No. 876,212. PATENTED JAN. 7, 1908.

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MOLD.

APPLICATION FILED FEB. 4, 1907.

Fig. 1.

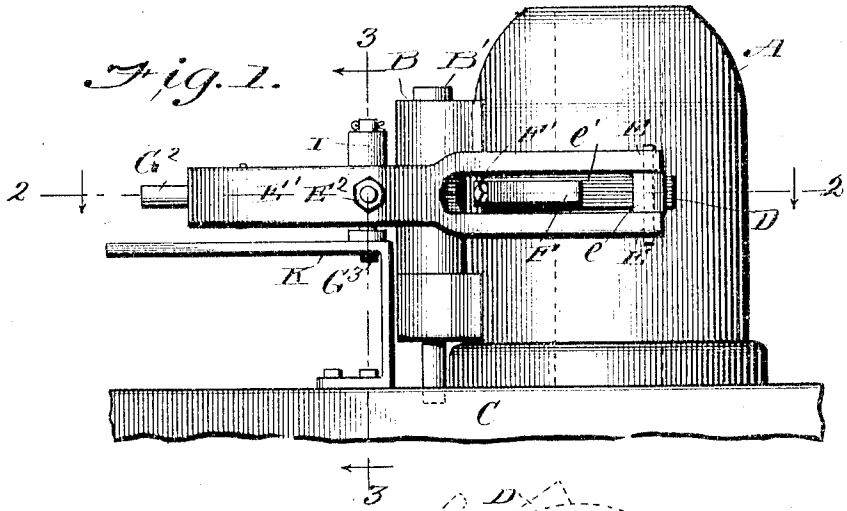

Fig. 2.

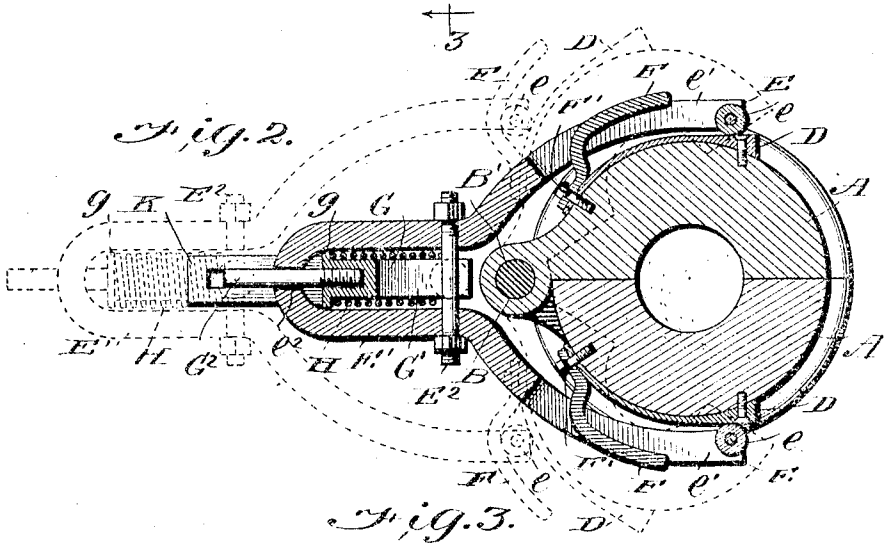

Fig. 3.

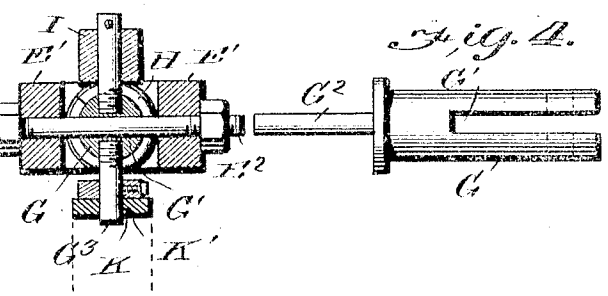

Fig. 5.

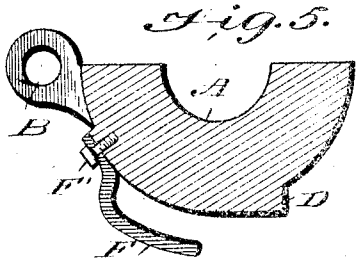

Fig. 4.

WITNESSES

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MOLD.

No. 876,212. Specification of Letters Patent. Patented Jan. 7, 1908.

Application filed February 4, 1907. Serial No. 355,571.

To all whom it may concern:

Be it known that I, WILLIAM J. MILLER, a citizen of the United States, and a resident of Coffeyville, in the county of Montgomery and State of Kansas, have invented certain new and useful Improvements in Molds, of which the following is a specification.

My invention is an improvement in molds for glass and other articles, and is especially designed for use on glass molds, and consists in certain novel constructions and combinations of parts as will be hereinafter described and claimed.

In the drawings, Figure 1 is a side view, and Fig. 2 a horizontal section on about the line 2—2 of an apparatus embodying my invention. Fig. 3 is a vertical cross-section on about the line 3—3 of Fig. 1. Fig. 4 is a detail side view of the slide. Fig. 5 is a detail view showing the tracks or bearings on the mold sections integral therewith.

By my invention, I provide a novel construction for effecting results secured by a somewhat different construction illustrated in a separate application for patent executed by me of even date herewith, and the present invention relates to the particular means herein disclosed for locking the mold sections closed by the operation of the locking device which is movable past the dead center of the mold, such locking device being in the construction herein shown a yoke, as illustrated in the drawings. The molds of modern glass machines must be opened, closed and securely locked, as each article is made, and the speed of the operation is governed to a great extent by the speed with which the mold can be opened and closed.

In the construction shown, the mold is formed of sections A which are pivoted at B, the pintle B′ extending down into the base C, as shown in Fig. 1. The mold sections A are provided on their outer sides with circumferentially extending tracks or bearings D upon which engage the ends of the yoke E. In Fig. 2 the tracks or bearings D are shown as made separate from the mold sections and secured thereto, while in Fig. 5, I illustrate such parts integral with the mold sections. Manifestly, they may be made separate or integral as desired, and these tracks or bearings form surfaces upon which operate the arms of the yoke. This yoke E′ when advanced to the position shown in Fig. 1 will close and lock the mold sections by the engagement of the yoke with the said sections, as shown in full lines Fig. 2, and when the yoke is retracted to the dotted line position in Fig. 2, the yoke arms will open the mold sections by the construction shown.

By preference to relieve the bearing of the yoke arms upon the mold sections, the said arms are provided with rollers *e*, and these rollers when the yoke is retracted engage upon the inner surface of the bars F secured to the mold sections and open the mold, as indicated in dotted lines Fig. 2. These bars F are secured at their rear ends F′ to their respective mold sections and are free at their forward ends and preferably operate through slots *e*′ formed longitudinally in the arms of the yoke so the said bars F will not interfere with the advancing movement of the yoke arms and yet will be in position to be engaged on their inner sides by the rollers *e* when the yoke is retracted.

The yoke is advanced and retracted preferably by the construction shown and comprising a slide or plunger G slotted longitudinally at G′ in its front end and fitting within the shank of the yoke and having at its rear end a pin G^2 guided through an opening e^2 in the rear end of the yoke shank. This slide G is encircled by a spring H which bears between the abutment *g* on the slide, and a cross-pin E^2 secured to the yoke. By this means any advance movement of the slide G will be communicated to the yoke, but will be cushioned by the spring H. For operating the slide G I prefer to provide it with a roller I which may be operated by hand power, by a cam lever, or otherwise as desired, and as the slide is advanced and retracted it operates to advance and retract the yoke as will be readily understood. The slide G and with it the yoke is guided in its forward and return movement by means of a pin G^3 depending from the slide G and operating in a slot K′ in the top bar of the bracket K which is mounted upon and secured to the base C, as shown.

The construction it will be understood is simple and enables me to operate the mold sections both to closed and opened position by the engagement of the arms of the yoke with the members of the mold sections whereby I am able to dispense with positive connections between the yoke arms and the mold sections, as will be readily understood.

By preference I lock the mold by moving the yoke arms past the dead center, but manifestly good results may be secured by

moving the said arms to or nearly to the dead center in the operation of the invention, it being understood that the mold will lock better the nearer the yoke gets to the dead center.

I claim:

1. The combination substantially as herein described, of the mold having separable sections and provided on the outer sides thereof with inner tracks or bearings and bars secured at one end to their respective mold sections and projecting thence towards their other ends and spaced at such ends away from such sections, a yoke having its arms embracing the mold sections and slotted for the passage of the track bars thereon, and having adjacent to their free ends rollers to bear upon the tracks or bearings at the outer sides of the mold sections and at the inner sides of the track bars, a plunger operating within the shank of the yoke and slotted longitudinally, a bolt connecting the side bars of the yoke shank and operating in the slot of the plunger, a spring on the plunger and bearing between said bolt and a suitable stop on the plunger, and a pin projecting from the plunger and operating in the body of the yoke shank, substantially as set forth.

2. A mold having separable sections moving on a vertical pivot and provided on the outer sides thereof with inner and outer tracks or bearings and a yoke movable radially to the mold and having its arms embracing the mold and provided with rollers operating upon the outer and inner bearings or tracks, substantially as set forth.

3. A mold having separable sections combined with a yoke having its arms rigid with each other and embracing the mold, and moving radial to the mold and in sliding engagement therewith to points adjacent to or beyond the dead center of the mold, whereby the yoke may close and lock the mold, and means on the mold for engagement by the yoke whereby it may operate to open the mold, substantially as set forth.

4. The combination with a mold having separable sections, of a yoke having its arms rigid with each other and embracing the mold sections to operate the same, and having its shank provided with side bars spaced apart, a plunger between the said side bars of the yoke shank, and slotted longitudinally, a connecting bolt between the shank of said bars and operating in the slot of the plunger, and a spring on the plunger operating upon the connecting bolt, substantially as set forth.

5. The combination of a mold having separable sections, and a yoke movable horizontally in a direction radial to the mold and having its arms embracing said sections and moving in sliding engagement therewith to points adjacent to or beyond the dead center of the mold whereby to close the mold and lock it in closed position against internal pressure, substantially as set forth.

6. A mold having separable sections and provided on the outer sides thereof with tracks or bearings extending past the dead center of the mold and also having track bars secured at their rear ends to their respective mold sections and extending thence forwardly in spaced relation to the tracks or bars of the mold sections, and a yoke having its arms embracing the mold sections and provided with means operating upon the outer surfaces of the tracks or bearings on the mold sections and the inner surfaces of the track bars on said mold sections, substantially as set forth.

7. A mold having separable mold sections combined with a yoke having its arms rigid with each other and embracing the mold and sliding in engagement therewith to a point adjacent to or past the dead center of the mold whereby to close and lock the mold, and a pivotal or hinge connection for the mold sections arranged midway between the yoke arms substantially as described.

8. A mold having separable sections and a yoke embracing the same and having its arms movable in sliding engagement with the mold sections to a point adjacent to or past the dead center thereof, the yoke being movable radially to the mold substantially as set forth.

9. A mold having separable sections connected by a vertical pivot and inner and outer tracks on said sections and spaced apart, and a yoke movable radially to the mold and having its arms embracing said sections and provided with means for engagement with the inner and outer tracks whereby it may be operated to open and close the mold, substantially as set forth.

10. The combination of the yoke open at one end with its arms spaced apart and a mold between said arms and composed of two sections pivoted together midway between the yoke arms and at the base thereof, the yoke arms being engaged at their free ends upon the outer sides of the mold sections and movable in such engagement radially of the mold to points adjacent to the dead center of the mold, all substantially as set forth.

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Witnesses:
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J. F. KEEFAUVER.