

No. 742,227.

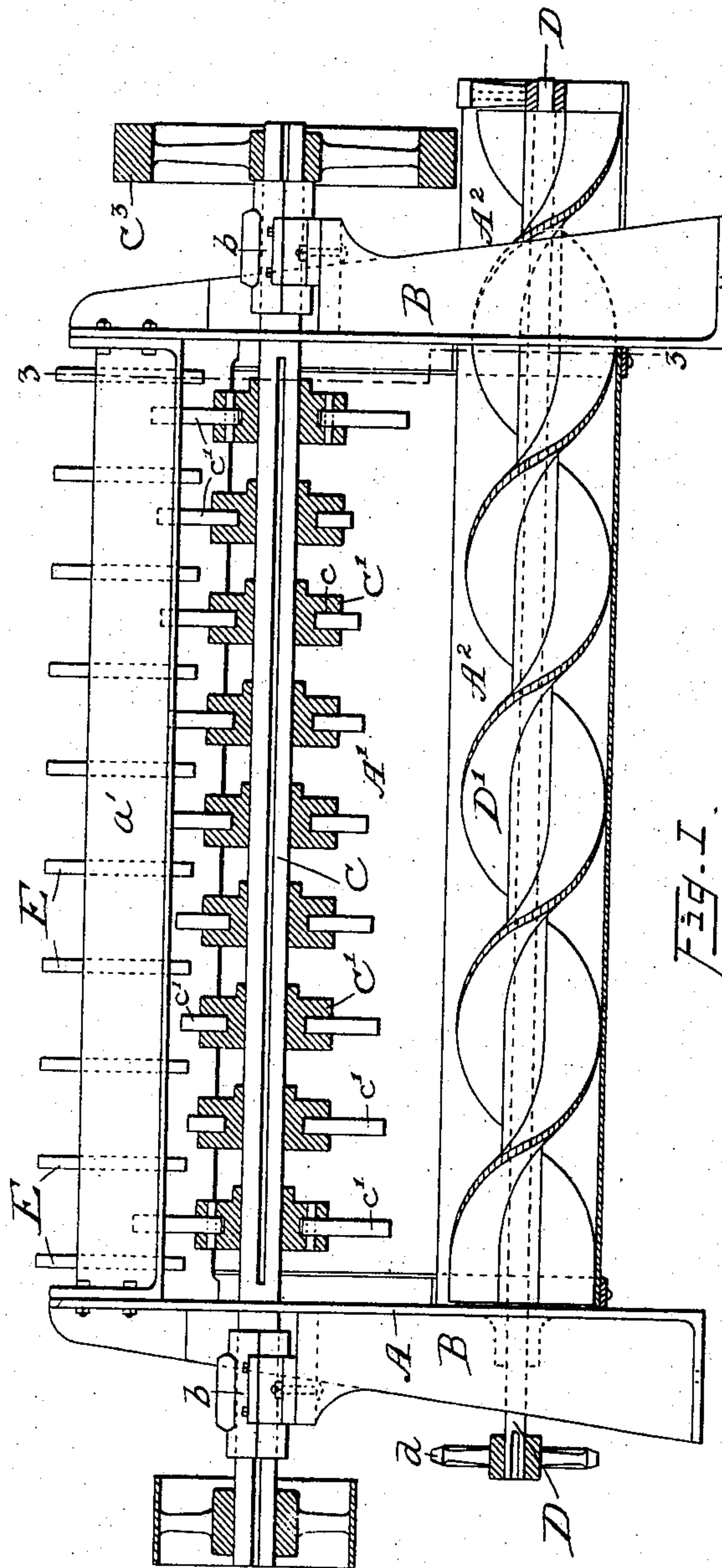
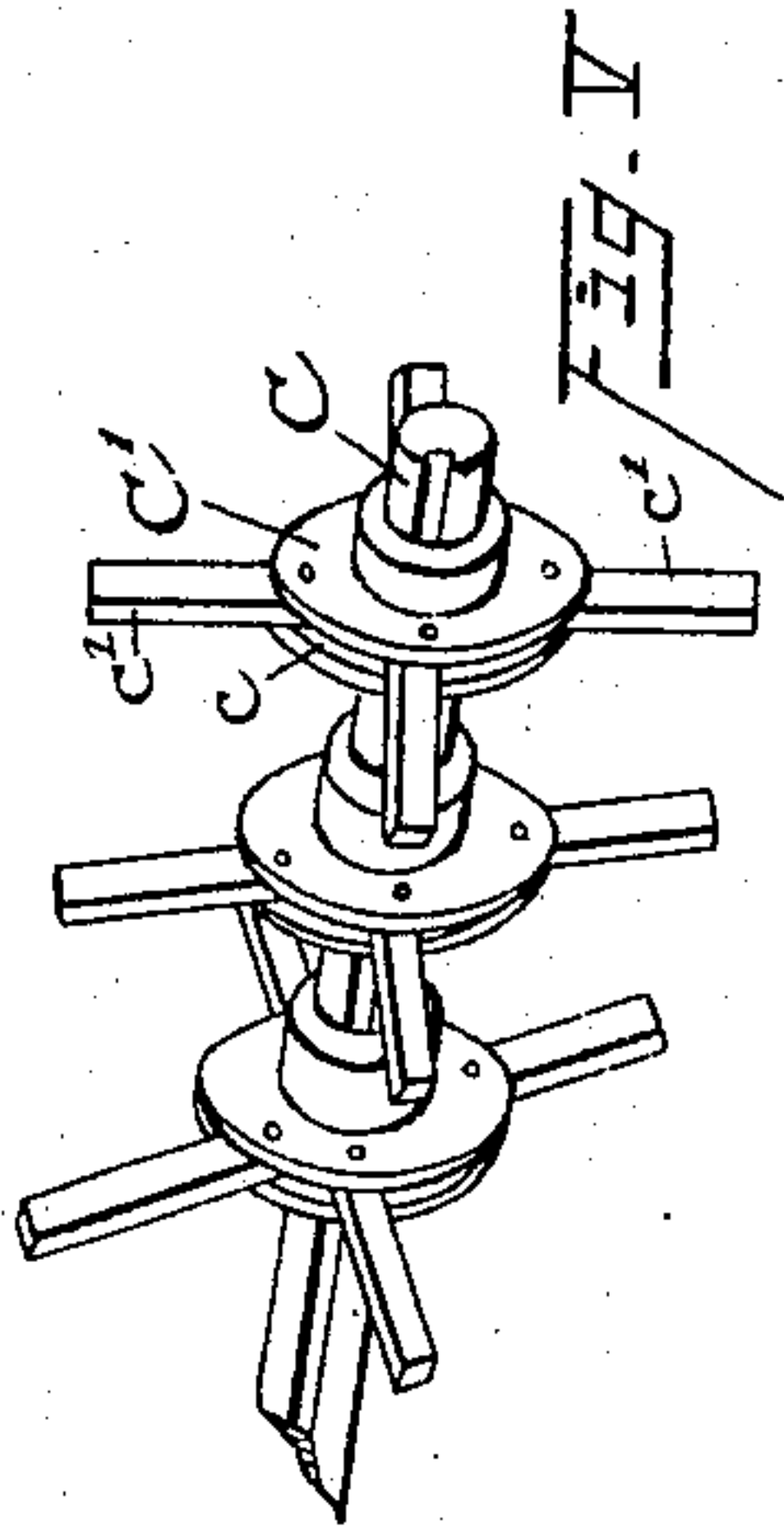
PATENTED OCT. 27, 1903.

E. S. PECK.  
DISINTEGRATOR.

APPLIOATION FILED DEC. 1, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:

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G. W. Saywell.

*Inventor.*

Ernest S. Peck  
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Attorney.

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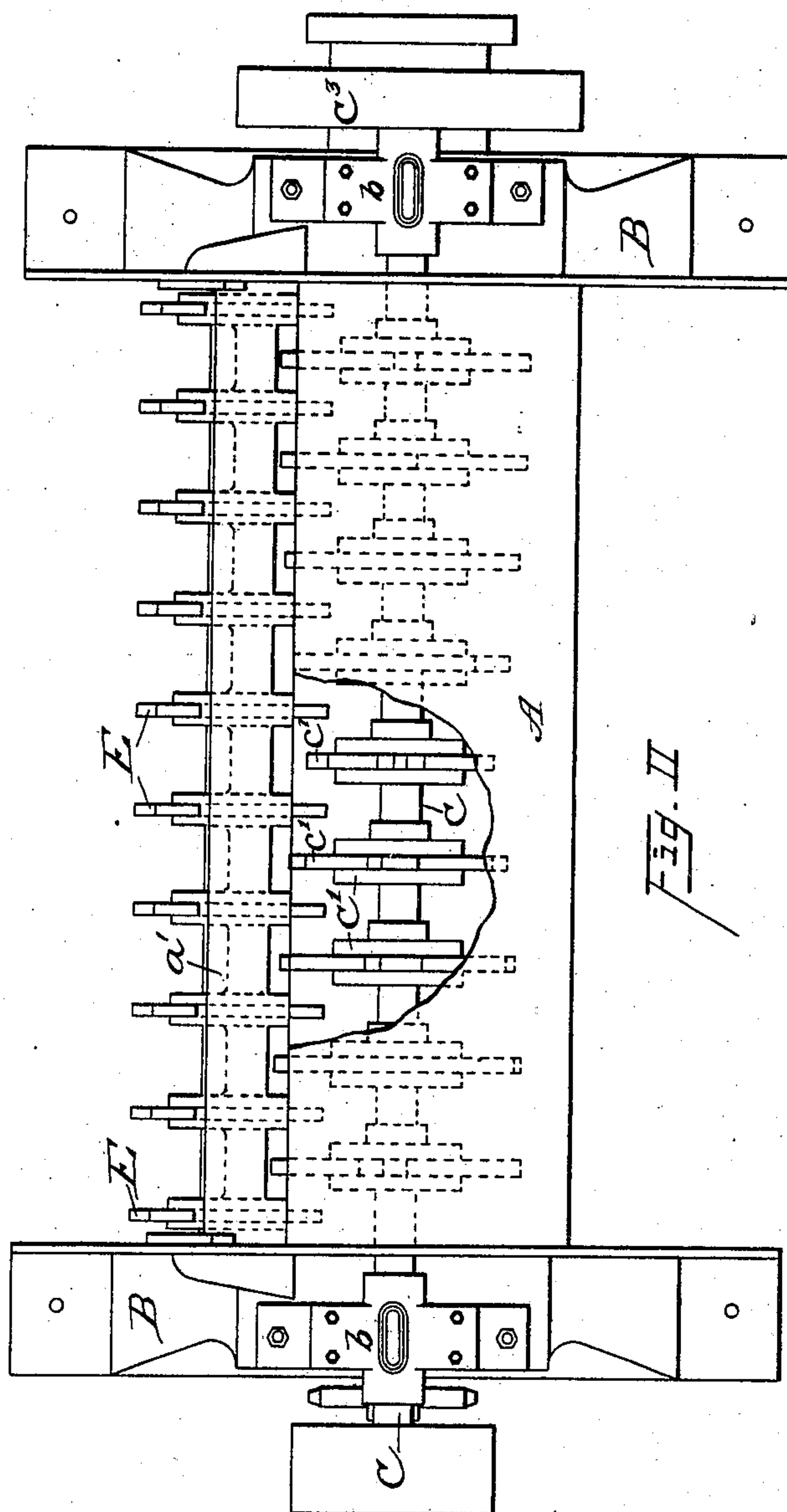
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3 SHEETS—SHEET 2.



Witnesses:

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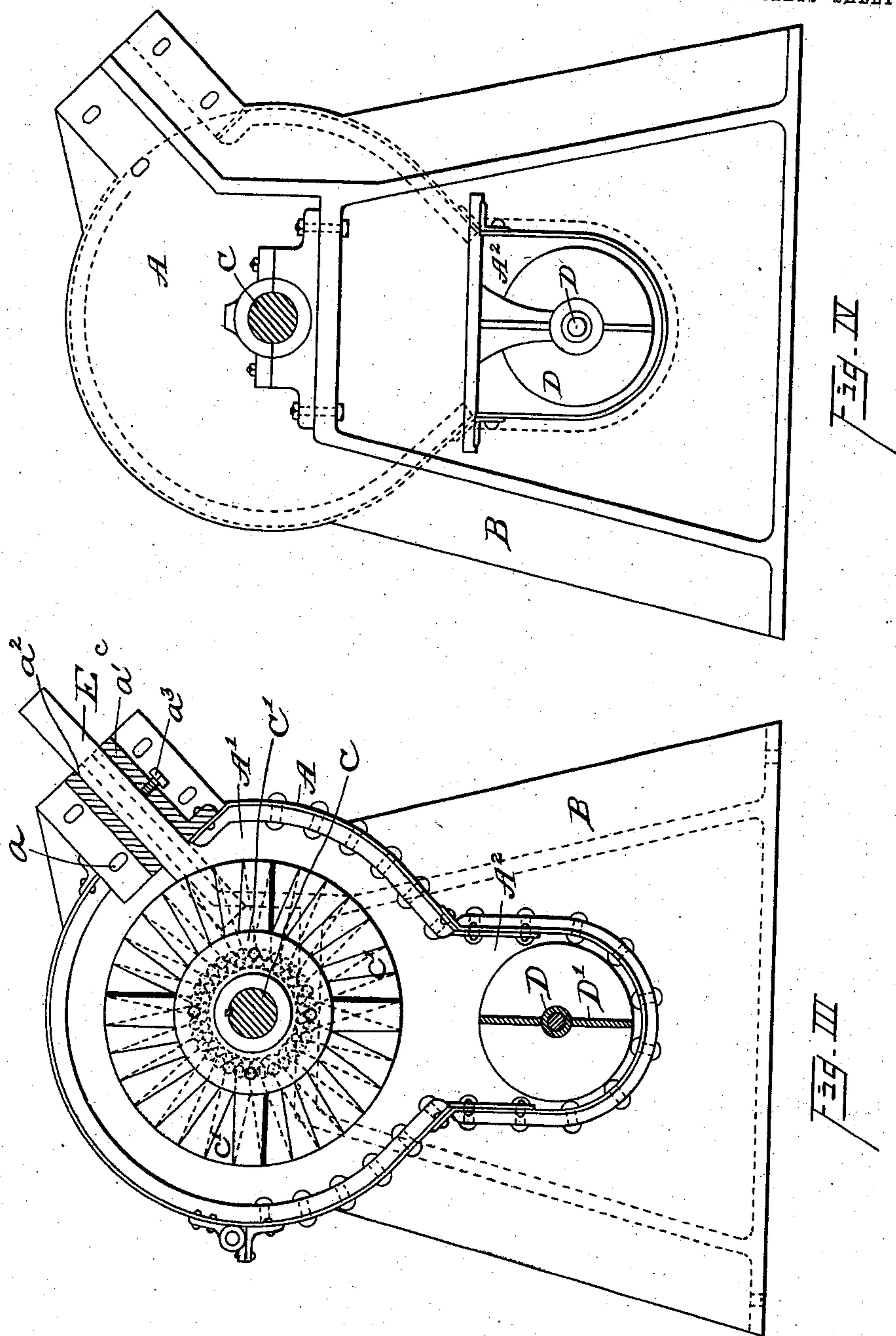
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NO MODEL.

3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

ERNEST S. PECK, OF NEWBURG, OHIO.

## DISINTEGRATOR.

SPECIFICATION forming part of Letters Patent No. 742,227, dated October 27, 1903.

Application filed December 1, 1902. Serial No. 133,380. (No model.)

*To all whom it may concern:*

Be it known that I, ERNEST S. PECK, a citizen of the United States, and a resident of Newburg, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Disintegrators, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to means for breaking up, crushing, or disintegrating different material—such as fertilizer, compressed tankage from garbage-reducing apparatus, &c., and particularly for tankage compressed into sheets or slabs.

The invention has for its object the carrying out of such disintegrating function in an economical and efficacious manner; and it consists of means hereinafter fully described, and specifically set forth in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of the various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a machine embodying my invention, shown partly in vertical longitudinal section and partly in front elevation. Fig. II represents a plan view of said machine with a part of the top casing broken away to disclose the interior construction. Fig. III represents a vertical transverse section of the machine, taken upon the plane represented by line 3 3, Fig. I. Fig. IV represents an end elevation, and Fig. V a detail perspective view, of a part of the shaft and disintegrating-arms forming a part of said machine.

A suitable casing A of cylindrical form, closed at both ends, is supported upon suitable standards B B. This casing forms an upper disintegrating-chamber A' and a lower receiving-chamber A<sup>2</sup>. Passing through the middle of chamber A', through the ends of the casing, and journaled in suitable bearings b b on the standards B B is a shaft C, Figs. I and II. Upon this shaft are keyed a series of hubs C' C', &c. Each hub is formed with a peripheral groove c, in each of which is

pivotaly mounted a group of disintegrating-arms c'. Each such group consists of four arms. These arms have a free swinging movement which permits them to stand out radially from the shaft, as shown in the drawings, when said shaft is rapidly rotated. Adjacent groups of arms have an angular relationship relatively to each other, such that the arms have a progressive angular displacement—that is, looking at the end of such shaft the arms are staggered, as shown in Figs. III and V, the angularity of successive arms increasing regularly from one end of the shaft to the other. As shown, the arms form four series longitudinally of the shaft.

The receiving-chamber A<sup>2</sup> projects beyond the end of the machine, as shown in Fig. I, such projecting end being open. In the chamber, journaled in suitable bearings, is a shaft D, which carries a screw D', which when rotated is adapted to discharge material from said chamber laterally through the open and projecting end thereof. A sprocket-wheel d is secured to one end of said shaft and is driven by suitable means.

An opening a is formed in the upper part of the casing for permitting the introduction of the sheets of compressed tankage into the disintegrating-chamber. A casting a' is secured to the casing below such opening and is provided with a series of inclined sockets a<sup>2</sup>, passing therethrough. In these apertures are seated a series of bars E, projecting into said disintegrating-chamber. These bars are adjustable longitudinally and securable by means of set-screws a<sup>3</sup>. The inner projecting ends of these bars form an adjustable support or feed-table for the compressed tankage while being disintegrated and project far enough into said chamber so that the plane of their supporting-surfaces is intersected by the disintegrating-arms when revolved.

The shaft C is driven by means of a suitable driving-pulley C<sup>3</sup>.

In operating the above-described device shaft C and arms c' are rapidly rotated and the discharging-screw D' also rotated at the proper speed. The sheets are now fed into the opening, so as to rest upon the support formed by bars E and to intersect the path of the arms c'. These arms successively and rapidly strike the sheet and disintegrate it.



The disintegrated material falls into the receiving-chamber, from whence it is discharged laterally by the screw D'. The arrangement whereby the arms are caused to strike successively permits the disintegration to be effected with less power than is required to effect the same when the arms or a part of them are, as has heretofore been done, caused to strike simultaneously.

- 10 Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed provided the means stated by any one of the following  
15 claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention—

- 20 1. In a disintegrating device, the combination with a disintegrating-chamber provided with longitudinally-adjustable supports for the material to be disintegrated, of revoluble disintegrating-arms having a progressive angular displacement and passing through said  
25 supports, each arm being capable of free swinging movement in the plane of its revolution.

2. In a disintegrating device, the combina-

tion with a disintegrating-chamber provided with longitudinally-adjustable supports for the material to be disintegrated, of a shaft independent of said supports and provided with revoluble disintegrating-arms having a progressive angular displacement and passing through said supports, each arm being capable of free swinging movement in the plane of its revolution.

3. In a disintegrating device, the combination of a disintegrating-chamber provided with longitudinally-adjustable supports for the material to be disintegrated, revoluble disintegrating-arms having a progressive angular displacement and passing through said supports, each arm being capable of free swinging movement in the plane of its revolution, a chamber for receiving such disintegrated material, and means for automatically removing the material from such receiving-chamber.

Signed by me this 22d day of November, 1902.

ERNEST S. PECK.

Attest:

D. T. DAVIES,  
G. W. SAYWELL.