

W. L. GREGG.  
Disintegrating Device for Pulverizing Clay.  
No. 214.384. Patented April 15, 1879.

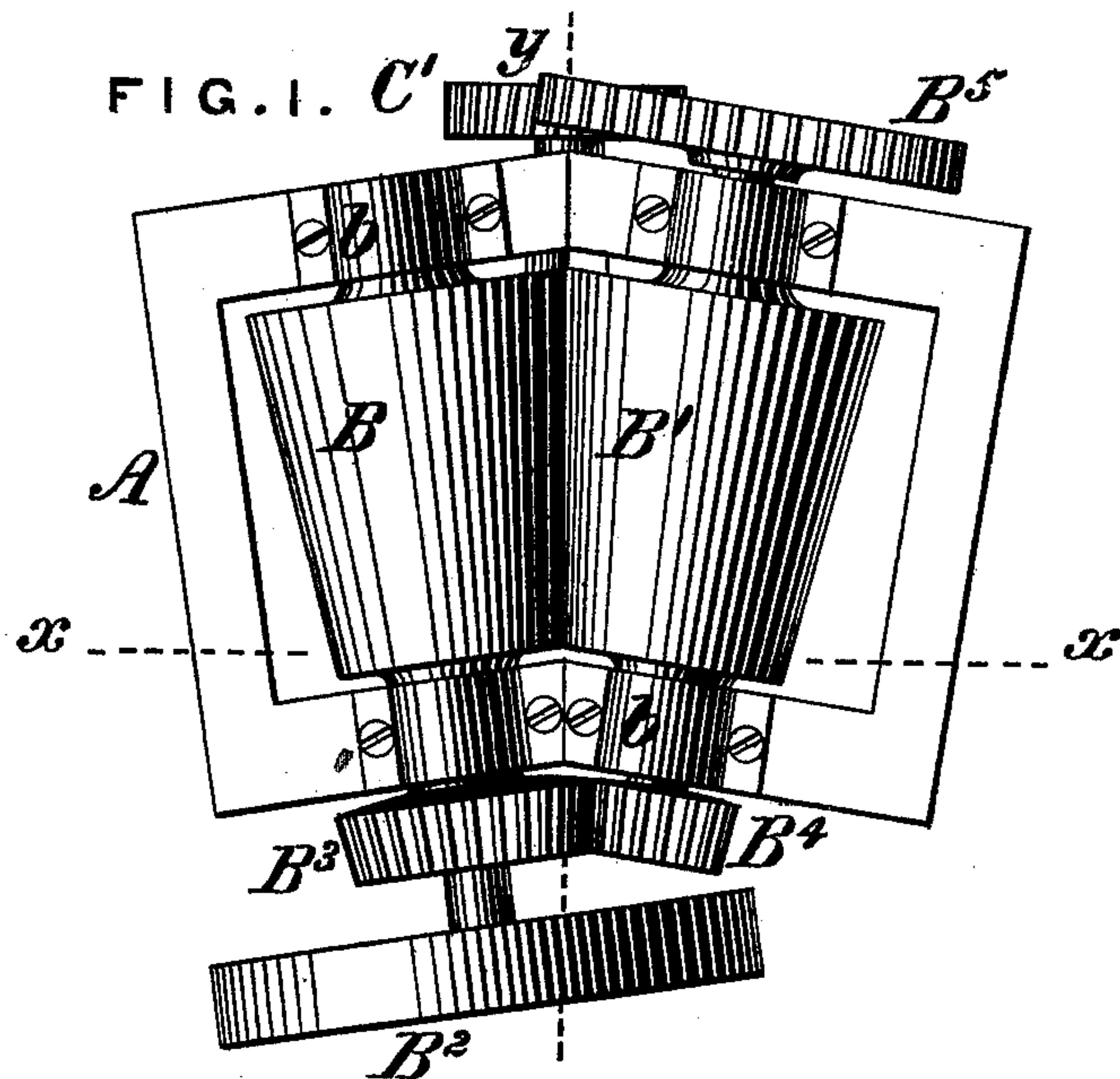


FIG. 2.

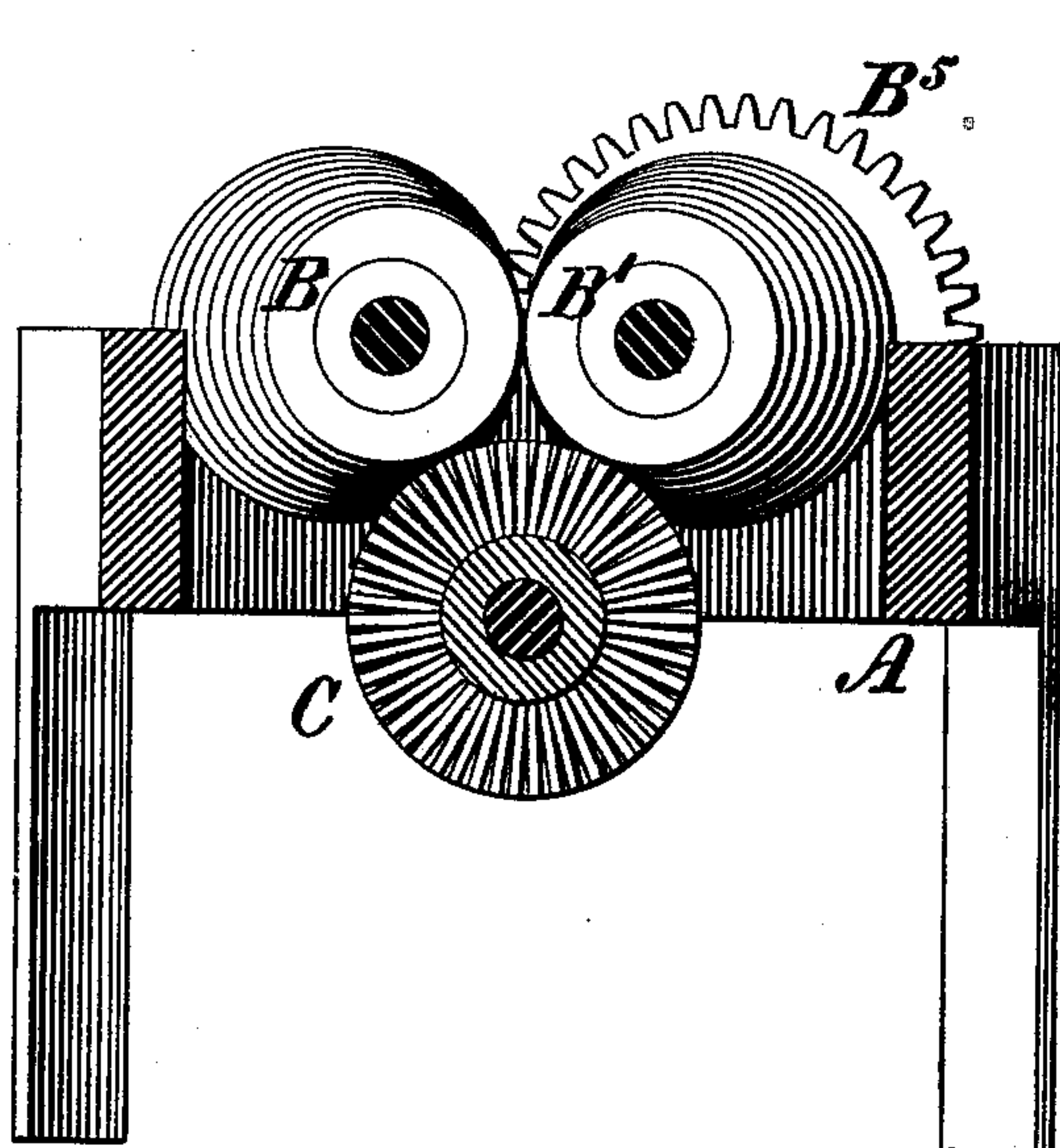
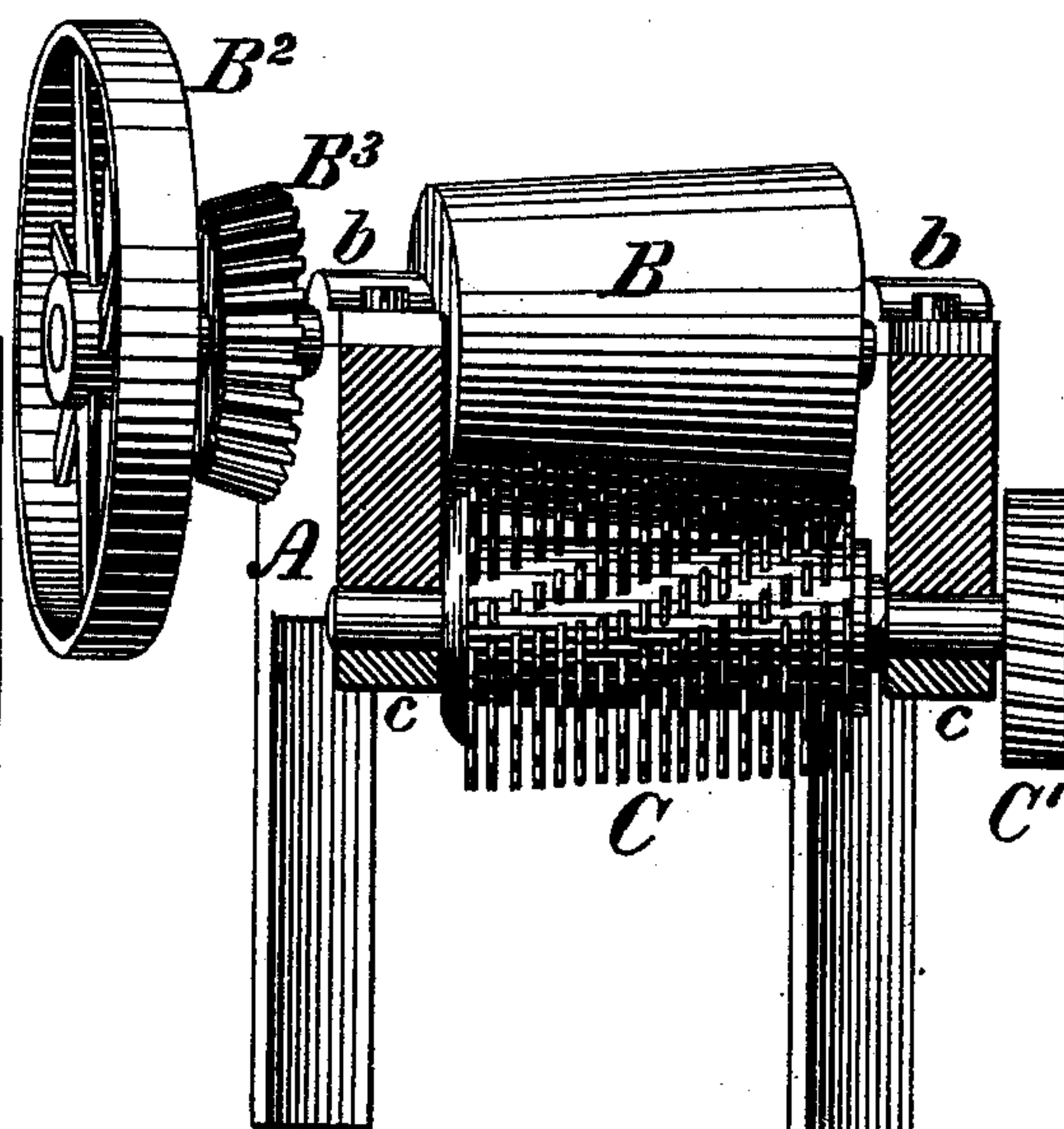


FIG. 3.



WITNESSES:

Harry Atwell.  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

WILLIAM L. GREGG, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN DISINTEGRATING DEVICES FOR PULVERIZING CLAY.

Specification forming part of Letters Patent No. 214,384, dated April 15, 1879; application filed June 26, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM L. GREGG, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Disintegrating Apparatus, of which the following is a specification.

My invention specially relates to apparatus employed in the manufacture of bricks for the preliminary treatment of clay before submitting it to the pressing operation, and is designed to provide improved means for thoroughly crushing and disintegrating the clay and converting it to the proper condition for being supplied to the molds.

To this end my improvement consists in the combination, with a pair of crushing-rollers, of a rotating brush or shaft armed with a series of flexible blades and placed beneath the rollers, so as to act upon the clay passing between them, as hereinafter more fully set forth.

My improvement is herein shown and described as applied to the apparatus for treating clay for which Letters Patent of the United States No. 66,488 were granted and issued to Isaac Gregg, under date of July 9, 1867, but is equally applicable to apparatus of other construction. Said patented apparatus consists of a pair of tapered or conical crushing-rollers, geared together, and serving, while disintegrating the clay, to throw off at their larger ends stones and other foreign matter which may be contained therein. I have, however, discovered in practice, in the use of this as well as other forms of disintegrating apparatus, that in many instances the clay will, on leaving the rollers, shoot out into long strips or bands in the manner of putty, in which condition it is not practicable to feed it to the molds.

By the use of my improvement I am enabled to thoroughly disintegrate the clay and supply it in a properly-comminuted state, as desirable for the formation of perfect bricks.

In the accompanying drawings, Figure 1 is a plan or top view of a disintegrating apparatus embodying my improvements; Fig. 2, a vertical transverse section through the same at the line *x x* of Fig. 1; and Fig. 3, a similar section at the line *y y* of Fig. 1.

To carry out my invention, I provide a substantial frame, A, to the upper portion of which are secured the bearings *b* of two crush-

ing-rollers, B B<sup>1</sup>. The rollers are shown as tapered or conical, as provided in the patent of Isaac Gregg, before referred to; but cylindrical rollers may be employed, if preferred, without departing from the substance of my invention.

The roller B is driven by a pulley, B<sup>2</sup>, secured upon its shaft, and in turn communicates motion to the roller B<sup>1</sup> at a different rate of speed through a gear, B<sup>3</sup>, meshing with a gear, B<sup>4</sup>, of different diameter, on the shaft of the roller B<sup>1</sup>.

A rotating brush, C, consisting of a series of elastic metallic blades or beaters secured radially and with their edges in the direction of rotation upon a shaft, is mounted in bearings *c* on the frame, in line with and immediately beneath the line of contact of the rollers B B<sup>1</sup>, and is rapidly rotated by a gear, B<sup>5</sup>, on the shaft of the roller B<sup>1</sup> meshing into a pinion, C', on the brush-shaft. The brush is, for convenience, rotated from one of the roll-shafts, but might receive its motion from a separate counter-shaft, if deemed desirable.

In the example shown, the blades of the brush are made of gradually-increasing length from one end of its shaft to the other, proportionately with and in reverse direction to the inclination of the conical rollers, so that the distance between its periphery and the peripheries of the rollers shall be uniform throughout its length; but where cylindrical rollers are employed the blades should be of the same length from end to end of the shaft.

In the operation of the apparatus the action of the rapidly-rotating brush-blades upon the clay, which falls upon them from the rollers above, completes and perfects the crushing operation, breaking up the bands or strips which may be produced by the rollers when the clay is very plastic, and reducing it to a thoroughly-comminuted state.

I claim as my invention and desire to secure by Letters Patent—

The combination, in an apparatus for disintegrating clay or other materials, of two crushing-rollers and a rotating brush, consisting of a series of elastic blades or beaters, secured radially upon a shaft beneath the crushing-rollers, substantially as set forth.

WM. L. GREGG.

Witnesses:

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