

E.H. & H.E. Merrill,
Making Clay Bottles,
No 78,676, *Patented June 9, 1868.*

Fig. 1.

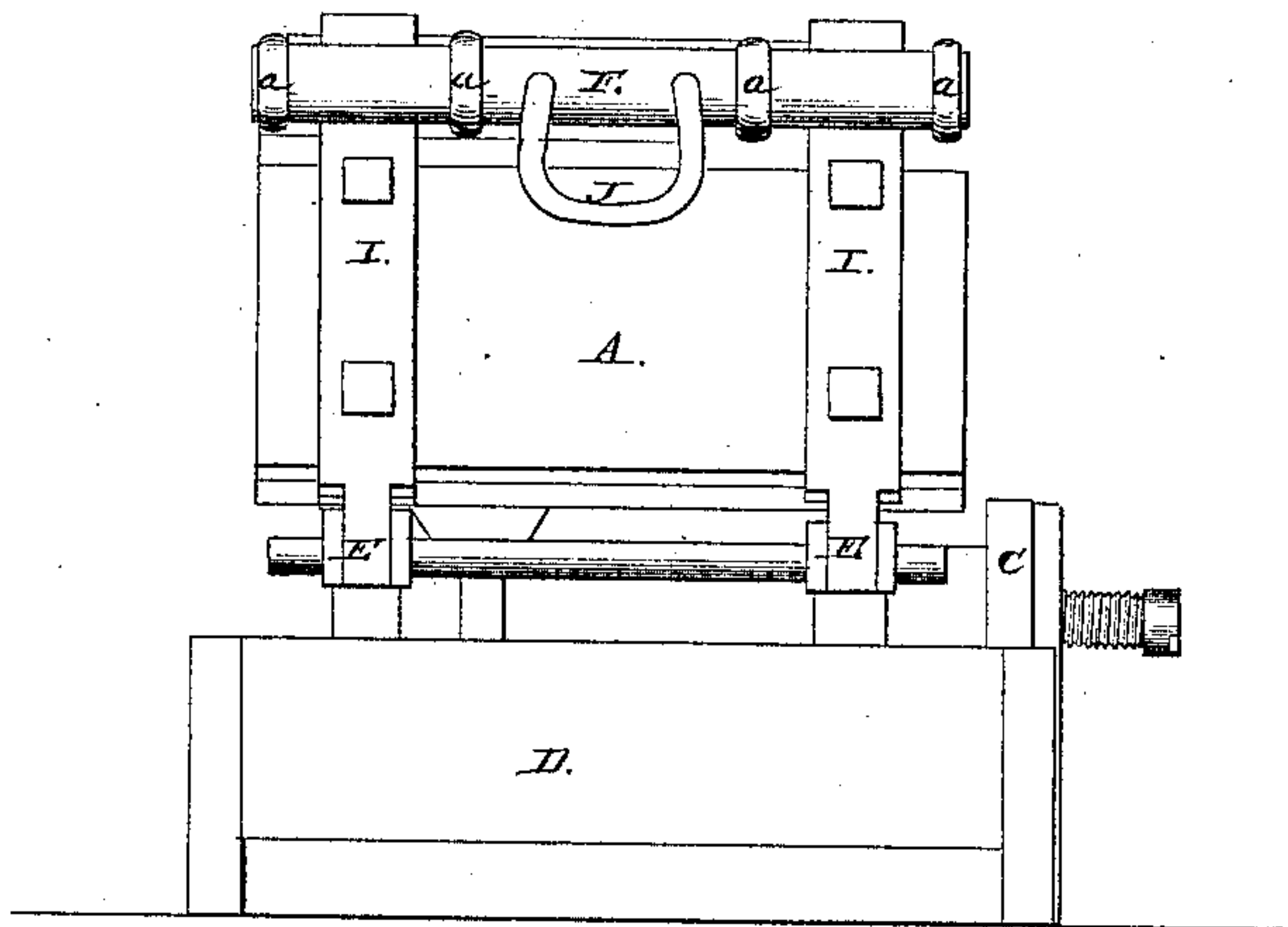


Fig 2

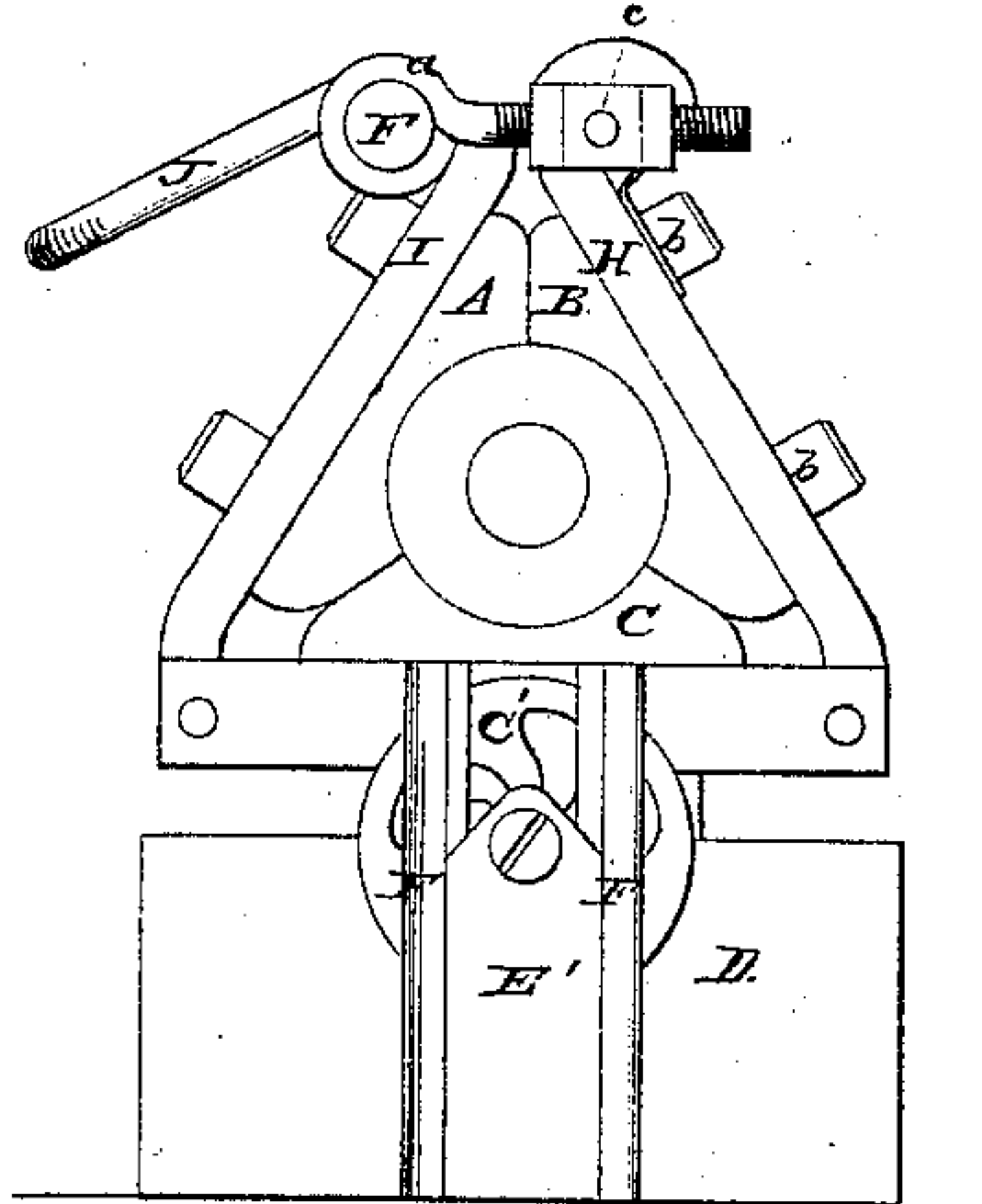


Fig. 3.

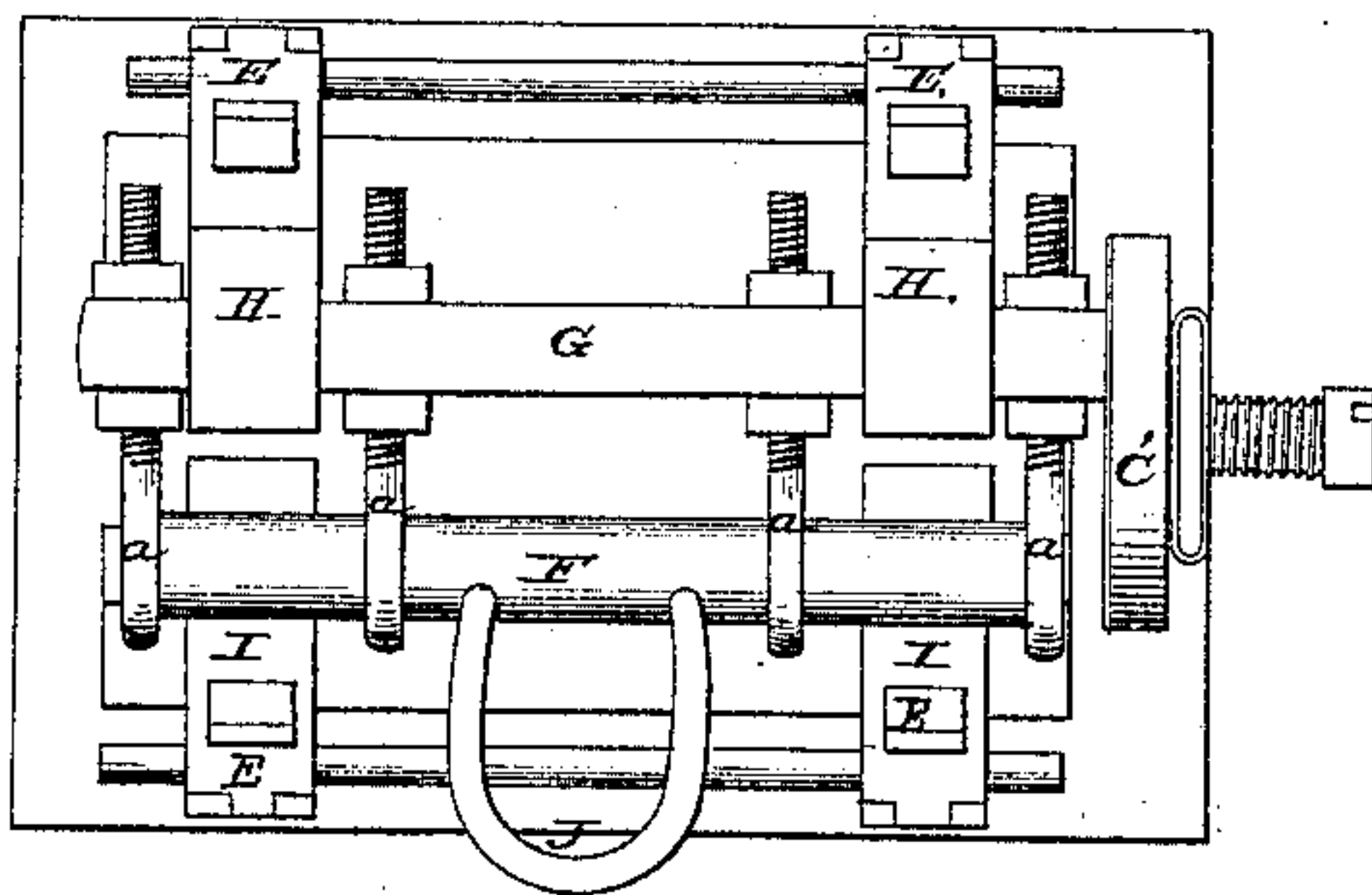


Fig. 4.

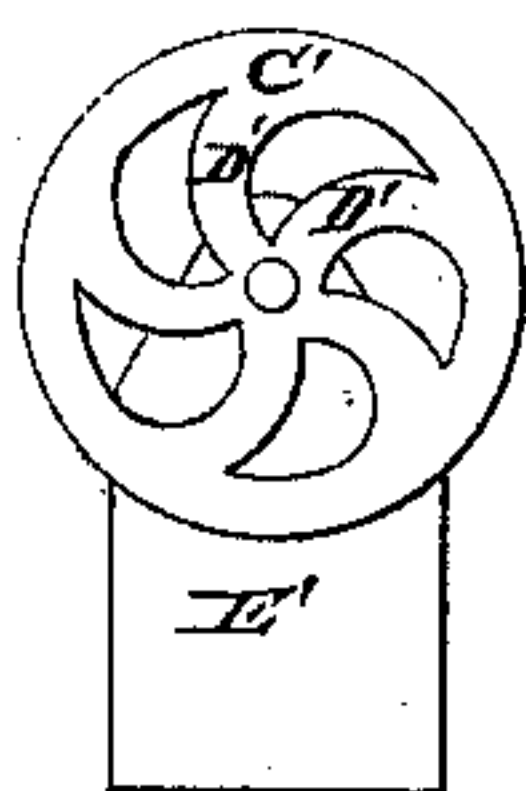
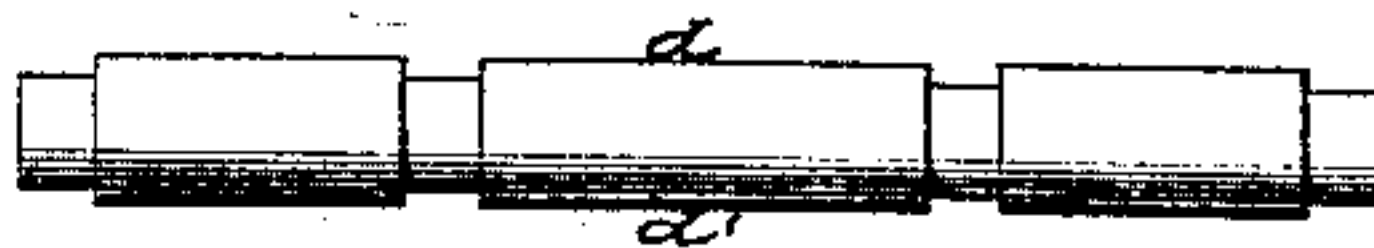


Fig. 5.



Witnesses:

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R. Coon.

Inventor:

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United States Patent Office.

E. H. MERRILL AND H. E. MERRILL, OF AKRON, OHIO.

Letters Patent No. 78,676, dated June 9, 1868.

IMPROVED APPARATUS FOR MAKING BOTTLES OF CLAY.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, E. H. MERRILL and H. E. MERRILL, of Akron, in the county of Summit, and State of Ohio, have invented certain new and useful Improvements in the Mode of Making Bottles, &c., of Clay; and we do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a side view of the apparatus.

Figure 2 is an end view.

Figure 3 is a view of the top.

Figures 4 and 5, detached sections.

Like letters of reference refer to like parts in the several views.

A, fig. 1, represents the mould in which the bottle is formed. This mould is constructed in three sections, A B C, fig. 2. Section C is fixed to the table or stand D, whereas the two side sections are connected to the third by a hinged joint, E, so that the mould can be opened for the purpose of removing the bottle.

The two jointed sections, when closed, are secured to each other by clamps, consisting of the eccentric-roller F, a detached view of which is shown in fig. 5, journaled in the adjusting-stays *a*, and by which said roller is connected to the bar G. This bar, as will be seen, is journaled to one section of the mould in bracket-stays H, attached thereto by the screw-bolts *b*.

By this device the two sections of the mould, when closed, are easily and firmly locked together, as shown in fig. 2, thus:

Let it be supposed that the eccentric-roller and stays *a* are turned up to the position indicated by the dotted lines *c*, fig. 2. In this position of the clamp the two sections of the mould A B can be thrown open. Now, on turning the clamp down from its vertical position to that shown in fig. 2, the roller F is slipped over the ends of the cleats I, which are seen to project slightly above the top of the sections. This being done, the two sections are then drawn tight together, by giving the roller a turn by means of the handle J. This turning of the roller will bring its eccentric side *d*, fig. 5, against the cleats, thereby binding the two sections together.

On a reverse turning of the roller, the clamp is loosened by bringing the concentric side, *d'*, of the roller towards the cleats. The clamp can then be thrown up to the position first indicated, and the mould opened, as above said.

By means of the adjusting-stays *a* the distance between the bar and roller can be lengthened or shortened up, and thereby adjust the clamp to its place and purpose.

C', fig. 2, is a disk, provided with curved arms, D', which reach out near to the margin of the disk, leaving a narrow rim or felloe, as shown in fig. 4. This disk is pivoted to a plate, E', and secured in position by the guides F, in which it slides upward and downward, for a purpose hereinafter shown.

The practical use of this disk is as follows:

A certain quantity of clay is put in the mould; a spiral grooved core is then forced in, which presses the clay between the outside of the core and wall of the mould, which gives the thickness and shape of the bottle. The bottom is now put on, which consists of a disk of clay of the proper size and thickness. This is inserted in the large open end of the bottle. The disk is then slid up until it covers the opening of the mould and bottom of the bottle, against which it is pressed, and at the same time given a rotating movement, the effect of which is that a portion of the clay of the bottom will be forced outward by the curved arms, pressing it, by this means, on and into the lower edges of the bottle, thereby uniting the bottom to the bottle.

We are aware that disks have been and are used for this purpose, and for which a patent was granted to us on the 31st day of July, 1847, but the disks were provided with radial grooves, which extended to the extreme margin of the disk, the consequence of which is, that on pressing them against the bottom of the bottle the clay would be forced along the grooves to the edge of the disk, and fall off, away from the bottle, instead of holding or retaining the surplus clay at the joint, so as to make the union of the bottom to the bottle tight and

secure. But, by making the disk with curved arms or grooves, and having them terminate a short distance from the margin, as above described, the surplus clay is not driven or carried away, but is retained about the joint by the rim of the disk, in consequence of which it is worked or kneaded into the joint, thereby making it more secure and complete than can be done with a disk provided with radial grooves, as above instanced, for a large percentage of bottles made with the radial groove-disk are lost, in consequence of the bottom not being united to the bottle in a good and substantial manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the bar G, adjusting-stays a, roller F, and bottle-mould, in the manner substantially as described.
2. The disk C', provided with curved or radial arms or grooves D', terminating within a short distance of the margin of the disk, leaving a rim around the entire edge, for the purpose set forth.

E. H. MERRILL,
H. E. MERRILL.

Witnesses:

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J. J. SMITH.