

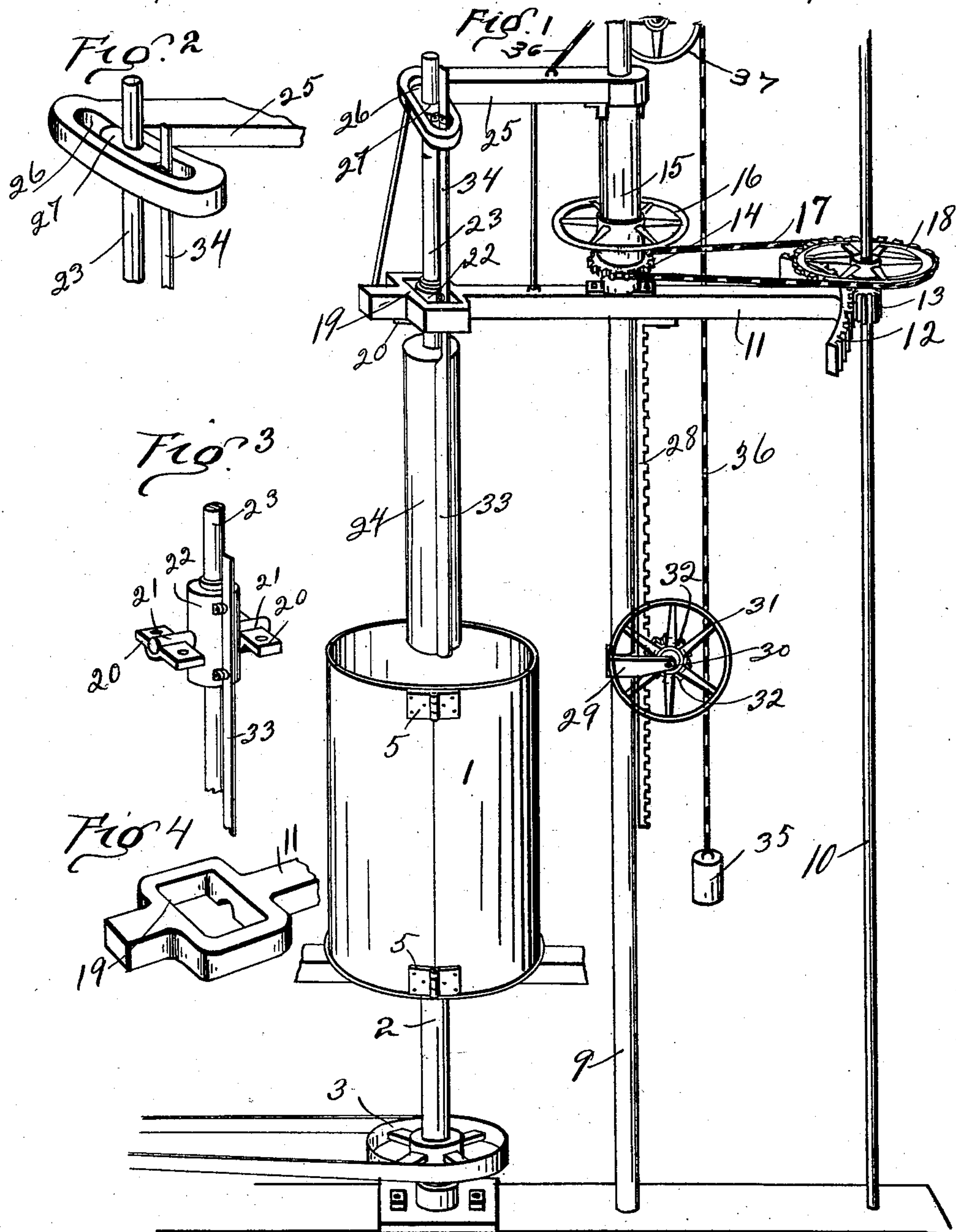
(No Model.)

J. A. ZENGLER.
POTTERY MOLDING MACHINE.

2 Sheets—Sheet 1.

No. 591,580.

Patented Oct. 12, 1897.



WITNESSES:

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J. A. Jeffers

INVENTOR:

John A. Zengler
By Fred W. Bond
Attorney

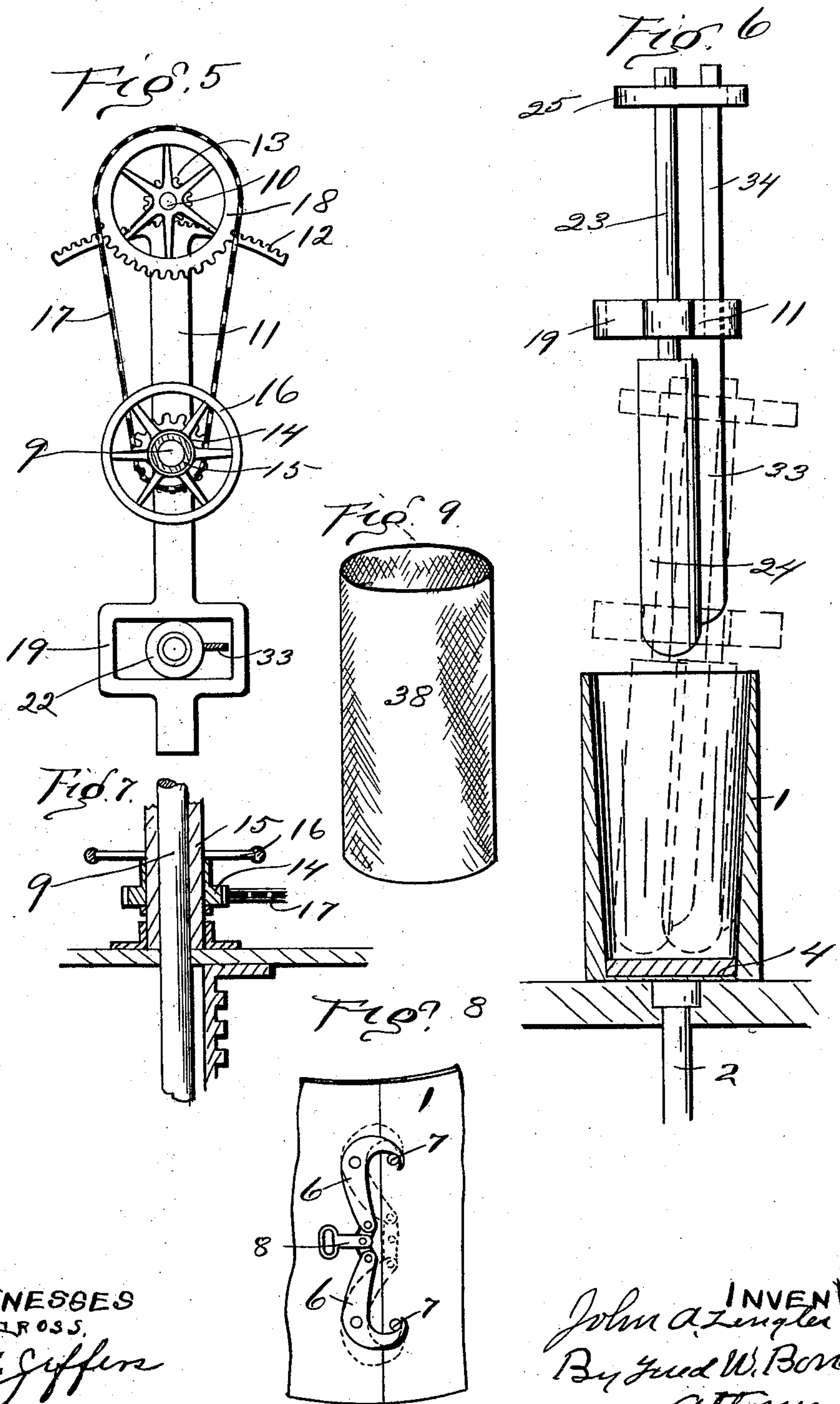
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UNITED STATES PATENT OFFICE.

JOHN A. ZENGLER, OF CANTON, OHIO.

POTTERY-MOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 591,580, dated October 12, 1897.

Application filed April 14, 1897. Serial No. 632,150. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. ZENGLER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Pottery-Molding Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the figures of reference marked thereon, in which—

Figure 1 is a side elevation of the machine, showing the forming-roller elevated. Fig. 2 is a view of the outer end of the upper bar, showing the different parts belonging thereto properly located. Fig. 3 is a view showing a portion of the roller shaft or bar and its pivoted bearing, together with a portion of the roller scraper or knife. Fig. 4 is a detached view showing a portion of the roller-carrying arm. Fig. 5 is a detached view of the roller-carrying arm and the different parts belonging thereto. Fig. 6 is a vertical section of the crock-forming cylinder and the roller located in its normal position. Fig. 7 is a vertical section of the sliding sleeve, showing a portion of the guide-bar and rack-bar. Fig. 8 is a view showing a portion of the crock-forming cylinder and illustrating the catch for holding the hinged sections together. Fig. 9 is a detached view of the lining.

The present invention has relation to pottery-molding machines; and it consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar numbers of reference indicate corresponding parts in all the views of the drawings.

In the accompanying drawings, 1 represents the cylinder in which the crock is formed, as hereinafter described, and is securely attached in any convenient and well-known manner to the top or upper end of the shaft 2, which shaft is held in a proper upright position by means of suitable bearings and is provided at a point below the cylinder 1 with a power-wheel, such as 3, which power-wheel may be a belt-wheel, as shown, or it may be a cog-wheel, as the only object is to impart rotary motion to the shaft 2 and the cylinder 1.

For the purpose of providing a means for removing a finished crock from the cylinder 1 said cylinder is formed in sections or halves 55 and the sections hinged together, substantially as illustrated in Fig. 1, it being understood that one of said sections should be connected to the bottom 4 of the cylinder 1. Diametrically opposite from the hinges 5 are located the catches 6, which catches are pivotally connected to one of the cylinder-sections, and upon the opposite cylinder-section are located the pins 7, which pins are so located that they will be engaged by the hooked 65 ends of the catches 6, as illustrated in Fig. 8. When it is desired to release the sections of the cylinder 1 so that one of the sections can be turned upon its hinges, the handle 8 is pushed toward the cylinder-section opposite 70 the one to which the catches are pivoted, which movement frees the hooked ends of the catches 6 from the pins 7, thereby releasing the sections of the cylinder 1. To one side of the cylinder 1 and its shaft 2 is located the 75 upright bar 9, which bar is secured at a fixed point at its bottom or lower end and connected in a fixed position at its top or upper end, the adjustment of the bar 9 being such that when placed in proper position it will be parallel with the shaft 2. To one side of the bar 9 and a short distance therefrom is located the bar 10, which bar is held in true parallel position with the bar 9 by securing the top 85 and bottom ends of said bar in fixed positions. The horizontal bar 11 is so connected to the bar 9 that it will turn or rock upon said bar and at the same time slide vertically up and down upon said bar, as hereinafter 90 described. To one end of the bar 11 is connected in any convenient and well-known manner the toothed segment 12, which toothed segment meshes with the pinion 13, which pinion is so attached to the shaft or bar 10 that it can slide up and down on said bar for the purpose hereinafter described. Directly above 95 the bar 11 or a short distance above said bar is located the cog-wheel 14, which cog-wheel is formed with or connected to the long hub 15, which long hub or sleeve is also provided 100 with the hand-wheel 16, which hand-wheel is located substantially as shown in Figs. 1 and 5. From the cog-wheel 15 leads the drive-chain 17 to and around the cog-wheel 18, which cog-

wheel rotates with the pinion 13 and moves up and down upon the bar 10 with said pinion 13. At the opposite end or portion of the bar 11 from that to which the segment 12 is connected is located the housing 19, to the under side of which are securely attached by means of suitable bolts the box-sections 20, which box-sections hold in proper position the short shafts 21, which short shafts are securely connected to the roller-shaft bearing 22, which roller-shaft bearing supports and holds in proper position the roller-shaft 23.

Upon the roller-shaft 23 is mounted the roller 24, and is formed of such a length that it can be inserted into the crock-forming cylinder 1, as hereinafter described, and moved laterally or tilted at an angle to form a crock. For the purpose of providing a means for tilting the roller 24, together with its shaft 23, at an angle to the cylinder 1 the arm 25 is provided with the elongated slot 26, in which elongated slot is located the sliding box 27, which sliding box receives the upper end of the roller-shaft 23. To the bar 11 is securely connected the rack-bar 28, which rack-bar extends downward along the bar 9, as illustrated in Fig. 1. To the bar 9 is attached in any convenient and well-known manner the arms 29, to which arms are journaled the shaft 30, upon which shaft the hand-wheel 31 and the pinion 32 are mounted. It will be understood that the arms 29 should be so attached to the bar 9 that they will turn upon said bar, but will not move up and down upon the bar 9. This may be accomplished by cutting an annular groove in the bar 9 or by locating pins above and below the arms 29. As this feature will be readily understood by an ordinary mechanic it is not illustrated. It will be understood that as the wheel 31 is rotated in one direction it will force the rack-bar 28 downward, and when rotated in the opposite direction will elevate said rack-bar by means of the pinion 32. The vertical movements of the rack-bar will carry with it the bar 11, and when said bar 11 is moving downward the pinion 13, the wheel 18, together with the cog-wheels 15 and 16, will follow the downward movement of said bar 11, as well as the arm 25 and the roller 24 and its shaft, together with the drive-chain 17.

In use after a sufficient quantity of plastic clay has been placed in the cylinder 1 the roller 24 is lowered into the cylinder, after which the hand-wheel 16 is rotated, which in turn moves the segment 12, by means of the drive-chain 17, the wheel 18, and the pinion 13, which causes the bar 11 to rock upon the bar or shaft 9, thereby moving the roller 24 toward the inner periphery of the cylinder 1, and as the cylinder rotates the clay will be pressed or formed into proper shape to produce a crock or other vessel. For the purpose of removing the clay that may adhere to the roller 24 the scraper 33 is provided, which scraper is located along the roller 24, as illustrated in Fig. 1, and is secured to the

bearing 22, by which arrangement the scraper 33 will follow the movements of the roller 24. When it is desired to tilt the roller 24 so as to bring said roller at an angle to the cylinder 1, the top or upper end of the roller-shaft 23 is pulled or pushed as desired, said roller-shaft turning upon the bearings 21. It will be understood that the roller 24 should be journaled upon the roller-shaft 23, so that the upper end of said shaft can be operated by hand.

For the purpose of stiffening the scraper 33 the bar 34 is provided and extends upward and is connected at its top or upper end to the sliding box 24.

For the purpose of compensating for the weight of the different parts that slide up and down upon the bars 9 and 10 the counterweight 35 is provided, to which is attached the cord or chain 36, which cord or chain extends upward and over the pulley 37, substantially as illustrated in Fig. 1. It will be understood that the cylinder 1 should be formed as to style and size to correspond with the style and size of the crock designed to be constructed. For the purpose of preventing the plastic clay from adhering to the inner periphery of the cylinder 1 it should be lined with cloth or paper or some other non-adhesive material.

For the purpose of providing a cylinder with a lining that the plastic clay will not adhere to a seamless lining 38 is provided, which is originally formed of any desired length and cut into sections to correspond with the length of the crock or vessel designed to be formed and placed in the cylinder, after which the plastic clay is put inside of the lining 38. By this arrangement I am enabled to provide a lining that can be easily and quickly adjusted and at the same time produce a finished crock that will be smooth upon its outer surface.

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

1. The combination of a revolving cylinder, the parallel bars 9, and 10, located to one side of the cylinder, the bar 11, journaled upon the bar 9, and provided with the segment 12, the housing 19, having journaled thereto the bearing 22, the scraper 33, located adjacent to the roller 24, and the roller 24, and means for rocking the segment and bar 11, substantially as and for the purpose specified.

2. The combination of a revolving cylinder, the shaft 23, and the roller 24, and the scraper 33, a vertically-movable bar 11, carrying the roller-shaft 23, and the roller 24, said roller-shaft hinged to the bar 11, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN A. ZENGLER.

Witnesses:

F. W. BOND,

J. A. JEFFERS.