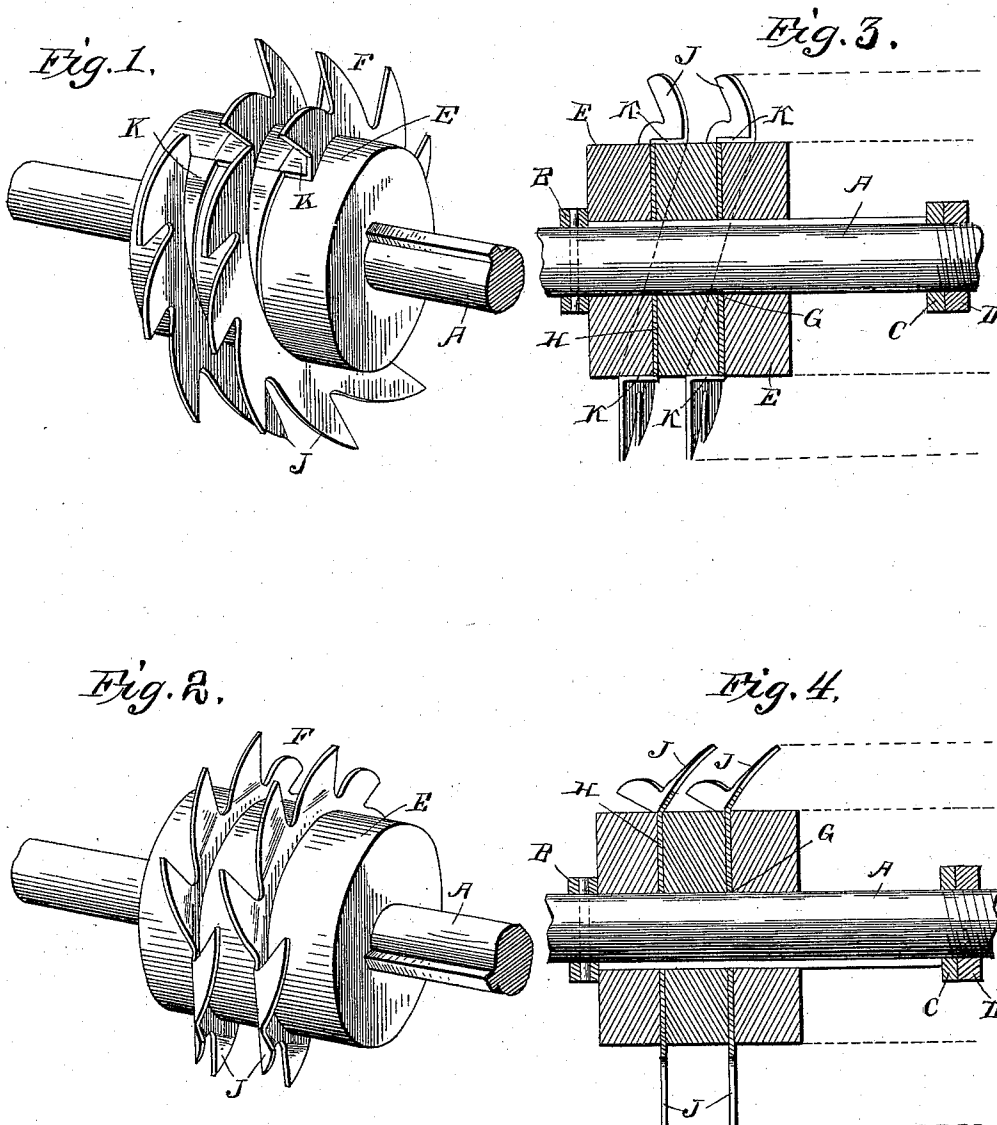


(No Model.)

G. W. PACKER.
FODDER SHREDDER.

No. 547,282.

Patented Oct. 1, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. PACKER, OF ROCK FALLS, ASSIGNOR TO THE KEYSTONE
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FODDER-SHREDDER.

SPECIFICATION forming part of Letters Patent No. 547,282, dated October 1, 1895.

Application filed July 17, 1895. Serial No. 556,280. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. PACKER, a citizen of the United States, residing at Rock Falls, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Fodder-Shredders; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to fodder-shredders; and it consists entirely in improvements in the fodder-shredding cylinder.

The general construction of the machine and its operation is as shown in my application for improvements in combined corn-huskers and fodder-shredders, Serial No. 546,696, filed April 22, 1895, and now pending in the United States Patent Office. Inasmuch as the location and operation of the shredding-cylinder and its relation to the other portions of the machine are fully shown in said application, and whereas, further, my improved shredding-cylinder is capable of being applied to and operated in any of the usual types of fodder-shredders, either separately or in conjunction with husking-rollers and with any suitable feeding mechanism, I do not consider it necessary to show or describe in this application anything further than my shredding-cylinder.

In the above said pending application the shredder-blades are seated between clamping-collars obliquely to the axis of the shredding-cylinder and in the general form of a spiral constructed around the axis of said cylinder. To accomplish this I utilize collars of an irregular clamping conformation, said collars having their clamping surfaces or sides oblique to the axis of the cylinder and spirally arranged in reference to the latter, so as to conform to and abut against the inner or clamped portions of the cutting-blades.

The distinguishing feature of my present invention consists in the fact that the clamped portion of the cutting-blade is seated in a plane perpendicular to the axis of the shred-

der-cylinder and are therefore susceptible of being clamped by collars which are true cross-sections of a cylinder and whose abutting or clamping faces which are pressed against the sides of the inner portions of the cutting-blades are also in planes perpendicular to the axis of the shredding-cylinder.

In my present construction I obtain the necessary spiral of the engaging-teeth at their outer or engaging extremities or points by either bending laterally a portion of said shredding-blades outside of the grasp or clamp of said seating-collars or by bending diagonally laterally the engaging-teeth. In the first-named construction the teeth all stand throughout their entire length in a position perpendicular to the axis of said cylinder. In the second construction above named the entire circle of the teeth in each blade project from the periphery of the aforesaid collars except the tooth where the line of the spiral of the engaging-points intersects said plane in different directions from the plane of the engaging-faces of said collars. Either of said constructions, however, produce at their outer ends a spiral series of projecting points which, in the rotation of said cylinder, pass through all of the area surrounding the periphery of said cylinder and engage and disintegrate the corn fodder presented thereto at every point.

I attain the above-named results by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective of the first-named method of spirally arranging the engaging-teeth on blades held between collars having their clamping-surfaces in a plane perpendicular to the axis of the cylinder. Fig. 2 is a perspective of the second above-named modes of accomplishing the same result. Fig. 3 is a detail of the first-described blades. Fig. 4 is a detail of the second-described blades.

Similar letters refer to similar parts throughout the several views.

A is a shaft of the shredding-cylinder which is rotated at the proper velocity from any suitable portion of the machine.

B is a collar rigidly seated on the shaft A at one end of the clamping-collars E. C is a

movable collar on said shaft at the opposite end of said collars and compressed toward the collar B by one or more set nuts D, thus clamping the collars between the collars B and C.

E E are the clamping-collars referred to, which have a greater cross diameter than that of the shaft A, and can be used in such number as the length of the cylinder may require.

F F are the shredding-blades, formed with a central opening G for the passage of the shaft A, an interior solid or uncut portion H to be clamped between the sides of the collars E and with peripheral projections or teeth J.

In Figs. 1 and 3 a portion of the solid or uncut part of the blades F is given an obliquely lateral bend K just outside of the periphery of the collars E, such lateral bend K at one side of said cylinder being upon one side of the contiguous teeth J and at the opposite side of said cylinder on the other side of the contiguous teeth. This formation results in turning the outer ends of the teeth of each blade F in a spiral line with the teeth of the adjacent blade F. In Figs. 2 and 4 such spiral continuation or continuity of the engaging-points of the teeth J is attained by bending the teeth J thereof laterally in the same manner as described and shown of bending the uncut portion K of the blades F outside of the collars E, as shown Fig. 1.

Either form of obtaining the spiral character of the engaging-points of the teeth J will accomplish the same result; but I deem the first-described method preferable, for the reason that the entire body of the teeth J

projects in a plane perpendicular to the axis of the cylinder. Yet inasmuch as my invention consists in arranging the engaging-points of the blades F in a spiral by bending the outer portion of the blades F laterally, I do not limit myself to either of the precise modes shown; but

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a fodder shredding machine the combination of a series of circular rotating blades, each of which is provided with peripheral projections the engaging ends of which are bent laterally successively in opposite directions and in different degrees to form a spiral of engaging points suitable collars interposed between said blades and suitable means for clamping said parts together substantially as shown and for the purpose described.

2. In a fodder shredding cylinder, the combination of clamping collars E, having their clamping faces perpendicular to the axis of said cylinder, the interposed blades F bent laterally near their peripheries, and outside of said collars to form spirally arranged engaging peripheral points, and suitable means of clamping said collars on said blades, substantially as shown and for the purpose specified.

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

GEORGE W. PACKER.

Witnesses:

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W. S. BOYD.