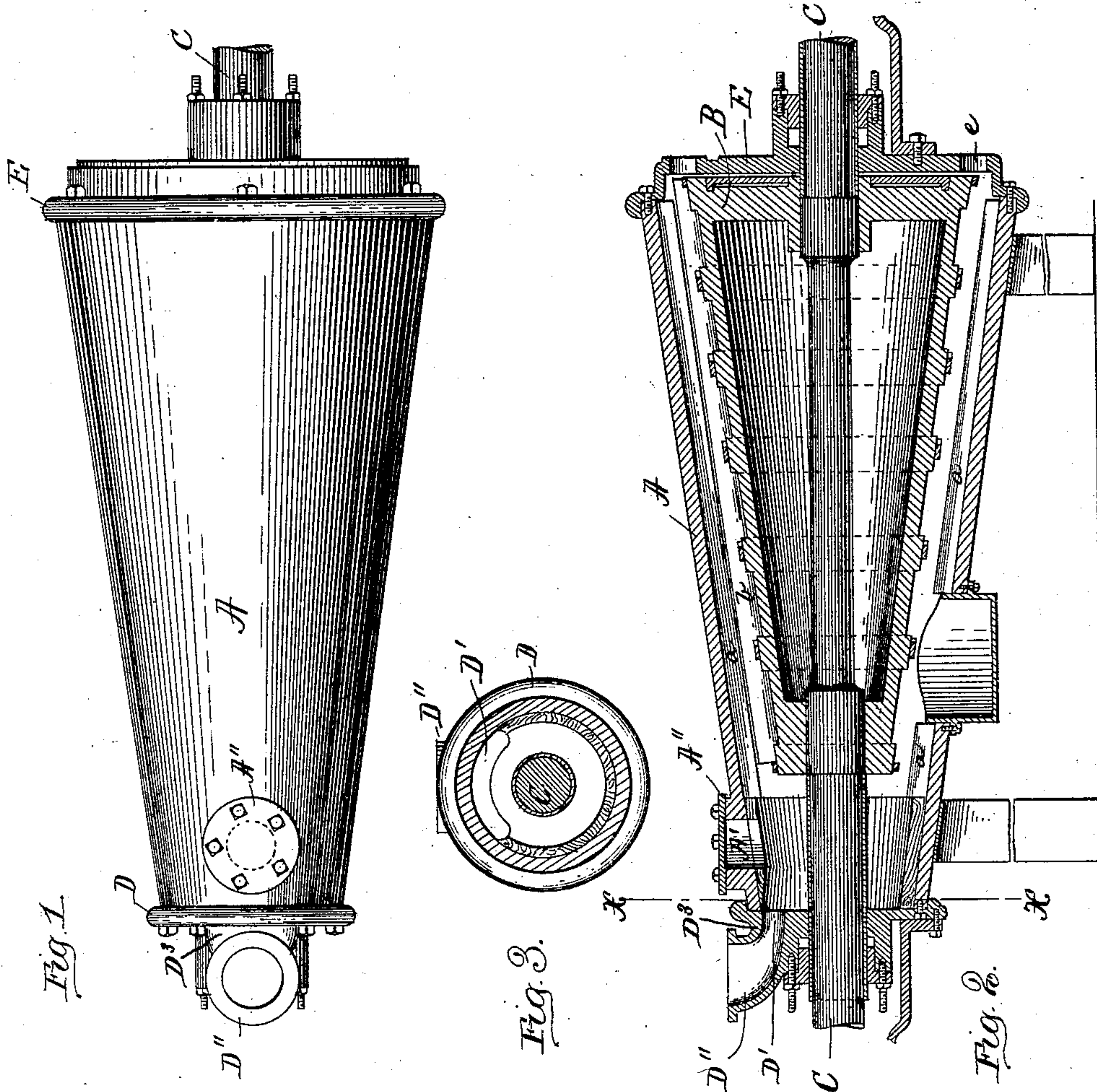


(No Model.)

E. W. BARTON.
JORDAN ENGINE FOR GRINDING PULP.

No. 444,644.

Patented Jan. 13, 1891.



Witnesses.
Geo. W. White.
Emma J. Smith

Inventor.
Edwin W. Barton.
by Alban Andrieu
his atty.

UNITED STATES PATENT OFFICE.

EDWIN W. BARTON, OF LAWRENCE, MASSACHUSETTS.

JORDAN ENGINE FOR GRINDING PULP.

SPECIFICATION forming part of Letters Patent No. 444,644, dated January 13, 1891.

Application filed September 12, 1889. Serial No. 323,749. (No model.)

To all whom it may concern:

Be it known that I, EDWIN W. BARTON, a citizen of the United States, and a resident of Lawrence, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Jordan Engines for Grinding Pulp, of which the following, taken in connection with the accompanying drawings, is a specification.

10 This invention relates to engines for grinding pulp, and has for its object to provide novel means for evenly feeding the material, avoiding the formation of strings, and preventing clogging.

15 To accomplish this object my invention consists in the features of construction herein-after described and claimed, reference being made to the accompanying drawings, in which—

20 Figure 1 represents a plan view of the invention. Fig. 2 represents a central longitudinal section of the same; and Fig. 3 represents a cross-section on the line X X, shown in Fig. 2.

25 Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

30 In the drawings, A represents a conical shell or case, as usual provided with circumferential knives or blades *a a* and intermediate wood fillings, as is common in machines of this kind.

35 B is the tapering roll, having secured to its circumference the knives or blades *b b* and intermediate wood fillings in the usual manner.

40 The roll B is located, as usual, within the shell A upon a shaft C, which is journaled in the heads D and E, which latter are secured in the usual manner, respectively, to the small and large ends of the shell or case A, as shown in Figs. 1 and 2.

45 In a ratio as the knives or blades *a a* and *b b* wear off the roll B is moved, by means of the usual well-known adjusting mechanism, toward the smaller end of the shell, such mechanism being, however, not shown in the drawings, as it does not form a part of my present invention.

50 To simply and efficiently deliver the stock horizontally into the grinding apparatus and

approximately into one-half of the smaller end of the shell or case to present the stock more readily to the action of the cutters, I provide the peculiar construction and arrangement of parts, which I will now describe. 55

The circular head D carries at its center a stuffing-box, through which passes the shaft C, and between such stuffing-box and the periphery of the head the latter is formed with a segmental slot D', the upper and lower edges of which, as shown in Fig. 3, are concentric with the axis of the shaft. The length of this segmental slot is approximately equal to one-third the circumference of the shell or case at its smallest end, and though the space between the stuffing-box and the periphery of the head D is comparatively small the formation of the delivery-orifice as a segmental slot provides for the requisite flow of stock without making such orifice a complete circle. A vertical pipe D'', formed as a cylinder at its upper end, is fashioned or formed at its lower portion into a knee, which is expanded laterally and formed into a segmental neck D³, 65 coinciding with the segmental slot D'. I have shown the pipe and knee D'' D³ formed integral with the head D, but this is not indispensable. 70

By the construction shown and described 80 the stock is delivered into approximately one-half of the upper part of the smallest end of the conical shell or case, and consequently the stock is instantly and effectually presented to a wide range of the cutters or knives. The construction of the conducting-pipe and the delivery-slot provides for a free flow of the stock and prevents strings and fibers from sticking to the extremities of the cutters or knives and thereby clogging them. 90

In practice I may retain the usual perforation A' as a hand-hole. In which event I provide it with a removable cover A''.

I am aware that a vertical pipe has been provided with a knee at its lower end communicating with an orifice formed as a circle in the smallest end of the conical shell of a pulp-grinder, as in English Patent No. 140 of 1866, and such therefore I disclaim. 95

By my specific construction of feed or delivery slot in the small end of the Jordan engine the material or stuff is evenly fed there- 100

to, and I effectually avoid the creation of strings and prevent the clogging which occurs when the stuff is fed through a circular hole.

Having thus described my invention, what I claim is—

The combination, with the conical shell A, the rotating conical cutter-roll B, and the horizontal shaft C of a Jordan engine, of the small head D, having a stuffing-box and
10 formed between its periphery and said box with the segmental delivery-slot D', concentric with the axis of the shaft, and the vertical pipe D'', cylindrical at its top and having the laterally-expanded segmental knee D³,

conforming to and connecting with the segmental slot, to deliver the pulp-stock horizontally into approximately one-half of the upper side of the smaller end of the conical case, substantially as described and shown.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 20th day of July, A. D. 1889.

EDWIN W. BARTON.

Witnesses:

ALBAN ANDRÉN,

MATTIE JACKSON.