

(No Model.)

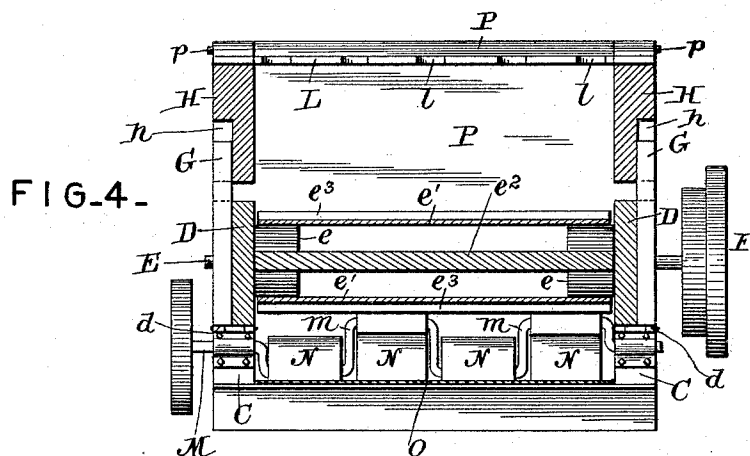
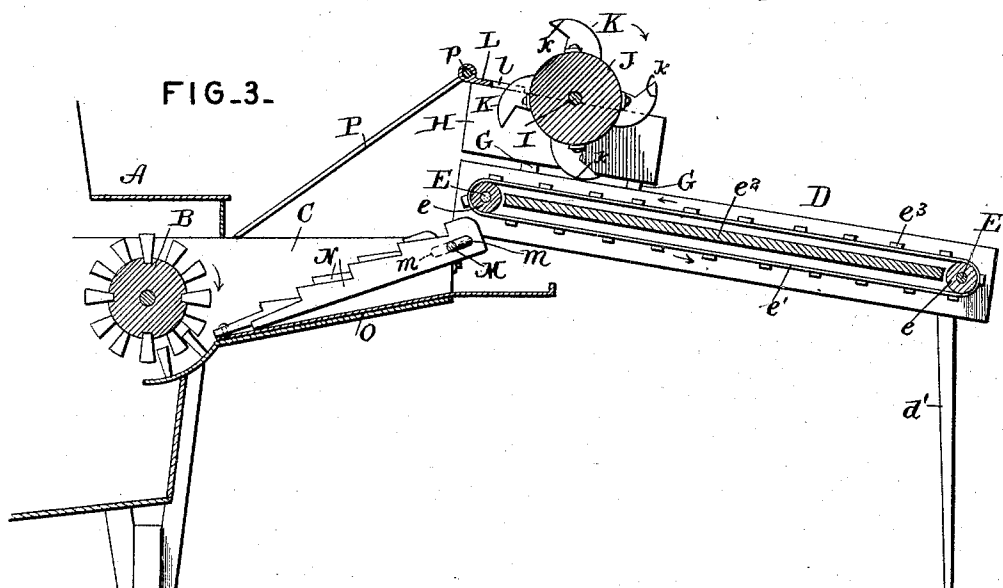
2 Sheets—Sheet 2.

D. GWIN.

BAND CUTTER AND FEEDER.

No. 482,476.

Patented Sept. 13, 1892.



Witnesses

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DAVID GWIN, OF EDGERTON, MISSOURI.

BAND-CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 482,476, dated September 13, 1892.

Application filed January 18, 1892. Serial No. 418,495. (No model.)

To all whom it may concern:

Be it known that I, DAVID GWIN, a citizen of the United States, residing at Edgerton, in the county of Platte and State of Missouri, have invented a new and useful Band-Cutter and Feeder, of which the following is a specification.

This invention relates to band-cutters and feeders; and it has for its object to provide a feeding attachment for thrashing-machines which will not only cut the bundles of grain fed to the thrasher, but will also at the same time shake and spread out the bundles of grain after being cut and evenly feed and distribute the same to the thrasher-cylinder.

The invention also provides a feeding attachment which shall be so connected with the thrasher as to be easily thrown up and out of the way when not in use.

With these and many other objects in view, which will readily appear as the nature of the invention is fully understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a band-cutter and feeder constructed in accordance with my invention applied to the cylinder end of a thrashing-machine. Fig. 2 is a top plan view of the same, showing the spreader-arms in dotted lines. Fig. 3 is a vertical longitudinal sectional view of the same. Fig. 4 is a vertical transverse section on the line 4 4 of Fig. 1.

Referring to the accompanying drawings, A represents the cylinder end of a thrashing-machine, in which is located and revolved the toothed cylinder B, working over the ordinary concave, and in front of which extends the opposite side arms C, inclosing the ordinary feeding-table of the thrasher.

A feeder-frame D is hinged at *d* to the ends of the extended side arms C and is supported upon the legs or supports *d'*, connected with the opposite end of the feeder-frame and holding the same in position in a line with the feeder end of the thrashing-machine, whereby the grain may be carried directly to the cylinder. In each end of the feeder-frame D is journaled the endless belt or apron-shaft E, carrying the belt-rollers *e*, over which passes the endless apron *e'*, arranged to move over and under

the ordinary frame-floor *e*², located between the end rollers *e*, and said apron is provided with the carrier-slats *e*³, secured thereto in the usual manner. The front apron-shaft E carries upon one end thereof outside of the feeder-frame the speed-pulleys F, which are connected by suitable belting with the other parts of the machine, as illustrated, all of which are driven from one of the thrashing-machine pulleys. The speed of the endless carrier may be controlled as desired by changing the belt on said speed-pulleys and the adjacent pulleys, to be noted. The feeder-frame D is provided upon each side, adjacent to the delivering end thereof, with the opposite upwardly-extending supporting-arms G, which support and guide the opposite movable knife-cylinder bearing-blocks H upon said feeder-frame. The said movable blocks H are provided upon their faces with the vertical grooves or slots *h*, which receive the upwardly-extending arms G, which while holding the said blocks in position allow the same to be free to move up and down without displacement, according to the size of the bundles passing under the knife-cylinder. Each of said blocks H is further provided with the top bearings *h'*, which receive the knife-cylinder shaft I, journaled therein and carrying the knife-cylinder J, working directly over the endless carrier adjacent to the delivering end of the feeder-frame. Driving-pulleys *i* are keyed on one end of said shaft I, and by means of suitable belting passing over said pulley or pulleys, as illustrated, the said knife-cylinder is driven at the requisite rate of speed.

Rigidly secured upon the periphery of the knife-cylinder J is a series of parallel rows of cutting-knives K. The said cutting-knives K are provided with curved cutting-edges *k*, which extend rearwardly, or away from the direction of rotation of the cylinder, and thus prevent the wrapping of the straw around the cylinder or drum and the choking of the machine, as is common in other machines of this character.

Secured to the upper rear edges of the blocks H in rear of the knife-cylinder is the transverse fender-plate L, extending close to said cylinder and provided with a series of notches *l*, which allow the knives K to pass through said plate as the knife-cylinder revolves and

serves to hold back any straw which may happen to cling to the knives and causes it to drop onto the feeding-table of the thrasher.

Journalled in bearings at the outer ends of the feeding-table are side arms C, and directly under the delivering end of the feeder-frame is the transverse multiple-crank shaft M, having a series of cranks *m*, which receive and carry the upper ends of the inclined notched feeder and spreader arms or bars N, which as the said crank-shaft is rotated vibrate alternately with relation to each other, and thus effectually loosen up the bundle passing from the knife-cylinder and evenly spread the grain, while at the same time delivering it to the cylinder D at the lower end of the same. Said feeder and spreader bars of course work directly over the feeding-table of the thrashing-machine, and in the present invention the lower ends of one or more are connected directly to the lower end of the vibrating delivering-pan O. The said delivering-pan extends rearwardly the full length of said bars or arms and under the delivering end of the feeder-frame and serves to receive the shattered grain and work it into the cylinder, as will be readily apparent. A float-board P is hinged upon the rod *p*, secured in the rear edge of the fender-plate L, and normally rests on the top of the grain, which leaves the knife-cylinder and falls upon the feeding and spreading bars. The float-board P thus serves to hold the grain to its place and prevent the reciprocating and vibrating arms from throwing the grain above the mouth of the thrasher.

It will be noted that the grain being fed upon the endless carrier at the receiving end of the feeder-frame will be carried directly to the revolving knife-cylinder, which will cut the band and which will rise and adjust itself to accommodate the size of bundle and will deliver the cut bundle to the spreading and feeding bars beneath the hinged float-board in the manner just described and allow the same to be evenly fed to the thrasher-cylinder, the belts connecting the several pulleys of the machine of course being sufficiently loose to allow for a certain degree of the vertical movement of the knife-cylinder. It may also be noted that by the connection of the feeder-frame with the separator that the

same can be thrown up and out of the way when not in use, and thus provide a convenient and efficient band-cutting and feeding attachment which subserves all the functions herein set forth.

The construction, operation, and advantages of the herein-described band-cutter and feeder are thought to be apparent without further description.

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

1. In a band-cutter and feeder, the combination, with a thrashing-machine having extended side arms inclosing the feeding-table in front of the cylinder, of an endless-carrier feeder-frame hinged to the outer ends of said arms, a knife-cylinder journaled upon said feeder-frame, a multiple-crank shaft journaled in the outer ends of said side arms, a series of alternately reciprocating and vibrating downwardly-inclined notched feeding and spreading bars connected at their upper ends to said crank-shaft, and a vibrating delivering-pan connected at its lower edge in front of the cylinder to one or more of said bars and working thereunder, substantially as set forth.

2. In a band-cutter and feeder, the combination, with a thrashing-machine having extended side arms, of an endless-carrier feeder-frame hinged to the outer ends of said feeder-arms, a knife-cylinder journaled upon said feeder-frame, a fender-plate in front of said knife-cylinder, a multiple-crank shaft journaled in the outer ends of said side arms, a series of alternately-reciprocating notched feeding and spreading bars connected at their upper ends to said crank-shaft, a vibrating delivering-pan connected at its lower edge to one or more of said bars and working thereunder, and a hinged float-board hinged to said fender-plate and normally lying directly over said feeding and spreading bars, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DAVID GWIN.

Witnesses:

C. C. KEMPER,
MILTON GUSTIN.