No. 729,239. PATENTED MAY 26, 1903.

L. D. SWART.

CORNSTALK SHREDDER.

APPLICATION FILED AUG. 4, 1902.

NO MODEL.

Fig. 1.

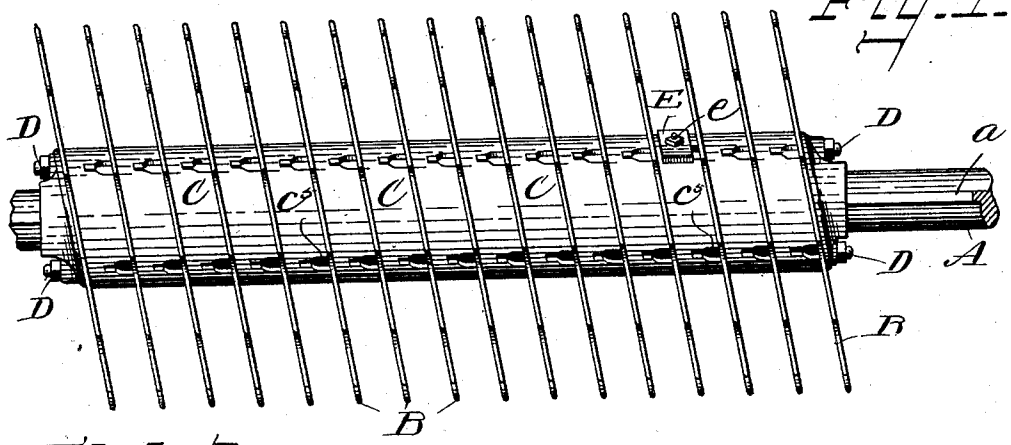


Fig. 2.

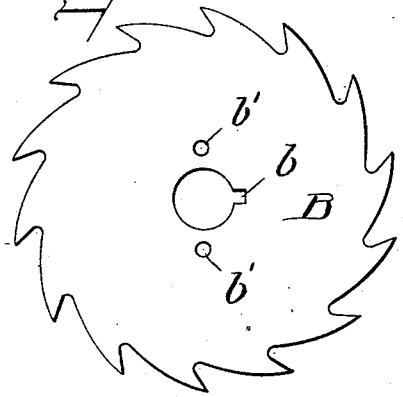


Fig. 3.

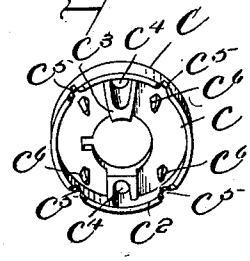


Fig. 4.

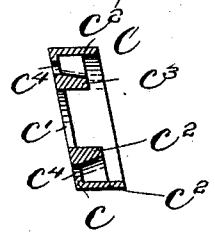


Fig. 7.



Fig. 5.



Fig. 6.

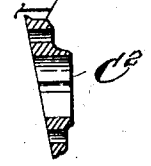
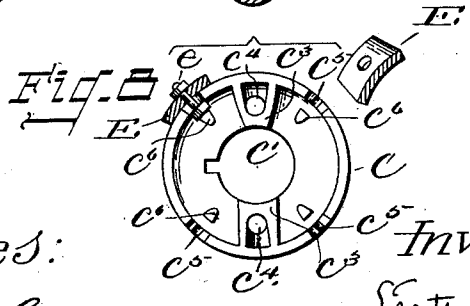


Fig. 8.



Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 729,239. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

LESTER D. SWART, OF AUBURN, NEW YORK, ASSIGNOR TO A. W. STEVENS COMPANY, OF MARINETTE, WISCONSIN.

CORNSTALK-SHREDDER.

SPECIFICATION forming part of Letters Patent No. 729,239, dated May 26, 1903.

Application filed August 4, 1902. Serial No. 118,266. (No model.)

To all whom it may concern:

Be it known that I, LESTER D. SWART, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Cornstalk-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.

My invention relates to cornstalk-shredders; and it consists in an improved rotating knife or cutter for shredding the stalks.

In the drawings I have shown the best form in which I have contemplated embodying my invention, and my said invention is disclosed in the following description and claims.

In the accompanying drawings, Figure 1 is a view in elevation of my improved shredder-knife. Fig. 2 is a view of one of the toothed disks. Fig. 3 is a view of one of the retaining-disks. Fig. 4 is a sectional view of the same. Figs. 5 and 6 are sectional views of the end retaining-disks. Fig. 7 is a section of the knife-shaft, and Fig. 8 is a view illustrating the balance weight-plates.

My improved shredding-knife consists of a series of toothed disks set angularly of the shaft, as shown in Fig. 1. The shaft A is formed with a spline a, and the toothed disks B are provided with an opening b, loosely fitting the shaft. These toothed disks are also provided with openings b' for the tie-rods D. These toothed disks are spaced upon the shaft by retaining-disks C. These retaining-disks are each composed of the disk portion c, having the aperture c', through which the shaft A passes, and the flange c^2, set at an angle to the disk c. The disk is also provided with a lug c^3, the inner edges of which are fitted to engage the shaft and hold the disk in the position desired. These lugs are also perforated at c^4 to receive the tie-rods D. The flange c^2 is also provided with recesses c^5, which are larger at the edges of the flange and have the inner part of the opening considerably reduced, forming, when placed against the toothed disk, an opening of keyhole form. Beneath each of these openings the disk portion c is provided with the projections c^6, having a flat face on the side toward the flange c^2. I also provide the end retaining-disks C' C^2, which have an opening to receive the shaft A and two smaller openings to receive the tie-rods D. The tie-rods D are preferably provided with threaded portions and a nut at each end. The parts when assembled form a rotary shredding-knife or cutter of the general appearance shown in Fig. 1.

In operating cutters of this character it is desirable that the same shall be so balanced as to revolve smoothly and steadily. In order to provide for balancing the knife or cutter, I employ weight-plates E, which are secured in the keyhole recesses or openings c^5 by bolts e. The head of the bolt is inserted through the larger part of the opening, and the plate and bolt are then moved to bring the bolt into the smaller part of the recess, in which position the head of the bolt will rest upon the flat face of the projection c^6. The nut of the bolt e is then tightened, securing the plate in place.

There are four of the recesses c^5 in the flange c^2 of each retaining-disk, and by means of the plates E the cutter can be easily balanced for each running.

I do not desire to be limited in all particulars to my exact constructions, as individual features may have their forms somewhat varied without departing from the principle of my invention.

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

1. A shredding-knife or cutter comprising among its members, the shaft, the toothed disk, and the retaining-disks, having the peripheral flange, and the lugs extending from the flange to the shaft and means for holding the toothed and retaining disks together upon the shaft, substantially as described.

2. A shredding-knife or cutter comprising among its members, the toothed disks, the retaining-disks having a peripheral flange and perforated lugs extending from said flange to the shaft, and the tie-rods passing through the said perforated lugs, substantially as described.

3. In a shredding-knife or cutter, the combination with the shaft and toothed disks, of

the retaining-disks having notched peripheral flanges, means for holding the toothed and retaining disks together on the shaft and the weight-plates and securing-bolts, substantially as described.

4. In a shredding-knife or cutter, the combination with the retaining-disk having the notched peripheral flange and the projections beneath said notches, of the weight-plate and securing-bolt, substantially as described.

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

LESTER D. SWART.

Witnesses:
NELLIE RADCLIFFE,
ED STATEN.