

(No Model.)

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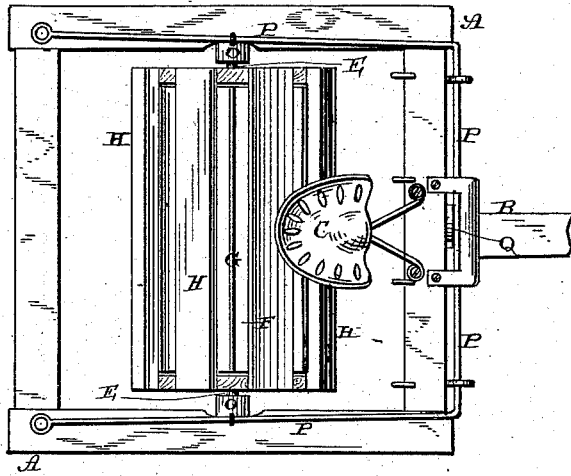
W. H. MERCER.

STALK CHOPPER.

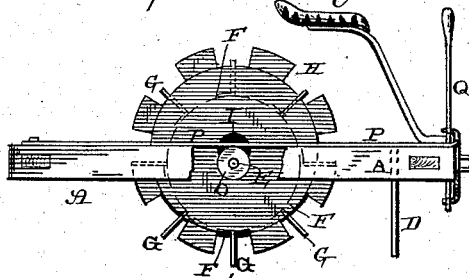
No. 293,055.

Patented Feb. 5, 1884.

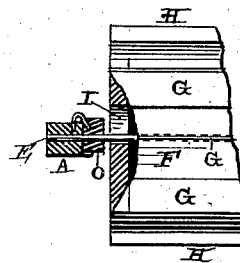
*Fig. 1.*



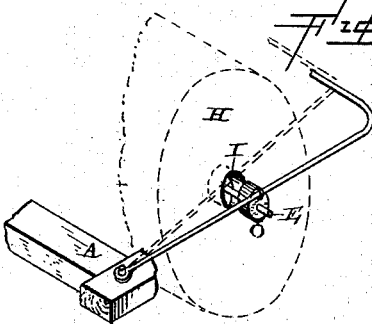
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



— Witnesses —  
*Alex S. Gardner*  
*J. W. Garner*

— Inventor —  
*W. H. Mercer,*  
*per*  
*J. A. Lehmann,*  
*att'y*

(No Model.)

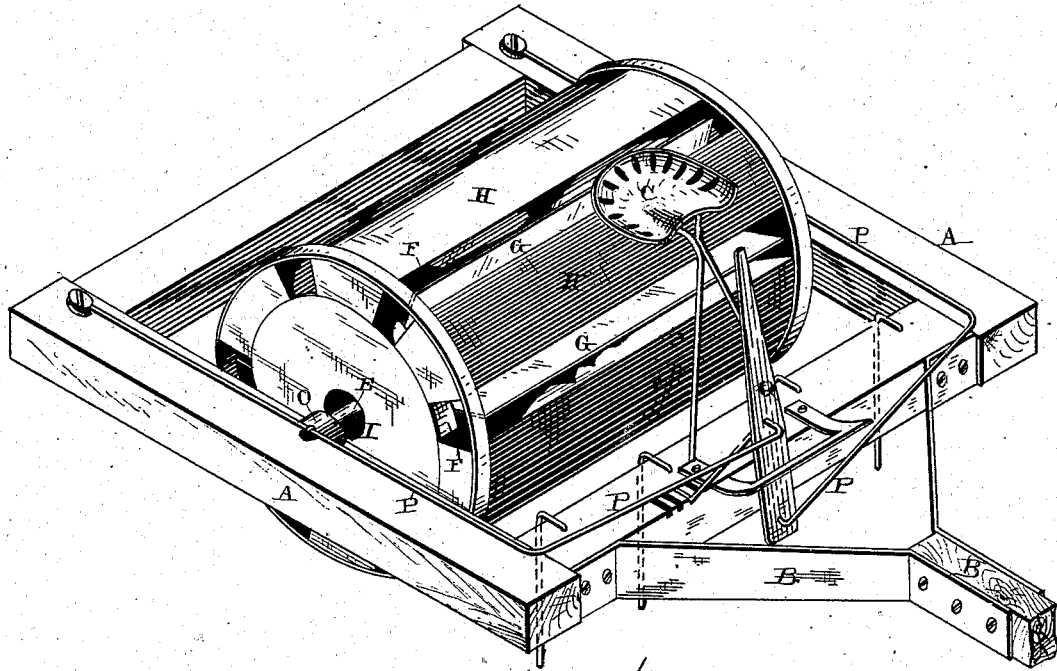
2 Sheets—Sheet 2.

W. H. MERCER.  
STALK CHOPPER.

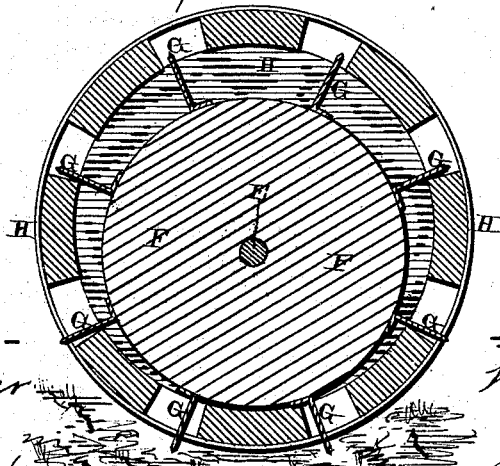
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*Fig. 5.*



*Fig. 6.*



-Witnesses-

*Louis F. Gardner*

*A. J. Pattison*

-Inventor-

*W. H. Mercer*

*per*  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. MERCER, OF MERCER, SOUTH CAROLINA.

## STALK-CHOPPER.

SPECIFICATION forming part of Letters Patent No. 293,055, dated February 5, 1884.

Application filed July 25, 1883. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIAM H. MERCER, of Mercer, in the county of Union and State of South Carolina, have invented certain new and useful Improvements in Stalk-Choppers; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in stalk-choppers; and it consists, first, in a stalk-cutter, the combination of the slotted outer cylinder having an opening through each end, and which is made to roll upon the ground independently of the shaft which passes through it, the inner cylinder provided with knives and secured rigidly to the shaft, the shaft which passes through both of the cylinders, and the frame in which the parts are placed; second, in a stalk-cutter, the combination of the frame, a shaft journaled therein, the inner cylinder provided with cutters and secured rigidly to the shaft, the slotted inclosing-cylinder provided with openings through its ends larger than the shaft, the sliding plugs placed on the ends of the shaft, and rods connected to the plugs for forcing them into the openings in the ends of the cylinder; third, the combination of the frame, the shaft, the cylinder provided with knives, the outer slotted inclosing-cylinder, the plugs for connecting this cylinder to the shaft, the rods connected to the shaft, and the operating-lever, the parts being combined and arranged to operate substantially as set forth.

The object of my invention is to give the inner cylinder, to which the knives are attached, no other than a rotary motion, and to inclose this cylinder in a slotted cylinder which has a rising and a falling movement, and to provide suitable means whereby this outer slotted cylinder can be held so that it will have no other movement than a rotary one, and thus serve as a protector for the knives as the machine is being drawn along from place to place.

Figure 1 is a plan view of a stalk-chopper embodying my invention. Fig. 2 is a side elevation, a portion of the frame being broken away. Figs. 3 and 4 are detail views. Fig.

5 is a perspective of my stalk-chopper. Fig. 6 is a vertical cross-section of the two cylinders alone.

A represents a suitable rectangular frame, to the front edge of which is secured the tongue B, and upon the top of which is secured the driver's seat C. Also secured to the front beam of the frame are suitable teeth, D, which serve to straighten the stalks and turn them at an angle to the length of the moving cylinder. Journaled in this frame is a shaft, E, to which is rigidly secured the cylinder F, which may be either solid or hollow, so that it can be filled with sand or other material, in order to increase its weight or not, as may be found necessary. Secured to or formed upon the outer surface of this cylinder are suitable lugs or ears, to which the cutting-blades G are clamped, bolted, or otherwise secured. The knives may either be perfectly straight or may extend around the cylinder at any desired angle, so as to give a gradual cut. This cylinder, provided with knives or cutters of any suitable kind, is made to revolve by the contact of the knives or cutters against the ground as the machine is drawn along. As the knives or cutters are liable to clog and the spaces between them to fill up, it becomes necessary to provide suitable means not only for preventing the spaces between the knives from becoming filled, but to keep the knives sufficiently clear. This is accomplished by means of an outer slotted cylinder, H, which incloses the cutter-cylinder, as shown. This outer hollow cylinder, H, may either be cast or made of separate and distinct parts, and of any suitable material. The bars or portions which extend along between the knives are just wide enough to form perfect guards against the spaces between the knives from filling or becoming clogged in any manner.

In other stock-cutters heretofore invented the movement of the knives has been effected by means of cranks or eccentrics. I give this outer cylinder the vertical movement or play, so that while resting upon the ground as the machine is drawn forward it is forced upward by contact with the earth, so that the knives or cutters of the inner cylinder will project down through the slots far enough to cut

the stalks as they lie upon the ground. In order to give this outer cylinder this vertical play, so as to enable it to act as a cleaner for the knives, there is made a circular opening, 5 I, through each of its ends, which openings are much larger than the shaft upon which it is journaled. This outer cylinder, H, is not attached to any part or thing, so as to be held in place. It has a movement in proportion as 10 these openings are larger than the shaft. The outer cylinder, H, being left free to move, the knives or cutters will project through its slots as the machine is drawn along. As these knives or cutters would become dulled or 15 broken in drawing the machine along roads in order to take it to and from the field, it becomes necessary to provide means for holding the cylinder H so that it shall have no other than a rotary motion. For this purpose the 20 sliding plugs O are placed upon the shaft, (or plugs are used large enough to fill the openings through the ends of the cylinder H.) To these plugs are secured the operating-rods P, which are attached at their front ends to the 25 lever Q. This lever is provided with a pawl, which engages with a suitable ratchet, for the purpose of holding the lever in any desired position. When these plugs are moved outward, so that they do not enter the openings 30 in the ends of the cylinder H, the cylinder has a vertical play, as above described. When, however, the plugs are forced into the openings, the cylinder is then connected directly to the shaft, so as to revolve with it, and will 35 have no other than a rotary motion. As the diameter of this cylinder H is just equal to the diameter of the inner cylinder, together with its knives, this outer cylinder then forms a protector which prevents all danger of the 40 knives coming in contact with the ground. The two cylinders then revolve together as perfectly as if they were united together, which is not the case when the plugs are moved outward, so as to leave the outer cylinder, H, free 45 to play up and down upon the shaft.

As the knives in time become not only dull, but worn away, the ears or projections upon the cylinder to which they are bolted will be made slotted; or the knives themselves may be provided with slots, so that they can be adjusted 50 outwardly from time to time, as necessity may require.

Having thus described my invention, I claim—

1. In a stalk-cutter, the combination of the 55 slotted outer cylinder, H, having the openings I through its ends, and which is made to roll along upon the ground independently of the shaft which passes through it, the cylinder F, provided with cutters and secured rigidly 60 to the shaft E, the single shaft E, which passes through both of the cylinders H F, and the frame A, the shaft being smaller than the openings I, so as not to control the movement of the cylinder H, substantially as shown. 65

2. In a stalk-cutter, the combination of the frame, a shaft journaled therein, the cylinder provided with cutters and secured rigidly to the shaft, the slotted inclosing-cylinder provided with openings through its ends larger 70 than the shaft, the sliding plugs placed on the ends of the shaft, and rods connected to the plugs for forcing them into the openings in the end of the cylinder, substantially as described.

3. The combination of the frame, the shaft, 75 the cylinder provided with knives, the outer slotted inclosing-cylinder, the plugs for connecting this cylinder to the shaft, the rods connected to the shaft, and the operating-lever, the parts being combined and arranged to operate 80 substantially as set forth.

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

WM. H. MERCER.

Witnesses:

F. A. LEHMANN,  
A. S. PATTISON.