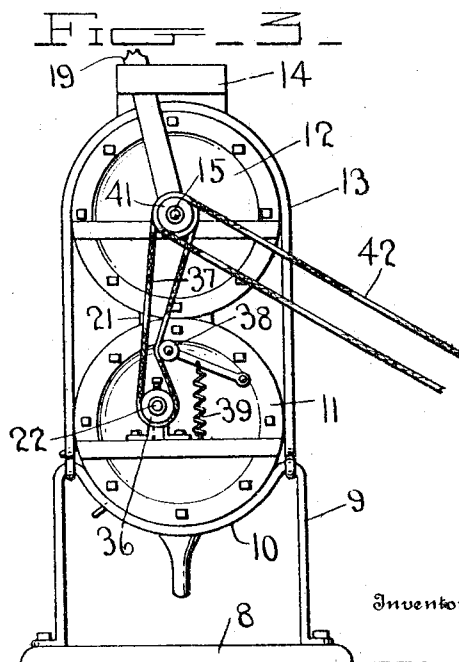
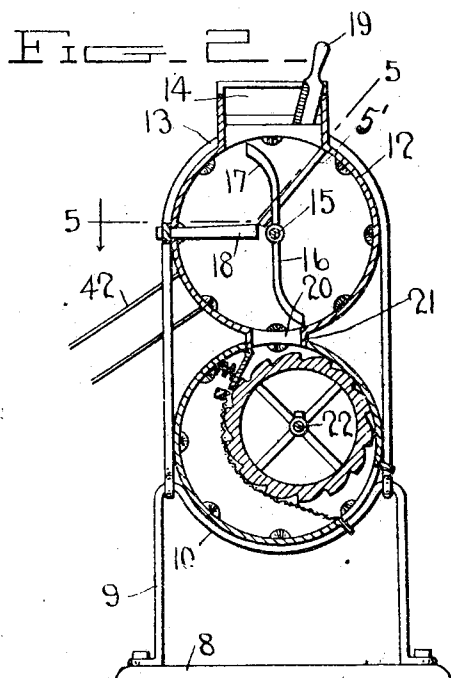
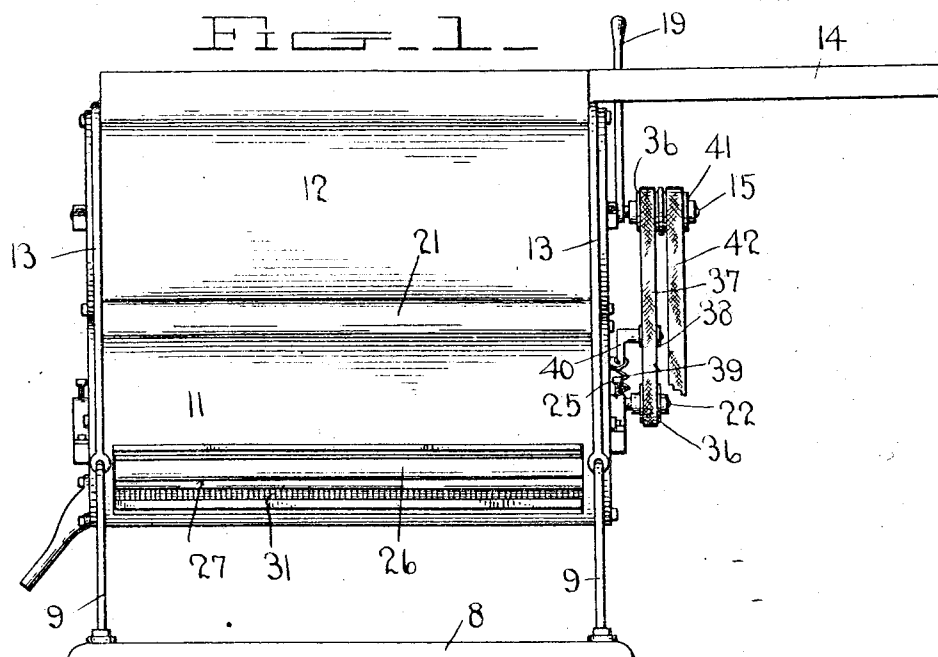


1,058,010.

Patented Apr. 1, 1913

2 SHEETS-SHEET 1.



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SHREDDER.
APPLICATION FILED JUNE 9, 1909.

1,058,010.

Patented Apr. 1, 1913.

2 SHEETS-SHEET 2.

FIG. 4

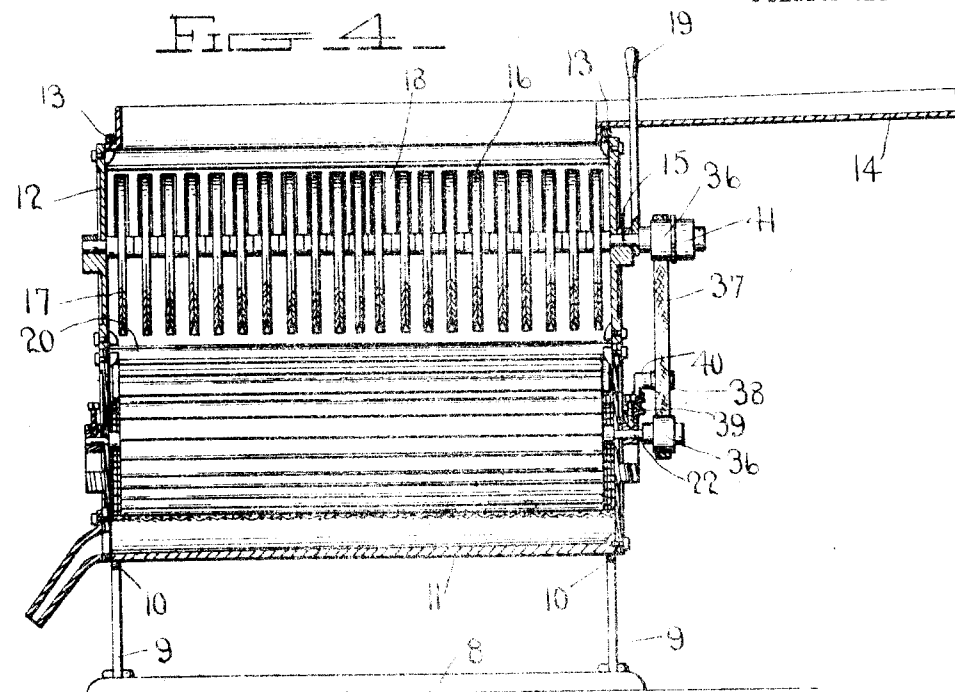
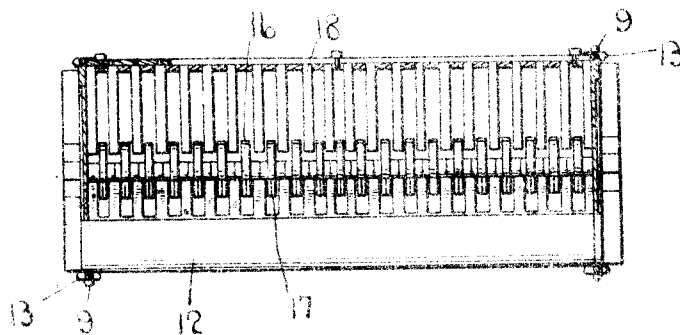


FIG. 5



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UNITED STATES PATENT OFFICE.

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SHREDDER.

1,058,010.

Specification of Letters Patent.

Patented Apr. 1, 1913.

Application filed June 9, 1909. Serial No. 501,068.

To all whom it may concern:

Be it known that I, JOHN WILLIAMS, a citizen of the United States, residing at Colt, in the county of St. Francis, State of Arkansas, have invented certain new and useful Improvements in Shredders; 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.

The invention relates to a shredder and more particularly to the class of shredding machines for sugar cane delivered thereto.

The primary object of the invention is the provision of a shredder of this character in which the sugar-cane is primarily cut in predetermined lengths before being fed into the machine and then separated into shreds to insure subsequently a more complete extraction of the saccharine juice therefrom.

A further object of the invention is the provision of a machine of this character in which the superposed cylinders are supported upon a stand to which are connected swinging loops embracing the ends of the cylinder whereby the latter may be readily removed from the stand and separated from each other so that they can be readily cleaned or repaired if found necessary.

A still further object of the invention is the provision of a shredder of this character which is simple in construction, thoroughly reliable and efficient in operation, and inexpensive in the manufacture.

With these and other objects in view the invention consists in the construction, combination, and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings, which disclose the preferred form of embodiment of the invention to enable those skilled in the art to practice the same, and as brought out in the claim hereunto appended.

In the drawings:—Figure 1 is a side elevation of the shredder constructed in accordance with the invention. Fig. 2 is a vertical transverse sectional view. Fig. 3 is one end elevation of the shredder. Fig. 4 is a longitudinal sectional view. Fig. 5 is a sectional view on the line 5—5 of Fig. 2.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

Referring to the drawings by numerals 8

designates a base on which is mounted a stand comprising vertical supporting uprights 9, the same having leg portions united by concaved cross connecting pieces 10 in which rests a removable cylinder 11 upon which is superimposed a cylinder 12, both being of approximately the same size, and hinged to these cross pieces 10 are swinging loops or yoke members 13 which latter serve to securely mount the cylinders in proper working relation to each other and upon the cross connecting pieces 10 of the leg portions of the stand, the loop terminals being formed with eyes 13' loosely engaging the said pieces 10 of the stand whereby the loop members may be removed or disengaged from the ends of the cylinders to permit the operation of the latter so that they can be readily cleaned or repaired when desired.

The shredding cylinder 12, at its top is provided with a mouth portion coextensive with the length of the cylinder and communicates with a feed trough 14, in which latter is adapted to be placed sugar-cane to be delivered into the shredding cylinder. Centrally journaled in the ends of the cylinder 12 is a rotatable shaft 15, which latter extends longitudinally through said cylinder and upon this shaft is fixedly mounted a plurality of oppositely extending radially disposed spaced cutting or chopping arms 16, the outer free extremities being curved as at 17, to more readily grab the material fed from the trough 14, of the machine.

Projecting inwardly in the cylinder 12, from one side thereof are a plurality of cutter blades or teeth 18, the same being arranged in a single row and spaced from each other in a horizontal plane to intersect the spaces between the cutter arms 16, so as to cooperate therewith for shredding the sugar cane when delivered from the feed trough 14, within the shredding cylinder.

Loosely connected to the shaft 15, exteriorly at one end of the cylinder 12, is a reciprocating manually operable knife bar or lever 19, which latter extends upwardly through a suitable opening in the trough 14, into the path of the sugar-cane deposited onto the trough so that said sugar-cane may be cut into predetermined lengths prior to its deposit within the shredding cylinder.

In the bottom of the cylinder 12, is formed a discharge opening 20, establishing communication between said cylinder and the lower cylinder 11 so as to permit the delivery of

the shredded sugar-cane from the shredding cylinder to the lower cylinder 11, and this opening is surrounded by a depending flange 21, which latter intersects the lower cylinder 5 so as to form a tight joint between the cylinders at the opening 20, therebetween so as to prevent the escape of shredded material when being delivered from one cylinder to the other.

10 Fixed to the shafts 15 and 22 exteriorly of the cylinders are belt pulleys 36, over which is trained a driven band or belt 37, and this belt or band is held taut upon the pulleys by a belt tightener 38, controlled by 15 a spring 39, fixed to the pivotal arm 40 of the tightener and to the cylinder 11. On the shaft 15 adjacent its pulley 36, is a main driving pulley 41 over which travels a driving belt 42, the latter operated from any 20 suitable source of motor power to actuate the shredder.

By arranging the blades 18 in a horizontal position within the cylinder with the ends thereof in close proximity to the shaft 15 25 carrying the chopping arms 16, the material to be operated upon is held in a proper posi-

tion to be shredded in a practical manner, the inclined comb 5' extending from one side of the cylinder operating to guide the said material to the said arms 16 above the shaft 15.

What is claimed is:--

The combination with a cylindrical casing and a hopper therefor, of a shaft mounted in the casing, means for rotating the shaft, 35 a plurality of radially extending chopping arms carried by the shaft, blades secured to the casing and projecting horizontally therefrom and between which the arms are adapted to pass, and an inclined comb connected 40 to the wall of the casing adjacent the hopper and extending to a point adjacent the free ends of the blades, for directing the material into proper position for the cutting action of the chopping arms.

45 In testimony whereof, I affix my signature, in presence of two witnesses.

JOHN WILLIAMS.

Witnesses:

JAMES J. GRAY,
EDWARD GRAY.