(No Model.)

G. J. FRITZ.

CLAY PULVERIZER.

No. 301,353. Patented July 1, 1884.

Fig. 1.

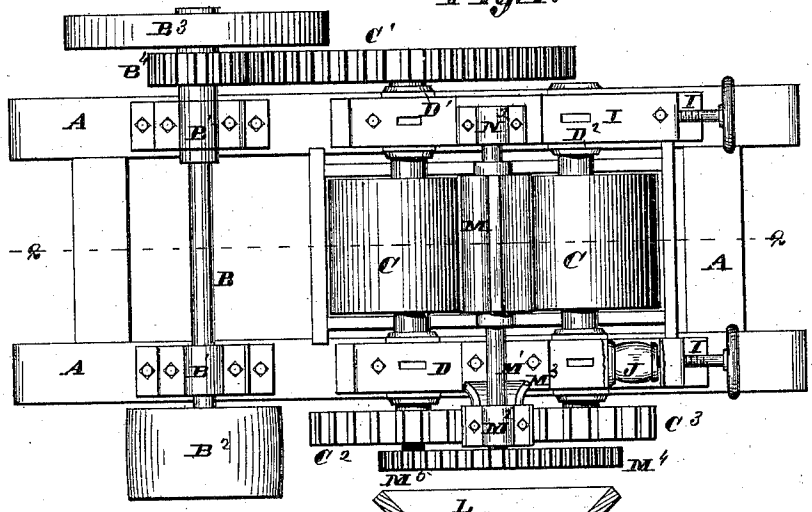


Fig. 2.

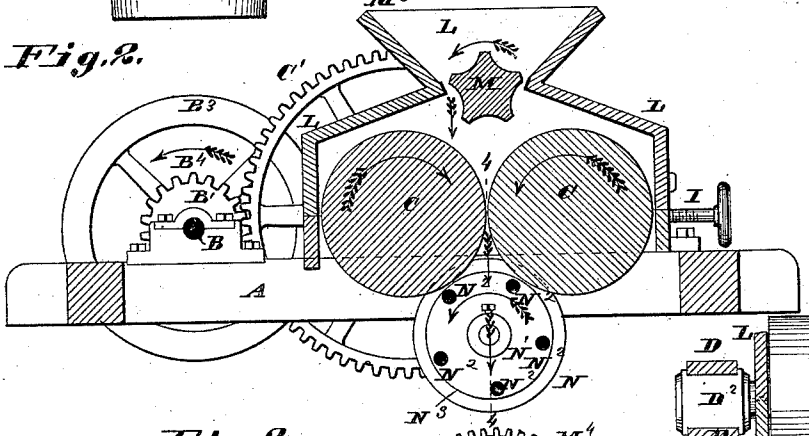


Fig. 4.

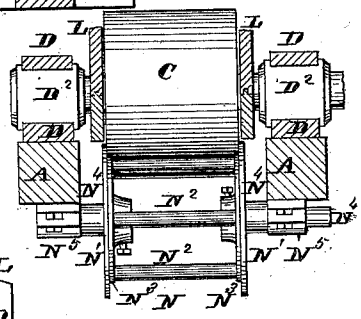
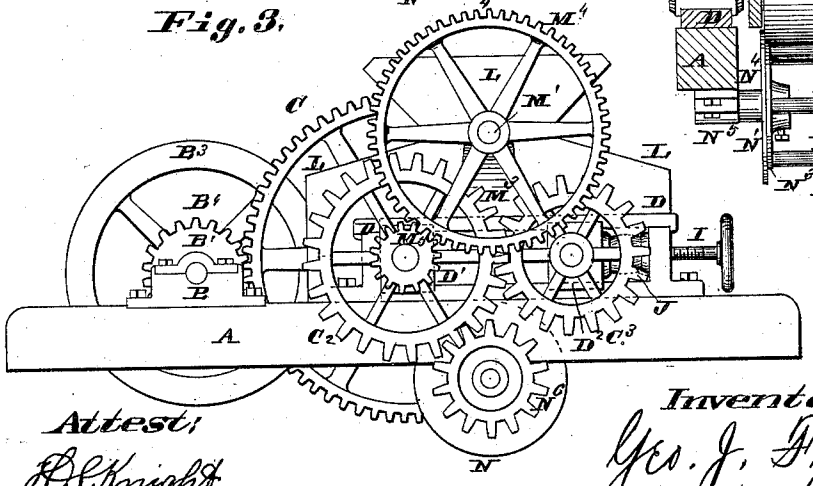


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE J. FRITZ, OF ST. LOUIS, MISSOURI.

CLAY-PULVERIZER.

SPECIFICATION forming part of Letters Patent No. 301,353, dated July 1, 1884.

Application filed April 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. FRITZ, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Clay-Pulverizers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a top view with the hopper removed. Fig. 2 is a vertical longitudinal section taken on line 2 2, Fig. 1, the hopper being in place. Fig. 3 is a side elevation; and Fig. 4 is a vertical transverse section taken on line 4 4, Fig. 2.

This invention relates to a machine for crushing and pulverizing clay; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the frame of the machine.

B represents the main driving-shaft, journaled in boxes B′, secured to the frame A. Secured to this shaft is a pulley, B^2, to receive power, a fly-wheel, B^3, and a pinion, B^4. The pinion meshes into a cog-wheel, C′, on one end of one of the crushing-rollers C, on the other end of which is a cog-wheel, C^2, meshing into a similar wheel, C^3, on the other crushing-roller. The wheel C^3 is preferably smaller than that C^2, so that the rollers will be turned at different speeds, which results in more effectually pulverizing the clay, as there is not only a crushing, but also a rubbing, pressure between the rollers. This I claim to be new and of my invention in a clay crushing or pulverizing machine, though I am well aware that differential rollers have been used in other machinery. The gudgeons of the rollers are journaled in boxes D′ D^2, fixed in a frame, D, supported and secured to the frame A. The boxes D^2 are movable, so that this roller may be adjusted to or from the other by set-screws I, passing through the rear ends of the frame D. I prefer to place elastic cushions J between the inner ends of the screws I and the boxes D^2.

L represents a hopper placed over the rollers, in which is a feed-roller, M, on a shaft, M′, passing through the sides of the hopper and journaled in boxes M^2, supported by standards M^3, secured to the frame D. The roller M is preferably corrugated, as shown in Fig. 2, so as to take better hold of the clay and force it downward to the rollers C, and this roller M is turned by means of a cog-wheel, M^4, on one end of its shaft, which is engaged by a pinion, M^5, on one of the rollers C. As the clay falls from the rollers C in a sheet, it is pulverized by a lantern-wheel, N, consisting of disks N′ and connecting rods or bars N^2. (See Fig. 4.) The disks have shoulders N^3, that fit up close against the rollers. The clay falls through this wheel, as shown by the arrows in Fig. 2, and is finely pulverized by being struck by the rods or bars. This wheel has gudgeons N^4 journaled in boxes N^5, secured to the under side of the frame A, and is driven by a cog-wheel, N^6, on one of the gudgeons, engaged by the wheel C^2 on one of the rollers C.

I claim as my invention—

1. In a clay-pulverizer, in combination with the two crushing-rollers, the pulverizing-wheel consisting of two disks connected by rods or bars, as set forth.

2. In a clay-pulverizer, the combination of the hopper, corrugated feed-roller, frames A and D, fixed and adjustable crushing-rollers, set-screws, cushions between the set-screws and the boxes of the adjustable roller, and pulverizing-wheel, consisting of two disks having shoulders N^3 and connected by rods or bars, the whole being operated by suitable gearing, and arranged substantially as and for the purpose set forth.

GEO. J. FRITZ.

In presence of—
GEO. H. KNIGHT,
SAML. KNIGHT.