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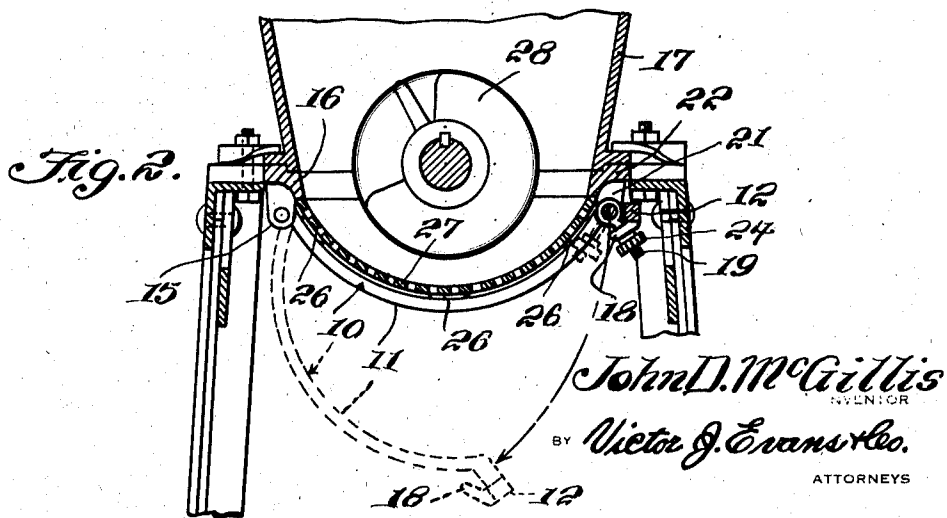
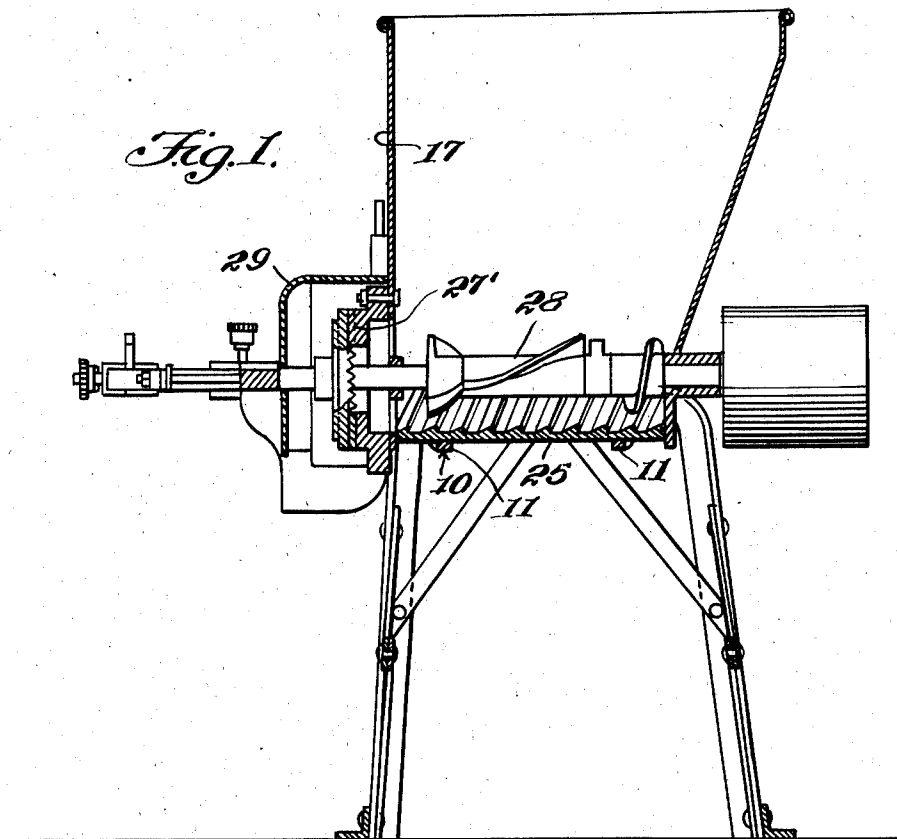
J. D. McGILLIS

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CORN SHELLER ATTACHMENT

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2 Sheets-Sheet 1



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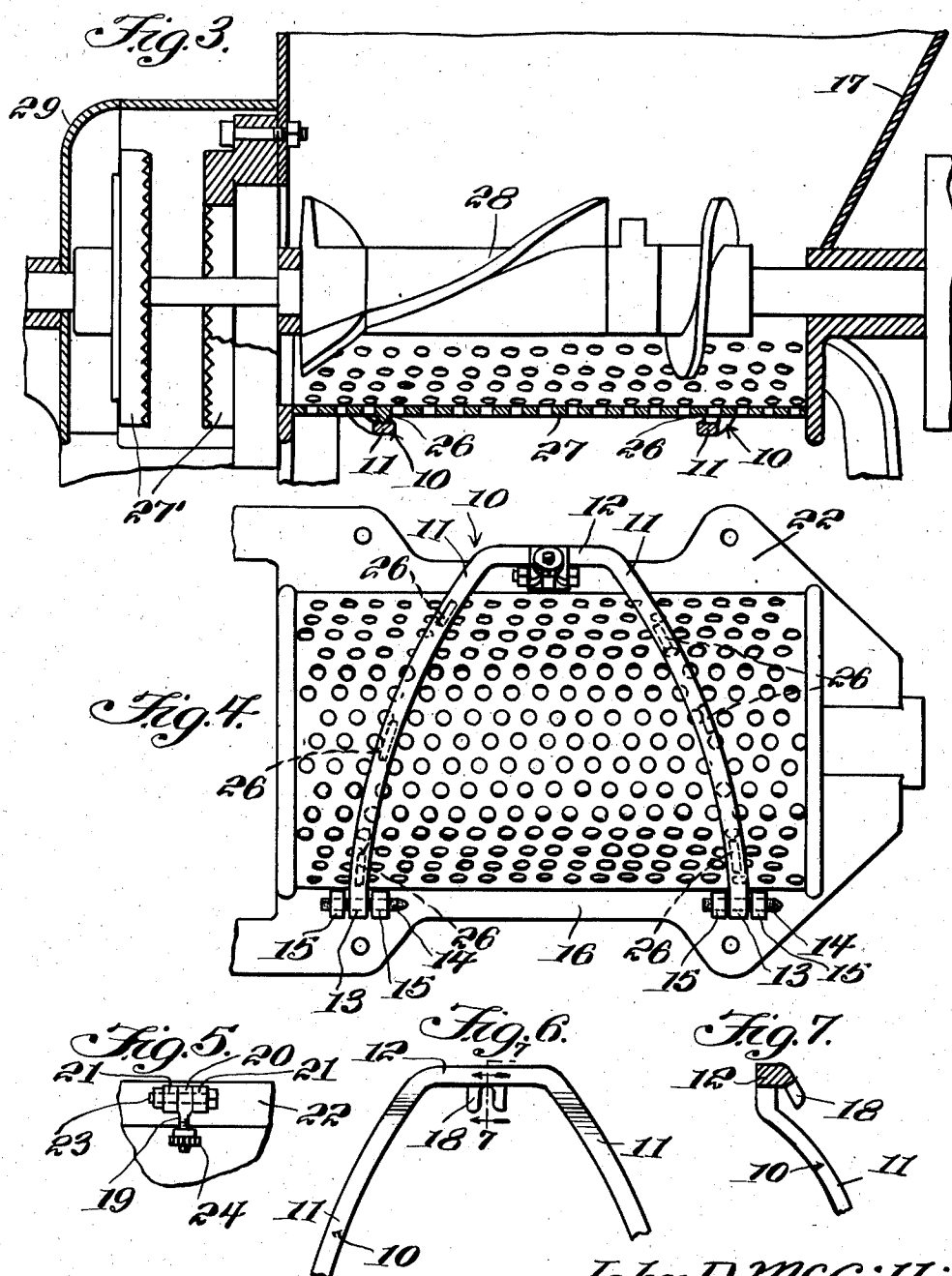
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2,298,830

CORN SHELTER ATTACHMENT

John D. McGillis, Chippewa Falls, Wis.

Application August 13, 1941, Serial No. 406,679

1 Claim. (Cl. 130—6)

This invention relates to a corn sheller attachment and has for an object to provide a supporting frame to interchangeably receive a concave for adapting a machine to grind corn on the cob, or a special screen having spirally arranged openings for adapting the machine to shell corn, the frame being hinged at one end through the medium of frangible hinge pins which will break in the event of foreign material, such as iron or a rock becoming mixed with the feed, the frame being secured at the opposite ends through the medium of an easily manipulated latch which may be frangible or not.

A further object is to provide, in such a machine, an extended burr housing to permit extended separation of burrs and the ejection of cobs during the shelling operation.

A further object is to provide a device of this character which will be formed of a few strong, simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction, and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim.

In the accompanying drawings forming a part of this specification:

Figure 1 is a longitudinal sectional view of a corn and cob grinder constructed in accordance with the invention.

Figure 2 is a cross sectional view of the grinder converted into a sheller by the substitution of a special screen for the concave.

Figure 3 is a longitudinal sectional view of the corn sheller, special screen and hinge supporting frame therefor.

Figure 4 is a bottom plan view of the corn sheller.

Figure 5 is a detail view in elevation showing the frame latch and hand nut.

Figure 6 is a detail view in elevation showing the prongs on the frame for receiving the latch.

Figure 7 is a detail sectional view taken on the line 7—7 of Figure 6.

Referring now to the drawings in which like characters of reference designate similar parts in the various views, the attachment is shown to comprise a frame 10 having downwardly bowed diverging legs 11 connected at the front ends by a cross bar 12. The legs are provided at the free ends with hinge eyes 13 which receive wooden hinge pins 14 which are engaged through hinge

eyes 15 formed on a longitudinal sill 16 of the hopper 17 of a machine commonly known as a feed grinder and cob buster mill.

The frame 10 is provided on the inner side of the cross bar 12 with spaced prongs 18 which curve downwardly and rearwardly from the cross bar, see Figure 2. These prongs receive between them a latch comprising a bolt 19, see Figure 5, which is provided with a hinge eye 20 which is received between two hinge eyes 21 which depend from the other longitudinal sill 22 of the hopper 17, see Figure 2. A pivot pin 23 frangible or otherwise, is passed through the interdigitating eyes 20 and 21 to swingingly mount the latch on the sill in position to pass in between the prongs 18. A hand nut 24 is threadedly engaged on the bolt 19 in position to be advanced tight against the prongs 18 and lock the frame in operative position.

For the purpose of providing a corn grinder a conventional concave 25, see Figure 1, is disposed at the bottom of the hopper to form a closure between the sills 16 and 22. The frame 10 supports the concave in operative position.

For the purpose of providing a corn sheller, a semi-cylindrical screen 27 is provided. The screen is preferably formed of sheet metal and is provided with openings, round or square, arranged diagonally or spirally therein. The screen is provided with projections 26 which engage the legs of the frame and compensate for the difference in thickness of the concave and the screen and also provide a space between the screen and the frame to allow shelled corn, which might otherwise be blocked off, to drop through the frame. When the concave is in use the conventional cob grinding heads 27 are disposed close together, one of the heads being stationary and the other being rotatable as is customary to grind up the cob and corn into comminuted feed.

The shelling screen 27 may be interchanged for the concave 25 by rocking open the frame 10 to remove the concave, and replacing the concave with the screen. Thereupon the frame may be closed and locked to support the screen in operative position upon the projections 26 of the frame.

In operation the working head 28 of the mill rotates to impinge and crack the cobs and corn against the concave when the latter is in use. When the screen is in use, the head rotates the corn on the cobs against the screen and the perforations thereof remove the corn from the cob and discharge the shelled corn through the screen while the bare cobs pass out through the deliv-

ery burr housing 29 of the mill and gravitate from between the heads 27 which in this instance have been separated so as to exert no active working function on the cobs.

The housing 29, in the present embodiment, is extended to greater length than is conventional to permit extended separation of burrs and the ejection of cobs during the corn shelling operation.

From the above description it is thought that the invention will be clearly understood without further explanation.

What is claimed is:

In a mill including a hopper, a rotatable working head in the hopper and longitudinal sills supporting the hopper, the improvement which con-

sists of a frame having a pair of downwardly bowed diverging legs connected at the front ends by a cross bar, hinge eyes at the free ends of the legs, hinge eyes on the longitudinal sills, 5 hinge pins engaged through said hinge eyes, spaced downwardly curved prongs on the under side of said cross bar, a latch bolt engaged between said prongs, means pivotally attaching the latch bolt to one of said sills, a semi-cylindrical 10 screen supported by said legs and provided with openings arranged spirally therein, and projections on the screen engaging the said legs to provide a space between the screen and the legs to 15 allow shelled corn to drop through the space between the legs.

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