

S. GARWOOD.  
BOTTLE-MOLD.

No. 174,514.

Patented March 7, 1876.

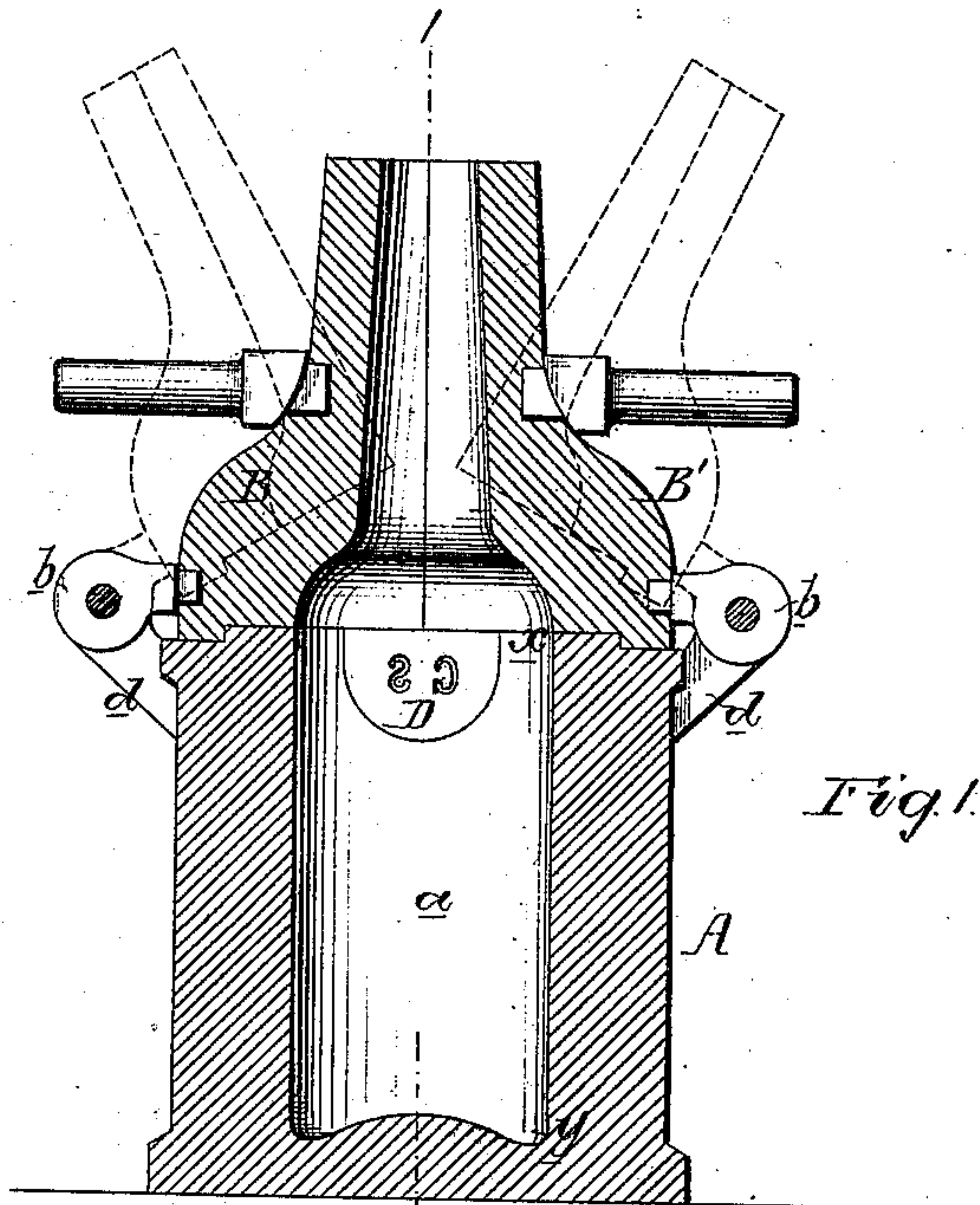


Fig. 1.

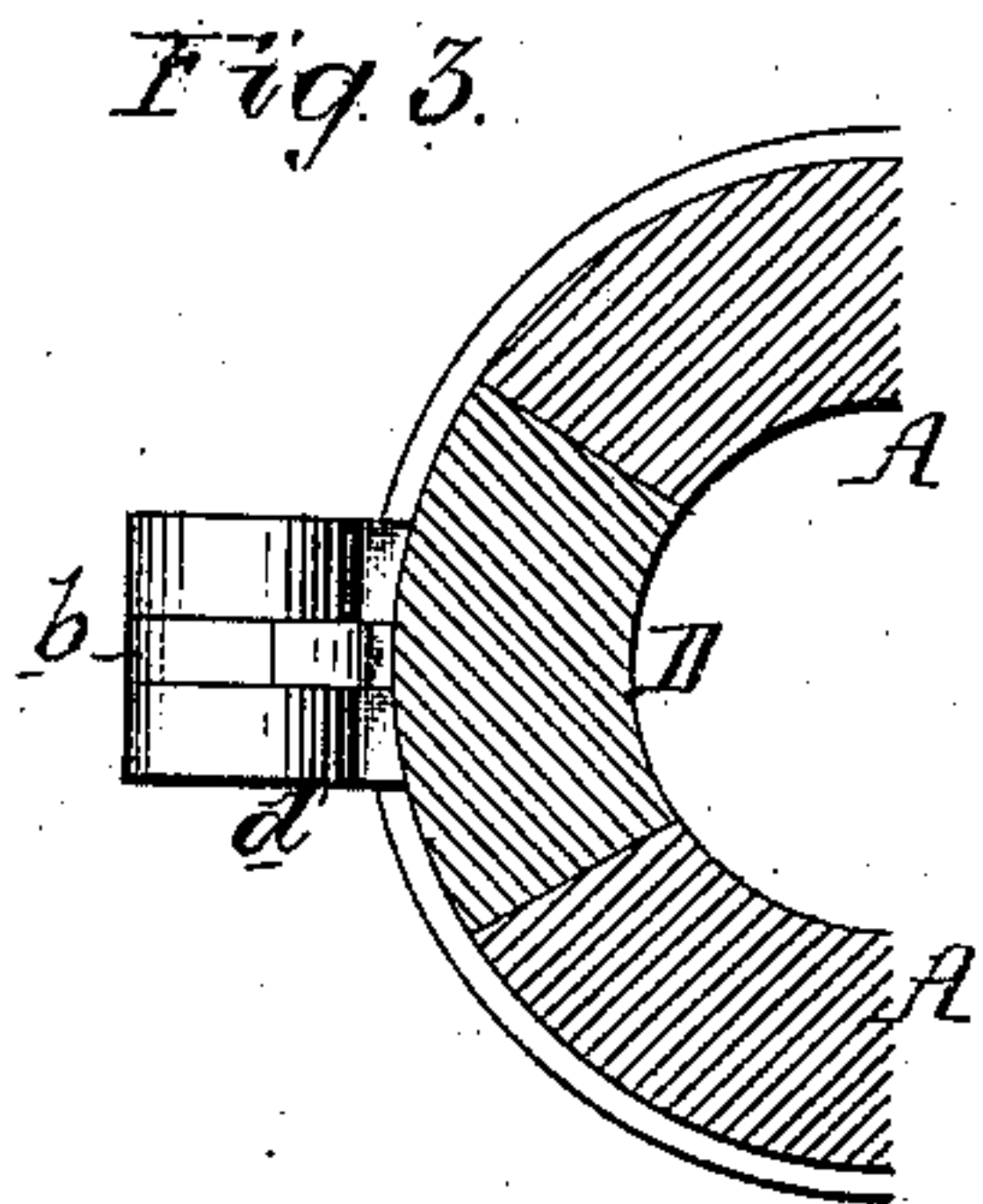


Fig. 3.

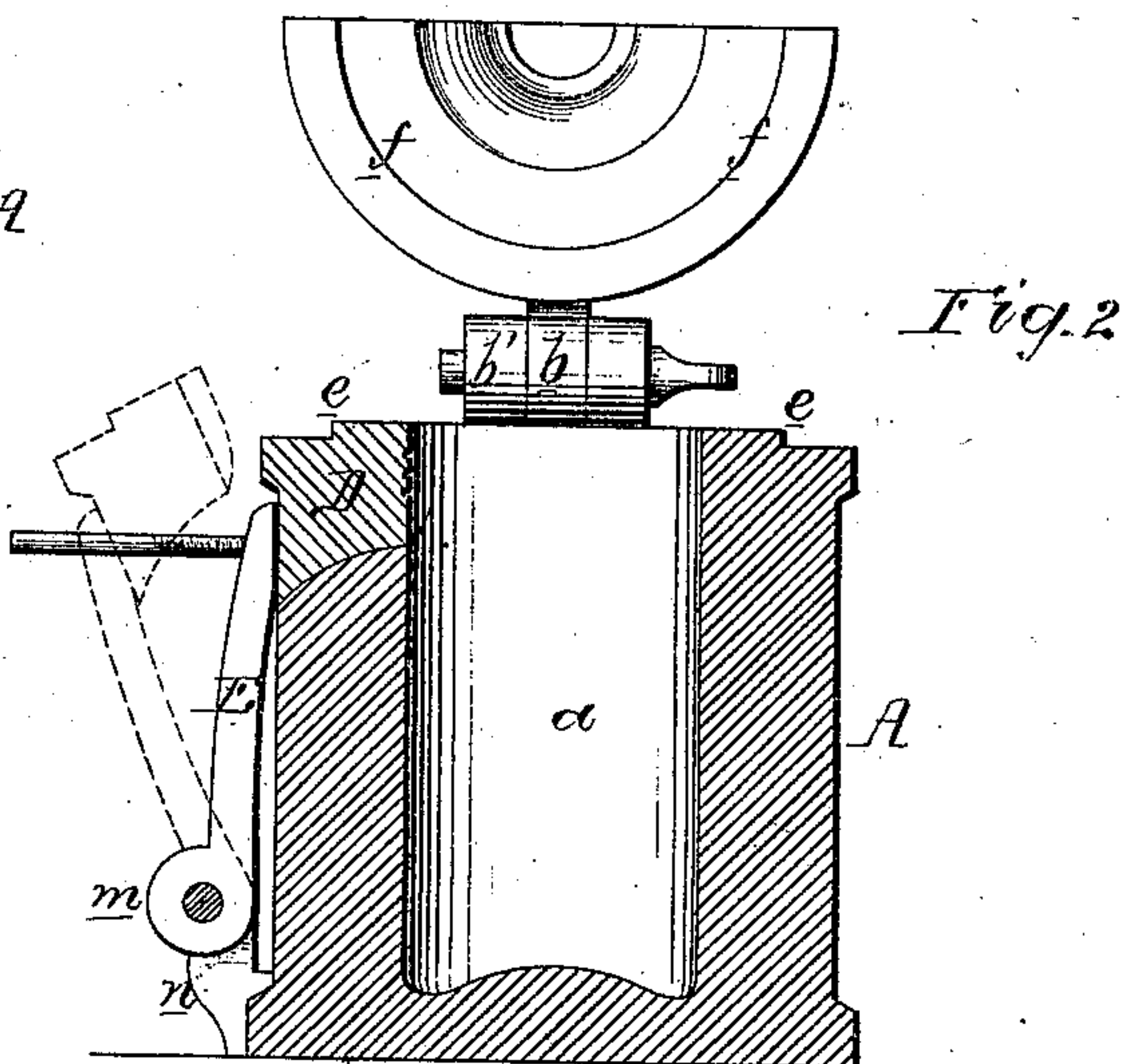


Fig. 2.

Witnesses  
Harry Houson Jr  
Harry Smith

Samuel Garwood  
by his Attorneys  
Houson and Son



# UNITED STATES PATENT OFFICE.

SAMUEL GARWOOD, OF WILLIAMSTOWN, NEW JERSEY, ASSIGNOR OF THREE-FOURTHS HIS RIGHT TO JOHN F. BODINE, CHARLES E. THOMAS, AND ARTHUR F. WROTNOWSKI, OF SAME PLACE.

## IMPROVEMENT IN BOTTLE-MOLDS.

Specification forming part of Letters Patent No. 174,514, dated March 7, 1876; application filed February 14, 1876.

*To all whom it may concern:*

Be it known that I, SAMUEL GARWOOD, of Williamstown, Gloucester county, New Jersey, have invented an Improvement in Bottle-Molds, of which the following is a specification:

My invention relates to an improvement in bottle-molds, which consists of a hollow base in which the body of the bottle is formed, and an upper two-part portion for the formation of the shoulder and neck; and the object of my improvement is to so construct a mold of this class that raised letters, figures, or designs may be formed on the body of the bottle below the neck.

In the accompanying drawing, Figure 1 is a vertical section of my improved bottle-mold, and Fig. 2 a section on the line 1 2, Fig. 1.

The lower portion or base A of the mold consists in the present instance of a hollow cylinder inclosing a space, *a*, for the formation of the body of the bottle, the interior of this base being slightly tapered inward from the upper edge *x* to the bottom *y*, so that the said body of the bottle can be easily withdrawn. The upper portion of the mold consists of two parts B and B', which together inclose a space for the formation of the neck and shoulder of the bottle, each part being provided with a stud, *b*, which is hinged to lugs *d* projecting from the base of the mold. When the parts are closed, as shown in Fig. 1, a semi-annular projection, *f*, on each of the portions B and B' overlaps an annular projection, *e*, on the top of the base A, so as to insure the proper coincidence of the interior of the said base with the space inclosed by the upper portions of the mold.

The above description will apply to molds heretofore made for the purpose of avoiding the vertical ribs which are made on bottles and other vessels by the joints of molds made in separable parts from top to bottom.

A recess is formed in the top and at one side of the base A of the mold, and to this recess is snugly fitted a block, D, secured to an arm, E, which is hinged at *m* to a lug, *n*, near the bottom of the base A, the inner face of this block being a continuation of the interior of the base, but having sunken letters, figures, or other characters which it may be desirable to have in relief on the body of the

bottle. When the mold is closed, as in Fig. 1, this block is retained in place by the overlapping projection *f* of one of the upper portions B B'. The mold having been opened, the operator introduces the molten glass on the end of the usual tube into the base A, then closes the upper portion of the mold, and then, blowing into the tube, distends the glass in the usual manner, so that it will conform with the interior of the mold, after which the upper portions of the latter are separated. The body of the bottle, however, cannot yet be raised from the base, for it is locked thereto by the glass which has penetrated the sunken letters of the block D; but immediately after opening the upper portion of the mold the block D must be turned down, as shown by dotted lines in Fig. 2, when the body of the bottle will be at liberty to be withdrawn.

It is essential to my invention that the recess in the base for the reception of the block should be made from the upper edge of the said base; for if the block should be inserted in a lateral opening in the base, the body of the bottle could not be withdrawn therefrom owing to the projecting letters.

Although the mold, as illustrated in the drawing, is made for the formation of round bottles, it will be understood that it can be constructed, according to my invention, for making square and other shaped bottles and vessels, and that more than one movable block D may be combined with the base of the mold.

I claim as my invention—

1. In a three-part bottle-mold the combination of the base A with a movable block, D, adapted to a recess in the top of the base, as set forth.

2. The combination in a three-part mold of a block, D, adapted to a recess in the top of the base A, and having a projection to be overlapped by one of the upper hinged portions of the mold, as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL GARWOOD.

Witnesses:

MATTHIAS M. CHEW,  
JEREMIAH HILYARD.