(No Model.) 2 Sheets—Sheet 1.

M. BURNS.

CORN HARVESTER.

No. 457,252. Patented Aug. 4, 1891.

Fig. 1.

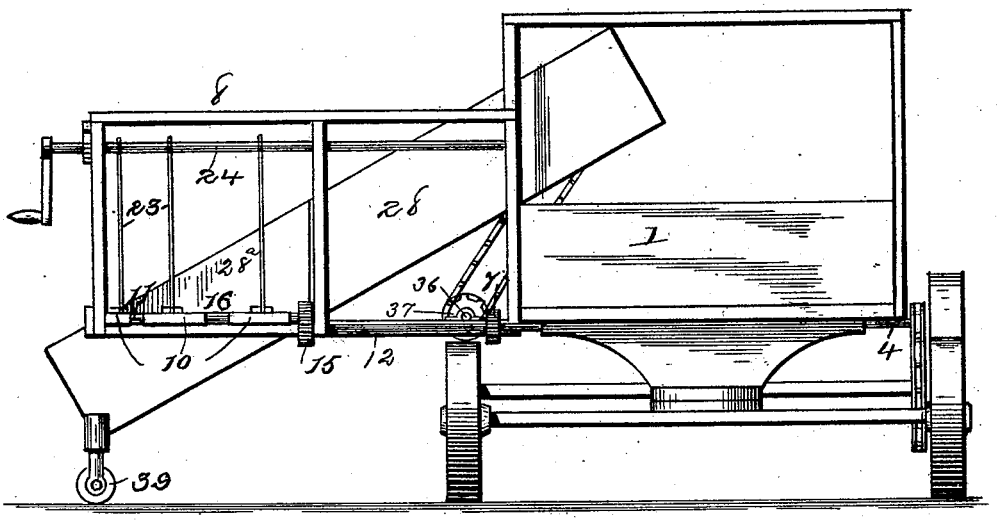
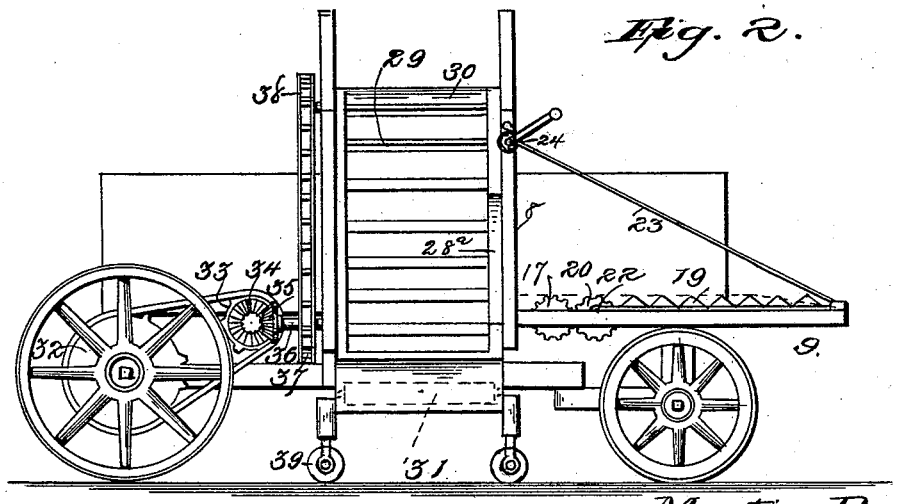


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

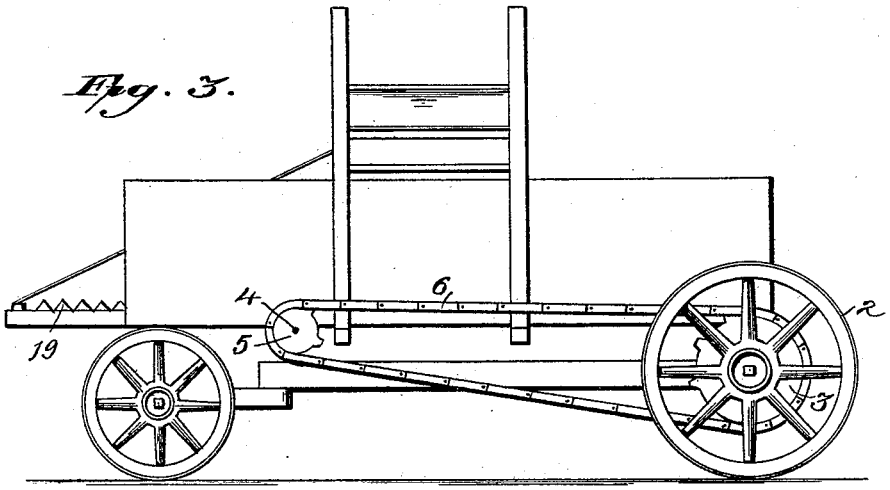
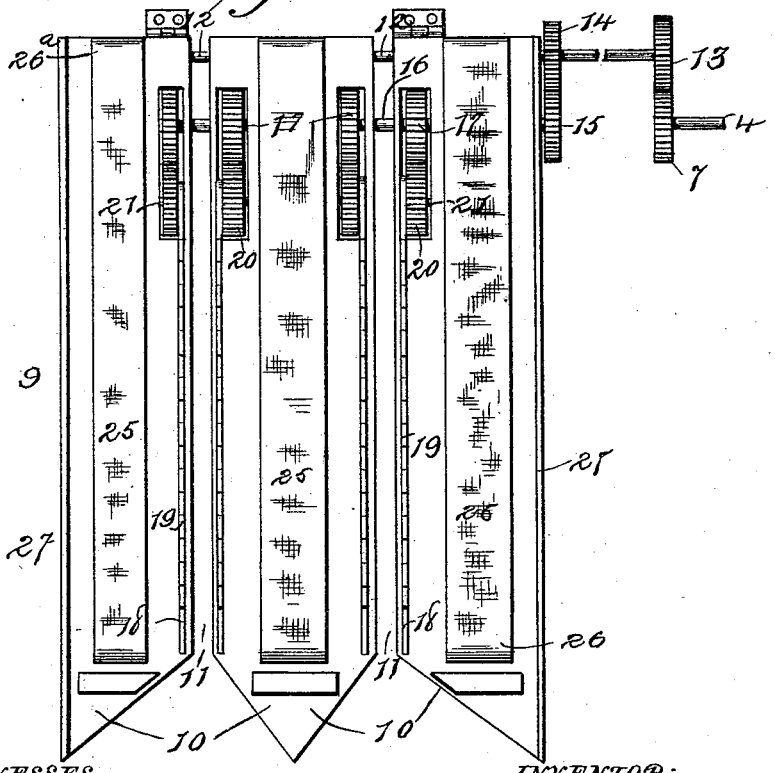


Fig. 4.



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UNITED STATES PATENT OFFICE.

MARTIN BURNS, OF PLATTE CENTRE, NEBRASKA.

CORN-HARVESTER.

SPECIFICATION forming part of Letters Patent No. 457,252, dated August 4, 1891.

Application filed December 13, 1890. Serial No. 374,587. (No model.)

To all whom it may concern:

Be it known that I, MARTIN BURNS, a citizen of the United States, residing at Platte Centre, in the county of Platte and State of Nebraska, have invented certain new and useful Improvements in Corn-Harvesters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in a new and improved corn-harvester which is adapted to be drawn through the corn-field and will there cut the ears from the standing stalks and discharge them into the body of the wagon; and my invention will be hereinafter fully described and claimed.

Referring to the accompanying drawings, Figure 1 is a front elevation of my new and improved corn-harvester. Fig. 2 is a side view of the right-hand side thereof. Fig. 3 is a side view of the left-hand side. Fig. 4 is a detail view, on an enlarged scale, of the cutter-frame and devices and the adjacent parts.

The same numerals of reference indicate corresponding parts in all the figures.

Referring to the several parts by their designating-numerals, 1 indicates the body of a wagon to which my invention is shown applied.

To the inner side of the rear left-hand drive-wheel 2 of this wagon is secured a sprocket-wheel 3, and beneath the forward part of the wagon-body is journaled a transverse shaft 4, having on its left-hand end a sprocket-pinion 5, and a sprocket-chain 6 passes around the wheel 3 and the pinion 5. On the right-hand end of the shaft 4 is secured a cog-wheel 7.

To the right-hand side of the wagon-body near its forward end is secured a suitable frame 8, and in the lower end of this frame is hinged by its inner end the cutter-frame 9. This frame is formed with a series of fingers 10, (the number of which may be increased or lessened, as required,) which are mounted at their rear ends in the frame 8, so as to leave a longitudinal space 11 between their sides of sufficient size for the admittance of the corn-stalks. Through the inner ends of these fingers passes the transverse shaft 12, having a pinion 13 on its inner end, which meshes with cog-wheel 7, and having a second pinion 14, which meshes with a pinion 15 on the left-hand end of the transverse shaft 16. The shaft 16 passes transversely through the inner ends of the fingers 10, and upon it at the points shown are secured the cog-wheels 17. The fingers 10 are formed at their adjacent edges with the longitudinal slots 18, in which the cutter-blades 19 are reciprocated. The upper edges of these blades are formed with a series of sickles or teeth.

At the rear ends of the slots 18 cog-wheels 20 are mounted in suitable openings in the fingers, each of said wheels being separately pivoted on pivot-pins 21 and has a wrist-pin 22, on which the inner end of its blade 19 is pivoted. The cog-wheel 20 meshes with the cog-wheels 17 on the transverse shaft 16, and it will thus be seen that through the connections above described, when the machine is driven forward, the cog-wheels 20 will be rapidly revolved and the blades 19 as rapidly reciprocated in the slotted edges of the several fingers. The fingers are connected by cords or chains 23 with the transverse bar 24, by turning which the outer ends of the fingers may be raised or lowered, as may be desired, and this bar 24 can be held at the point to which it is adjusted by a suitable pawl. As the machine is driven forward, the cornstalks enter the narrow spaces between the several fingers, and as they are drawn through the same the rapidly-moving blades 19 cut the ears from the stalk, and they fall upon the fingers and are conveyed by revolving belts 25 to the inner ends of the fingers and discharged through an opening 28^a, formed in the front side board of the inclined elevator 28 upon the lower end of the conveyer. These chains 25 travel around rollers 26 26^a. Guards 27 extend up along the outer edges of the cutter-frame to prevent the cut ears from falling off the same.

28 indicates the main elevator or conveyer, which is mounted at the side of the wagon just back of the cutter-frame, so that the ears falling from the rear end of the cutter-frame will be discharged on the lower end of the conveyer. Endless chain belts 29 travel around the upper and lower rollers 30 and 31, mount-

ed in the ends of the conveyer-frame. Upon the inner side of the rear right-hand wagon-wheel is secured a sprocket-wheel 32, and a sprocket-chain passes around this wheel, and a sprocket-pinion 33 is journaled on that side of the wagon-body. A beveled pinion 34 on the outer face of the sprocket-pinion 33 meshes with a similar beveled pinion 35, secured on the outer end of a shaft 36. Upon this shaft is mounted a sprocket-wheel 37, and a similar sprocket-wheel 38 is mounted on the end of the shaft 30. A sprocket-chain passes around these two wheels, as shown. By this arrangement as the machine is driven forward the chain belt of the conveyer will be continuously revolved, and the cut ears falling upon the lower end of the conveyer from the cutter-frame will be elevated and discharged into the wagon. The lower end of the inclined elevator-frame is preferably supported on wheels 39.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my improved corn-harvester will be readily understood. It will be seen that it is comparatively simple in construction and is very effective in operation.

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

1. The combination of the fingers 10, formed with the longitudinal slots 18 and having the end rollers 26 26ª journaled in them, the transverse revolving shaft 16, having the pinion 15 upon its outer end, and the cog-wheel 17, secured upon it, the transverse shaft 12, having the pinion 14, the pivoted wheels 20, having the wrist-pins 22, the narrow reciprocating blades 19, pivoted at their rear ends upon the wrist-pins 22, and the belts 25, passing around the rollers 26 26ª, substantially as set forth.

2. The combination, with the wagon-body, of the inclined elevator arranged at the side thereof, the fingers 10, hinged at their rear ends and provided with the longitudinal reciprocating blades 19, the transverse adjusting-bar 24, and the connecting-chains 23, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARTIN BURNS.

Witnesses:
J. J. O'NEILL,
GEO. N. HOPKINS.