(No Model.)

C. J. PORTER.

CORN SPLITTING AND CUTTING MACHINE.

No. 382,108. Patented May 1, 1888.

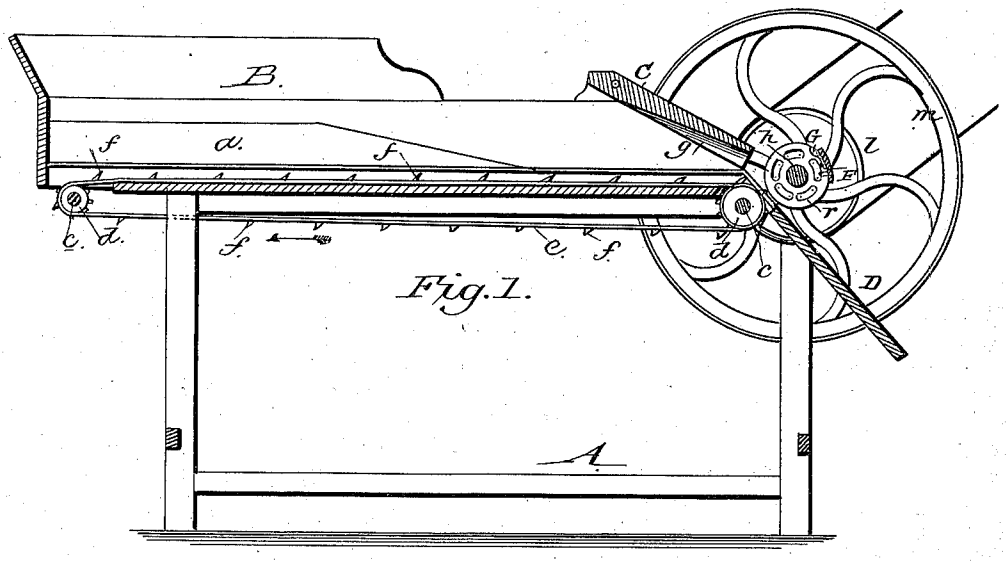


Fig. 1.

Fig. 2.

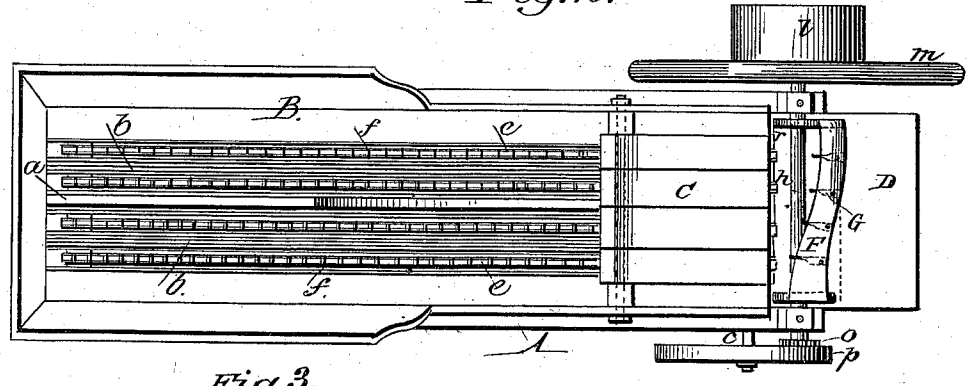
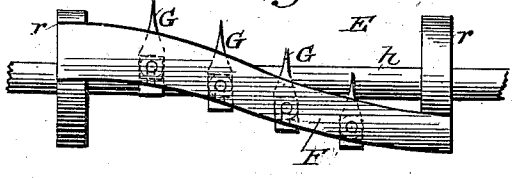


Fig. 3.



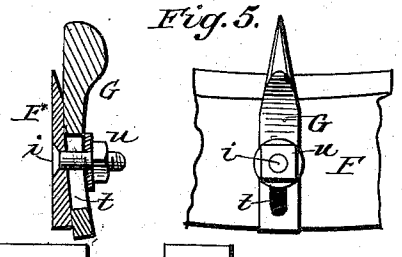


Fig. 5.

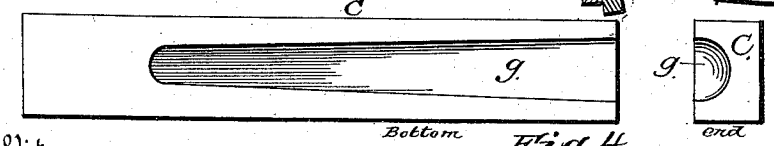


Fig. 4

Witnesses.

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UNITED STATES PATENT OFFICE.

CLINTON JACKSON PORTER, OF BOWLING GREEN, KENTUCKY.

CORN SPLITTING AND CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,108, dated May 1, 1888.

Application filed September 21, 1887. Serial No. 250,298. (No model.)

To all whom it may concern:

Be it known that I, CLINTON JACKSON PORTER, a citizen of the United States, residing at Bowling Green, in the county of Warren and State of Kentucky, have invented certain new and useful Improvements in Corn Splitting and Cutting Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal sectional view of my machine. Fig. 2 is a plan view of the same. Fig. 3 is a detail of the revolving cylinder, showing the knives or cutters attached thereto. Fig. 4 represents a bottom and end view of one of the guide-blocks composing the pivoted board for guiding and holding the cob. Fig. 5 illustrates details of the knife or cutter for splitting the cob longitudinally.

My invention has reference to machines for splitting and cutting corn for stock purposes; and it consists in the constructions and combinations of devices which I shall hereinafter fully describe and claim.

To enable others skilled in the art to make and use my invention, I will describe its construction and indicate the manner in which the same is carried out.

In the said drawings, A represents a suitable frame, within which the several operative parts of the machine are mounted. The hopper B is mounted on top of the frame A, extends nearly the full length of the machine, and is divided by a central partition, *a*, into two channels or guides, *b b*. (See Fig. 2.) Secured to the under side of the hopper at opposite ends is a shaft, *c*, having spur-wheels *d*, around which are passed endless chains *e*, having lugs or projections *f*, which engage and convey the ear-corn through the channels *b* to the knives at the discharge end of the same. By thus constructing the hopper it will be observed the ear-corn is caused to traverse the channels endwise, for a purpose I will hereinafter indicate. At the discharge end of the hopper and to the upper portion of the same is pivoted a swinging board or frame, C, which may be formed in one piece, or, if desired, may be constructed of sections suitably united together. In either case the lower face of the board or sections is cut away or grooved at *g*, to form independent guides for the passage endwise of the corn. These grooves gradually increase in depth from the upper to the lower end of the board or sections, and not only guide the ears of corn, but also hold them while being acted on by the knives or cutters. By pivoting the upper end of the board the lower end is permitted to have a free movement and normally rests against the floor of the hopper or against the inclined discharge board or chute D. Therefore, as the ears of corn are advanced by the endless chains, their ends enter the grooves in said board and raise the same in their efforts to pass through the machine.

The cutting mechanism, to which I desire to call especial attention, consists of a cylinder, E, mounted upon a transverse shaft, *h*, at the discharge end of the machine, said shaft being provided at one end with a band-pulley, *l*, to which power is applied, and a balance-wheel, *m*, and at the opposite end with a pinion, *o*, adapted to engage an internal gear, *p*, on one of the shafts *c*, to operate the endless chains.

The cylinder E comprises end disks, *r*, having attached thereto in any well-known manner the opposite ends of one or more spirally-arranged knives or cutters, F, to which, at desired distances apart, are adjustably secured other knives or cutters, G, arranged approximately at right angles to the cutters F, and secured to the latter by headed screws or bolts *i*, passing therethrough and through elongated slots *t*, formed in the body of the cutters G, the said screws or bolts being engaged by nuts *u* to secure the cutters G in position after being adjusted.

From this description it will be manifest that as the ends of the cobs emerge from the grooves in the swinging board they are caught by the leading cutters G and split longitudinally. As the ears of corn are further advanced by the movement of the endless chains, they are brought into a position where they may be engaged by the spirally-arranged transverse cutter or cutters F, which cut through the corn in lines approximately at right angles to the cut made by the leading cutters G, and therefore break the ear-corn into small pieces, in which condition it may be fed to the stock. I

am also permitted by the use of this machine to greatly reduce the cost of preparing the corn for stock purposes, and also avoid the waste which frequently occurs in many machines of a similar nature.

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

1. In a corn splitting and cutting machine, a hopper and the endless chains or belts for advancing the ear-corn endwise therein, in combination with a revolving cylinder having one or more spirally-arranged transverse knives or cutters, a series of cutters, G, adjustably secured thereon so that their points project beyond the cutting-edge of the transverse cutters in a plane at right angles thereto, and a pivoted swinging board at the discharge end of the hopper adjacent to the cutters for holding the ear-corn while being operated on by said cutters, substantially as described.

2. The combination, with a hopper and means for advancing the ear-corn endwise therein, of a revolving cylinder having transverse cutters or knives, the slotted cutters G, the nuts and bolts for adjustably securing said cutters to the transverse cutters, and the swinging grooved board for holding the ear-corn while being operated on by the cutters, substantially as described.

3. An improved corn splitting and cutting machine comprising a main frame, a hopper divided by a central partition in two channels or guides, endless chains or bands moving in said channels and advancing the ear-corn endwise therein, a swinging board at the discharge end of the hopper having a grooved under surface for the passage of the corn and for holding the corn endwise in the hopper, and a rotating cylinder having a plural number of cutters for cutting the corn held by said board, substantially as described.

CLINTON JACKSON PORTER.

Witnesses:
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