

H. Brooke,

Glass Mold.

No. 85,637.

Patented Jan. 5. 1869.

Fig. 1.

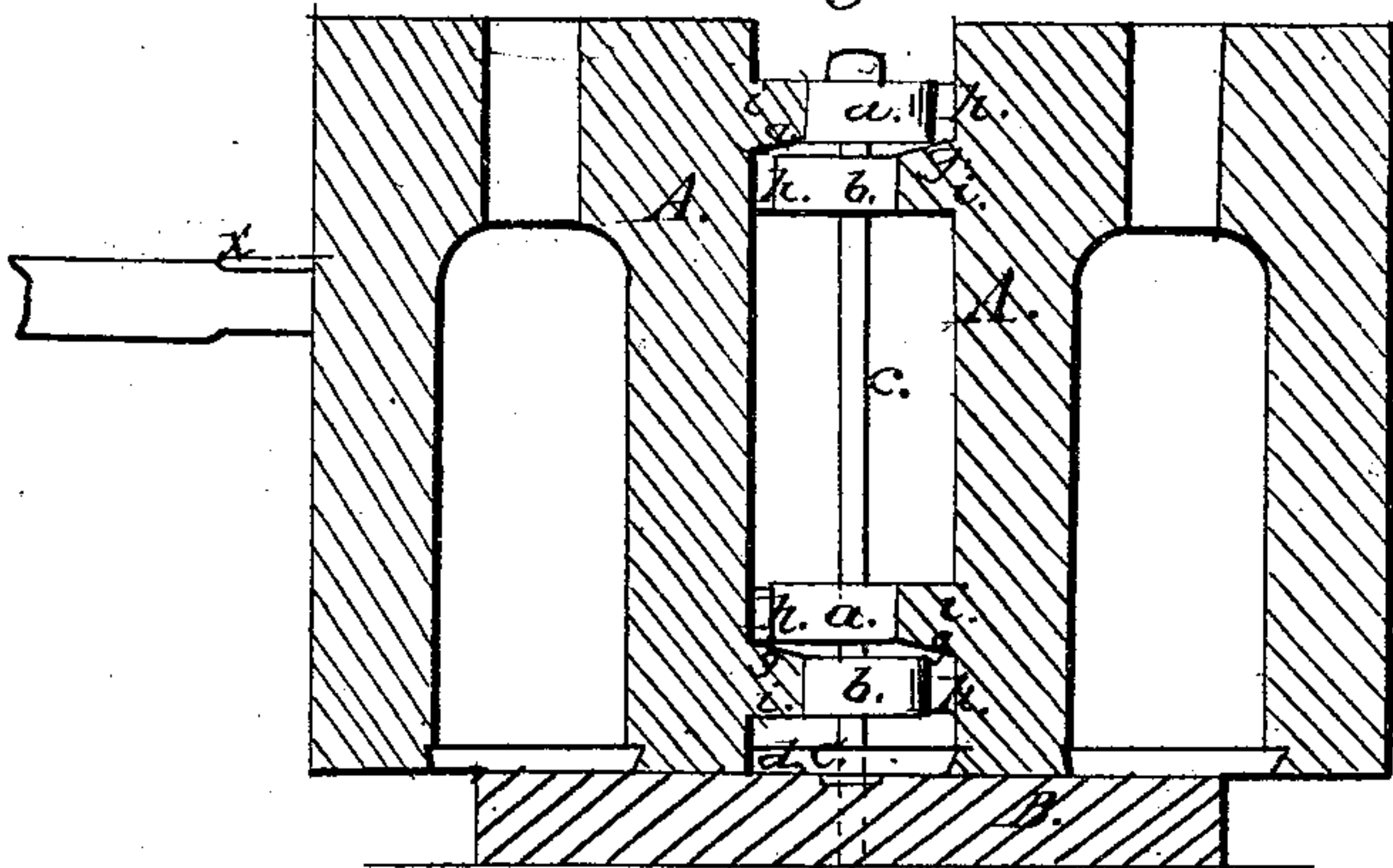


Fig. 3.

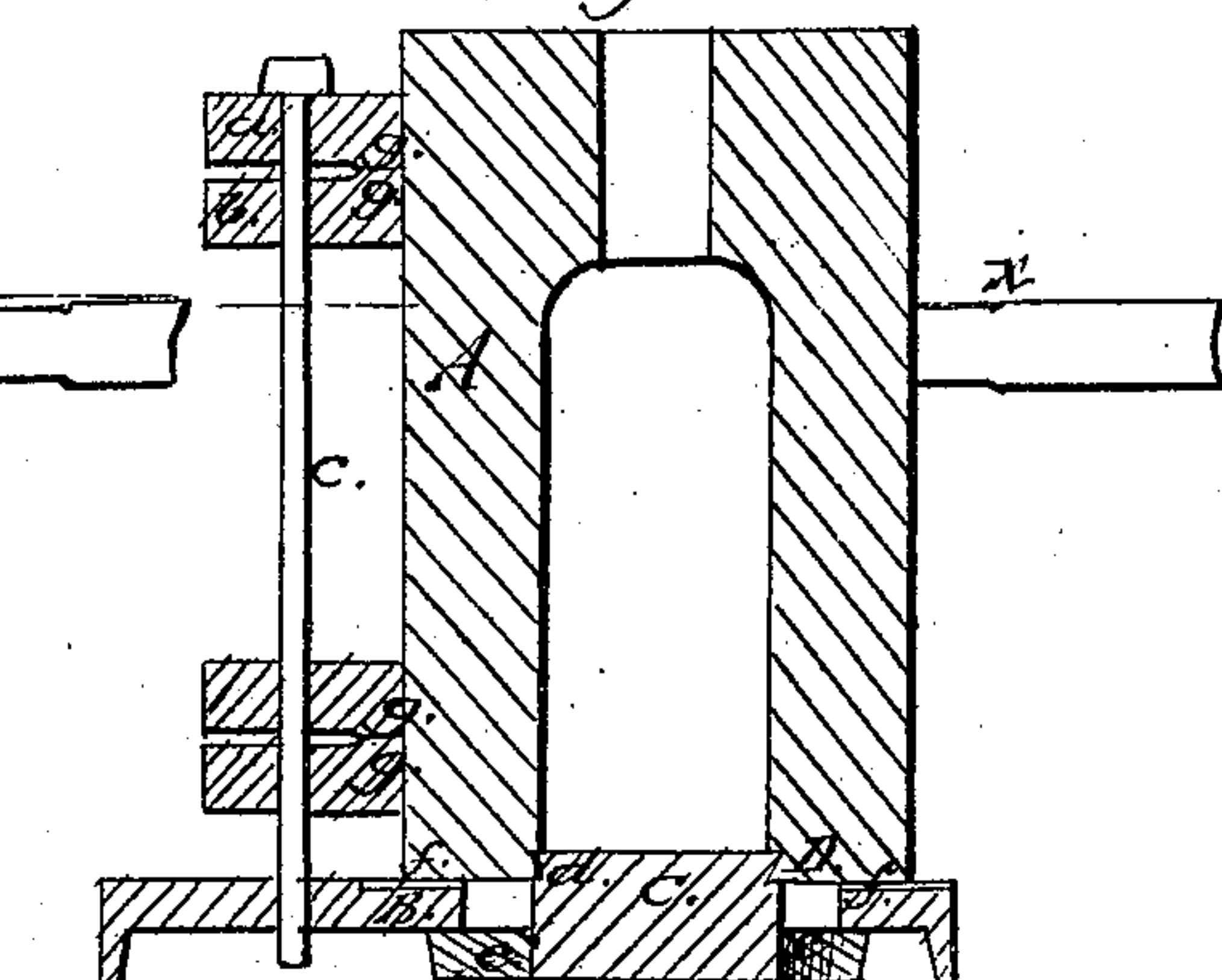


Fig. 2.

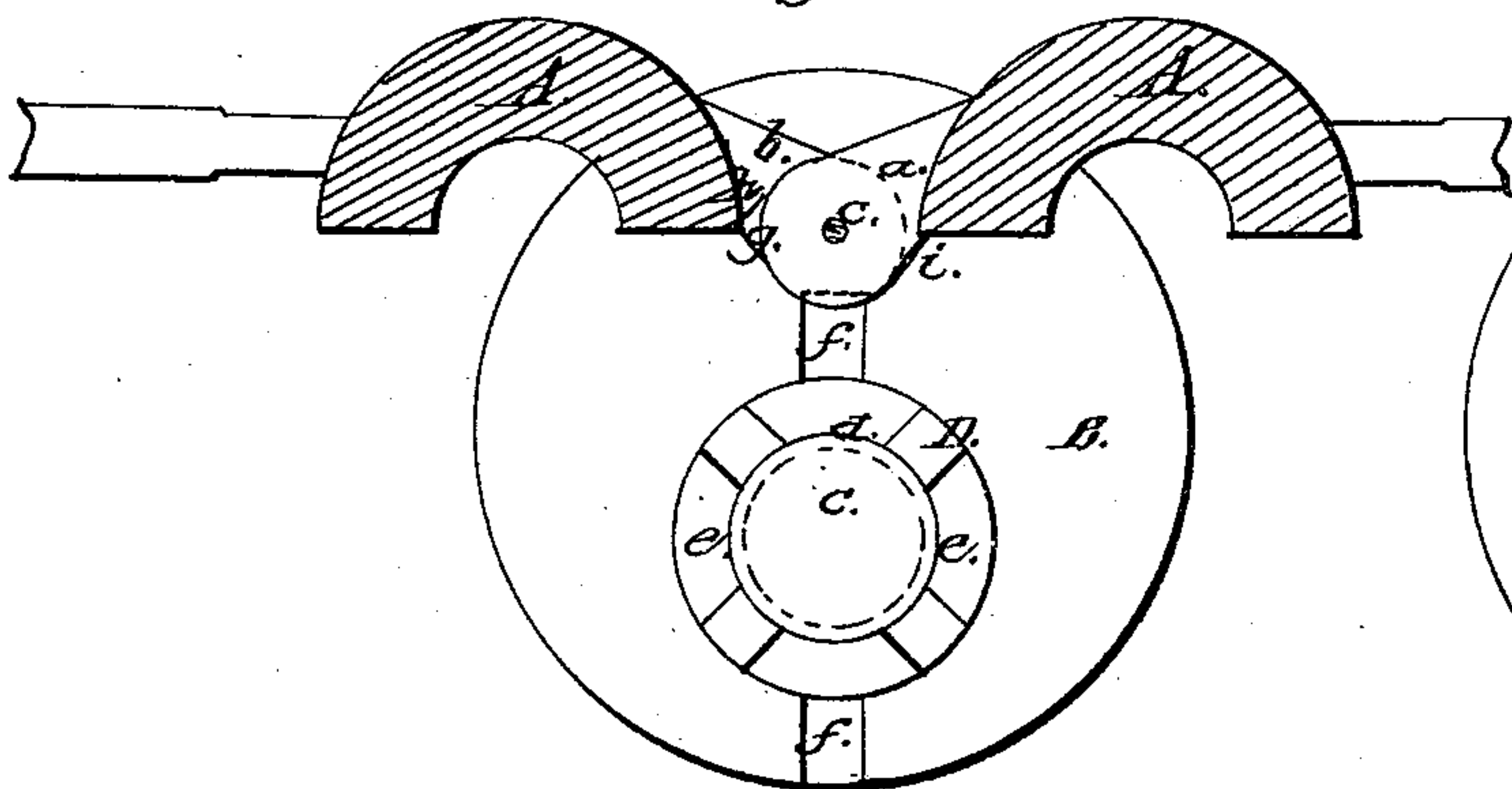
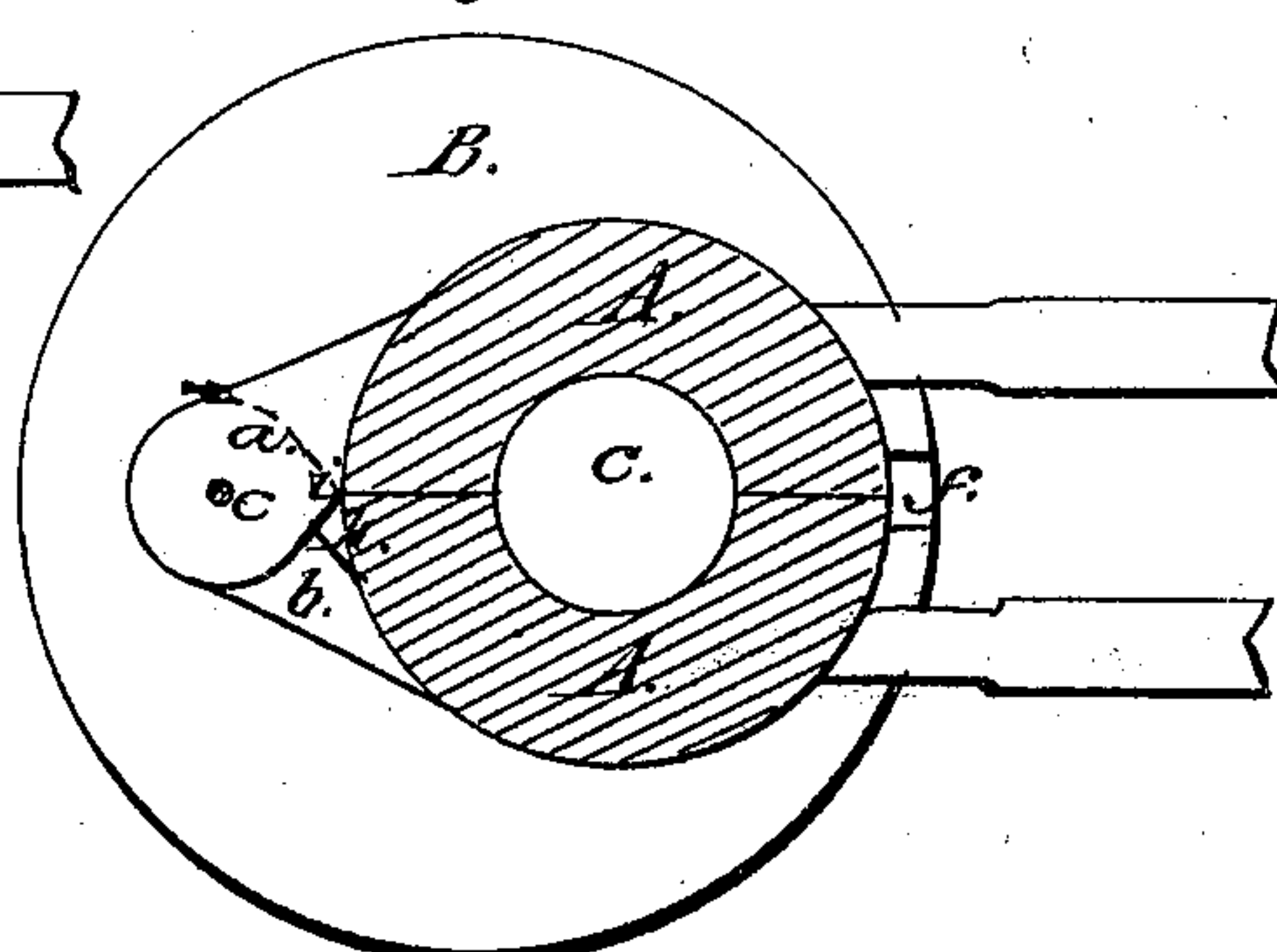


Fig. 1.



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HOMER BROOKE, OF NEW YORK, N. Y.

Letters Patent No. 85,637, dated January 5, 1869.

IMPROVED GLASS-MOULD.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HOMER BROOKE, of the city, county, and State of New York, have invented a new and useful Improvement in Glass-Moulds, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a glass-mould constructed in accordance with my improvement, in a shape or form for making bottles, and as thrown open;

Figure 2, a sectional plan of the same, taken as denoted by the line *xx* in figs. 1 and 3;

Figure 3 is a vertical section of said mould, closed, at right angles to fig. 1; and

Figure 4, a horizontal section of the mould, as closed, through said line *xx*.

Similar letters of reference indicate corresponding parts.

This, my improvement, has reference to glass-moulds for making bottles and other articles, in which the mould is made up of hinged sections, resting on or working over a bottom plate, and enclosing or surrounding, when shut, a centre plate. In all previous constructions of such moulds, it has been found difficult to secure, in the absence of oil, which cannot be used, in consequence of the heat of the mould, a free and easy or frictionless hinge-action to the mould-sections, without destroying the true and proper meeting of said sections when closed, or, however freely and perfectly constructed at first, the wear upon the hinge or joint has, sooner or later, impaired the easy and proper action of the mould. Another difficulty has been the clearance of waste glass and dirt from off the bottom of the mould or mould-bed, owing to the imperfect separation, by escape-openings, of the centre plate from said bottom or bed, and the absence of channels or cavities in the bed for the overflow and dirt swept by the meeting faces or edges of the mould-sections when brought together.

My invention, which obviates these difficulties, consists—

First, in a peculiar construction of the hinge-portions of the mould-sections, whereby said sections, during the greater portion of their opening and closing-actions, are relieved from bearing one upon the other, and are free from downward pressure of or on the joint-pin, they, during such actions, being borne by the mould-bed, but, in closing, or as they close, are caused to work in contact at their hinge-surfaces, for the purpose of securing a proper vertical adjustment of said sections relatively to each other.

Secondly, the invention consists in a further peculiar construction of the hinge-portions of the mould-sections, to admit of their free play in opening and closing, and to secure a proper relative horizontal or transverse adjustment of said sections.

Thirdly, the invention consists in such a recessed construction of the mould-bed, as that a cavity is formed, entirely surrounding the centre plate, and in communication with the openings, for carrying off the waste glass and dirt, to effect a more perfect clearance of the latter, and thereby to facilitate the close shutting of the mould.

Fourthly, the invention consists in a further construction of the mould-bed, for the same object or objects, by a certain arrangement of grooves relatively to the hinge of the mould.

Referring to the accompanying drawing—

A A are two sections forming the body of the mould, arranged to open and shut, and kept in position by means of hinge-portions or projections, *a a* and *b b*, playing on or around a joint-pin, *c*.

B is the mould-bed or bottom, on which the mould-body or sections A A rest, and which is formed with a centre plate or raised disk, C, having a dovetailed groove, *d*, in or around it, to receive the mould-sections when closed.

D is a cavity or recess, formed in the mould-bed, and arranged to surround or encompass the centre plate C, for the purpose of allowing the accumulating waste glass and dirt which collect on the mould-bed, when the mould-body is open, to escape therefrom and be discharged through openings *e e*.

Grooves, *f f*, arranged in the closing-line of the mould-sections A A, are also formed in the upper surface of the mould-bed, to form receptacles for waste glass and dirt in shutting to the mould-body, whereby the close meeting of the mould-sections is more effectually secured.

The hinge-portions, *a a* and *b b*, of the mould-sections, are provided with inclined planes, *g g g g*, so formed or arranged as that, while the mould is finishing its closing-action, and when closed, the two inclines *g g*, of either double-hinge portion, bear against each other, thereby adjusting the mould-sections vertically in proper relation to each other, but so that, for the greater part of the opening and closing-actions of the moulds, said inclines are free from contact, and the mould-sections relieved from friction on the hinge.

The hinge-portions *a a* and *b b* are, furthermore, provided with adjusting-surfaces or supports, *h h h h* and *i i i i*, arranged so that either pair, *h h* and *i i*, meet or come in contact in the closing to of the mould-sections, thereby securing a proper relative horizontal adjustment of said sections, but work free of each other and all frictional contact during the larger portion of the opening and closing movements of the sections.

The inclined planes *g g g g* may be arranged on the back part of the hinge, or on both back and front thereof; also, the hinge-portions, with their several inclines and supports *g g g g*, *h h h h*, and *i i i i*, may be made in separate pieces from the mould-sections,

and be attached to them by bolts, screws, or rivets, in preference to being cast with the mould-sections, as here shown.

Furthermore, the cavity D, which encompasses the centre piece, may be made elliptical, square, or other shape besides round, as here shown, to suit different shapes of glass articles made in the moulds.

Likewise, the grooves *ff* may be arranged in varied directions on or in the mould-bed, and may be of any suitable number to suit moulds or mould-bodies that are divided in more than two parts, but, in all cases, must lie in the direction or directions of the closing-line or lines of the mould-sections.

Instead of such grooves, apertures made through the mould-bed, outside of the cavity D, and arranged as described, may be substituted.

The joint-pin *c*, of the hinge, passes freely through a hole in the mould-bed, but in cases where there is no centre plate, C, and dovetail-shaped groove, *d*, for the correspondingly-shaped lower edges of the mould-sections to fit into, said joint-pin may be made fast to

the mould-bed, and a stop-pin be introduced to keep the mould-body central in or on the mould-bed.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The combination, with the mould-sections A A, of the inclined planes *g g*, to or on the hinge-portions, *a* and *b*, of said sections, substantially as specified.

2. The surfaces or supports, *h* and *i*, on or to the hinge-portions, *a* and *b*, of the mould-sections, when combined therewith, essentially as shown and described.

3. The combination, with an opening and closing mould-body, of the mould-bed or bottom B, constructed with a continuous cavity or recess, D, arranged to surround or encompass the centre plate C, and having openings or grooves, *ff*, arranged on or in the mould-bed or bottom, in direction of the closing-line or lines of the mould-sections, essentially as shown and described.

Witnesses:

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