

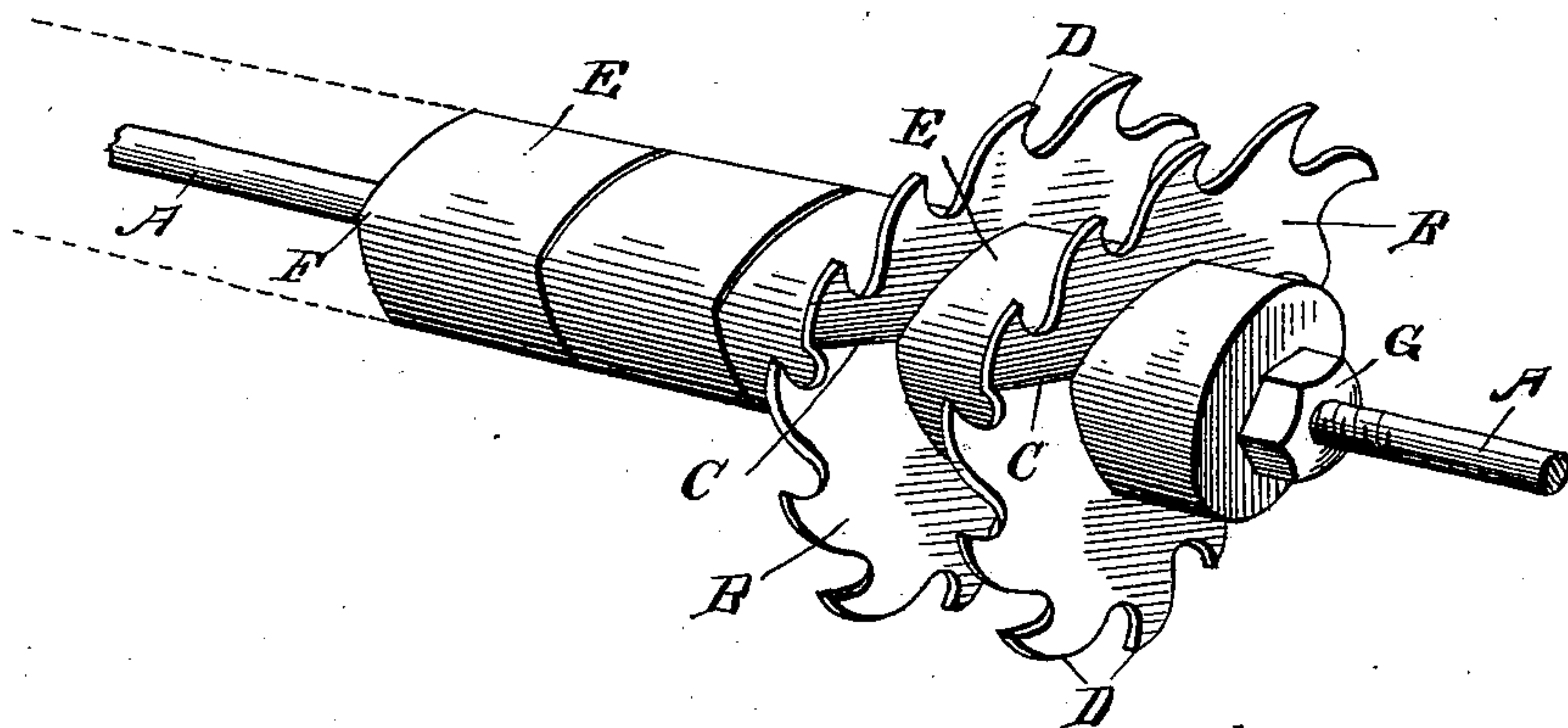
(No Model.)

G. W. PACKER.  
SHREDDER HEAD.

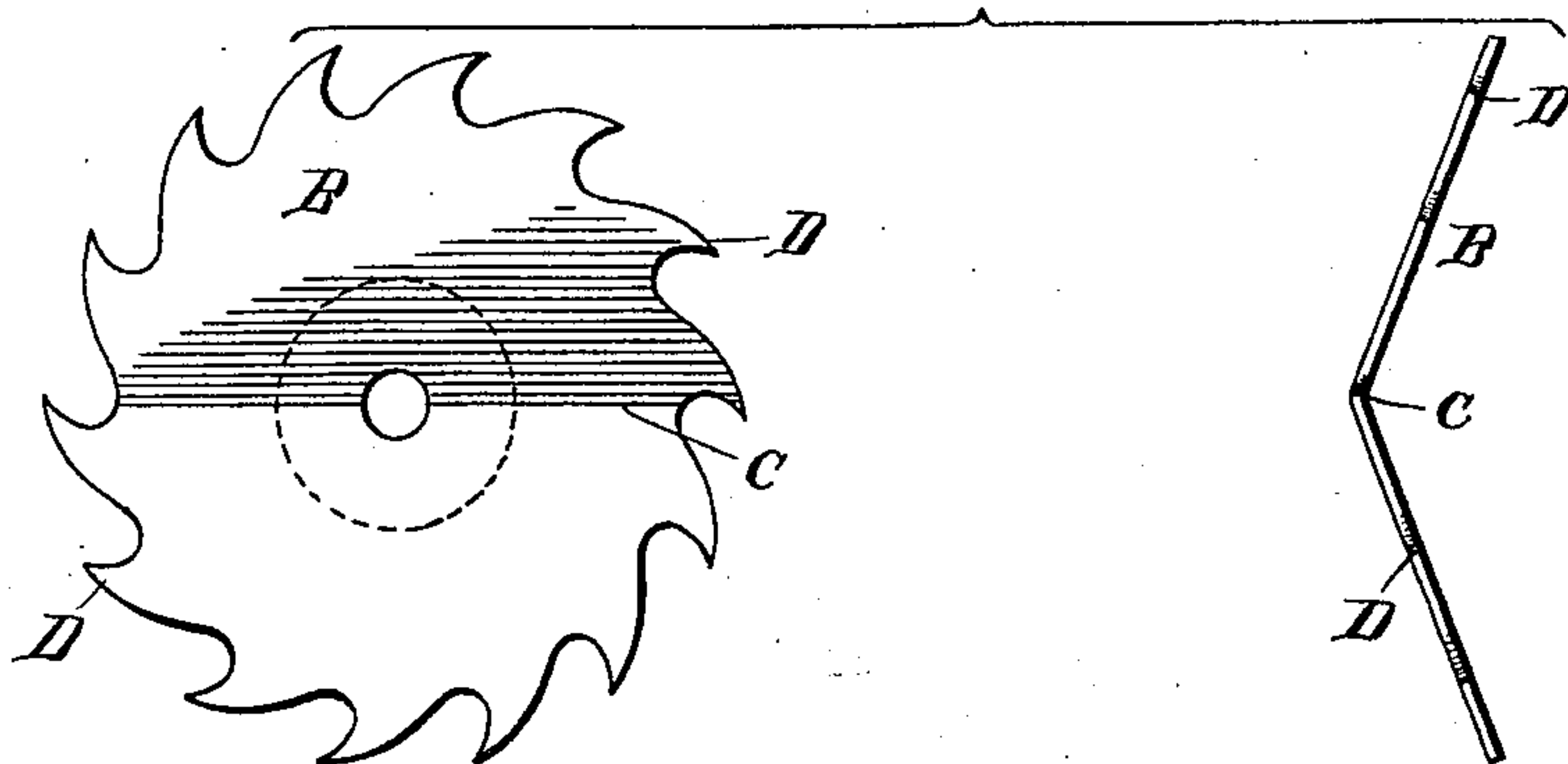
No. 562,092.

Patented June 16, 1896.

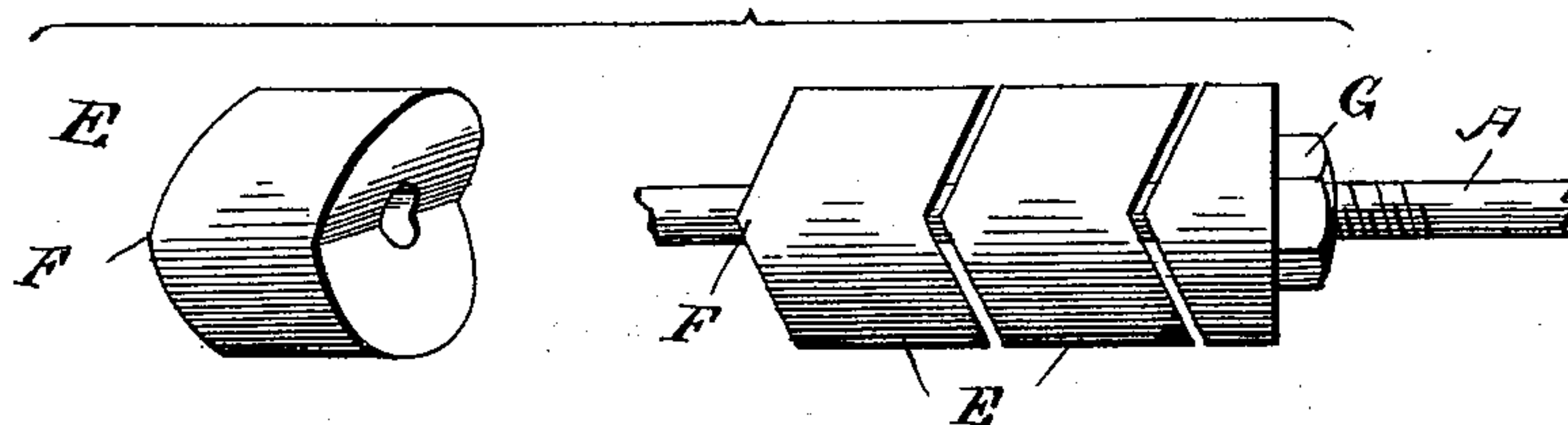
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:  
*Herbert R. Lewis*  
*Max Abel.*

Inventor:  
George W. Packer.  
By *John G. Manahan.*  
Att'y.

# UNITED STATES PATENT OFFICE.

GEORGE W. PACKER, OF ROCK FALLS, ILLINOIS, ASSIGNOR TO THE KEYSTONE MANUFACTURING COMPANY, OF STERLING, ILLINOIS.

## SHREDDER-HEAD.

SPECIFICATION forming part of Letters Patent No. 562,092, dated June 16, 1896.

Application filed November 23, 1895. Serial No. 569,900. (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 Shredder-Heads; 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 improvements in shredder-heads for fodder-shredding machines, and pertains to the novel and peculiar mode hereinafter described for constructing and seating the shredding-blades in said head.

In order that the series of blades constituting the shredder-head may be seated with sufficient firmness and solidity to safely endure their great velocity and the constant resistance to their peripheries resulting from the projections thereto of the heavy hard cornstalks, it is essential that both sides of the blade be well supported at or near its center. To this end it is necessary to interpose a collar or spacer between the blades. This construction results in producing an interval between the blades, which, were the blades seated throughout their entire width perpendicular to their axial rotation, would leave a space into which the ends of the cornstalks would be projected between the blades, and therefore the shredding thereof be very imperfect, if it did not entirely fail.

The purpose of my invention is to so conform and place the series of shredding-blades in the shredder-head as that, while making full provision for the thorough and efficient seating of the blades in the shredder-head, by lateral grasp or compression thereon at or near the center, to also so deflect portions of the perimeter of said blades laterally as that the engaging-points of said blades may severally move in orbits perpendicular to the axis of the shredding-cylinder, the plane of said orbits being mostly different, though par-

allel to each other, and all perpendicular to the axis of rotation. This results in forming the engaging-points of the shredder-blades in segmental spirals, as compared with their axis of rotation, the object being to have such engaging-points project into as much space laterally as is practical, so as to project laterally over said intervening spaces, and in the aggregate to traverse in close proximity the entire area parallel with the axis of their rotation at their projecting points, so that assuming the swift rotation of the shredder-head, there will be no point where the approaching cornstalks reach the transverse line of said projecting points, but what said stalks shall come in endwise contact with one or more said points.

I attain the above purpose by the construction shown in the accompanying drawings, in which—

Figure 1 is a perspective of a section of a shredder-head embodying my invention. Fig. 2 is a detail of one of the blades. Fig. 3 is a detail of one of the collars interposed between the blades.

Similar letters refer to similar parts in each view.

As my invention is applicable to each of the various types of fodder-shredders, and its location relative to the residue of the machine will be readily understood, I do not deem it necessary in this application to show or describe any other portion of the machine.

A is the usual center shaft of the shredder-head, suitably journaled, as usual, transversely of the machine, and in the rear of the feeding devices, in position to receive the fodder projected endwise toward said shredder.

B B are the circular shredding-blades, in each of which there is formed the transverse central bend C, extending through the axis of said blade across the entire face or side thereof. This results in throwing the opposite halves of said blade in an oblique direction to the plane of its rotation, thereby causing all, or nearly all, of the projecting and engaging points D thereof to pass through different orbital planes, so as to aggregately traverse the entire area at the perimeter of said blades as far as practicable, and in sufficiently



close parallel lines to prevent the cornstalks from entering between said blades and to engage and reduce every portion of said stalks.

5 E E are the interposed collars, which are seated on the shaft A between the blades B and against the outer sides of the end blades. These collars E are provided with angular ends F, adapted to fit into the depressed and raised sides, respectively, of the blades B, and  
10 are held against the latter with sufficient compression by end nuts G G, seated, respectively, on the shaft A at the ends of the series of collars, or said collars may be compressed and held in any other suitable mode.

15 It is obvious that in lieu of the central bend C the blade B may be constructed of two equal parts, the line of division being that of said bend C. In the latter construction it will be necessary to form small openings in the blades  
20 for the reception of dowel-pins on the engaging faces of the collars E, as shown in one of my recent United States Patents on shredding-machines.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is— 25

1. In a shredding-machine, the shredder-blades B, formed with the central bend C, through their diameters, respectively, substantially as shown and for the purpose described. 30

2. In a fodder-shredding machine, the combination of blades B, formed with the central bend C, through their diameters, respectively interposed collars E, having engaging ends conformable thereto, and suitable means for compressing laterally said collars against the  
35 respective sides of said blades, substantially as shown and for the purpose described.

In testimony whereof I affix my signature 40 in presence of two witnesses.

GEORGE W. PACKER.

Witnesses:

JOHN G. MANAHAN,  
HOWARD E. LLEWELLYN.