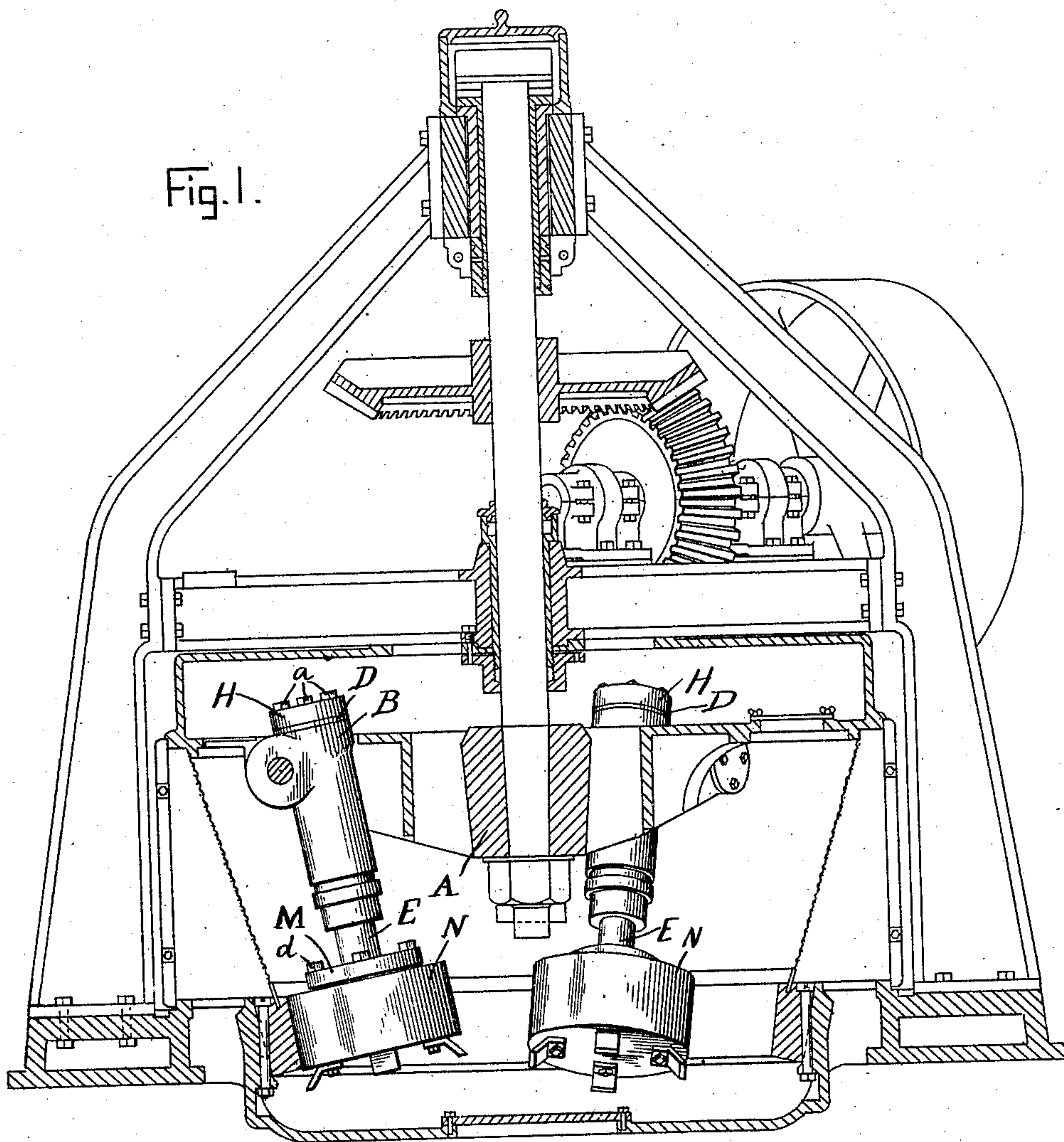


986,756.

G. L. PRATT.
PULVERIZING MACHINE.
APPLICATION FILED NOV. 10, 1908.

Patented Mar. 14, 1911.
2 SHEETS—SHEET 1.



Witnesses

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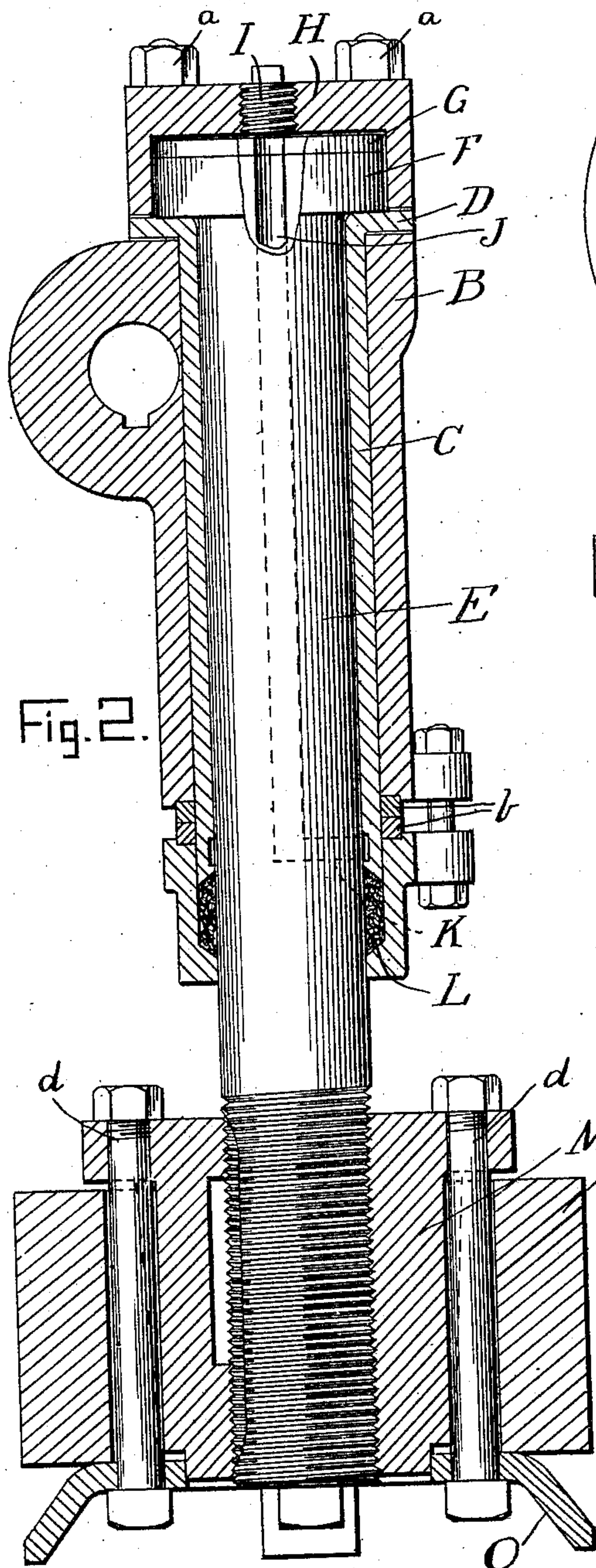


Fig. 2.

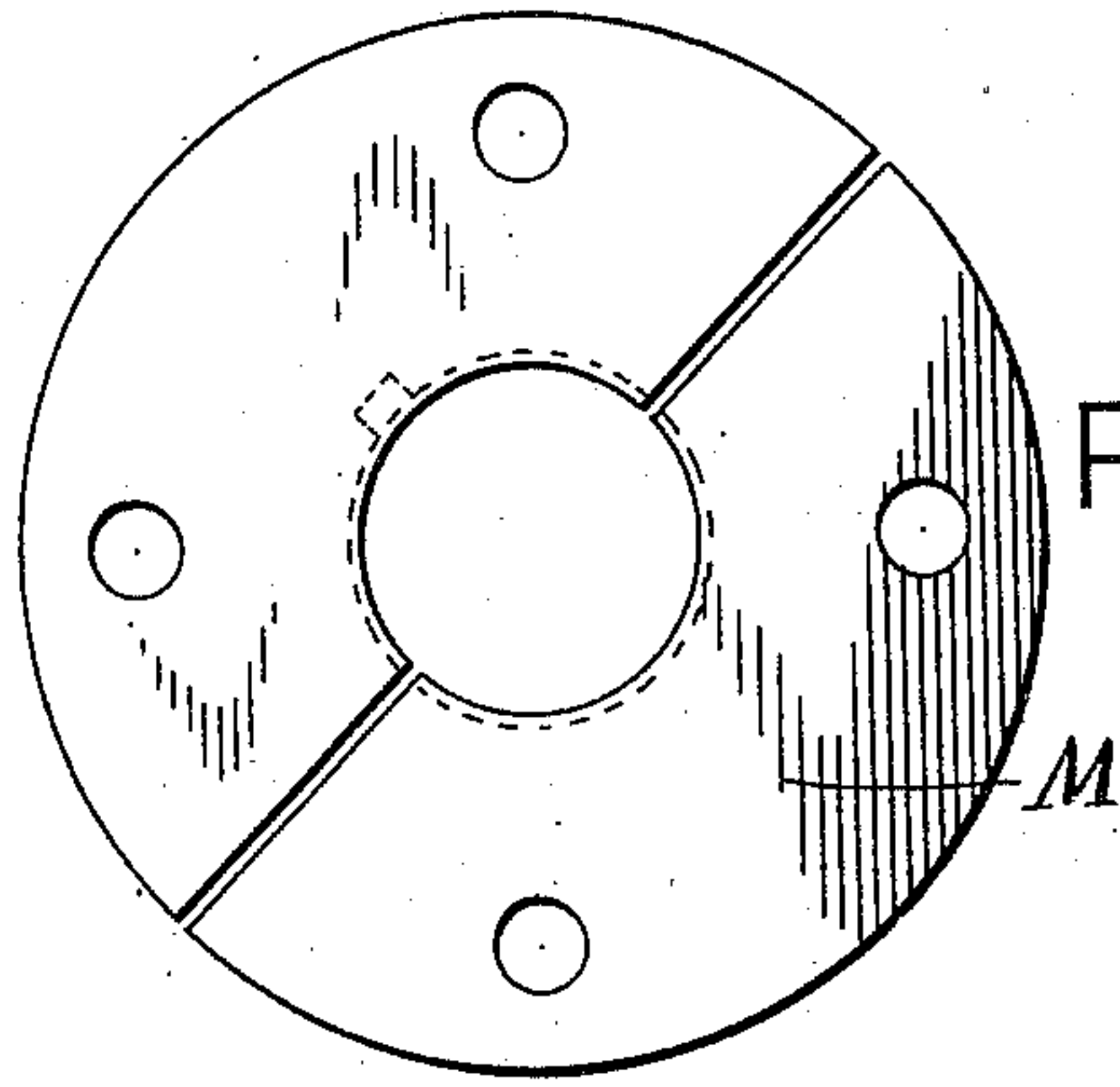


Fig. 5.

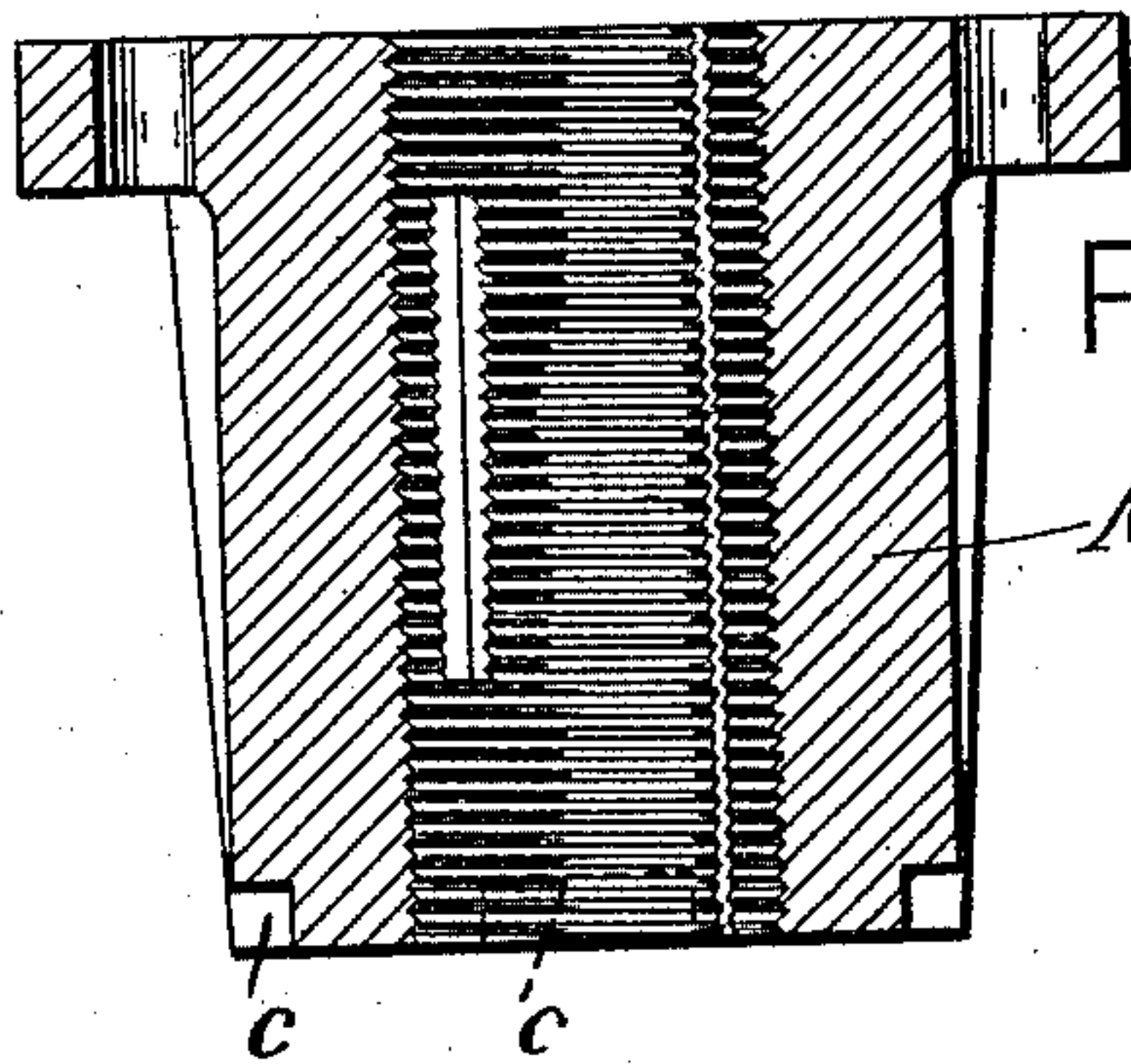


Fig. 4.

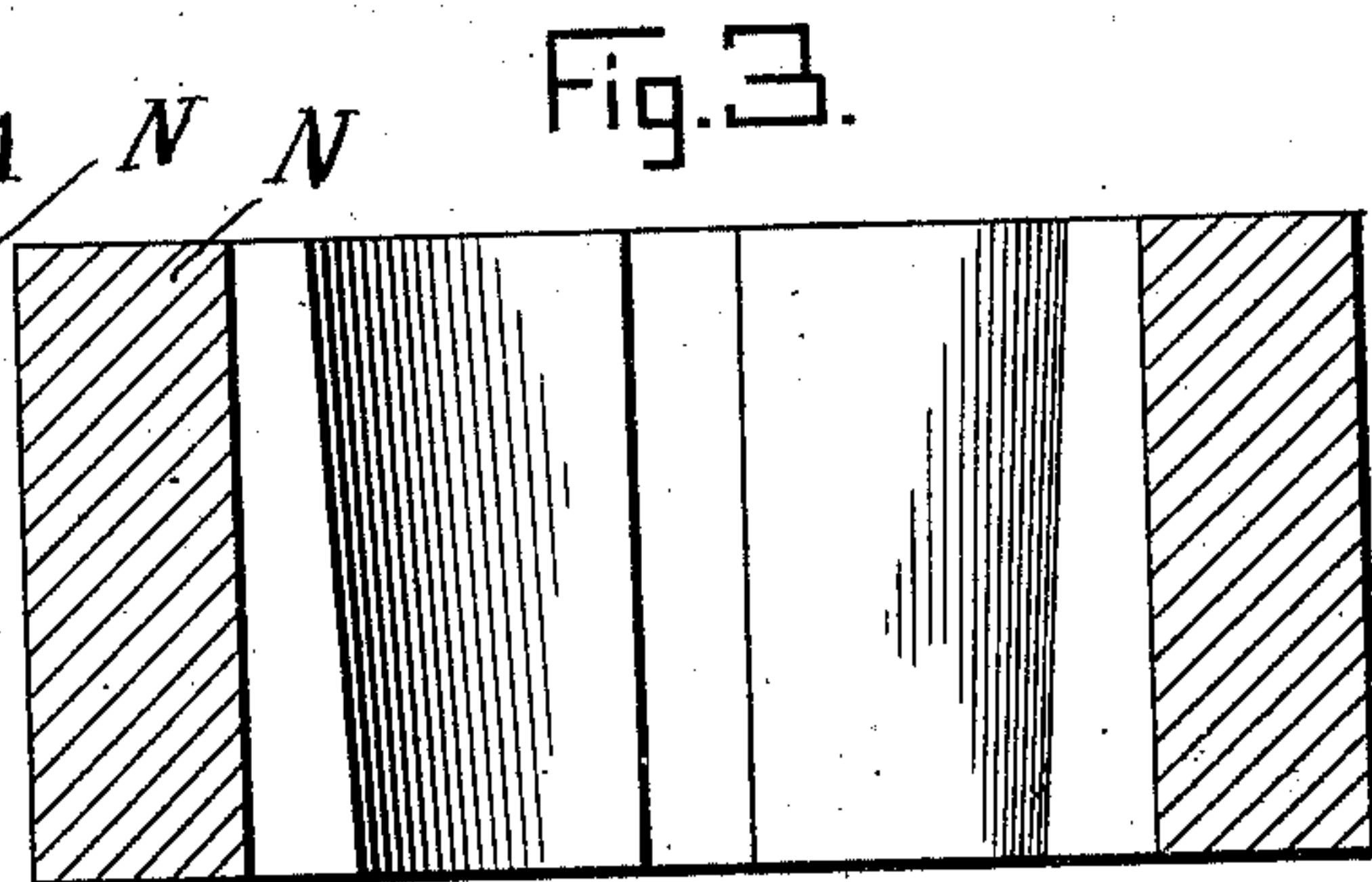


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE L. PRATT, OF DECATUR, GEORGIA.

PULVERIZING-MACHINE.

986,756.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed November 10, 1908. Serial No. 461,909.

To all whom it may concern:

Be it known that I, GEORGE L. PRATT, a citizen of the United States, residing at Decatur, in the county of Dekalb and State of Georgia, have invented certain new and useful Improvements in Pulverizing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to pulverizing-machines, and more particularly to that type of machine in which is employed a roll-table carrying a plurality of roll-shafts, to each roll-shaft, there being secured a pulverizing-roll adapted to rotate against and engage a ring, the disintegration taking place between the ring and aforementioned rolls, all as illustrated, for instance, in my previous Patent No. 826,062, July 17, 1906.

An object of the invention is to so construct and arrange the roll-shaft and its co-operating elements as to permit of a ready renewal of any of the wearing parts.

With this in view, my invention comprehends the improved form of construction described in detail hereinafter, pointed out in the appended claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section, partly in elevation, of a pulverizing machine equipped with my improvements. Fig. 2 is a vertical section of the roll-shaft carrying the roll, and the swinging-box in which the shaft is supported. Fig. 3 is a detail view of a roll as used in my improved form of construction, and Fig. 4 is a detail view of the roll-cone to which the roll is adapted to be secured. Fig. 5 is a top plan view of the same.

Referring more particularly to the drawings, in which like reference characters indicate corresponding parts in the several views, A designates the roll-table as commonly employed in this class of machines, and illustrated in my previous patent already referred to. Supported upon the roll-table A, is the swinging-box B, within which is mounted the bushing C of bronze, or other suitable material. The bushing C is flanged at its upper end and extends over the upper surface of the swinging-box B, the said flange being designated by D.

Carried by the swinging-box B, and engaging the bushing C, is the roll-shaft E

which is provided with a head F, extending partially over the flange D, as shown clearly in Fig. 2.

G is a friction disk of bronze, or other suitable material, positioned between the head F of the roll-shaft, and the cap H, which is secured to the swinging-box B by suitable bolts *a*.

I is a screw-plug in the cap H, being removable to permit of supplying the bearing with lubricant when necessary.

Directly beneath the plug I, and extending through the roll-shaft, is an opening J which terminates in a right-angled outlet K, whereby the lubricating substance is fed to the exterior of the lower portion of the roll-shaft. An ordinary stuffing-box L is provided, surrounding the roll-shaft, and fibrous rings *b* are supplied between the gland L and the swinging-box B, whereby the lubricant is prevented from escaping through any possible defects in the bushing C. Gaskets are also secured both above and below the flange B of the bushing, to prevent escape of the lubricant at this point.

When fresh lubricant is put into the roll-shaft, it goes automatically to the bottom of the bearing through the opening J and outlet K, and by the action of centrifugal force, produced by the rotating of the roll-table, the lubricant will be thrown away from the center of the machine and will climb around the exterior of the shaft, remaining continuously surrounding the head F and in contact with the friction disk G, with which the head of the shaft engages, and upon which upward thrust is exerted by the action of the machine.

It is to be noted that I so arrange the parts of the bearing of my improved machine, that I may take advantage of the inclination of the roll-shaft in order to feed the lubricant continuously and keep it constantly in contact with the parts upon which comes the greatest wear.

A further advantage of the present construction results from the method of securing the bushing C in place, whereby it is free for expansion and contraction, the degree of which, of course, will be different from that of the other metal, of which the swinging-box is constructed. This expansion and contraction is permitted without allowing any of the parts to become loose or get out of their proper positions to any extent whatsoever.

Threaded upon the lower end of the roll-shaft is the cone M, provided with cut-away portions *c* at its lower edge, for a purpose presently to be mentioned. N designates
5 the roll which surrounds the cone M, and is secured thereto by means of bolts *d*, or other suitable attaching devices. Seated within the cut-away portions *c*, and abutting the roll M are the plows O, which are secured
10 in position under the heads of the bolts *d*. Thus it will be seen that I have devised a simple and efficient means for securing the roll tightly upon the shaft, and at once, attaching the plows readily and securely in
15 their proper operative positions.

I have shown and described the invention here in its preferred embodiment, although various changes and alterations are possible, and may be adopted without, in any way,
20 departing from the essential features or spirit of my invention.

What I desire to secure by Letters-Patent, and claim is:

In a pulverizing machine of the character described, the combination with a roll-shaft, 25 of a sleeve screw-threaded upon the end of said shaft, and having a downward and inward inclined cone-shaped portion, a flange at the top of said cone-shaped portion, cut-away portions at the bottom of said sleeve, 30 a roll surrounding the sleeve, plows positioned in the aforementioned cut-away portions, and bolts for holding the roll and plows in engagement with the sleeve.

In testimony whereof, I affix my signature, in the presence of two subscribing witnesses. 35

GEO. L. PRATT.

Witnesses:

J. F. GIBBONS,
E. F. KILLIAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
