

(No Model.)

G. C. PRATT.
CLAY PULVERIZER.

No. 315,064.

Patented Apr. 7, 1885.

Fig. 1.

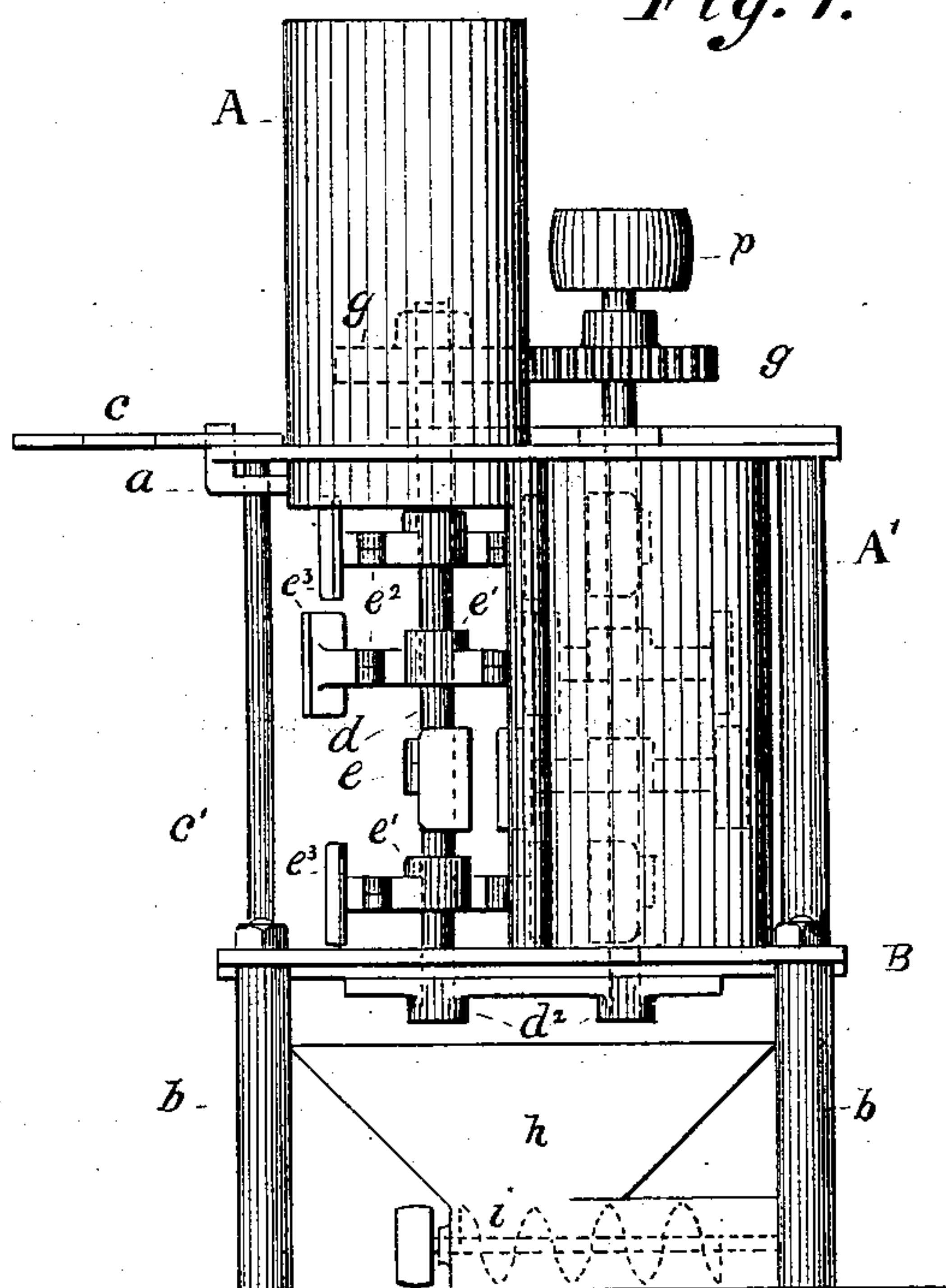


Fig. 2.

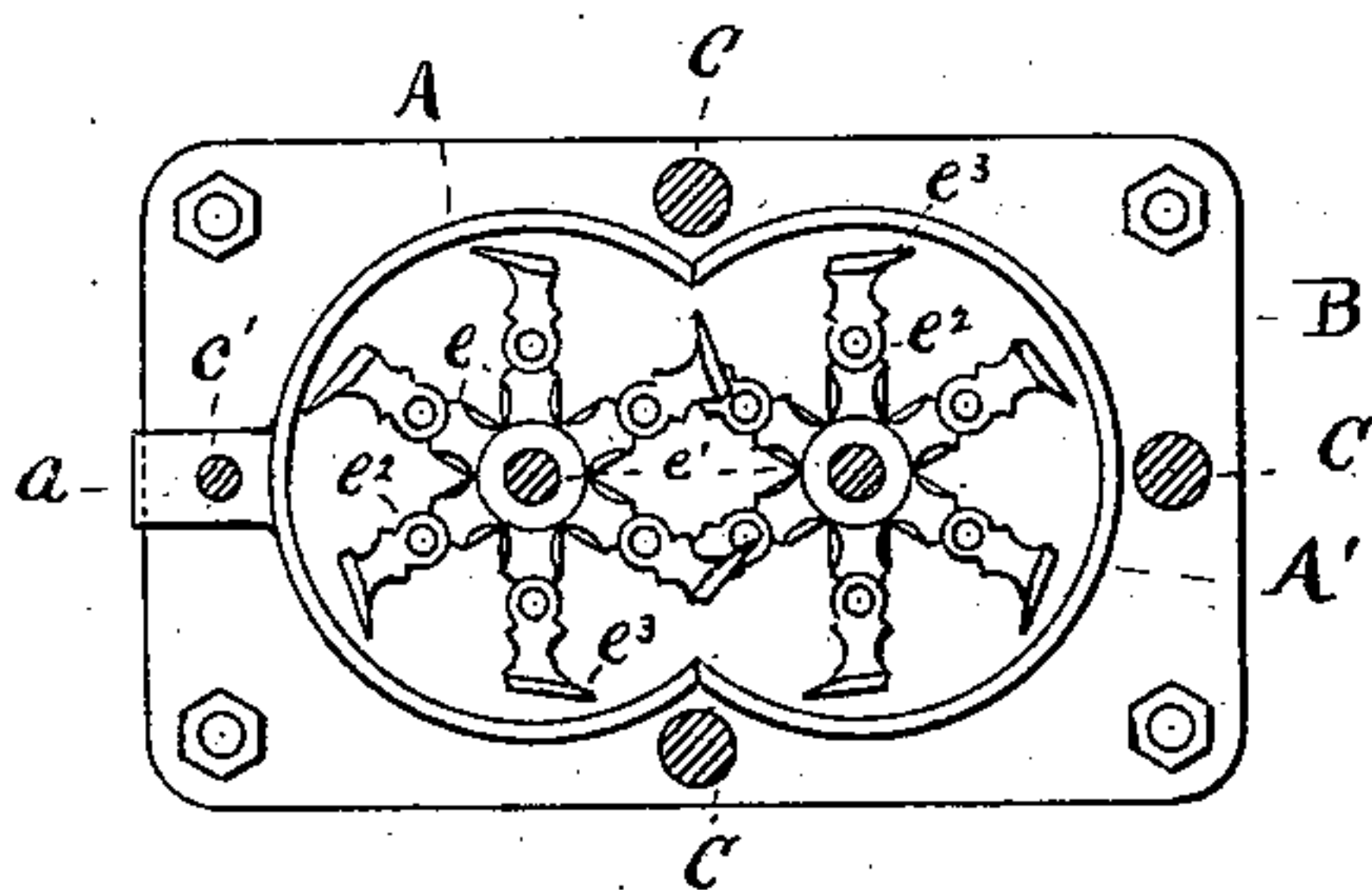
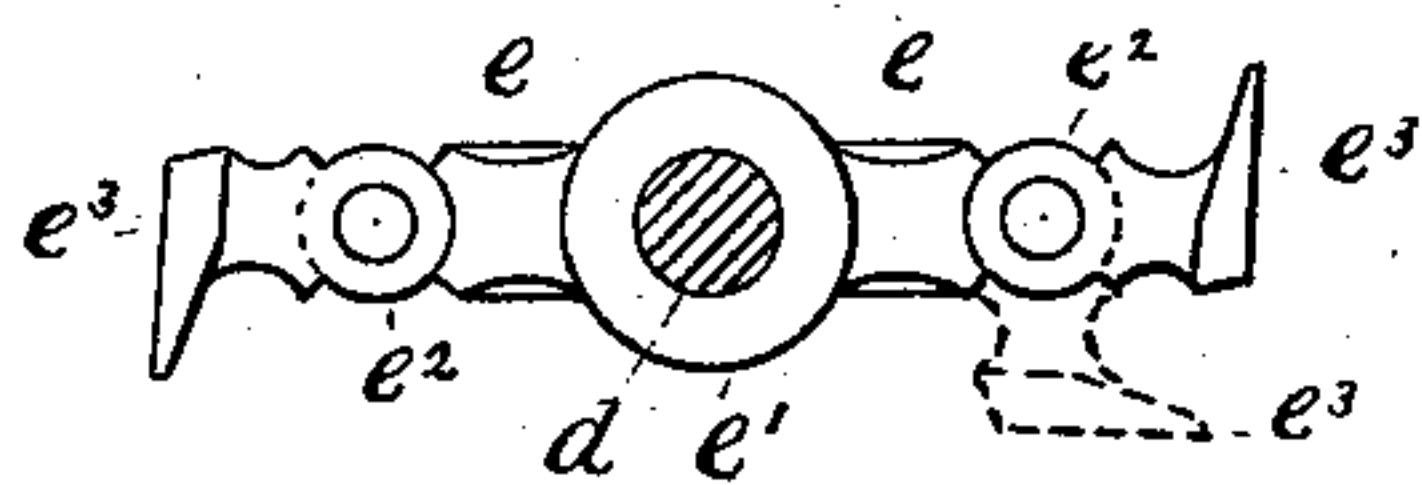


Fig. 3.



Witnesses:

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GRANVILLE C. PRATT, OF ANOKA, MINNESOTA.

CLAY-PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 315,064, dated April 7, 1885.

Application filed January 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, GRANVILLE C. PRATT, a citizen of the United States, residing at Anoka, in the county of Anoka and State of Minnesota, have invented certain new and useful Improvements in Clay-Pulverizers, of which the following is a specification.

My invention relates to machines provided with rotary beaters for reducing and pulverizing clay for the manufacture of bricks and other purposes. In machines of this character effective operation is frequently interfered with and the machines damaged by stones and other hard substances introduced into the machines with the clay and which are caught between the beaters and casing.

It is the principal object of my invention to obviate the difficulty arising from this source, and this object I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine; Fig. 2, a top view, the covering of the machine being removed; and Fig. 3, a detached view of a pair of the beaters.

A A' are adjoining cylindrical segments forming the casing of the machine, and rest upon a base, B, which is supported on posts b.

A frame-work, as C, of any suitable construction is used to support and stiffen the machine.

Over the portion A' of the casing may be provided a fixed covering; but for a cover for the part A it is preferable to have two lids, c, pivoted to the frame C without the casing and capable of being swung out clear of the casing.

The part A of the casing is arranged to slide vertically within the frame, so that it can be raised to the position shown in Fig. 1, and its movements are guided by the projection a from its periphery near the bottom fitted as a sleeve on the post c'. A notch is made in the projection a, into which one of the lids c may be made to slide when the half-casing is elevated to support the latter. By this arrangement ready access can be had to the interior of the machine for inspection or repairs.

d d' are vertical shafts pivoted in the step-boxes d²; and should have boxes provided at the top of the frame. The shaft d may be

driven by a pulley, as p, and by means of the gear-wheels g g will drive the shaft d' in an opposite direction.

e e are the beaters, secured on the shafts d d' in spiral lines and overlap at the center of the machine. They may be made in pairs attached to a sleeve, e', as shown, and fastened to the shafts in any well-known manner. Flexible joints e² are made in the arms, permitting them to bend in one direction on a horizontal plane. On the extremities of the hinged portions are hoe-shaped blades e³ in vertical position and set to rotate close to the casing. These broad cutting-edges are effective in breaking up and pulverizing the clay which is thrown by centrifugal force from the center to the casing, and the joints in the beaters permit the arm to bend back when a stone or other hard substance is caught between the blade and casing, thereby avoiding injury to the beater or casing.

In operating the machine, the beaters being set in rapid rotation, clay is fed through a spout into the center of the machine at the top and is caught by both sets of beaters and thrown by centrifugal force toward the casing, to be taken up by the blades and carried around to the center of the machine. At this point the greater portion of the substance leaves the beater which first carried it, to be caught up by the next lower beater of the opposite series, and the operation thus continues until the material falls from the bottom of the machine. A hopper, h, is fitted to the bottom, and a conveyor, i, carries away the substance fed to it.

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

1. In a reducing and pulverizing machine, in combination with a suitable casing, one or more rotary beaters having arms jointed to turn backward from their direction of rotation and provided at their extremities with blades or cutters.

2. A pulverizing-machine having two oppositely-revolving shafts carrying overlapping beaters rotating within a casing conforming to the peripheries of the beaters, and the said beaters being constructed with joints adapted to bend back from the direction of their rotation.

tion and bearing vertically-arranged cutters at their extremities.

3. A casing composed of two cylindrical segments, one of which is arranged to be raised
5 and secured in suspension, in combination with two oppositely-revolving shafts carrying beater-arms which overlap, and which arms have joints permitting them to bend back from the direction of their rotation and are pro-
10 vided with cutters at their extremities, substantially as described.

4. In a rotary beater, the arms e , attached

to the sleeve e' , and having joints e^2 , and carrying cutters e^3 on their jointed portions, as set forth.

5. The combination of casing $A A'$, shafts $d d'$, gear-wheels $g g$, and on said shafts beaters having joints e^2 and hoe-shaped cutters e^3 ,
15 substantially as set forth.

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