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C. N. L. BRUDEWOLD & J. M. WOOD.

MOLD.

APPLICATION FILED JUNE 23, 1904.

NO MODEL.

Fig. 1.

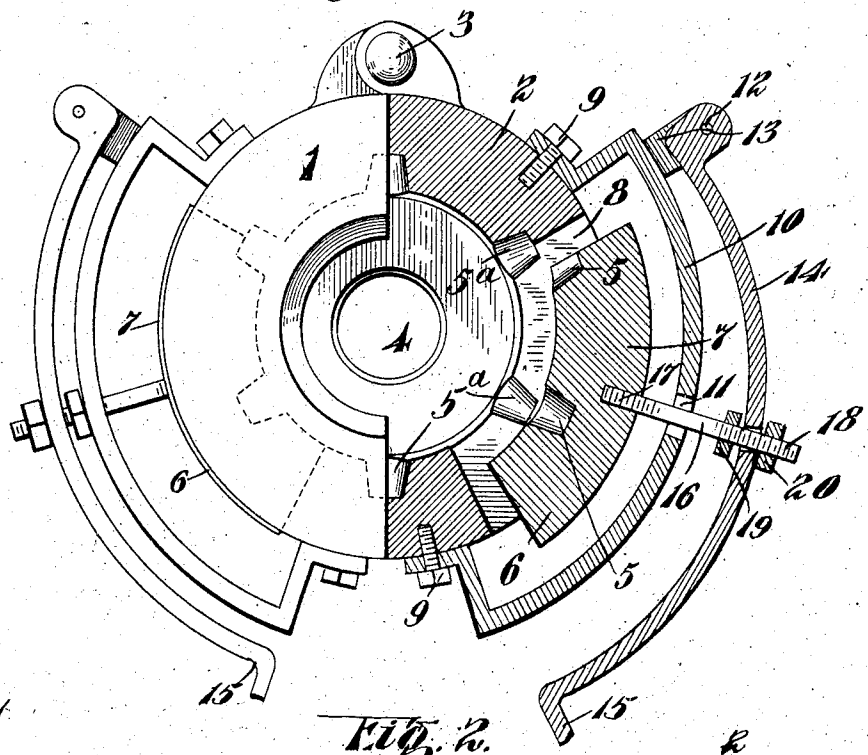
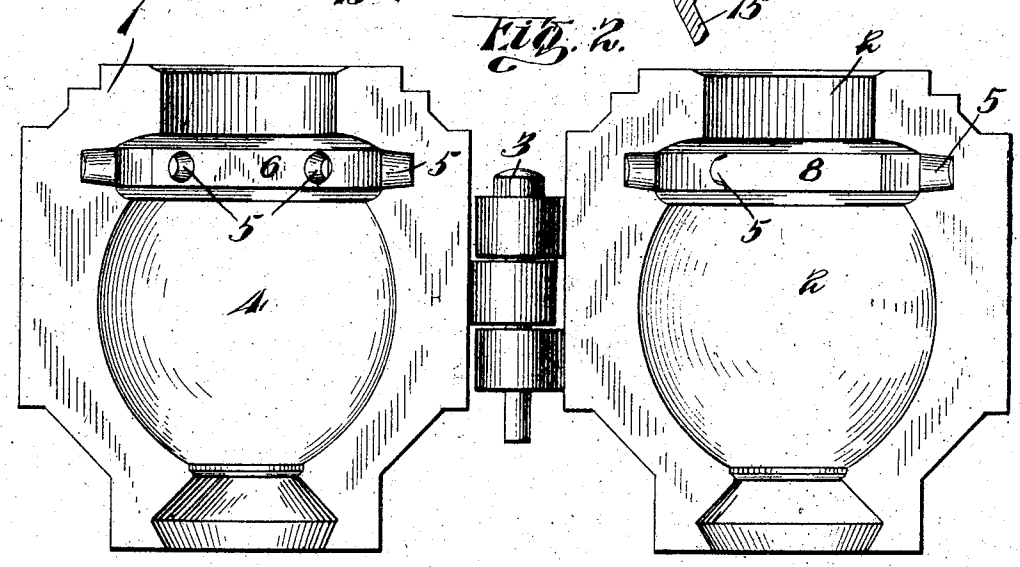


Fig. 2.



Witnesses
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No. 772,497. Patented October 18, 1904.

UNITED STATES PATENT OFFICE.

CHARLES N. L. BRUDEWOLD AND JOSEPH M. WOOD, OF CAMBRIDGE, OHIO.

MOLD.

SPECIFICATION forming part of Letters Patent No. 772,497, dated October 18, 1904.

Application filed June 23, 1904. Serial No. 213,874. (No model.)

To all whom it may concern:

Be it known that we, CHARLES N. L. BRUDEWOLD and JOSEPH M. WOOD, citizens of the United States, residing at Cambridge, in the county of Guernsey and State of Ohio, have invented certain new and useful Improvements in Molds; and we do 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 appertains to make and use the same.

Our invention relates to improvements in glass-molds of that type in which a globe or other hollow article is blown or otherwise made.

The object of our invention is to provide a simple and efficient means whereby glass globes and chimneys which have series of holes around their lower portions may be blown in the common form of mold known among glass-workers as "open and shut iron molds."

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a top plan view, with parts in section, of our glass-mold, the same being in its closed position; and Fig. 2 is an elevation of the mold in its open position.

Referring to the drawings by numerals, 1 and 2 denote two mold-sections which are pivotally connected together, as at 3. These mold-sections may be of any suitable form, construction, or material and may be connected in any desired manner; but, as illustrated, each is in the form of a half-cylinder and has upon its inner face a depression or cavity 4 of any shape or configuration. When the mold-sections 1 and 2 are in their closed position, said depressions 4 form a cavity in which the glass globe or chimney is blown. The glass globe or chimney which is designed to be made in said mold is of that type designed to be used upon vapor or gas lamps in which a mantle is employed—such, for instance, as Welsbach lights. The air-holes around the bottom or lower portion of such globes or chimneys are formed by blowing the latter with projecting portions known as "blow-overs" and then chipping these off and grinding them to form the finished air-hole. The portions of the mold which form these blow-overs may be located at any suitable point; but, as shown in Fig. 2 of the drawings, they are disposed adjacent to its upper end and consist of circular depressions 5, formed in the inner face of the mold. Said depressions extend radially from the center of the mold, and hence the blow-overs will also project radially. In order to permit the mold to be swung open after the chimney or other article has been formed, we provide each of the sections 1 and 2 with a removable portion or mold-section 6, which is that part of the mold around said blow-overs. By making the mold-sections 6 removable it will be seen that they may be moved radially outward away from the molded article in order to free or clear the blow-over projections upon the said article. Said globe-sections 6 may be made of any suitable size, form, or material; but, as shown, they are in the form of segmental blocks 7, which are adapted to fit snugly in similar shaped openings 8, formed in the mold-sections 1 and 2. Any suitable means may be provided for moving the sections 6 into and out of the openings 8 to close or open the same. As shown in Fig. 2, we have secured by screws 9 upon the outer side of each mold-section an arc-shaped bracket 10, which is spaced from said mold and formed adjacent to its center with a slot 11. Pivoted, as at 12, upon a stud 13, formed upon one end of the bracket 10, is a curved hand-lever 14, the free end of which is formed with a handle 15. Said lever 14 is connected with the block 7 by a stem or bolt 16, which projects through and is guided in said slot 11 in the bracket 10. The inner end of said bolt 16 is screwed into the mold-section 6, as at 17, and the outer screw-threaded end 18 of said bolt projects through an opening formed in the lever 14 and is provided with two nuts

19 and 20, between which the lever 14 is so disposed that said bolt has a slight lateral movement.

The operation of the mold will be readily seen. When the mold is in its closed position, as shown in Fig. 1, and both of the removable mold-sections 6 are in closed position in the openings 8, the glass globe or chimney is blown in the cavity 4 in the usual manner. After the chimney or other article 5^a has cooled sufficiently the handles 15 are forced apart to first swing the mold-sections 6 out of the mold-sections 1 and 2 and then to swing the latter to their open position to permit the chimney or other article to be removed. It will be seen that by first removing the mold-sections 6 the blow-over projections upon the chimney or other article will be freed from the mold, so that its two sections 1 and 2 may be readily swung open.

While we have shown and described the preferred embodiment of our invention, it will be understood that we do not limit ourselves to the precise construction herein set forth, since various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A glass-blower's mold comprising mold-sections pivotally secured together, one of said sections being formed with an opening, a removable mold-section in said opening, a slotted guide-bracket upon the mold-section in which said opening is formed, a lever pivoted upon said bracket, and a bolt connecting said removable mold-section and said lever and projecting through the slot in said bracket, substantially as described.

2. A mold comprising two mold-sections pivoted together and formed with radially-disposed openings, removable mold-sections in said openings, slotted brackets upon said pivoted mold-sections, in line with said openings, hand-levers pivoted upon said brackets, and bolts extending through said slotted brackets and connecting said hand-levers and said removable mold-sections, substantially as described.

3. A mold comprising two sections pivoted together and provided with a series of radial depressions to form blow-overs, and an independently-pivoted section connected to each mold-section, substantially as described.

4. A glass-blower's mold comprising main mold-sections pivoted together and provided with radial depressions to form blow-overs, said sections each having an opening therein, and a mold-section independently pivoted to each of said main mold-sections, and provided with depressions, substantially as described.

5. A glass-blower's mold comprising main mold-sections pivoted together and provided with radial blow-over depressions, and an auxiliary mold-section hinged to each of the main sections by independent joints, substantially as described.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

CHAS. N. L. BRUDEWOLD.
JOSEPH M. WOOD.

Witnesses:
G. W. BROWN,
J. A. JACOBSEN.