

(No Model.)

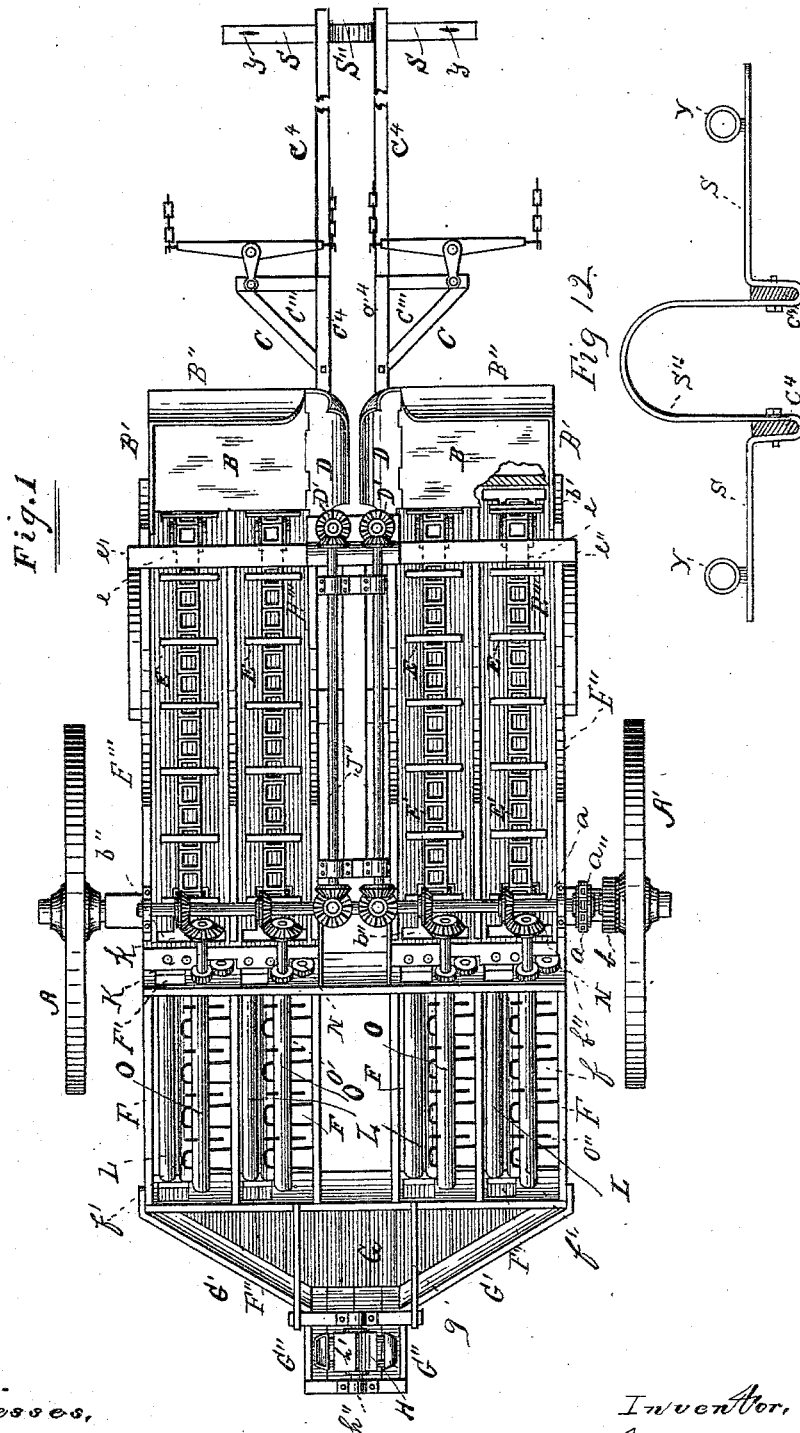
3 Sheets—Sheet 1.

C. L. BURGESS.

CORN HARVESTER.

No. 301,667.

Patented July 8, 1884.



Witnesses,
Henry Thompson,
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Inventor,
Curtis L. Burgess

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Fig. 4

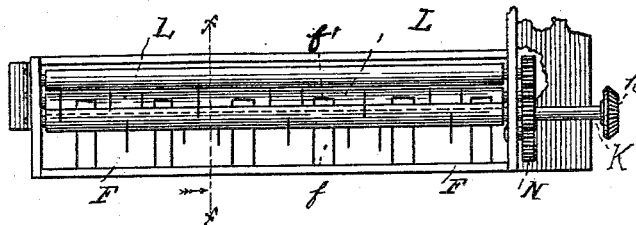


Fig. 5

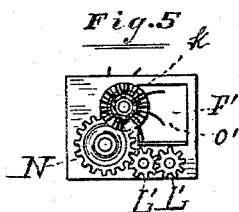


Fig. 6

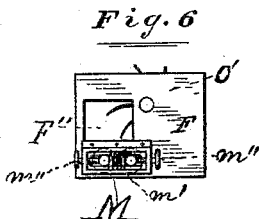


Fig. 7

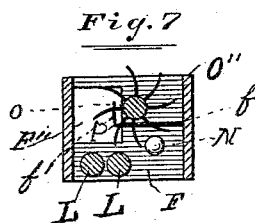


Fig. 8

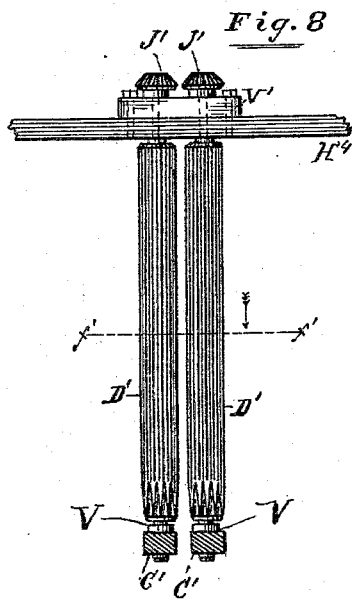


Fig. 9

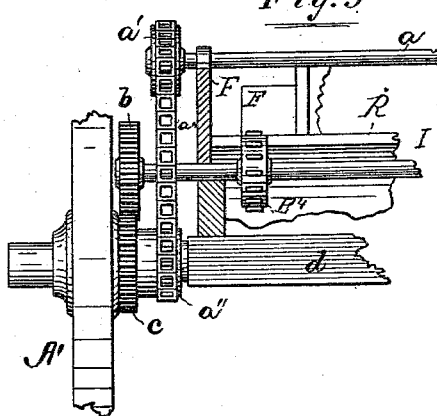
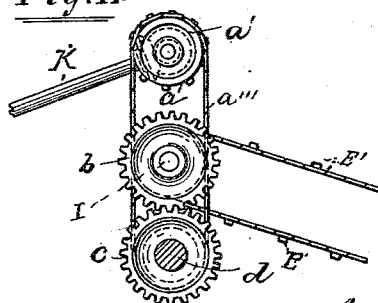


Fig. 10



Fig. 11



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UNITED STATES PATENT OFFICE.

CURTIS L. BURGESS, OF WOODHULL, ILLINOIS.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 301,667, dated July 8, 1884.

Application filed May 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, CURTIS L. BURGESS, a citizen of the United States, residing at Woodhull, in the county of Henry and State of Illinois, have invented a new and useful Corn-Husking Machine, of which the following is a specification.

The object of this improvement is to provide a speedy and economical means of removing corn from the stalk in the field, and also husking it without materially injuring either the stalks or the corn.

The invention consists in the novel construction and arrangement of the parts, as will be hereinafter fully explained and specifically claimed, reference being had to the drawings herewith filed as part hereof, in which similar letters of reference denote the same parts throughout the several views.

Figure 1 is a top view without several minor features, which are fully illustrated and located in special figures. Fig. 2 is a side elevation, and Fig. 3 is an end elevation. Fig. 4 is a section showing the husking-rollers and mode of connecting their motion. Fig. 5 is an end view of the husking-roller chambers, more fully illustrating the geared connection of the husking-rollers not fully shown in Fig. 1. Fig. 6 is an end view showing exit from the husking-roller chambers into the final elevator-box. Fig. 7 is a vertical section showing interior of the husking-roller chambers and relative position of the parts. Fig. 8 is a vertical section. Fig. 9 is a section as seen from the rear portion of the machine. Fig. 10 is a section taken on the line *ff* of Fig. 8. Fig. 11 is a vertical section. Fig. 12 is an end elevation, partly in section, of attachment for drawing the machine.

A A' are transporting-wheels, one of which, A', has an inwardly-extended hub provided with pinion *c* and sprocket-gear *a''*, the motion of which connects through chain belt *a'''* with sprocket-gear *a'*, and thereby drives the shaft *a*, which imparts motion to the triple husking-rollers in the husking-chambers F by means of the geared shafting K *k*.

The superstructure of the machine is supported by longitudinal beams C', which may be affixed to the axle *d* by iron straps or any suitable means, and securely connected to the

front elevator-chambers, and adjoining husking-chambers on their inner sides, or any other suitable position.

The transporting-wheels A A' revolve on the axle *d*, and by the advance of the machine, which is pulled by horse-power, motion will be communicated to the different parts.

B B' B'' are inclined boxes, into which the corn falls after being separated from the stalks by contact with and action of the vertical rollers D' D', which move inwardly and grasp the stalk, but will not admit of the passage of the corn, which is therefore snapped from the stalk. The rollers D' D' are kept in position by journals running in metal bearings V, attached to longitudinal beams C', and metal journals V', affixed to upper transverse beam, H', forming part of the frame-work H', H'', H''', X, and *m*, for supporting the shafting J'' J' and their geared connections. The shafting J'' is driven by shafting J', which connects at their lower ends with shaft *a'* by bevel-gears working in corresponding gear thereto attached. The shafting J'' runs in metal bearings *j*, attached to beam H''', as shown in Fig. 3.

D D are hinged sides or doors of the receiving-boxes B B' B''. They lean toward each other, and thus prevent the corn from falling to the ground after it has been separated from the stalks by the vertical rollers D' D'.

Adjoining the receiving-chambers B B' B'' are elevator-chambers E'', provided with endless belts E' E' E' E', having transverse projecting ribs E. Said belts connect with sprocket-wheels E' on shaft I, (see Fig. 9,) which is driven by pinion *c*, acting on pinion *b* at the end of shaft I. The endless belts E' E' move around the floors of the elevating-chambers E' E'' on rollers *e'''*, through recesses *b''* at the inner ends thereof, and communicate with receiving-chambers B B' B'' through recesses *b'* in the bottoms thereof, and recesses *e* in the partition-wall *e''*, whereby the corn in the receiving-chambers is moved thence over the bridge R (see Figs. 2, 9) toward the husking-chambers F, into which it drops through the openings F'.

O O represent husking-rollers worked by bevel-gear shafting K *k*, connecting with corresponding bevel-gear, *k'*, on shaft *a*, as specially illustrated in Fig. 3. The shafting K,

driving the husking-rollers O O', is provided with pinion-wheels at the inner end walls of the husking-chambers F at h'' , which communicate motion to the pinion-wheel N, whereby the stripping-rollers L are driven in the same direction as the husking-rollers O O', as shown in Figs. 4 and 5. The husking-rollers are provided with curved and bevel-pointed projections or fingers O', which engage with and loosen the husks, which are immediately caught between the rollers L, whereby they are stripped from the ear and dropped beneath the machine.

Attached to the side walls of the husking-chambers F, nearest the husking-rollers O O', are inwardly-projecting plates f , provided with vertical flanges f' , located adjacent to the husking-fingers O', for the purpose of preventing the corn from being clutched by the triple rollers, and thereby having the grain bruised and wrenched from the cob.

At the exit end of the husking-chambers F, and outside thereof, the stripping-rollers L L run in adjustable boxes affixed thereto by inclosing-frame M, which is bolted or screwed to the husking-chamber wall, as shown in Fig. 6. Said boxes are pressed apart by spiral spring m' , which gives the stripping-rollers a tendency to move away from each other. Such inclination is controlled, as desired, by means of the set-screws m'' at the ends of the frame M, whereby the rollers may be made to run as closely together as may be necessary to properly strip the loosened husks from the corn.

G G' G'' is a box or trough for receiving the corn after the husks have been removed, and where the corn is picked up by the elevator-cups h on chain H, which move around square rotating block h' , which revolves on axis h'' . The trough G G' G'' is partly supported by rods g , connecting with husking-chambers F.

Motion may be communicated to the elevator-belt H h by a line of bevel-gear shafting connecting with corresponding gear located on shaft a , and supported by suitable framework, which may be affixed to the elevator-chambers F, and said superstructure may be provided with an inclined trough for receiving

the elevated corn, and sliding the same by force of gravity into a wagon moving along near the machine.

To draw the machine a double tongue having central arch, S'', lateral projections S, breast-chain rings y , and tongues C', as shown in Fig. 12, should be affixed to the machine at the single-tree projection C O'', and the horses hitched thereto. The arched connection between the double tongues C' should be of sufficient height to allow free passage of the stalks to the machine between the double tongue, as indicated by the arrow in Fig. 1.

Having thus explained the construction and operation of my improvement, what I claim as new, and desire to secure by Letters Patent, is as follows:

1. The husking-rollers L L O O', connected by gearing k N L' L', in combination with the husking-chambers F, geared shaft a , chain belt a''' , and drive-wheel A', substantially as specified.

2. The inclined receiving-chambers B B' B'', having hinged doors D D, in combination with the elevator-chambers E'' and E''', and elevator-belts E E', substantially as specified.

3. The hinged doors D D, in combination with the receiving-chambers B B' B'', for the purpose set forth.

4. The combination of the receiving-chambers B B' B'', elevating mechanism E E' E'' E''', bridge R, husking-chambers F, and husking mechanism L L O O' k N L' L' K, constructed and arranged to operate as specified, for the purpose set forth.

5. The receiving-chambers B B' B'', and doors D D, in combination with vertical snap-rollers D' D', having tapered ribs at their lower ends, and geared to operate substantially as specified.

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

CURTIS L. BURGESS.

Witnesses:

G. L. SHUMWAY,
P. E. JOHNSON.