

(No Model.)

T. A. CONSIDINE.  
MOLDING MACHINE.

No. 398,704.

Patented Feb. 26, 1889.

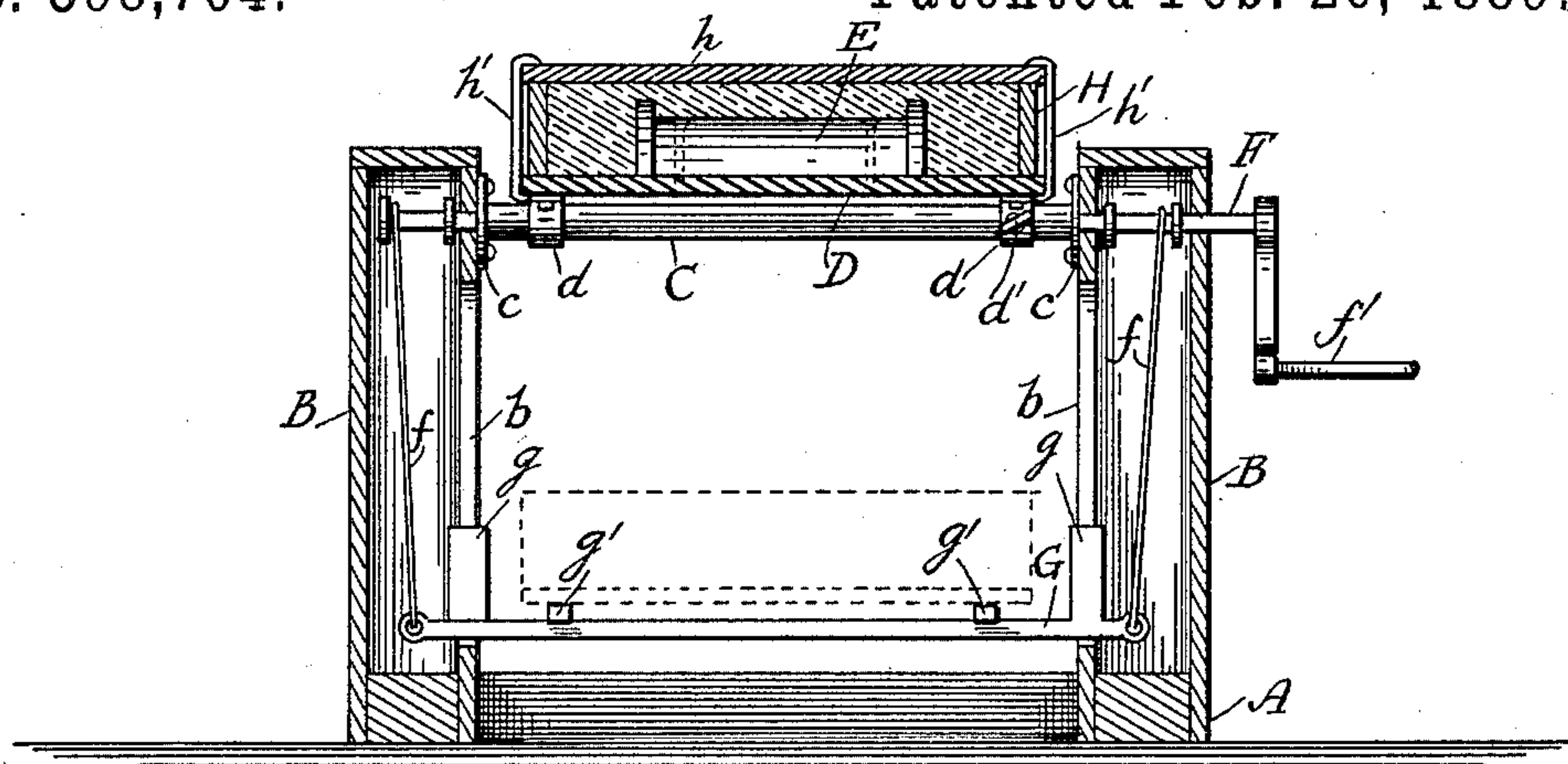


Fig. 1.

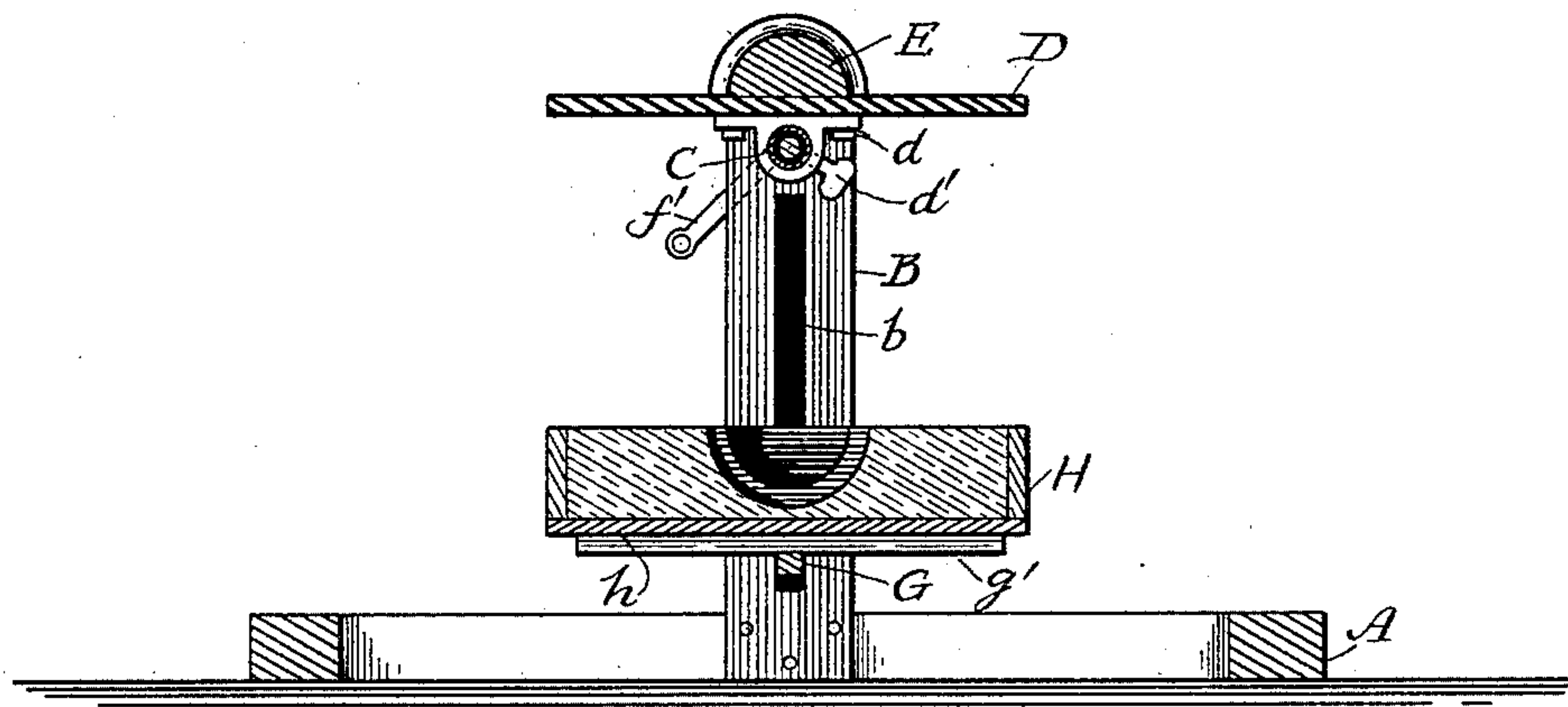


Fig. 2.

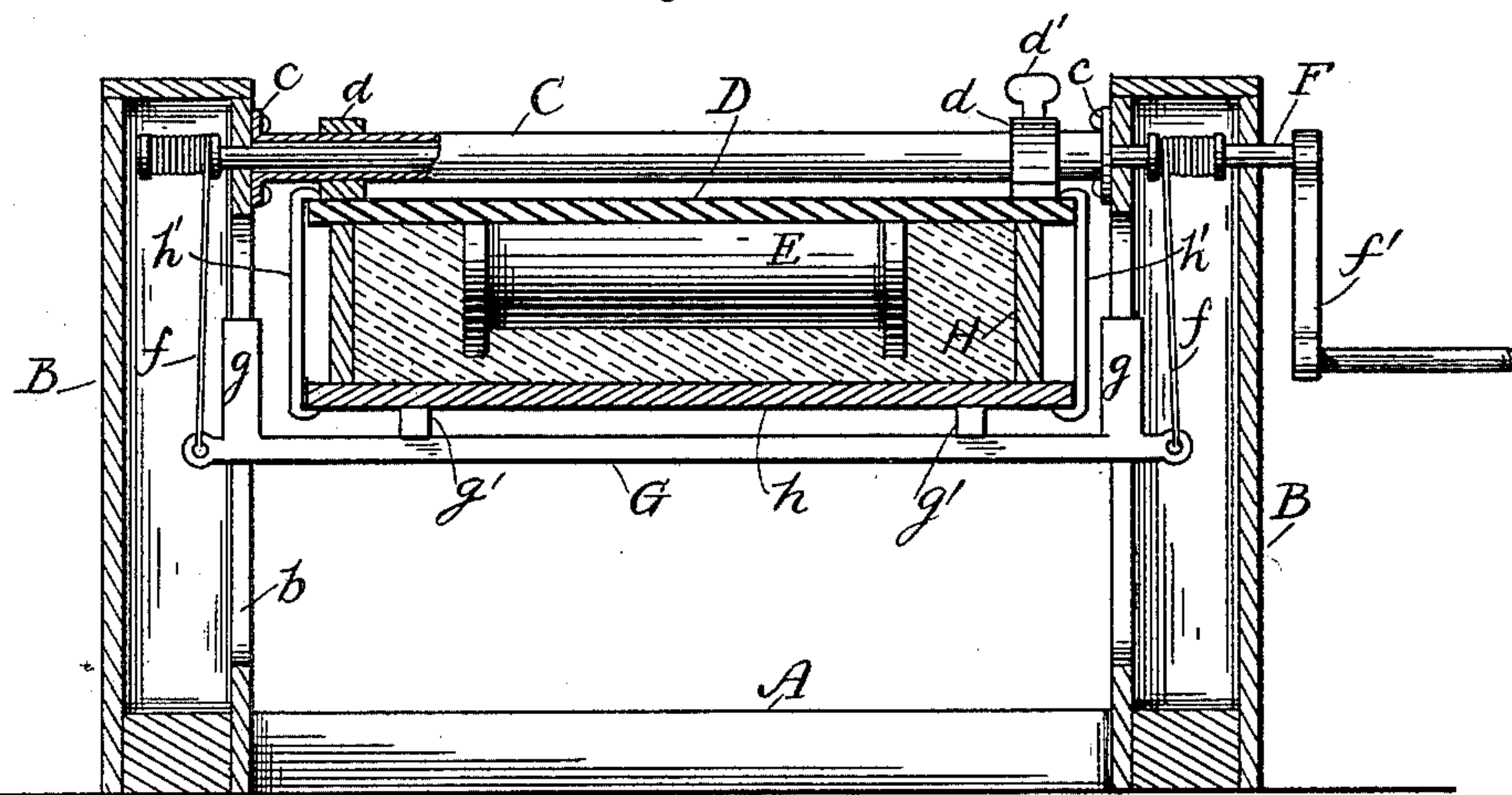


Fig. 3

Witnesses:  
J. B. Halpenny.  
David Stevens.

Inventor:  
Thomas A. Considine  
By Bradley & Fletcher  
his Attys.



# UNITED STATES PATENT OFFICE.

THOMAS A. CONSIDINE, OF CHICAGO, ILLINOIS.

## MOLDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 398,704, dated February 26, 1889.

Application filed October 27, 1888. Serial No. 289,354. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS A. CONSIDINE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new, useful, and Improved Molding-Machine, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of my improved machine, showing a flask upon the mold-board in position for tamping. Fig. 2 is a transverse vertical sectional view of said machine. Fig. 3 is a side view showing the parts in a reverse position from that indicated in Fig. 1.

Like letters of reference in the different figures indicate like parts.

The object of my invention is to provide a machine for withdrawing the respective sections of metal-molding flasks containing a formed sand mold from the pattern, and, if necessary, "reprinting" the sand mold.

To this end my invention consists in a reversible molding-board, in combination with a receiving-rest for the flask-section and means for raising and lowering said rest with accuracy, ease, and speed, all of which is hereinafter more particularly described, and definitely pointed out in the claim.

Referring to the drawings, A represents the foundation or horizontal frame-work of the machine, to the respective ends of which are rigidly secured vertical standards B B, preferably made hollow, as shown. A hollow shaft, C, having flanges c c at its respective ends, is rigidly secured to said standards B, at or near the top thereof, by means of screws passed through said flanges, as shown. Loosely mounted upon said hollow shaft are bearings d d, which are bolted to a flat molding-board, D. Said molding-board is thus free to be revolved upon the hollow shaft, but may be secured in any desired position by means of a set-screw, d', passing through one of the bearings d to engage with the hollow shaft C. The pattern E is rigidly attached in any well-known way to the mold-board D. A shaft, F, is loosely projected through the hollow shaft C, which serves as a bearing therefor.

Attached to the shaft F, at or near the respective ends, as shown, are wire cords or

chains f f, which are arranged to be wound thereon, as upon a windlass, by means of the crank f', attached to the end of the shaft. The opposite ends of said cords f are attached to a bar, G, which is extended lengthwise of the machine and passed through the slots b b formed in the uprights B B, and which serve as guides for the bar G in its vertical movement. Vertical projections g g, rigidly attached to the bar G and adjusted within the slots b b, respectively, serve to prevent the bar G from tilting. Horizontal cross-bars g' g' are rigidly attached to the bar G, and serve as rests for the flask-section when drawn from the mold, as hereinafter stated. The vertical projections or guides g g serve to retain said cross-bars g' g' in a horizontal plane.

The operation of said machine is as follows: Assuming the mold-board D to be adjusted above the shaft C in a horizontal plane, as shown in Fig. 2, and fastened by the set-screw d' and the pattern E, rigidly secured to said mold-board, the flask H is then placed upon the board D, the molding-sand tamped therein around the pattern, as shown in Fig. 1, when a board, h, is placed over the flask, and the whole securely clamped to the mold-board D by means of clamps h' h'. The mold-board is then inverted by rotating it upon the shaft C until it rests in a horizontal plane beneath the shaft, as shown in Fig. 3, when the set-screw d' is tightened to hold it in the desired position. The crank f' is then turned, which raises the bar G until the cross-bars or rests g' g' are brought firmly against the flasks, when the clamps h' h' are detached, and the rests, with the flask thereon, lowered by means of the windlass from the mold, as shown in Fig. 2 and indicated in dotted lines in Fig. 1. When this is done, the operation may be repeated with the remaining section or sections of the flask.

Should it be necessary to "reprint," which is not always required, the section H of the flask may be lowered from the pattern, sprinkled with the usual powder and again raised by means of the windlass until the pattern is embedded in the mold formerly made thereby, when it is again withdrawn and the flask-section removed. It is obvious that this arrangement renders the operation of reprinting easy and accurate from the fact that it

insures perfect registration, while the movement is rapidly performed.

Having thus described my said invention, what I claim, and desire to secure by Letters  
5 Patent, is—

The combination, in a molding-machine, of the mold-board D, bearings *d d*, set-screw *d'*, stationary hollow shaft C, shaft F, extending through the hollow shaft C, and having a wind-  
10 lass attached thereto, bar G, having cross-bars *g' g'*, flexible connections *f f*, for connecting said bar G with the shaft F, and parts *g g*, ar-

ranged in suitable slots in the frame of the machine for maintaining said bars *g' g'* in a horizontal position, substantially as shown 15 and described.

In testimony whereof I have signed this specification, in the presence of two subscribing witnesses, this 13th day of October, 1888.

THOS. A. CONSIDINE.

Witnesses:

D. H. FLETCHER,  
DAVID STEVENS.