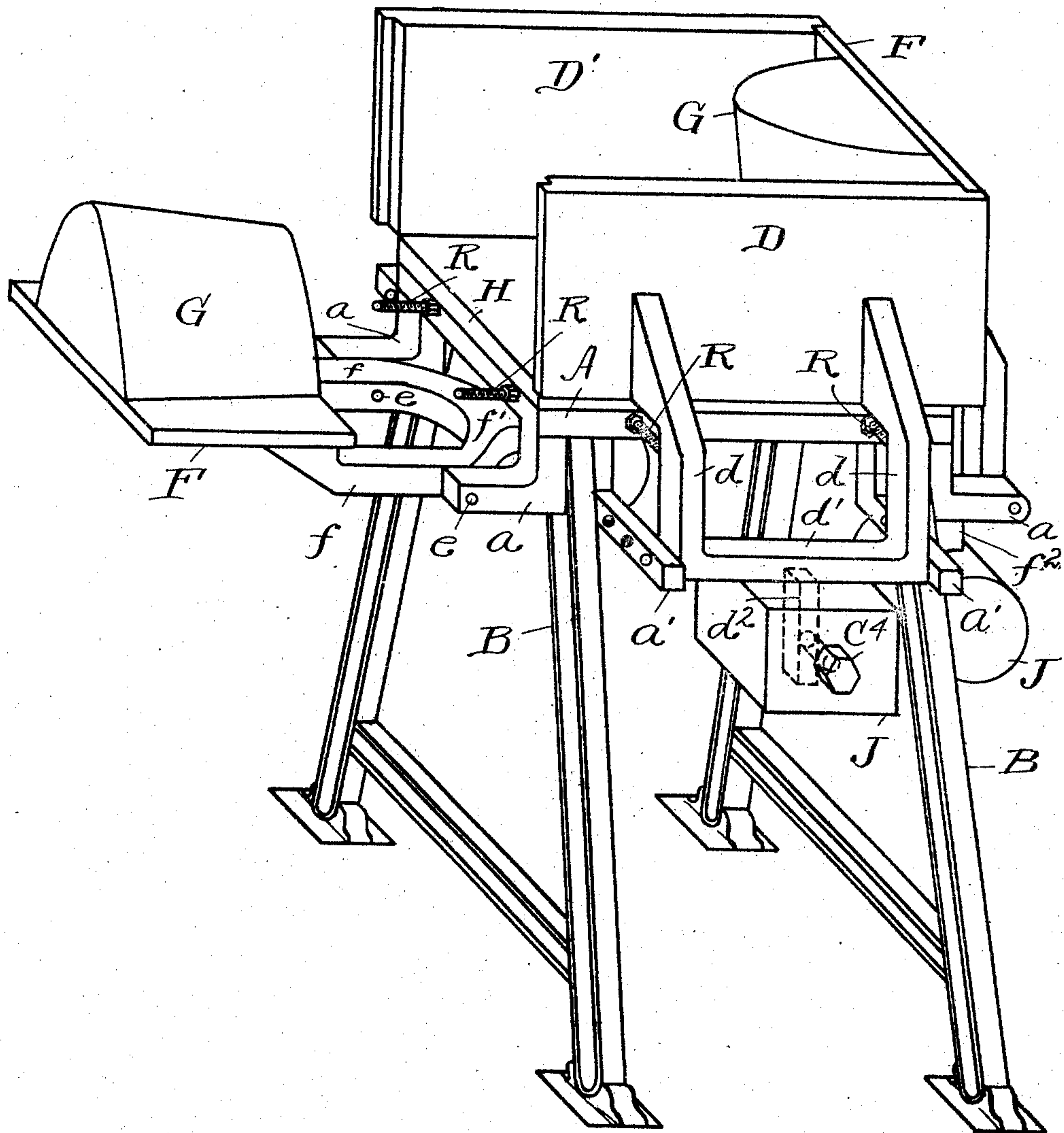


W. B. BOLLES.
MOLDING MACHINE.

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928,354.

Patented July 20, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM B. BOLLES, OF CLEVELAND, OHIO.

MOLDING-MACHINE.

No. 928,354.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed March 13, 1908. Serial No. 420,830.

To all whom it may concern:

Be it known that I, WILLIAM B. BOLLES, a citizen of the United States, residing at 5715 Thackeray avenue southeast, in the city of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Molding-Machine, of which the following is a specification.

This invention is in the nature of an improvement upon the invention which forms the subject matter of my co-pending application, filed January 13, 1908, Serial No. 410,669.

The objects of the invention are to render it easier for the operator to operate the machine and also to determine with exactness the position, when closed, of the swinging side and end plates of said mold.

The invention consists in the construction and combinations of parts shown in the drawing, and hereinafter described and claimed.

The drawing is an isometric view of the machine embodying the invention,—the right hand end plate and associated parts being shown in their closed position, and the left hand end plate and associated parts being shown in the position they occupy when said end plate is swung open.

Referring to the parts by letters, A represents the bed plate or table of the machine frame, and B, B, the standards on which said plate is rigidly secured.

D represents the front mold plate, D' the back mold plate, and F, F, the two end mold plates. Two bracket arms *a* are fixed to the bed plate of the machine at each end thereof and project laterally from, but in a plane below, the plane of said bed plate. Two other arms, *a'*, *a'* are fixed to said bed plate and project forward therefrom, but they, like the arms on the end, are likewise in a plane below the plane of the bed plate. Two similar arms, which the drawing does not show also project in like manner rearward from the bed plate of the machine, but in a plane below it. Each of the end plates is provided with two hinged arms *f*, *f*, which project rearward, and then downward therefrom,—these two hinged arms being rigidly connected at their lower ends by a cross bar *f'*. The two hinged arms *f* are pivoted to the bracket arms *a* by means of pivoted pins *e*. Rigid with the cross arm *f'* is a downwardly extended stem *f*² upon which a counterweight J is rigidly but adjustably

fixed. Similar hinged arms *d*, two in number, are fixed to the front plate D, and to the rear plate D', the lower ends of each of these hinge arms *b* being connected by a cross bar *d'* having a stem *d*² on which a counterweight J is adjustably connected. The counterweights J are respectively connected with the various stems adjustable, as stated, by means of set bolts like bolt *c*⁴. The purpose of these counterweights is to make the moving of the plates upon their pivots from the open to the closed position, and vice versa, easier for the operator than it would otherwise be. The bracket arms *a*, *a'* are dropped below the level of the bed plate so that these several mold plates D, D' and F may open and swing to the horizontal position in which the left hand plate F is shown in the drawing before the counterweights J engage and are stopped by the under side of the bed plate.

R represents stop screws which screw into the bed plate A, one opposite each of the hinged arms of the various plates; and jam nuts S embrace these screws and hold them in the position to which they may be adjusted. When the plates are swung toward the closed position, they are stopped at exactly the proper point by the engagement of said hinged arm with these several set screws.

H represents the removable off-bearing plate which forms the bottom of the mold; and the lower edges of the several plates F, D and D' are, when said plates are closed, in a plane above the top of the table a distance a trifle greater than the thickness of said board H, whereby the edges of said board may project more or less beneath said mold plates.

G is cores fixed to the end plates F. It is contemplated that these cores may be removable and other cores of different sizes substituted, although no means are shown for so removing them. It is with special reference to the removability and replacement of these cores that the counterweights associated with the end plates F are made adjustable. In other words, it is most desirable that it should be adjustable when the cores G are removable. The adjustability of the counterweights is, however, a desirable feature in order that the individual operator may adapt the operation of the machine to his own liking. Some will want the plates to swing open automatically when they are released; others may want them to swing

closed automatically; others may want them to be nicely balanced.

In a machine of this sort some sort of clamps will be required to hold the mold plates in their closed position, but such clamps are no part of the present invention, and are therefore not shown.

Having described my invention, I claim:

1. The combination of a table having a top A having bracket arms, a mold plate pivoted to said bracket arms fixed to said top, and counterweights connected with said mold plates below their several pivots.

2. The combination of a frame having a top provided with outwardly projecting bracket arms rigid therewith, a mold plate having hinge arms which project outward and downward therefrom and are rigidly connected by a cross bar which has a stem, said hinge arms being pivoted to said bracket arm, and counterweights secured upon said stem.

3. The combination of a frame having a

top provided with outwardly projecting bracket arms rigid therewith, a mold plate having hinge arms which project outward and downward therefrom and are rigidly connected by a cross bar which has a stem, said hinge arms being pivoted to said bracket arm, and counterweights adjustably secured to said stem.

4. The combination of a table having a top A and bracket arms projecting therefrom outward in a plane below its top, a mold plate having hinge arms rigid with it projecting outward and downward therefrom and pivoted to said bracket arms, adjustable stops secured to the table top and projecting from the edge thereof and adapted to engage said hinge arms when the mold plate is closed.

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Witnesses:

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