March 11, 1930. H. SYNCK 1,750,546

CORN HUSKING MECHANISM

Filed Aug. 20, 1928

FIG 1

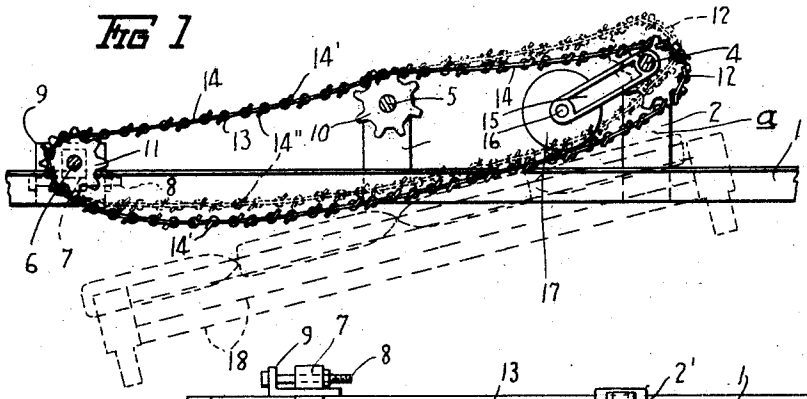


FIG 2

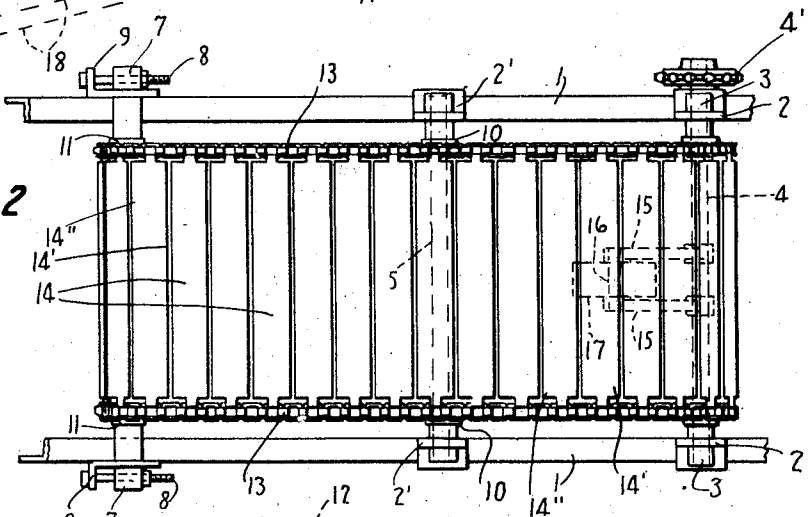


FIG 3

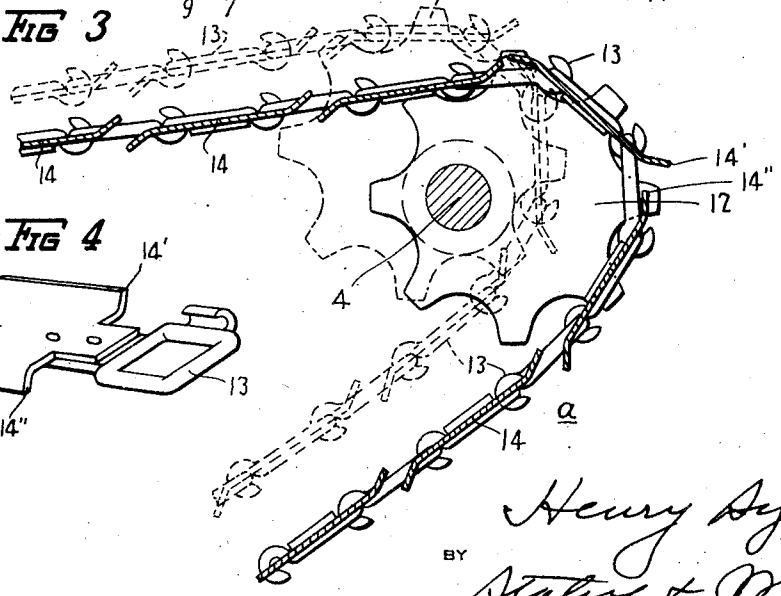


FIG 4

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UNITED STATES PATENT OFFICE

HENRY SYNCK, OF COLDWATER, OHIO, ASSIGNOR TO THE NEW IDEA SPREADER COMPANY, OF COLDWATER, OHIO, A CORPORATION OF OHIO

CORN-HUSKING MECHANISM

Application filed August 20, 1928. Serial No. 300,692.

This invention relates to improvements in corn huskers, it more particularly relating to the means for feeding the ears of corn along the husking rolls and pressing the same thereto.

One of the objects of my invention is to provide a feeding and pressing device which includes a sagging endless apron and means for causing the apron to alternately engage and free the ears of corn.

Another object of the invention is to provide an apron consisting of endless chains and cross slats in which the slats are so shaped as to decrease the open space between adjacent slats as they pass about the sprocket wheels.

In the accompanying drawings:

Fig. 1 is a side elevation, partly in section, of a feeding and pressing device embodying my improvement.

Fig. 2 is a plan view of the same.

Fig. 3 is an enlarged fragmentary side elevation of a portion of the endless apron, together with one of the eccentric sprocket wheels.

Fig. 4 is an enlarged perspective view of a detail of the apron.

In corn husking machinery it has been customary to provide a sagging apron arranged above the husking rolls which acts to press the ears of corn to the husking rolls and also feed the ears down the husking roll. One of the objections to such a form of feeding and pressing device is that it interferes with the spinning of the ears upon their axes during their passage down the husking rolls, thus preventing the husking rolls from always gripping the husks on all sides of the ear. In order to overcome this objectionable feature, I have provided means for causing the sagging portion of the apron to alternately engage and free the ears so that the ears will have an opportunity of spinning on their axes during the time they are free from the apron to thereby increase the efficiency of the action of the husking rolls in removing the husks from the ears.

In the present case, this result is accomplished by providing eccentric sprocket wheels about which the sprocket chains of the apron pass which act to intermittently take up the sag of the apron so as to lift the sagging portion of the apron from the ears of corn.

Referring to the drawings, 1 represents a portion of the frame of a corn husking mechanism having upright standards 2 and 2'. One of the sprocket shafts 4 for the apron is mounted in bearings 3 at the upper ends of the standard 2. The other sprocket shaft 6 for the apron is mounted in bearings 7 adjustably mounted in brackets 9 secured to the frame members 1, and have adjusting screws 8 whereby the adjustment may be made to give the proper sag to the apron. A shaft 5 for idler sprockets is supported in suitable bearings in the upper end of the standard 2'.

On the shafts 5 and 6 are pairs of concentric sprockets 10 and 11 respectively, while on the shaft 4 is a pair of eccentric sprockets 12, with the long radius R of each sprocket on the same side of the shaft center. The shaft 4 also has a drive sprocket 4' by which it is driven from a suitable source of power. The apron consists of sprocket chains 13 which pass over the sprocket wheels and slats 14 which are rigidly connected to the links of the chain as shown in Fig. 4. The edges of these slats are reversely bent as indicated at 14' and 14'' in Fig. 4.

Journaled on the shaft 4 is a plurality of arms 15 which carry at their free ends a shaft 16 on which is journaled a pair of roller weights 17 which ride upon the lower sagging run of the apron to furnish a yielding weight to change the catenary curve of the sagging portion of the apron to provide in effect a throat between that portion of the conveyer indicated by the character *a* at the upper ends of the husking rolls 18, shown in dotted lines in Fig. 1, for the purpose of pressing the ears onto the rolls at the upper portion of the rolls.

In operation, the sagging portion or lower run arm of the apron, by the action of the eccentric sprockets, is caused to assume the position shown in dotted and full lines in Fig. 1 so as to alternately free and engage the ears of corn on the husking rolls. When the ears are free from the apron they have

an opportunity to spin on their axis by reason of the pull upon the husks which have been gripped by the husking rolls so as to present new surfaces to the husking rolls.

The bent portion 14′ of the forward edge of each slat is for the purpose of causing an effective feed of the ears of corn on the husking rolls. By bending the rear edge of each slat in the opposite direction from the bend 14′ I am enabled to have the rear edge of a slat sufficiently overlap the forward edge of an adjacent slat as to minimize the space between the slats and at the same time allow for clearance as the slats move about the sprockets; this arrangement being for the purpose of preventing the entanglement of husks and trash between adjacent slats.

Having thus described my invention, I claim:

1. In corn husking mechanism, husking rolls, an endless sagging flexible apron rotatably mounted above said rolls in close proximity thereto to engage ears of corn thereon, and means for intermittently removing a portion of the sag in said apron.

2. In corn husking mechanism, husking rolls, a flexible movable endless apron comprising a plurality of cross strips adapted to exert pressure upon ears of corn on said rolls, and means for intermittently relieving said pressure.

3. In a corn husking mechanism, husking rolls, an endless apron comprising sprocket chains and cross connecting strips, sprocket wheels about which said chains are passed, the lower run of said apron being permitted to sag, and means for intermittently tightening the said chains to relieve a portion of the sag of said apron.

4. In a corn husking mechanism, husking rolls, an endless apron comprising sprocket chains and cross connecting strips, and pairs of sprocket wheels about which said chains pass, the lower run of said apron being adapted to sag in contact with the ears of corn on said roll, at least one pair of said sprocket wheels being eccentrically mounted so as to intermittently tighten said chains to free said apron from said ears of corn.

5. In corn husking mechanism, husking rolls, an endless apron comprising a pair of sprocket chains and cross connecting slats, two separated pairs of sprocket wheels about which said chains run, a pair of intermittent idler sprocket wheels to support the upper run of said chains, one pair at least of said sprocket wheels being eccentrically mounted to intermittently remove a portion of the sag of the lower runs of said chains.

6. In a corn husking mechanism, husking rolls, an endless flexible apron supported above said rolls with the lower run thereof adapted to sag in contact with ears of corn on said rolls, and a yieldable pressure device arranged to bear on the inner portion of the lower run of said apron near the upper ends of the husking rolls.

7. In a corn husking mechanism, husking rolls, an endless flexible apron supported above said roll with the lower run thereof adapted to sag in contact with ears of corn on said rolls, a yieldable pressure device arranged to bear on the inner portion of the lower run of said apron near the upper ends of the husking rolls, and means for intermittently removing a portion of the sag of said apron.

8. In a corn husking mechanism, husking rolls, a flexible apron comprising a pair of sprocket chains and cross connecting slats, a plurality of sprocket wheels about which said chains run, and a pivoted roller weight resting upon the inner surface of the lower run of said apron near the upper end of said husking rolls, at least one pair of said sprocket wheels being eccentrically mounted.

9. In a corn husking mechanism, husking rolls, an endless flexible apron supported above said rolls, said apron comprising a pair of chains and cross connecting slats, each of said slats having its forward edge bent in a direction to engage ears of corn on said husking rolls and its rear edge bent in an opposite direction.

In testimony whereof, I have hereunto set my hand this 18th day of July, 1928.

HENRY SYNCK.