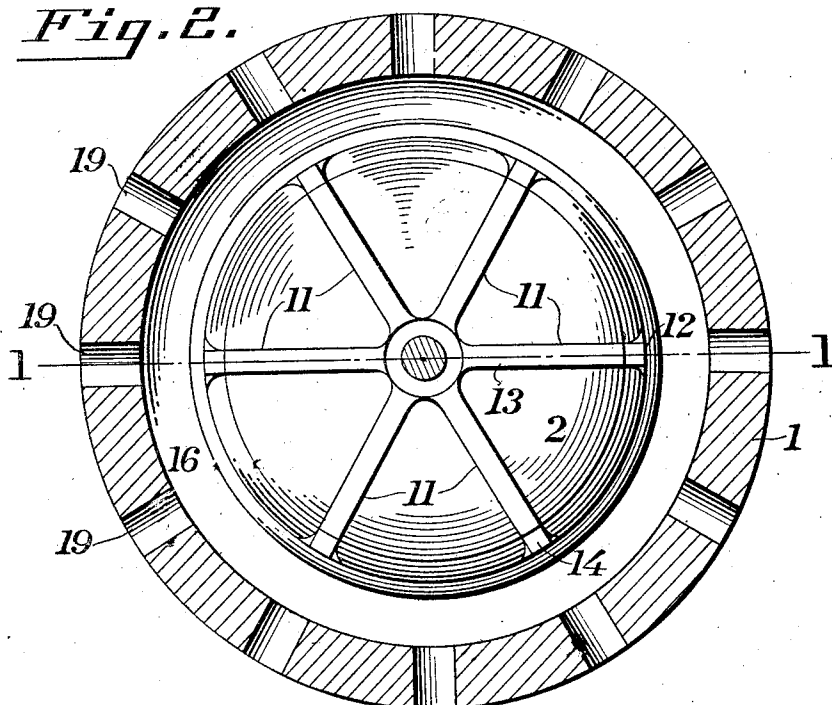
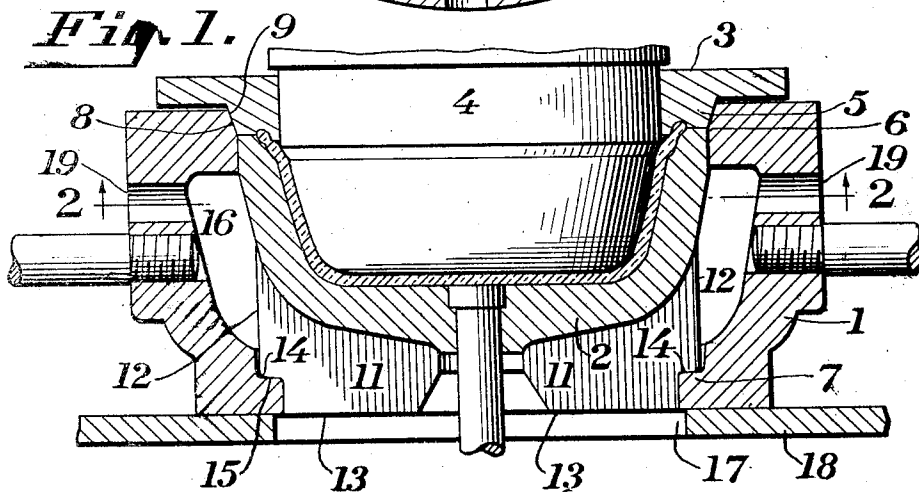


Fig. 1.



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UNITED STATES PATENT OFFICE.

HOWARD SAID, OF CORNING, NEW YORK, ASSIGNOR TO CORNING GLASS WORKS, OF CORNING, NEW YORK, A CORPORATION OF NEW YORK.

MOLD.

Application filed November 22, 1922. Serial No. 602,610.

To all whom it may concern:

Be it known that I, HOWARD SAID, a citizen of the United States, residing at Corning, in the county of Steuben and State of New York, have invented new and useful Improvements in Molds, of which the following is a specification.

This invention relates to improvements in molds, and it particularly relates to improvements in molds used for forming pressed glassware, such for instance as baking dishes and other thick-walled articles. The prime object of my invention is to provide a mold of improved construction where-in provision is made for the circulation of a cooling fluid under pressure upon the exterior surface of the mold bottom so as to enable the mold to be worked more frequently in continuous operation than is the case with the usual types of press molds.

In the accompanying drawings, wherein is illustrated the preferred embodiment of my invention:—

Figure 1, is a vertical longitudinal section through a mold for pressing glassware constructed according to my invention, taken approximately on the line 1—1, of Fig. 2, the parts of the mold being shown in the position they assume when the plunger is depressed, and

Fig. 2, is a horizontal section taken approximately on the line 2—2 of Fig. 1, looking at the under side of the mold bottom.

Referring to the drawings, the mold comprises an outer shell 1, a mold bottom 2 that is mounted in the shell, a ring 3 which is adapted to be seated upon the shell and bottom, and a plunger 4. All of these parts are so designed that they will cooperate, when assembled, to form pressed articles from molten glass which has been deposited in the mold bottom. The ring 3, and plunger 4 may be of the form now in use, and these elements can be used in my device without alteration. The ring 3 is formed with a depending flange 5 whose surface is finished to fit smoothly upon the top of the upper edge of the bottom 2, while its interior diameter is finished to receive the plunger.

The bottom of the shell 1 is open, and the body portion of the shell is of greater diameter than the diameter of the mold bottom 2. The top and bottom edges of the shell extend inwardly to provide upper and lower

flanges 6 and 7, respectively: the upper flange 6 being formed with an inclined seat 8 for the outer inclined surface 9 of the flange 5 of the ring, while the inner surface of the flange 6, below the inclined portion 8 thereof, is formed substantially vertical. This portion of the flange 6 of the shell is adapted to encircle the upper exterior portion of the bottom 2.

As the diameter of the top of the mold bottom is approximately similar to the diameter of the interior of the flange 6 of the shell, and the contour of the exterior of the mold bottom is approximately parallel to the inner wall of the shell, when the mold bottom is positioned within the shell, its exterior will be spaced from the shell, and its bottom will be spaced from the open bottom in the shell.

Integrally formed on the outer surface of the mold bottom 2, are radial fins 11, having vertical outer edges 12, and horizontal lower edges 13, the fins 11 being of such form that they will occupy only the lower portion of the space between the shell and bottom of the mold. The purpose of the fins 11 is to serve as means for supporting the bottom 2 in the shell, and, therefore the outer corners of each of the fins 11 is notched as at 14 for engagement with an annular seat 15 formed in the lower flange 7 of the shell.

The construction is such that an annular chamber 16 is formed between the shell and the mold bottom, the lower portion of such chamber being pierced by the fins 11 while the upper portion of the chamber is open so as to permit cooling fluid entering the chamber from the bottom to readily circulate.

When the mold is being used in the production of glass articles, it is adapted to be placed over an opening 17 in the table 18 of the glass pressing apparatus, the size of the open bottom of the shell corresponding approximately with the size of the opening 17, so that fluid under pressure can be easily introduced to the chamber 16 of the mold, between the mold bottom and shell.

To permit circulation of the cooling fluid, which is by preference air that has been forced into the chamber 16, the shell, near its upper edge, has formed therein a plurality of openings 19, which may be of any desired size, and may be of the number required to permit the fluid to pass through

the chamber at a velocity necessary to keep the mold bottom at working temperature, it being understood that when the mold is being used in continuous production, the hot glass tends to overheat the bottom 2, and thus prevent the mold from being worked very fast unless ample provision is made to cool the mold bottom, as hereinabove described.

10 Having thus described my invention, what I claim is:—

1. A mold of the character specified comprising a shell having upper and lower flanges, and a mold-bottom having radial
15 fins extending therefrom, the upper edge of the mold-bottom engaging the upper flange of the shell and the radial fins of the mold bottom engaging the lower flange of the shell whereby the mold bottom is spaced
20 from the shell.

2. A mold for the purpose specified consisting of a hollow shell, open at the bottom, and having upper and lower inturned
25 flanges, a mold bottom positioned within the shell, the upper edge of the mold bottom en-

gaging the upper flange of the shell, and radial fins extending from the mold bottom and engaging the lower flange of the shell.

3. A mold of the character described consisting of a hollow shell, open at the bottom, 30 and having upper and lower inturned flanges, a mold bottom positioned within the shell and spaced therefrom, the upper edge of the mold bottom engaging the upper flange of the shell, radial fins extending 35 from the mold bottom and engaging the lower flange of the shell, whereby a chamber for a cooling fluid is formed in the space between the shell and bottom, and openings formed in the upper portion of the shell to 40 permit the cooling fluid in the chamber to pass outwardly through the shell.

4. The combination of a mold, a mold bottom formed with cooling ribs on the under surface thereof, and means for directing 45 cooling air against said ribs.

In testimony whereof I hereunto sign my name this 21st day of November 1922.

HOWARD SAID.