

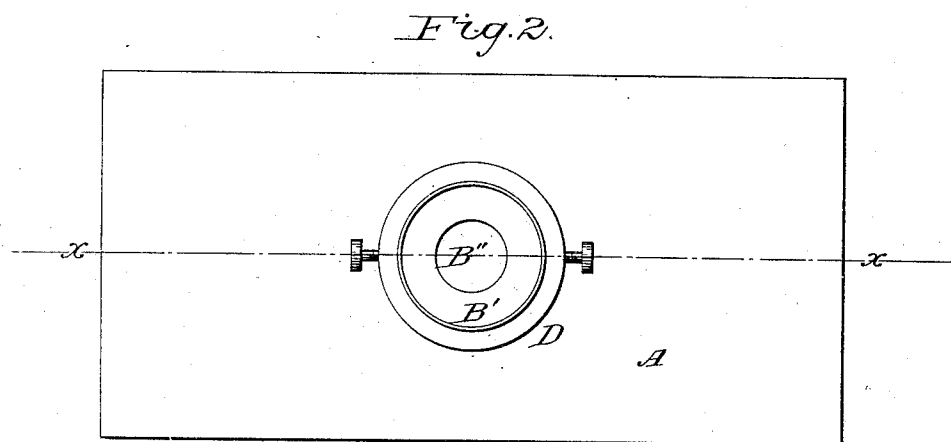
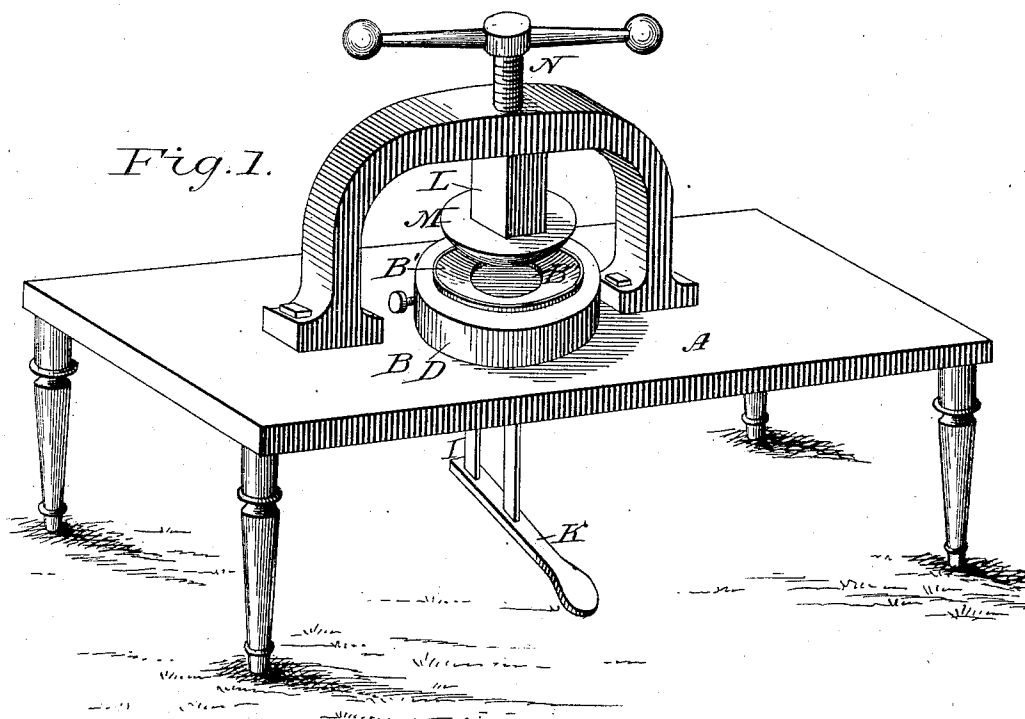
(No Model.)

2 Sheets—Sheet 1

J. CROSSLEY & H. T. COOK.
PRESS FOR FORMING ARTICLES OF POTTERY WARE.

No. 320,541.

Patented June 23, 1885.



Witnesses:
F. C. Doty.
D. W. Edelin.

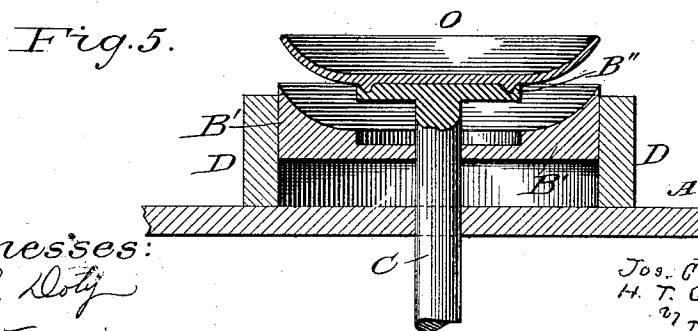
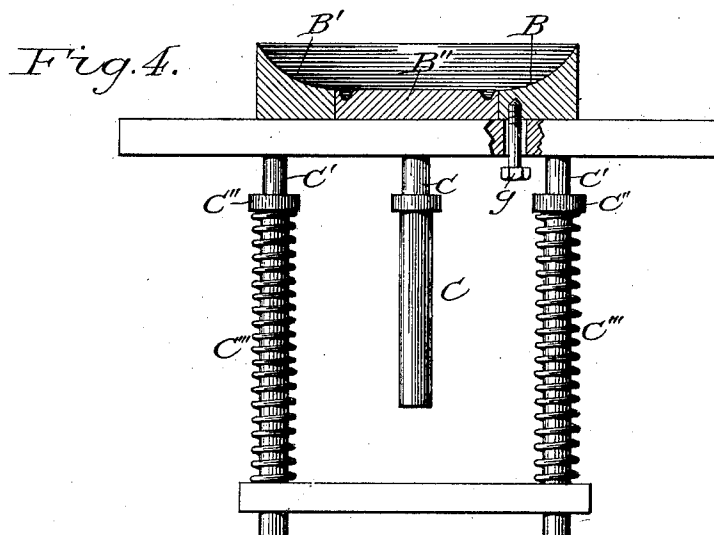
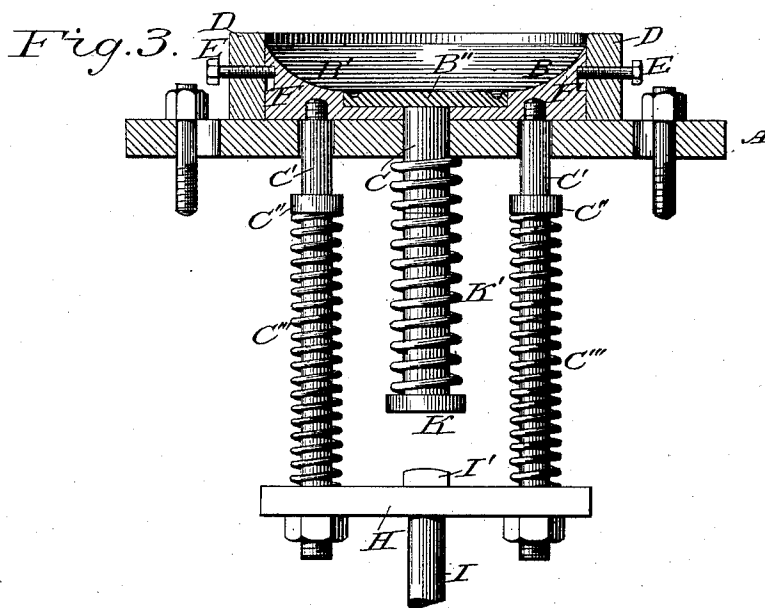
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Jos. Crossley
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By *James Buchanan*
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UNITED STATES PATENT OFFICE.

JOSEPH CROSSLEY AND HENRY T. COOK, OF TRENTON, NEW JERSEY.

PRESS FOR FORMING ARTICLES OF POTTERY-WARE.

SPECIFICATION forming part of Letters Patent No. 320,541, dated June 23, 1885.

Application filed March 7, 1885. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH CROSSLEY and HENRY T. COOK, citizens of the United States, residing at Trenton, in the county of Mercer and State of New Jersey, have invented a new and useful Press for Forming Articles of Pottery and other Ware, of which the following is a specification.

Our invention relates to improvements in presses by which articles of pottery and other ware are shaped by pressure, thus dispensing with the slow, imperfect, and laborious process of shaping such articles by hand.

This invention is shown in the accompanying drawings, in which drawings similar letters of reference indicate similar parts.

In the drawings, Figure 1 shows a perspective view of our machine. Fig. 2 shows a top view of the dies and of the table wherein they are mounted. Fig. 3 is a cross-section at $x x$ of Fig. 2, and shows, also, the mechanism for operating the dies. Fig. 4 shows this mechanism more in detail. Fig. 5 shows a section of the article formed.

In the drawings, A is the table or bed of the press. Upon this bed is mounted the die B. This die is made in two parts, B' and B". The part B' is, as shown, recessed to receive the part B", and when B" is in position it, with B', forms a die of the shape of the proposed article. B' is pierced in the center to allow the shaft C, to which the part B" is firmly affixed, to pass through it. Into the part B' are firmly fastened the shafts C' C'. These shafts C' C', with the shaft C, all pass down through the bed A, and are operated by the mechanism hereinafter described. About the die B is the case D, rising above the die and firmly connected with the bed A. In this case are the set-screws E, passing within it, and, entering the slots F in the part B', act as stops for the part B'. I sometimes employ as stops the set-screws G, Fig. 4, screwed directly into the part B'.

The shafts C' C' are provided with the collars C" C", which act as stops. Below these, and encircling the shafts C', are springs C". These shafts are connected by the bar H, in which the bottoms of the shafts freely move. To this bar is attached the rod I, connected with a treadle, K, or any appropriate mech-

anism for operating the same. The collars C" being fixed rigidly upon the shafts C', the springs C" operate to keep the bar H, when at rest, at the bottom of the shafts. To the shaft C is also affixed, at the bottom end, a collar, K. Around the shaft C, and between the bottom of the bed A and the top of this collar K, is placed another spring, K'. This spring serves to keep the part B", when at rest, down within the recess in the part B'.

The operation of our mechanism is as follows: The follower L, to which is attached the counter-sink M, or, as it may be termed, that part of the die which forms the interior shape of the article to be formed, being elevated by the screw N or any appropriate mechanism, the dust or other material from which the article is to be formed is spread in sufficient quantity upon the die B. The counter-sink M is then brought down by the screw N, or by any appropriate mechanism capable of exerting great pressure upon the material. This material, being confined within the case D and subjected to this pressure, is thereby compacted into any shape the dies may be formed to produce. The counter-sink M is then retracted, and the article formed is seen lying within the die B, perfectly formed. Articles thus formed, not yet having been fired, are quite fragile, and the difficulty heretofore has been to remove them uninjured from the die when formed by common dies. By our mechanism we are enabled to remove every article without the least injury to the article. The rod I, being raised, carries with it the bar H and shafts C'. These shafts raise the whole die B upward in the case D, carrying with it the article formed. As soon as the die B is raised until the article formed is above the top of the case D, the set-screws E or G, indifferently, act as stops and arrest the upward movement of the part B'. The rod I and bar H, still rising, the springs C" C" are compressed, the upper part, I', of the rod I engages against the lower end of the shaft C, and the rod I, still rising, the spring K' is compressed, the shaft C is carried upward, carrying with it the part B", which rises out of its recess in the part B', and bears upward with it and freed from the part B' the article formed. In Fig. 5 is shown a sectional view of the die and of the article,

represented by the letter O, thus borne aloft by the part B'. Indifferently, in operation we can lower the case D, instead of raising B'.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The die B, movable within the case D and composed of the parts B' and B'', substantially as shown and described.
2. The die B, composed of the part B', provided with stops, and of the part B'', in combination with the case D, substantially as shown and described.
3. The part B'', provided with the shaft C, in combination with the part B', provided with the shafts C' C', substantially as shown and described.
4. The die B, composed of the part B'', provided with the shaft C, and the part B', provided with the shafts C' C', in combination with the case D, substantially as shown and described.
5. The part B'', provided with the shaft C,

such shaft carrying the collar K and spring K', in combination with the part B', provided with the shafts C' C', carrying the collars C' C'' and springs C''' C''', and with the bar H and rod I, substantially as shown and described.

6. The die B, composed of the part B'', provided with the shaft C, such shaft carrying the collar K and spring K', and of the part B', provided with the shafts C' C', carrying the collars C' C'' and springs C''' C''', in combination with the case D and the bar H and rod I, all substantially as shown and described.

7. The die B, composed of the part B' and of the part B'', in combination with the case D, substantially as shown and described.

JOS. CROSSLEY.
HENRY T. COOK.

Witnesses:

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A. BUCHANAN.