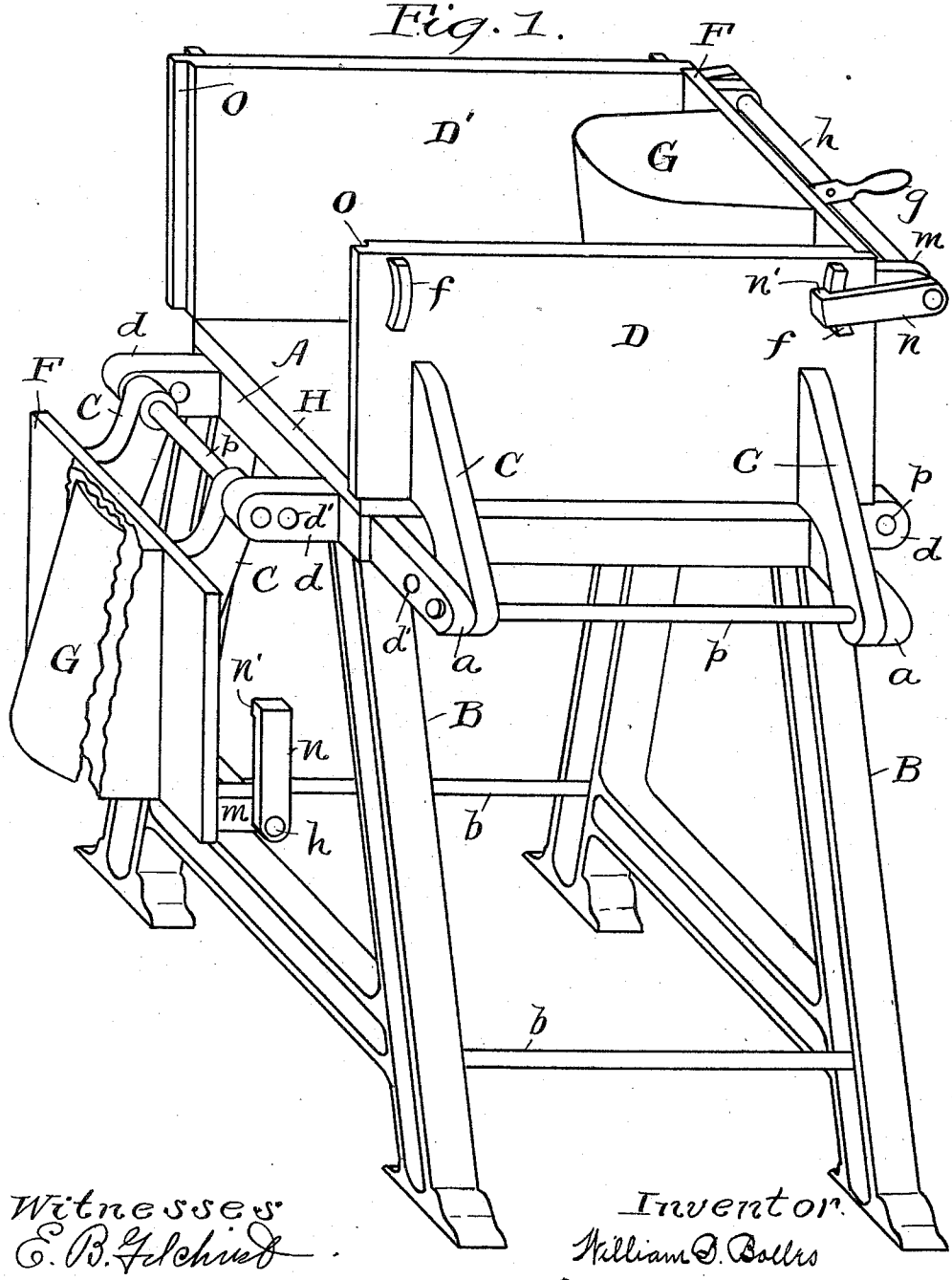
W. B. BOLLES.

MOLDING MACHINE.

APPLICATION FILED JAN. 13, 1908.

1,006,053. **Patented Oct. 17, 1911.**

Fig. 1.



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WILLIAM B. BOLLES, OF CLEVELAND, OHIO.

MOLDING-MACHINE.

1,006,053. Specification of Letters Patent. Patented Oct. 17, 1911.

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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.

The primary object of the invention is to provide a machine in which cement building blocks of desirable shape may be formed and from which they may be removed easily, quickly and without injury, said machine being capable of being easily changed so that the blocks made therein will be of various sizes.

In the drawing, the figure is an isometric view of a machine embodying the invention, the right end plate being closed and the left end plate open.

The bed plate or table top A is fixed upon legs B, B, suitably connected by brace rods *b*, *b*.

D, D′ represent respectively the front and back mold plates, and F, F represent the end mold plates. When the mold is closed and ready to receive the material from which a building block is to be formed, these four plates stand in substantially vertical positions, the side edges of the plates F fitting in vertical grooves *o* in the ends of the front and back plates. It is a matter of no consequence to the present invention whether the back plate D′ is fixed permanently in the described vertical position, or whether it be connected with the bed plate A by substantially the same means which are shown for connecting the front plate D thereto.

Hinge arms C, C, are rigid with the front plate D, and with each of the end plates F, and extend from the outer faces thereof in a downwardly and outwardly direction. Two arms *a* project outwardly from the bed A, and in each of these arms are several holes *d′*. A rod *p* by entering suitable holes in these two arms and in the hinge arms of plate D pivotally connect said plate to the bed of the machine. Similar rods *p* are employed for pivoting the hinge arm C of the end plates F, F, to corresponding arms *d* projecting laterally from the plate A,—said arms having a plurality of holes *d′*, *d′*.

Each end plate F, F, is provided with outwardly extended lugs *m* in which a horizontal rock shaft *h* is mounted, said rock shaft being provided with an operating handle *g* fixed to it. On each end of each rock shaft *h* is an arm *n* having at its end an inwardly turned finger *n′* which provides a shoulder adapted for engagement severally with the curved outwardly projecting lugs *f* on the front and rear plates D, D′ respectively, the curved faces of these lugs being slightly eccentric with respect to the axis of shaft *h* when the end plates are closed.

In using the described machine, the operator gets the plates D and D′ into vertical position. He then swings the end plates into vertical position, and then by turning the rock shaft *h* brings about a suitable engagement between the shoulders on the arms *n* and the curved lugs *f* whereby the end plates are drawn in tightly and held in place. The inner faces of the arms *n* by their engagement with the outer faces of the lugs *f* likewise hold the front plate D from swinging forward, and the back plate D′ from swinging rearward, if it be a hinged plate.

Upon the inner face of each end plate is a core G, which may be formed as a part of the plate or fixed thereto by any suitable means. Each core is of progressively and regularly smaller area in horizontal section from its top downward. The shape of the core in horizontal section should be a semi-circle or semi-ellipse, or a parabola, or some form approximately these. The base of the core,—that is to say, the plane in which it joins plate F, must be as wide as the core is at any place, in the same horizontal plane, and should be preferably a trifle wider there than anywhere else. When the core is shaped as described, the block made in the mold is of peculiar and desirable shape. It is evident that when the cores are shaped as described, the smallest outward movement of the end plates on their hinge axes will completely separate the core from contact with the block.

An off bearing plate H forms the bottom of the mold, and rests upon the top of the bed plate A, and the finished block is removed with this plate H, while the mold is open; and that another plate H is put in place before the mold is closed. The lower edges of the mold plates, D, D′, F, F, when the mold is closed, are approximately in the plane of the top surface of the plate H. Therefore plates H of one size may be used whether the mold be adjusted for making blocks of one size or another,—because when

the mold plates are hinged so as to make small blocks, the lower edges of said plates when closed lie close to the top surface of said plates H,—the edges of said plate H extending a greater or less distance under said mold plates.

Having described my invention, I claim:

In a block-molding machine, the combination of a bed having an integral back and pairs of arms extending from its front edge and each of its end edges with front and end plates hinged respectively to said pairs of arms and adapted when closed to form an open-top mold, rock shafts mounted near the upper edges of the end plates, arms on the extending ends of the shafts having inturned toes on their free ends, and eccentrically curved ribs on the front and back plates of the mold adapted to be engaged by the toes on said arms, whereby the end plates are drawn into close clamping contact with the ends of the front and back plates with means for rocking said shafts.

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