

(No Model.)

N. W. BOCH.

DIE FOR THE MANUFACTURE OF EARTHENWARE VESSELS.

No. 520,294.

Patented May 22, 1894.

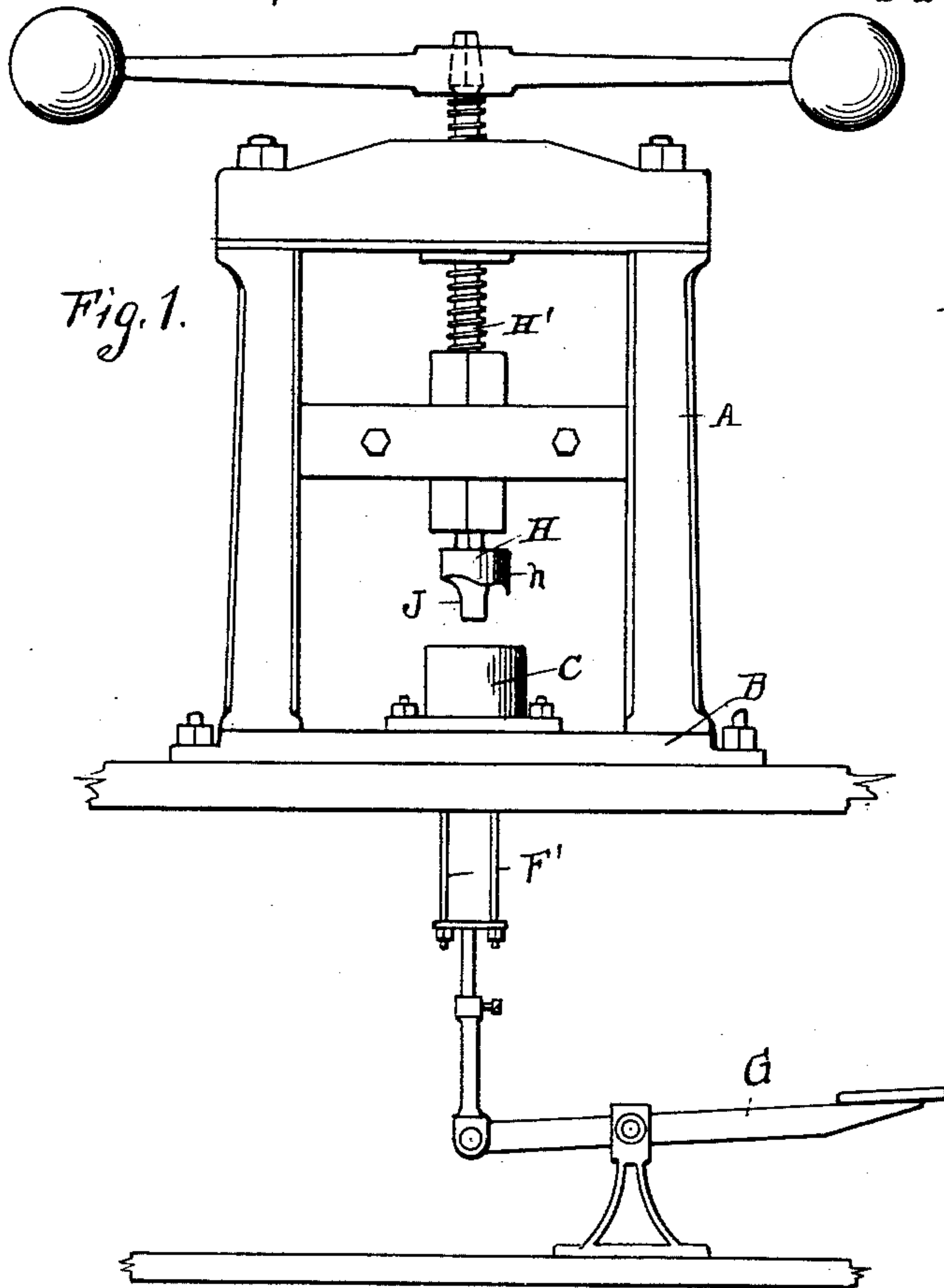


Fig. 2.

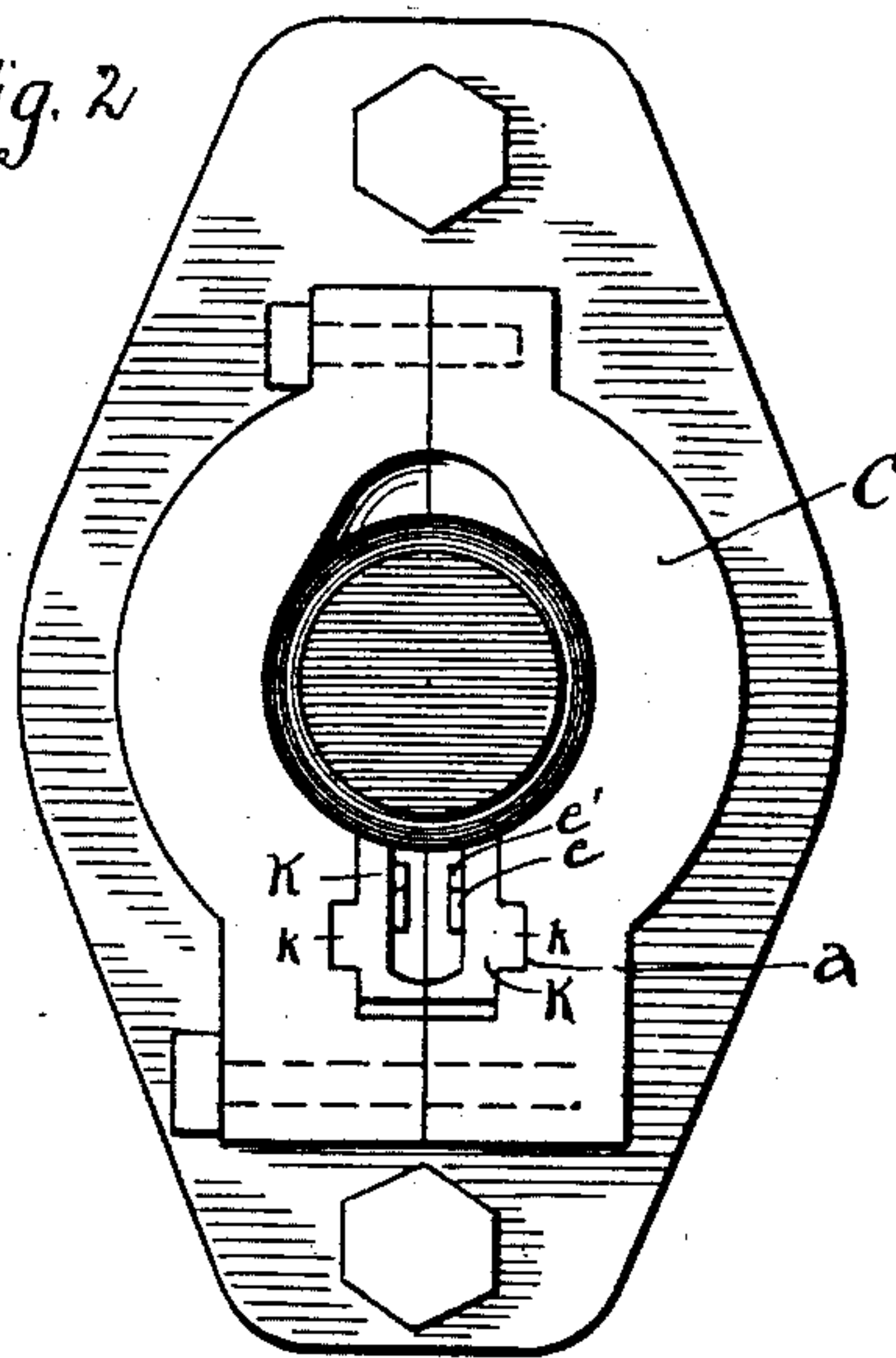


Fig. 4.

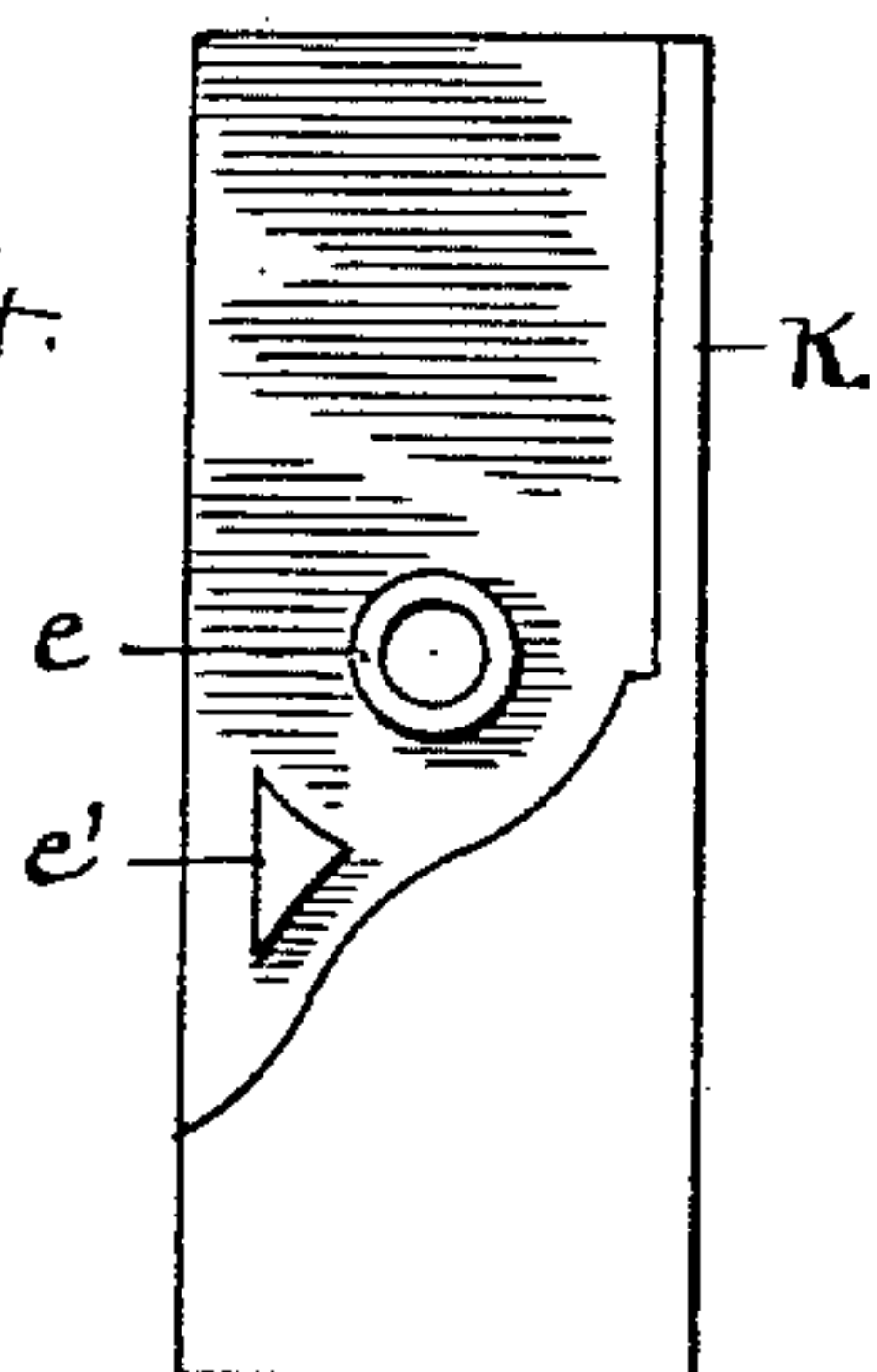


Fig. 5.

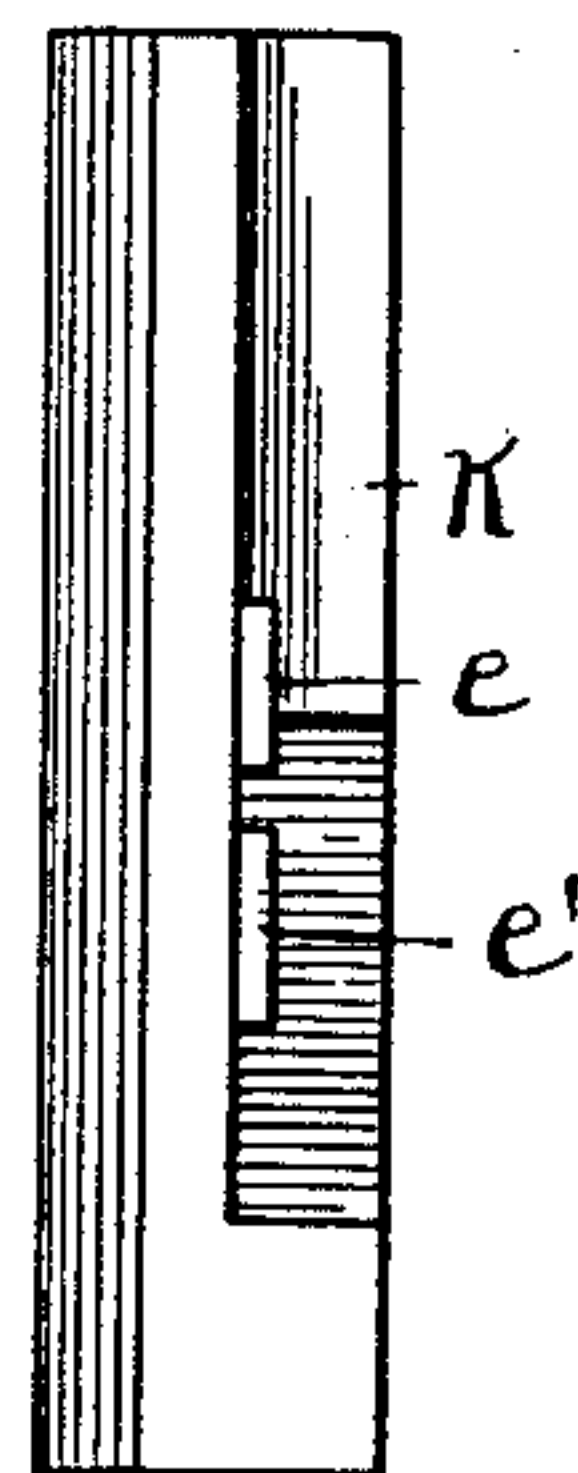
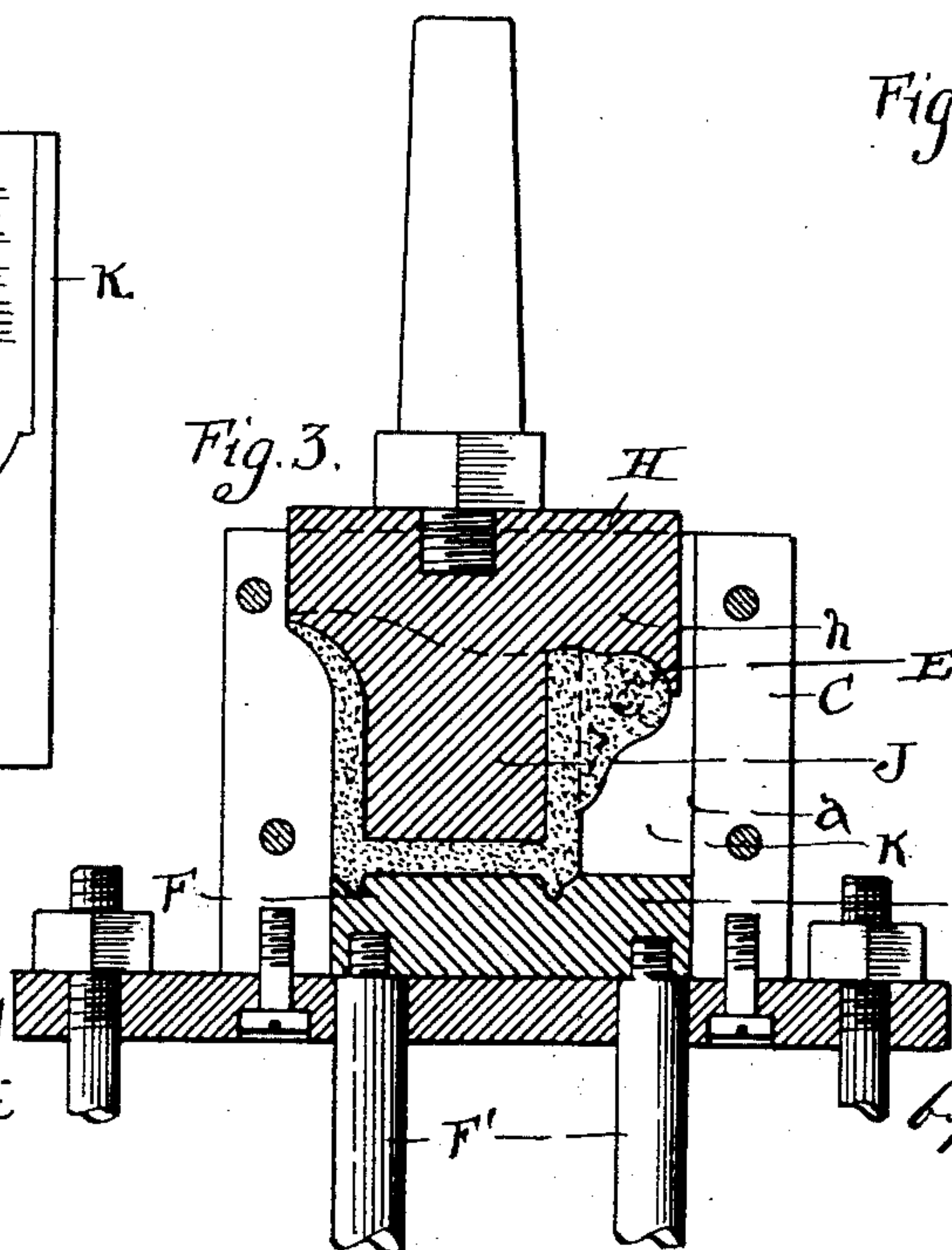


Fig. 3.



WITNESSES

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NOAH WATERBURY BOCH, OF TRENTON, NEW JERSEY.

DIE FOR THE MANUFACTURE OF EARTHENWARE VESSELS.

SPECIFICATION forming part of Letters Patent No. 520,294, dated May 22, 1894.

Application filed October 7, 1893. Serial No. 487,460. (No model.)

To all whom it may concern:

Be it known that I, NOAH WATERBURY BOCH, a citizen of the United States, and a resident of Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Dies for the Manufacture of Handled Earthenware Vessels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is an elevation of a machine embodying my invention. Fig. 2 is a plan view of the die case and forming pieces. Fig. 3 is a vertical section of the die case and dies in operative relation. Figs. 4 and 5 are respectively face and side views of the auxiliary forming pieces.

This invention has relation to a certain new and useful means for the manufacture of pitchers, jugs, cups, vases, match-safes, or other similar vessels made from granulated porcelain, earthenware, or other granulated plastic or porous materials, and has for its object the provision of means for making such articles having oblong, irregular, or bellied outlines at one operation and in one piece; and the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claim.

Referring to the accompanying drawings illustrating the invention, the letter A, designates the press frame, having a bed plate B upon which is rigidly supported a stationary die case C.

In the drawings I have illustrated means especially adapted to the formation of individual cream pitchers, and the following description will be generally confined to a description of such means, although it will be obvious that other like articles such as above enumerated may be formed by the same means by varying the contour of the dies and former.

F designates the bottom die which is capable of a vertical movement in the die-case, and is carried by a vertical plunger or "heave-up"

rod F', connected at its lower portion to a foot-lever G.

H designates the upper die which is shown as being carried by a screw H', although a plunger may be employed if desired. Said die H has an offset at *h* which is adapted to enter the offset chamber *a* and effect the compression of the handle. Said upper die also has a depending core plug J which forms the interior of the article.

The die case C has therein a chamber conforming to the external configuration of the article to be formed, and is provided with an offset handle forming chamber *a*, in which is formed the solid integral and laterally depressed or perforated, handle E. The walls of this offset chamber are vertical, and adapted to receive two supplementary forming pieces K, K'. These pieces K, K', are recessed or shaped on their meeting faces to give the desired form to the handle, and are inserted in the offset chamber, as shown. Said pieces are held to a true sliding movement by a dove-tail, or spline-and-groove connection *k* with the walls of the offset chamber, and the lower die is provided with a projection *l* working in a slot in the case below said plates, said projection, when said die is raised, engaging the plates and raising them out of the case with the finished article, thereby avoiding damage to the handle.

In the drawings I have shown the case as formed in two parts, but this is not essential, being preferred simply for the reason that it facilitates the machine work in its formation, as by making a two-part case, the inside outlines in irregular work can be more easily and smoothly finished, being more accessible to the die-maker.

The operation is as follows:—The supplementary pieces K, K', are placed in position, resting at their lower ends upon the extension *l* of the lower die F, which is drawn down until it rests on the bed plate. The granulated material is then placed in the die case, and the upper die is lowered, forming the piece of ware by compression and at the same time its integral handle, as seen in Fig. 3. The upper die is then raised, and the lower die is elevated, raising with it the formed article and the pieces K, K'. Said pieces K, K', are usually

formed with projections *e, e'* on their forming faces, which form the depressions or perforations in the handle.

The common practice heretofore in the manufacture of handled cream jugs and individual pitchers from earthenware has been to form the handle separately in plastic molds, and to stick or join them to the body portion by a second treatment, after the said body portion was completed.

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

In a machine for forming handled vessels from earthenware, the combination of a mold chamber conforming to the external configuration of the article to be formed, and having an offset handle-forming chamber, the upper movable die having an extension adapted to

enter said offset chamber, and a projection for forming the interior of the vessel, the vertically movable bottom die forming the bottom of said mold chamber and having an extension forming the bottom of said offset chamber, and the auxiliary handle forming pieces *K, K*, placed one at each side of the said offset chamber, and having their meeting faces shaped to give the proper configuration to the handle, said pieces being supported upon the extension of the bottom die, and having means for guiding them to a true vertical movement, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

NOAH WATERBURY BOCH.

Witnesses:

ISRAEL HOWELL,
DAVID LEVINS.