

(No Model.)

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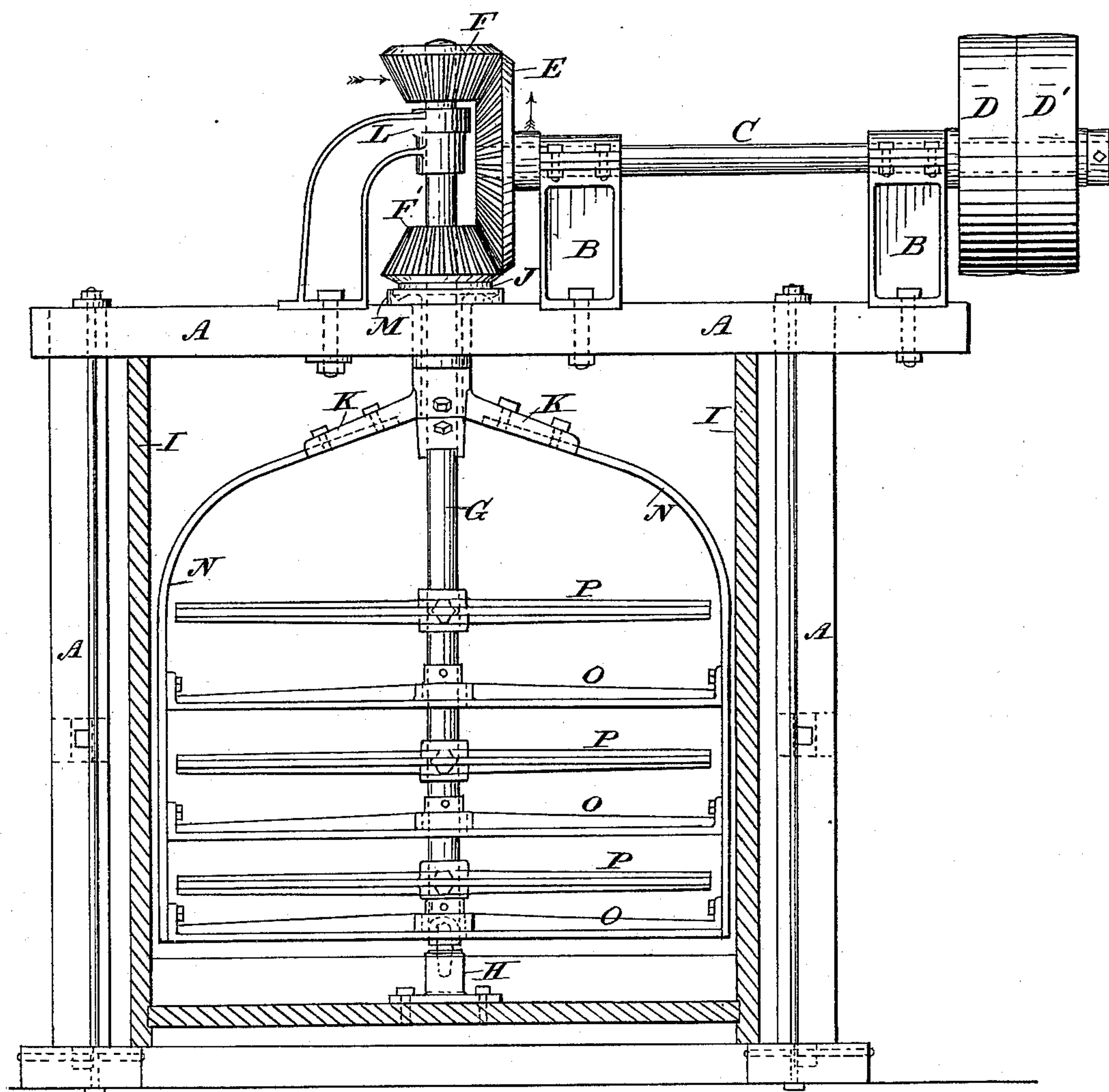
P. WILKES.

BLUNGER FOR MIXING CLAY FOR POTTERS' USE.

No. 297,047.

Patented Apr. 15, 1884.

Fig. 1.



Witnesses:

J. C. Brecht.

S. F. Keller.

Inventor:

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By Your Obedt. Servant

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(No Model.)

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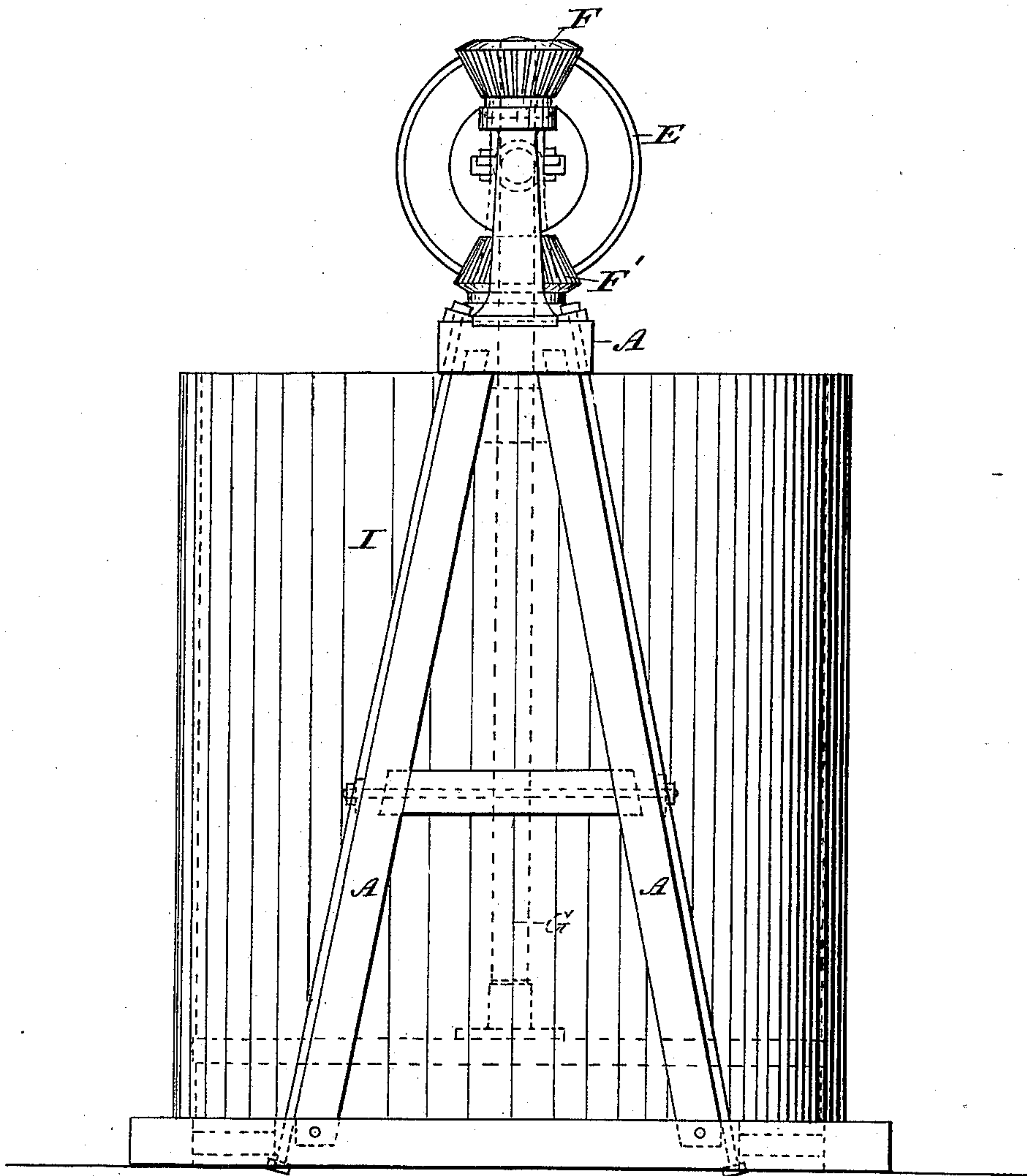
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Fig. 2.



Witnesses:

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(No Model.)

3 Sheets—Sheet 3.

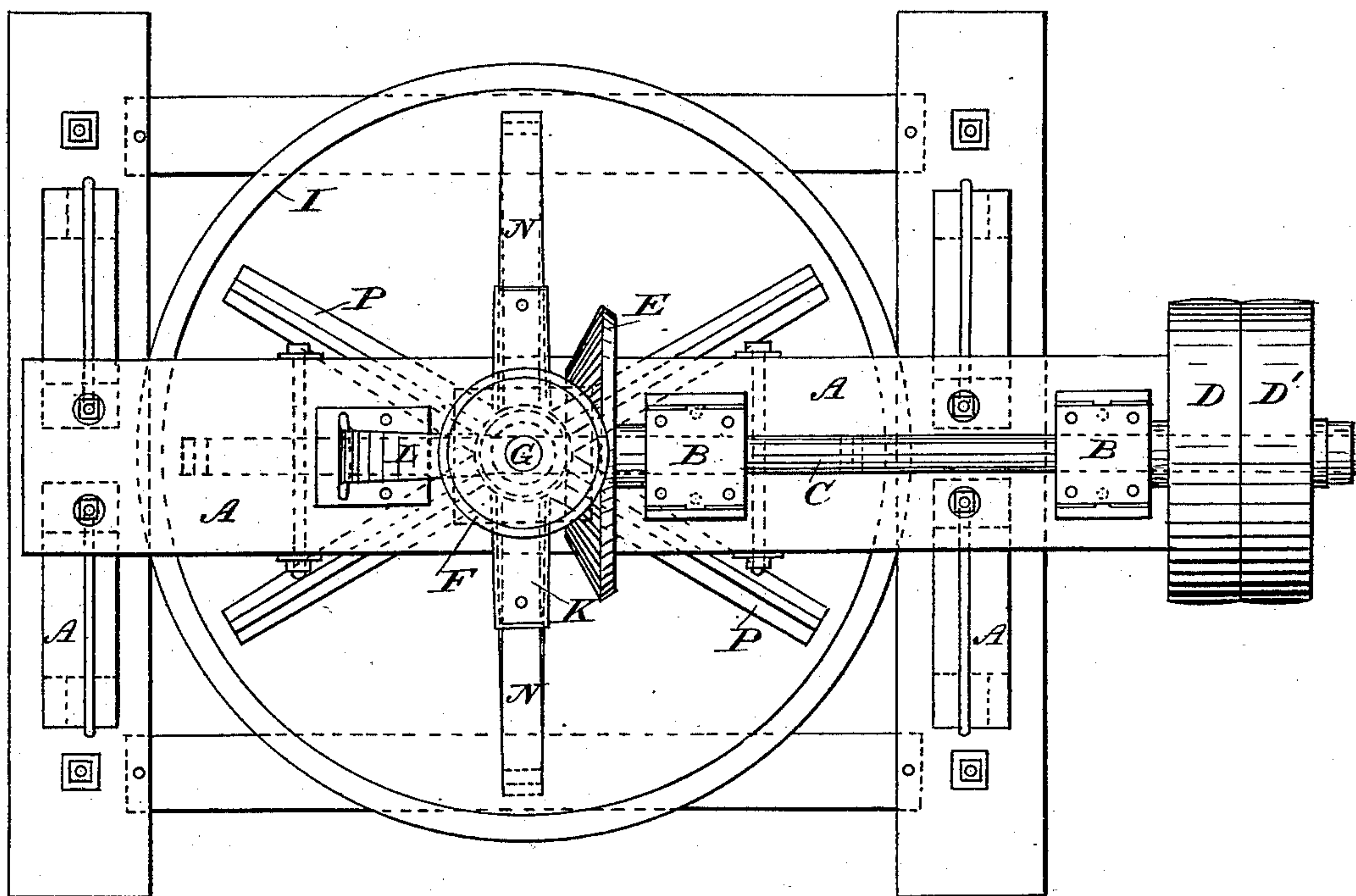
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Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

PETER WILKES, OF TRENTON, NEW JERSEY.

BLUNGER FOR MIXING CLAY FOR POTTERS' USE.

SPECIFICATION forming part of Letters Patent No. 297,047, dated April 15, 1884.

Application filed March 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, PETER WILKES, a citizen of the United States, residing at Trenton, New Jersey, have invented new and useful
5 Improvements in Blungers for Mixing Clay for Potters' Use, of which the following is a specification.

My invention relates to certain novel features of construction in blungers for potters' use.

The object of my invention is to provide a blunger which will readily and successfully mix the clay; and with this object in view my invention consists in the particular features
15 of construction and operation hereinafter fully described and specifically claimed.

In order that those skilled in the art may know how to make and use the same, I will proceed to describe the construction and operation of my improved blunger, referring
20 by letters to the accompanying drawings, in which—

Figure 1 is a side view of a blunger embodying my invention; Fig. 2, an end view, and
25 Fig. 3 a top view, of the same.

Similar letters indicate like parts in the several figures.

A represents a frame, upon which is mounted on suitable bearings, B, a horizontal driving-shaft, C, provided with the ordinary pulleys,
30 D D', at one end, and with a bevel-gear, E, at the opposite end, meshing with the two bevel-pinions F F', the former, F, keyed to the upper end of a vertical shaft, G, resting in a step-bearing, H, in the bottom of a tank, I. The
35 other pinion, F', is secured by a sleeve, J, cast with said pinion, to a four-arm casting, K, adapted to revolve around the vertical shaft G, which is supported vertically by the step-bearing H at the bottom and a suitable bearing, L, at the upper end. The sleeve J is enlarged above the frame A, and is formed with
40 V-bearings, (shown in dotted lines at Fig. 1,) resting in a corresponding groove in a plate, M, to insure a steady motion. To the arms K on the casting are secured four iron bars, N, forming, as it were, a cage. Mixing-arms O,
45 bored out at the center, so as to slip over the shaft G and move easily around the same, are secured at their ends to the cage-arms N, opposite to each other, by bolts, or in any other
50 suitable manner, and P are intermediate bars somewhat shorter, cored out centrally, slipped

over the shaft G, and secured thereto by bolts or keys, so as to revolve with said shaft.

From the construction shown and described, it will be seen that by the arrangement of gears and pinions the power applied to shaft C causes the pinions F F' to be rotated in opposite directions, and accordingly the cage N and its
60 cross-arms O are revolved in the direction given to pinion F', while the shaft G, with its cross arms or blades P, revolves with pinion F in an opposite direction, so that the clay and water contained in the tank I are agitated
65 by the horizontally-rotating blades O P, while the cage-arms N, having a general vertical direction, whip the contents of the tank in a direction at right angles to the arms O P, producing a very thorough and effective agitation or mixing of the clay and water.

The several parts of the machine are readily put together or taken apart, as clearly shown in the drawings, and I have found from experience that the results accomplished by the machine are highly satisfactory. It may be
75 here remarked that it is very important that the position of the bearings H and L should be such as to bring the shaft G, and consequently the cage formed by the arms K and bars N and the arms O, exactly in the center of the vessel, so that the strain caused by forcing the arms through the more or less tenacious clay is equalized by having a uniform
80 pressure on all sides. I have found that any departure from this central position of the mixers will throw an unequal strain on one part and soon destroy the machine.

What I claim as new, and desire to secure by Letters Patent, is—

In combination with a suitable frame, A, and clay-tank I, the vertical shaft G, provided with cross-arms P, cage N, provided with cross-arms O, the shaft G passing centrally through both sets of arms, and adapted to be
90 rotated in a direction opposite to that of the cage N, by means substantially as described, for rotating the cage and shaft, as hereinbefore set forth.

In testimony whereof I have hereunto set
100 my hand in the presence of two subscribing witnesses.

PETER WILKES.

Witnesses:

RICHARD S. CLINE,
COURTLAND S. ROBBINS,