(No Model.) 2 Sheets—Sheet 1.

J. W. DENMEAD.

MACHINE FOR TURNING EARTHENWARE VESSELS.

No. 262,281. Patented Aug. 8, 1882.

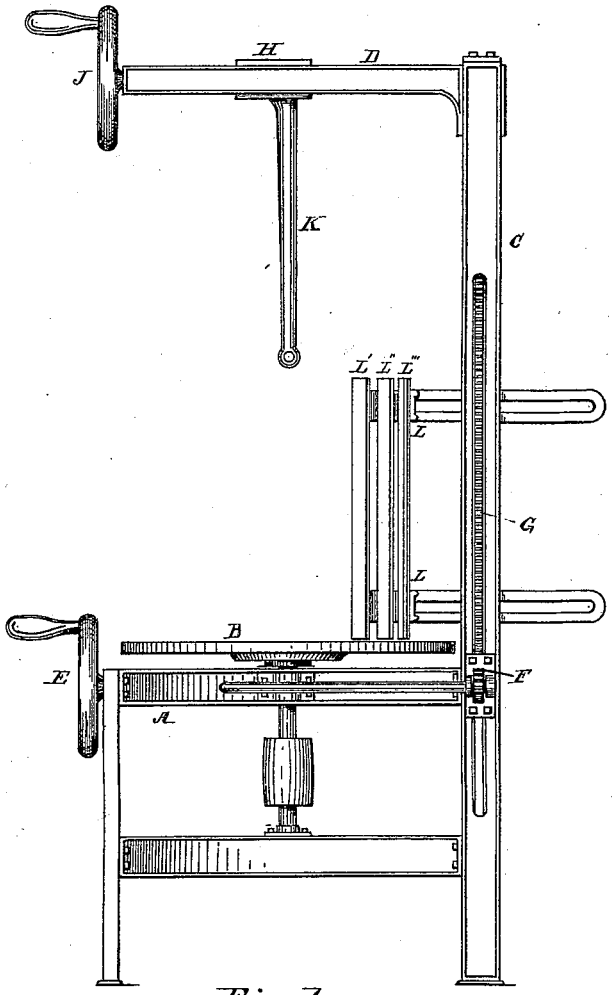

Fig. 1.

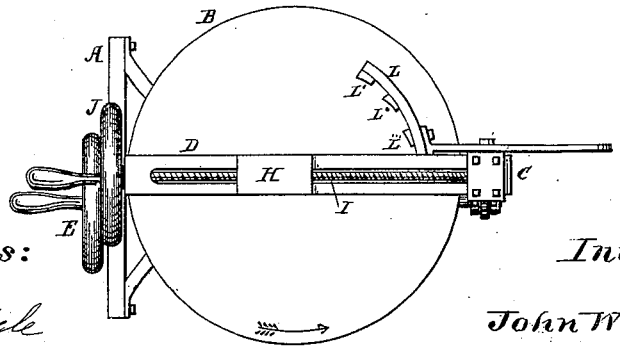

Fig. 2.

Witnesses:

Dayton A. Doyle

E. W. Stuart

Inventor:

John W. Denmead,

by C. P. Humphrey

Atty.

(No Model.) 2 Sheets—Sheet 2.

J. W. DENMEAD.

MACHINE FOR TURNING EARTHENWARE VESSELS.

No. 262,281. Patented Aug. 8, 1882.

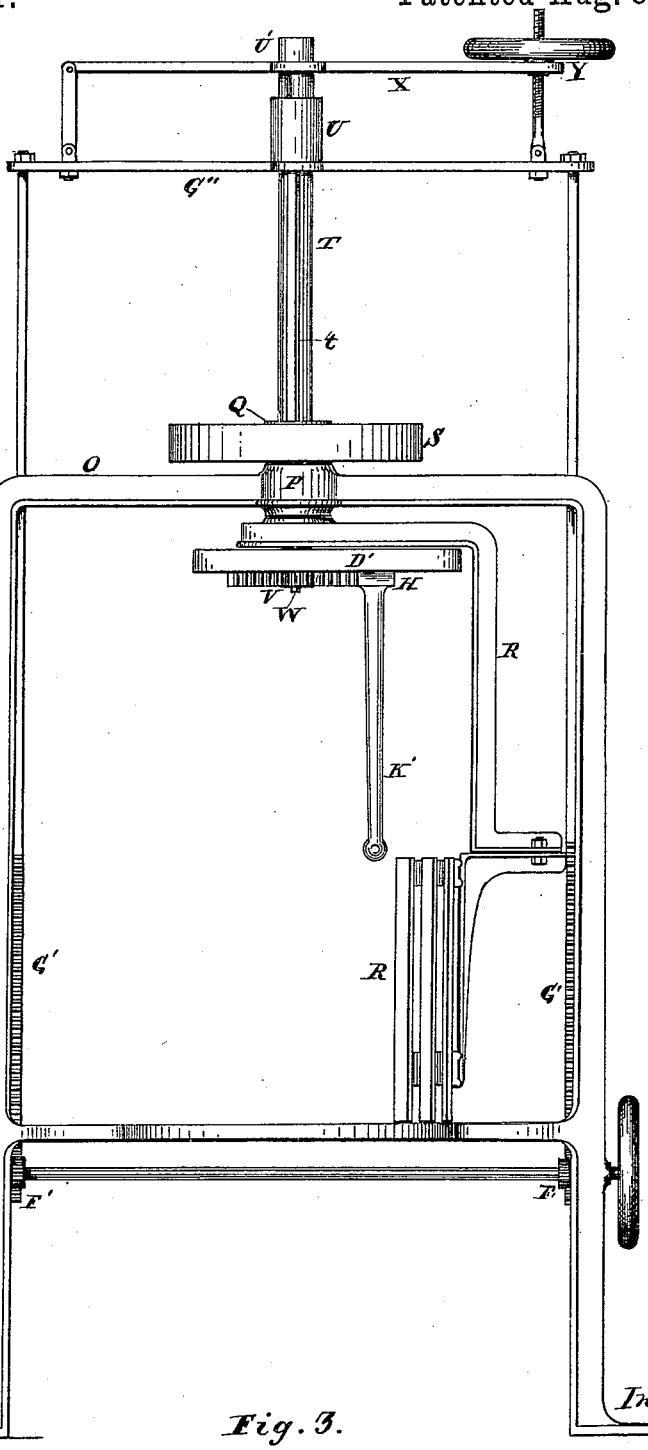

Fig. 3.

Witnesses:

Dayton A. Doyle

John Wemmer

Inventor:

John W. Denmead

by C. P. Huntington

Atty.

UNITED STATES PATENT OFFICE.

JOHN W. DENMEAD, OF AKRON, OHIO, ASSIGNOR OF THREE-FOURTHS TO JULIUS S. LANE, OF SAME PLACE.

MACHINE FOR TURNING EARTHENWARE VESSELS.

SPECIFICATION forming part of Letters Patent No. 262,281, dated August 8, 1882.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. DENMEAD, of Akron, in the county of Summit and State of Ohio, have invented a new and useful Improvement in Machines for Turning Earthenware Vessels, of which the following is a specification.

My invention relates to improvements in machinery whereby plastic clay is molded into vessels.

The object of my invention is to reproduce mechanically, as far as may be, the operation of the human hands in turning pottery, and thereby rapidly form earthenware vessels of any desired size by machinery without the aid of skilled labor. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of one form of a pottery-turning machine embodying my invention; Fig. 2, a plan of Fig. 1; and Fig. 3, a front elevation of another form of a pottery-turning machine embodying my invention.

The machine illustrated by Figs. 1 and 2 is thus described: Journaled within a suitable frame, A, is a shaft bearing a potter's wheel, B, and provided with a pulley, whereby it may be revolved. At the back of the frame A arises the vertical post C, supported by which is the horizontal arm D, which is arranged to be raised and lowered on the post C by the pinion F, rack G, and hand-wheel E. On the arm D is the slide H, adapted by means of the screw I and hand-wheel J to move along said arm. From the under side of the slide H projects vertically the rod K, which I call the "inside-former." Attached to the post C by adjustable supports is a frame-work, which I call the "outside-former," and which consists of two or more horizontal curved bars, L, to which are attached a series of vertical slats, L′, L″, &c.

In operation, the wheel B being revolved in the direction indicated by the arrow in Fig. 2, a ball of tempered clay is placed centrally thereon. The rod K is lowered centrally into the ball, then carried toward the outside-former, forcing the clay outward, and when in that position raised, forming the clay into crock shape. It is again lowered, carried farther toward the outside-former, and again raised; and this operation is repeated until the crock is formed and removed in the usual manner.

Another form of my invention is shown in Fig. 3, wherein the operation of the parts is reversed, the ball of clay remaining at rest and the formers revolving. It consists of a table, M, supported by a suitable frame, N, above which rises the arch O, provided with the vertical bearing P, in which is journaled the hollow shaft Q, bearing the outside-former R, and turned by the pulley S. Within the hollow shaft Q is a smaller hollow shaft, T, adapted to be raised and lowered therein by the racks G′ G′, pinions F′, and yoke G″, but compelled to revolve with it by a feather, *t*. On the lower end of the shaft T is keyed an arm, D′, in which is a slide, H′, adapted by means of the rack and pinion V to be moved lengthwise thereon, and from the under side of the slide projects vertically the inside-former K′. The pinion V is keyed to the shaft W, which passes inside of the shaft T, and is turned to cause the slide H′ to traverse the arm D′ by the following device: The upper end of the shaft T terminates in a sleeve, U. A feathered sleeve, U′, slides inside of the sleeve U, and is held in position relative to the shaft T by a yoke, X, and screw and wheel Y. Inside of the sleeve U′ is a screw-thread of high pitch, in which rests a pin projecting from the shaft W. While the sleeves U U′ remain in the same position with reference to each other the three shafts Q T W revolve together; but by causing the sleeve U′ to approach or recede from the sleeve U the shaft T will, by means of the screw-thread in the sleeve U′, be turned in one direction or the other, causing the inside-former to move outward or inward on the arm D.

In operation the ball of tempered clay is placed on the table M, and the inside-former, by the devices herein shown, manipulated with reference to it in the same manner as described in the operation of Fig. 1.

The outside-former is preferably a series of slats, beveled toward the approaching clay, the first and last whereof are situated at the same distance from the center and the intermediate ones farther from the center; but

other devices approximating a segment of a circle may be substituted, and they may have such inner shape as to produce any desired configuration in the surface of the vessel.

I do not confine myself to the exact devices here shown for manipulating the inside-former, as any device which will produce the desired motion may be substituted without departing from my invention.

I claim:

1. In combination with the wheel B, a fixed outside-former, the cross-section of which is substantially an arc of a circle, and an inside-former of less diameter than the desired vessel, and arranged by devices, such substantially as shown, for causing the inside-former to approach and recede from the wheel and outside-former, substantially as and for the purpose hereinbefore set forth.

2. In combination with a fixed table, an outside-former the general horizontal section of which shall be the segment of a circle, and an inside-former having a less diameter than the vessel to be made, both adapted to revolve together above said table, and the latter arranged by devices, such substantially as shown, to approach and recede from both the table and outside-former, substantially as shown, and for the purpose specified.

3. The herein-described outside-former, consisting essentially of a series of perpendicular parallel slats, the intermediate ones of which are placed farther from the center of the wheel than the end ones, substantially as and for the purpose hereinbefore set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of April, A. D. 1882.

JOHN W. DENMEAD.

Witnesses:

C. P. HUMPHREY,

DAYTON A. DOYLE.