

No. 737,543.

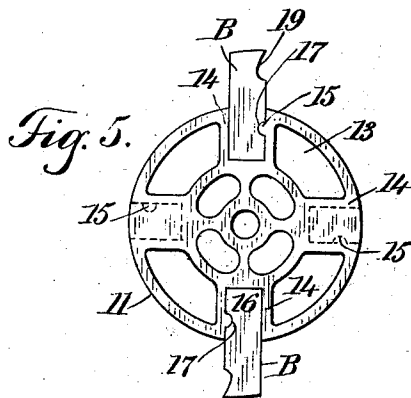
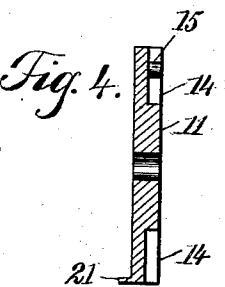
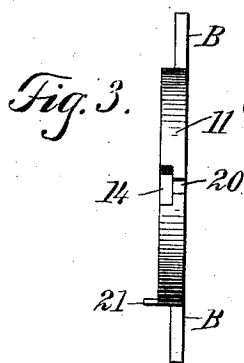
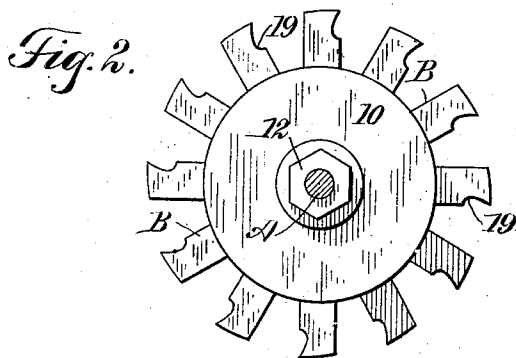
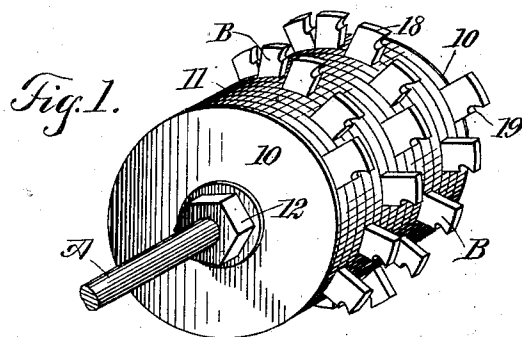
PATENTED AUG. 25, 1903.

E. WISNER.

KNIFE CYLINDER FOR CORN HUSKERS AND SHREDDERS.

APPLICATION FILED APR. 21, 1903.

NO MODEL.



WITNESSES.

Attestingly
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UNITED STATES PATENT OFFICE.

ELMER WISNER, OF CARO, MICHIGAN.

KNIFE-CYLINDER FOR CORN HUSKERS AND SHREDDERS.

SPECIFICATION forming part of Letters Patent No. 737,543, dated August 25, 1903.

Application filed April 21, 1903. Serial No. 153,640. (No model.)

To all whom it may concern:

Be it known that I, ELMER WISNER, a citizen of the United States, and a resident of Caro, in the county of Tuscola and State of Michigan, have invented a new and Improved Knife-Cylinder for Corn Huskers and Shredders, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide a knife-cylinder for corn huskers and shredders so constructed that the knives will be firmly and simply held therein and so that any one or all of the knives may be conveniently and expeditiously removed to be sharpened or when damaged and as readily and quickly replaced without removing the cylinder from the machine and without removing any portion of the knife retaining or locking mechanism from the cylinder.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improved cylinder. Fig. 2 is an end view thereof, the shaft being in section. Fig. 3 is an edge view of one of the plates or rings of which the cylinder is mainly composed with knives in position therein. Fig. 4 is a section through the cylinder plate or ring, the section being taken through the knife-receiving pockets or recesses; and Fig. 5 is a side elevation of one of the cylinder rings or plates and knives in position in one face.

The cylinder consists primarily of a shaft A, end disks, plates, or rings 10, and intermediate disks, plates, or rings 11. One end plate, disk, or ring 10 is keyed or otherwise secured to the shaft A, while the other plate, disk, or ring is loosely mounted on the said shaft, as are likewise all of the intermediate plates, disks, or rings 11. The intermediate plates, disks, or rings 11 are held in engagement with each other and firmly between the end plates, disks, or rings 10 by screwing a nut 12 on the shaft A firmly against the loosely-mounted end plate or ring 10, as is shown in Figs. 1 and 2.

All of the plates, disks, or rings 10 and 11 may be made solid with the exception of a central opening to receive the shaft A, or they may be provided with a series of openings 13, as shown in Fig. 5, enabling them to be made as light as possible consistent with strength.

Each intermediate disk, ring, or plate 11, one of which is particularly shown in Fig. 5, is provided in each side face with two recesses or pockets 14 diametrically opposite, and the pockets or recesses in one face are practically at right angles to the pockets or recesses in the opposite face, as is also shown in Fig. 5. Each pocket or recess 14 is provided at one side edge with a projection 15, preferably in the shape of a lug, but the end disks 10 are provided with diametrically opposite recesses or pockets 14 in their inner faces only. Each pocket or recess 14 in a cylinder plate or ring is adapted to receive the shank of a knife B, the said shanks fitting snugly in the said recesses, and the knives extend beyond the peripheries of the said rings or plates a desired distance. Each knife is provided with a recess 17 in one side edge, and these recesses, when the shanks of the knives are fitted in the pockets or recesses 14, receive the lugs 15, extending from a wall of the said recesses, as is also best shown in Fig. 5. When the knives are in position on the cylinder rings or plates, their outer side faces are flush with the corresponding faces of the disks or rings, so that one disk or ring, when knives are in position therein, may fit closely an opposing disk, ring, or plate. Each knife is provided with a concaved cutting-surface 19 in one side edge, whereby the outer ends of the knives at such edges are more or less hook-shaped and the cutting edges 19 are at the same side of all of the knives. Furthermore, preferably the outer end of each knife B is more or less convex or rendered segmental.

Most of the cylinder rings or plates are provided with a supplementary peripheral recess 20, (shown in Fig. 3,) and such recesses are generally opposite one of the knife recesses or pockets 14. The cylinder rings, plates, or disks are likewise provided with peripheral lugs 21, extending from one side, and a lug of one disk, ring, or plate is adapted to enter a peripheral recess 20 in the next adjacent disk, ring, or plate. Under this construction

it will be observed that the knives are firmly held in position in the rings or plates and that the various plates or rings have interlocking engagement and are held in close relation to each other by properly adjusting the nut 12. Furthermore, under this construction it is obvious that when knives are to be removed, to be replaced for any reason, or to be sharpened it is simply necessary to loosen the nut 12 so that the rings, disks, or plates may be separated and the knives quickly withdrawn, and after the knives are replaced, which can be expeditiously done, it is simply necessary to force the rings, disks, or plates together and lock them in such close relation. The disks, plates, or rings can be so adjusted or arranged or the recesses or pockets 14 can be so placed as to cause the knives to run spirally around the cylinder, as shown in Fig. 1, or the knives may have a zigzag arrangement, if desired, or may be arranged in any manner required.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

- 25 1. A knife-cylinder consisting of a shaft, end rings or plates carried by the shaft, one of the end plates or rings being secured to the

shaft and the other adjustable thereon, a locking device for the adjustable end ring or plate, a series of intermediate rings or plates, each being provided with pockets in a side face, each pocket having a lug at one side wall, knives the shanks of which fit in the said pockets, the shank of each knife having a recess to receive a lug in the pocket to which the knife is fitted, and an interlocking connection between the several rings or plates, as set forth.

2. A knife-cylinder, consisting of a shaft, end rings or plates carried by the shaft, a series of intermediate rings or plates provided with interlocking peripheral lugs and recesses and with pockets in their side faces, each pocket having a lug on one side wall, and knives, the shanks of which fit in the pockets and are provided with recesses to receive the lugs of the pockets, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELMER WISNER.

Witnesses:

LEWIS G. SEELEY,
SABIN HOOPER.