

May 23, 1944.

J. L. AASLAND

2,349,328

TRASH ROLL CONSTRUCTION

Filed June 10, 1942

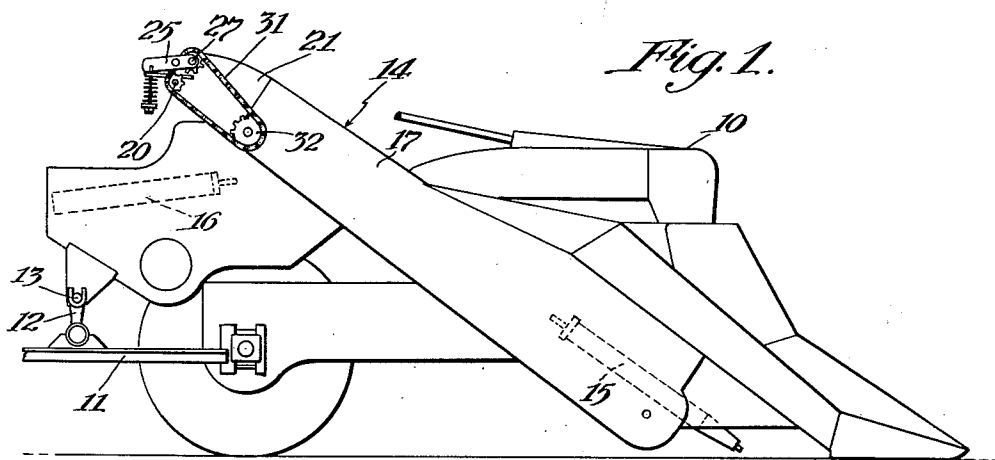
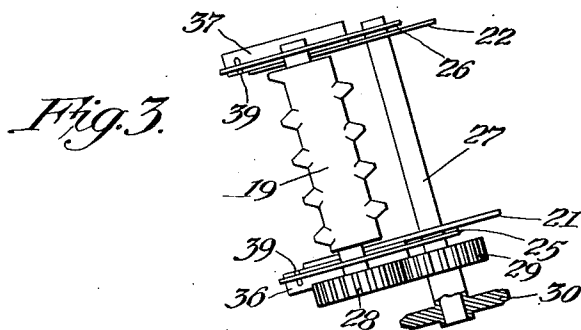
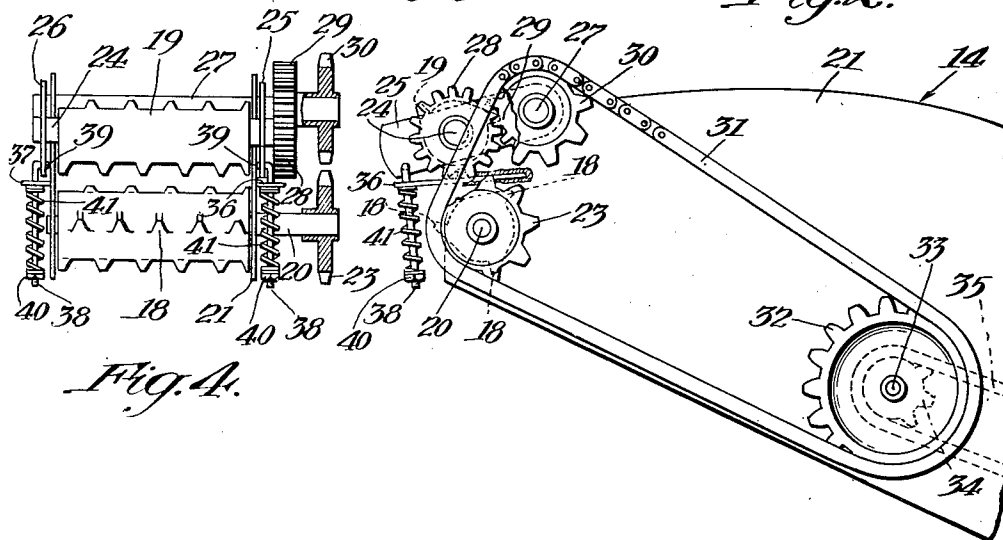


Fig. 2.



Inventor:
John L. Aasland
By Paul C. Pippel
Atty.

UNITED STATES PATENT OFFICE

2,349,328

TRASH ROLL CONSTRUCTION

John L. Aasland, Moline, Ill., assignor to International Harvester Company, a corporation of New Jersey

Application June 10, 1942, Serial No. 446,450

2 Claims. (Cl. 56—104)

This invention relates to a trash roll construction for a corn picker.

It is known to use trash rolls on a corn picker for removing corn ears from stalks which have broken from the ground. It is desirable to make the spacing between the trash rolls adjustable for varying conditions and, if one trash roll is driven by the other by means of meshing gears fixed to the rolls, the spacing between the rolls may become so great that the one gear does not mesh with the other sufficiently for driving. The present invention has to do with an overcoming of this drawback.

An object of the present invention is to provide an improved trash roll construction for a corn picker.

A further object is the provision of a novel driving means for trash rolls of a corn picker.

A further object is to provide a new and improved mounting for trash rolls of a corn picker.

Other objects will appear from the disclosure.

According to the present invention, one trash roll of a pair of rolls, which is movable with respect to the other of the pair of rolls, is mounted so as to swing about a pivot and is driven by means which includes a member mounted upon the pivot. With this arrangement the movable trash roll is always driven whatever its position with respect to the other trash roll.

In the drawing:

Figure 1 is a side view of a tractor-mounted corn picker employing the novel trash roll construction of the present invention;

Figure 2 is a side view showing only a portion of what is shown in Figure 1; and

Figures 3 and 4 are detail views showing a trash roll construction.

Reference character 10 designates a tractor having a draw-bar 11 extending from the rear. Secured to the draw-bar 11 is a structure 12, which pivotally supports at 13 a corn picker 14. The corn picker includes a snapping unit comprising snapping rolls 15, of which only one is shown, and a husking unit comprising husking rolls 16, of which only one is shown. In the section of the corn picker positioned between the snapping rolls 15 and the husking rolls 16 is an elevator, not shown, for conveying corn ears from the snapping rolls to the husking rolls. The section of the corn picker in which the elevator is located is designated by the reference character 17. Positioned at the upper end of the corn picker, generally above the husking roll 16, are a stationary trash roll 18 and a movable trash roll 19. The stationary trash roll 18 is mounted upon

a shaft 20 journaled in side sheets 21 and 22 of the corn picker. Secured to the shaft 20 outside the side sheet 21 is a sprocket 23. The movable trash roll 19 is mounted upon a shaft 24 journaled in arms 25 and 26 mounted upon a shaft 27 journaled in the side sheets 21 and 22. A gear 28 is secured to the shaft 24 and meshes with a gear 29 mounted upon the shaft 27. A sprocket 30 is mounted upon the shaft 27 so as to be fixed to the gear 29. A sprocket chain 31 drives the sprockets 23 and 30 and is itself driven by a gear 32 mounted upon a shaft 33 carrying a sprocket 34 in mesh with a chain 35. The sprocket 34 and chain 35 may form a part of the drive for the elevator previously referred to by which corn ears are conveyed from the snapping rolls 15 to the husking rolls 16. Secured to the side sheets 21 and 22, as by soldering or welding, are elements 36 and 37 projecting beyond the rear edges of the sheets. Bolts 38 project through the elements 36 and 37, respectively, and have bent end portions 39 which project through openings in the arms 25 and 26. Nuts 40, threaded to the other end of the bolts 38, retain spiral springs 41 between them and the elements 36 and 37. By the arrangement just described the arms 25 and 26 are resiliently urged downwardly so as to urge the upper movable trash roll toward the lower stationary trash roll.

In operation, corn stalks broken from the ground are stripped of the ears attached thereto by the trash rolls 18 and 19 between which they pass. When larger stalks pass between the trash rolls, the upper roll 19 may move upwardly against the action of the springs 41. As previously stated the sprockets 23 and 30 are driven by the sprocket chain 31. The sprocket 23, of course, drives the stationary trash roll 18, and the sprocket 30 drives the gear 29, which, in turn, drives the gear 28, which drives the movable trash roll 19. Any movement of the upper trash roll 19 toward or away from the stationary trash roll 18, due to variation in size of trash and stalks passed between the rolls, does not cause interruption of the drive of the rolls, since the gear 29, which drives the gear 28 secured to the adjustable trash roll 19, is mounted upon the shaft 27 which serves as the pivot axis of the arms 25 and 26 upon which the movable trash roll 19 is mounted. Thus, as the movable trash roll 19 moves upwardly away from the stationary trash roll 18, the gear 28 simply moves about the gear 29 and stays constantly in mesh with it. Thus, there is no interruption of drive.

It will be apparent from the foregoing descrip-

tion that a new and novel trash roll construction has been provided and that this construction includes means by which the rolls are constantly driven, regardless of the spacing between them.

The intention is to limit the invention only within the scope of the appended claims.

What is claimed is:

1. In a corn picker, a pair of spaced side sheets, a pair of trash rolls for removing corn ears from stalks broken from the ground, means rotatably mounting one trash roll in the side sheets, a shaft rotatably mounted in the side sheets, a pair of arms pivoted on the shaft outside the side sheets for pivoting with respect to the side sheets, means rotatably mounting the other trash roll on the

arms, whereby the said other trash roll is movable toward and away from the said one trash roll by virtue of pivoting of the arms on the side sheets, means driving the said one trash roll, a first sprocket secured to the said one trash roll, a second sprocket mounted on the shaft, a chain driving both sprockets, a first gear secured to the second sprocket, and a second gear meshing with the first gear and secured to the said other trash roll.

2. In a corn picker specified in claim 1, there being resilient means acting between one arm and a side sheet to urge the said other trash roll toward the said one trash roll.

JOHN L. AASLAND.