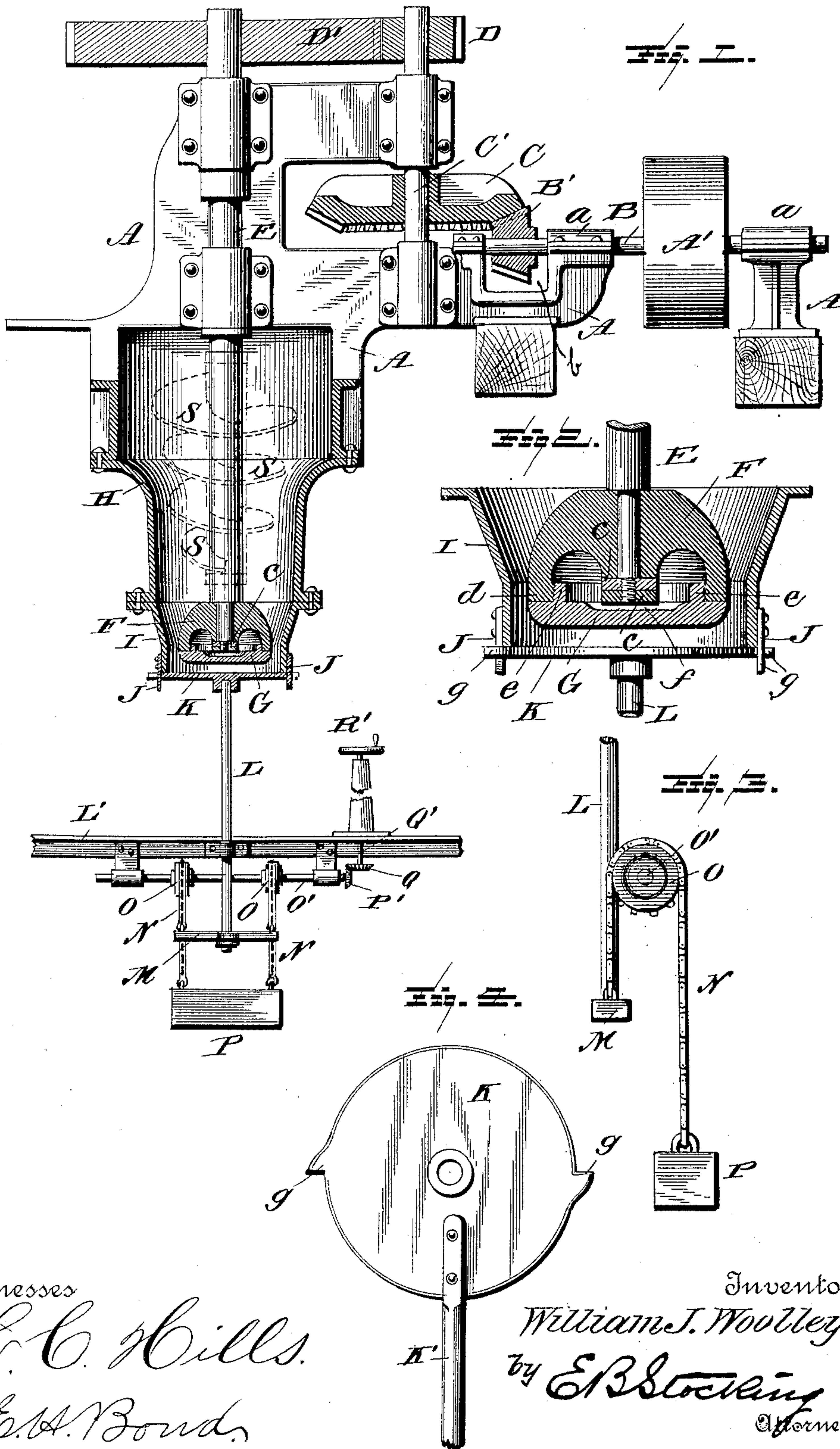


(No Model.)

W. J. WOOLLEY.  
POTTERY MACHINE.

No. 468,391.

Patented Feb. 9, 1892.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM J. WOOLLEY, OF ANDERSON, INDIANA.

## POTTERY-MACHINE.

SPECIFICATION forming part of Letters Patent No. 468,391, dated February 9, 1892.

Application filed February 25, 1891. Serial No. 382,712. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. WOOLLEY, a citizen of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Pottery or Retort Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in retort or pottery machines and is designed for forming bottoms on retorts, pipes, and other articles.

15 It has for its objects, among others, to provide a disk which forms the bottom of a material that will prevent sticking of the clay thereto. I have found that satisfactory results cannot be obtained by the use of an iron plate or disk. Experiments with such have  
20 resulted in the sticking of the clay thereto and a consequent waste of the material and loss of time. I find that a wooden disk or plate is the most satisfactory. It may be, perhaps, the only material which will work  
25 perfectly satisfactorily. I provide means for holding the clay while the bottom is being formed, and then removing the same from the mold, forming the sides as the material is removed, and, when it has reached the desired  
30 length, cut it off and raise the support ready for another operation. The support or bottom of the mold is carried by a counterbalance device, which renders it easy of manipulation. The said bottom is provided with  
35 lugs or projections, which, when the said bottom is rotated, slightly serve to disengage the latches which hold the bottom in place.

Other objects and advantages of the invention will hereinafter appear, and the novel  
40 features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part  
45 of this specification, and in which—

Figure 1 is a side elevation of my improved machine with parts in section. Fig. 2 is a central vertical section through the die or mold and bottom-former on an enlarged scale.  
50 Fig. 3 is an end view of the counter-balance for the mold-bottom. Fig. 4 is a bottom plan

of the said bottom and its operating-handle on an enlarged scale.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the frame-work, which may be of any form suited to the purpose, and B is the main shaft, journaled in suitable bearings or boxes *a* on the frame and  
55 carrying the drive-pulley A', driven from any suitable source of power. (Not shown.) On this shaft is a bevel gear-wheel B', fast thereon and arranged to work in a depression *b*, provided in the frame therefor, as seen in Fig. 60  
1. This bevel-gear meshes with a larger gear-wheel C, carried by a vertical shaft C', suitably journaled in bearings or boxes in the frame and at its upper end carrying a gear-wheel D, which meshes with a larger gear-  
70 wheel D' on the vertical shaft E, which is suitably journaled in the frame and carries at its lower end the bottom-former, as seen in Fig. 1. This bottom-former consists of the head F, through which the shaft or core passes,  
75 and is secured thereto, as seen in Figs. 1 and 2, the end of the shaft being reduced and screw-threaded and provided with retaining nut or nuts *c*, as seen in said Figs. 1 and 2. This head is internally threaded, as at *d*, and  
80 G is the bottom disk or plate, which is formed of wood and provided with an upwardly-extending externally-threaded flange *e*, which engages the threads of the head, as seen best in Fig. 2, being centrally chambered, as seen  
85 at *f*, to provide room for the retaining-nuts. The wooden bottom disk or plate will not stick to and retain the clay. This is most essential for good work in this class of machines. Being detachable, it can be readily removed  
90 when necessary.

Depending from the frame is the hopper or clay-chamber H, which is flanged, as shown in Fig. 1, and to the lower flanges is secured the die or mold I, which is tapered for a portion  
95 of its height and at the lower end provided with substantially vertical walls. Within this die or mold the bottom-former works, as seen in Figs. 1 and 2. J are latches secured to the side walls of this vertical portion of  
100 the die or mold, and K is the bottom of the die, which is provided with diametrically-op-



posite lugs or projections *g*, designed to engage the said latches, and thus be held in place while the bottom of the vessel is being formed. This bottom-plate is provided with  
5 a handle *K'*, by which it may be turned sufficiently to disengage the lugs and latches to permit the bottom to be lowered after the bottom of the vessel is formed. This bottom plate is carried by a vertical rod or support *L*,  
10 which is guided in a suitable guide on the floor *L'*, as seen in Fig. 1. At its lower end it is secured to a cross-bar *M*, to the ends of which are connected the cords or chains *N*, which pass over the pulleys *O* on the shaft *O'*, suit-  
15 ably journaled in hangers depending from the under side of the floor, and at the other ends the cords or chains are attached to a counterbalance-weight *P*, as seen in Figs. 1 and 3. The shaft *O'* carries a bevel-gear *P'*,  
20 which meshes with a gear *Q* on the vertical shaft *Q'*, extended up through the floor and provided with a hand wheel *R'* or other analogous means, whereby it may be turned to raise or lower the cross-bar, and consequently  
25 the bottom plate. The vertical shaft preferably extends through a suitable stand or casing, as seen in Fig. 1.

Any suitable means, as the spiral conveyer *S*, may be employed to feed the clay downward. 30

What I claim as new is—

1. The combination, with the die and the detachable bottom plate thereof, of the rod carrying said plate, the cross-bar attached to said rod, the shaft and pulleys, the hand- 35 wheel and intermediate mechanism for revolving said shaft, the chains connected to the cross-bar and passed over said pulleys, and the weight attached to the other ends of said chains, substantially as specified. 40

2. In a machine of the class described, the combination of the core or shaft *E*, the chambered head through which the shaft passes, the chambered bottom plate detachably engaged with said head, and the nut upon the 45 end of the shaft within the said chamber and serving to hold the head upon the shaft, substantially as described.

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

WILLIAM J. WOOLLEY.

Witnesses:

A. B. KENYON,  
J. S. BARTH.