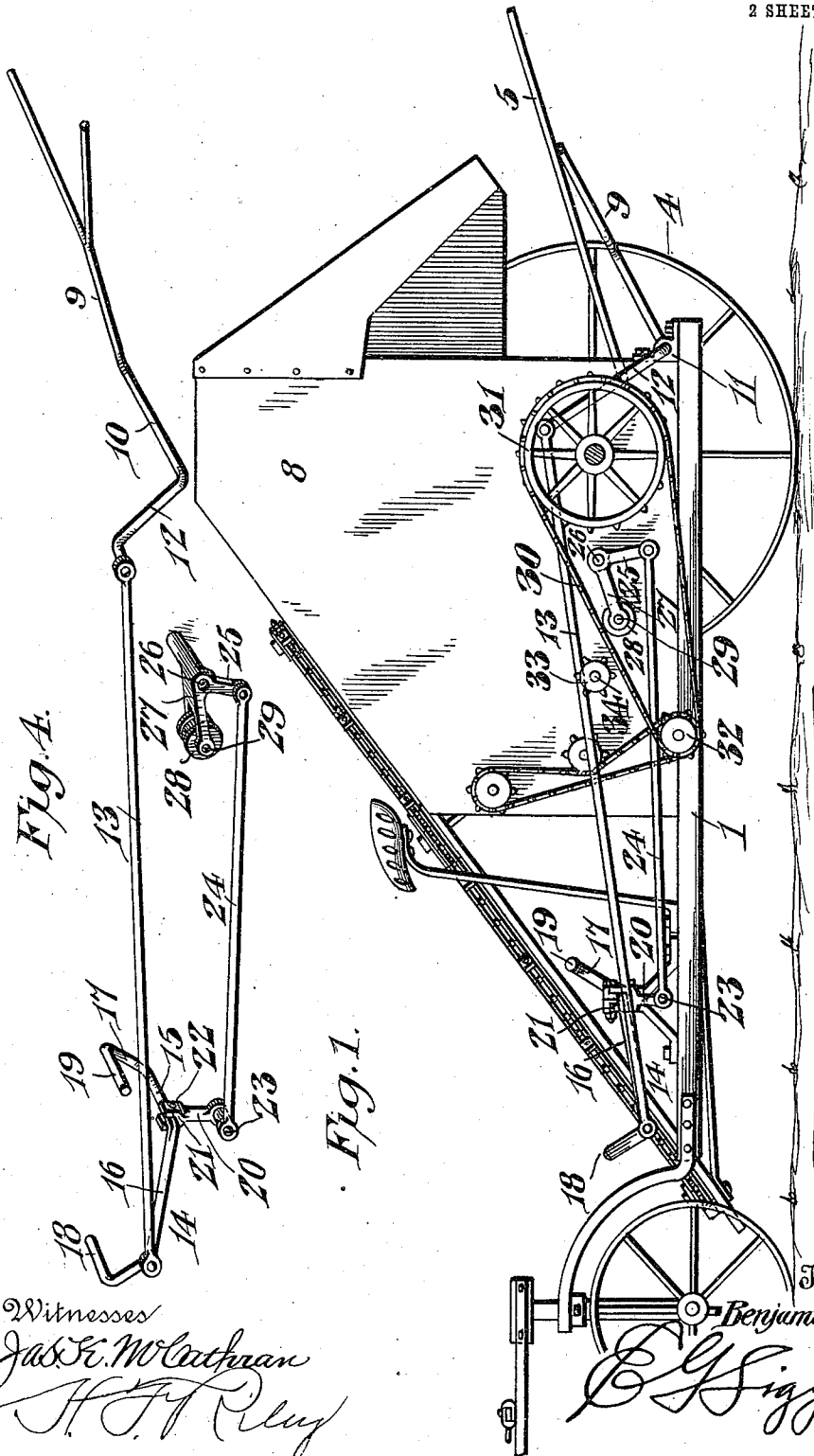


B. E. REED.
CORN HARVESTER.
APPLICATION FILED AUG. 31, 1909.

975,797.

Patented Nov. 15, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

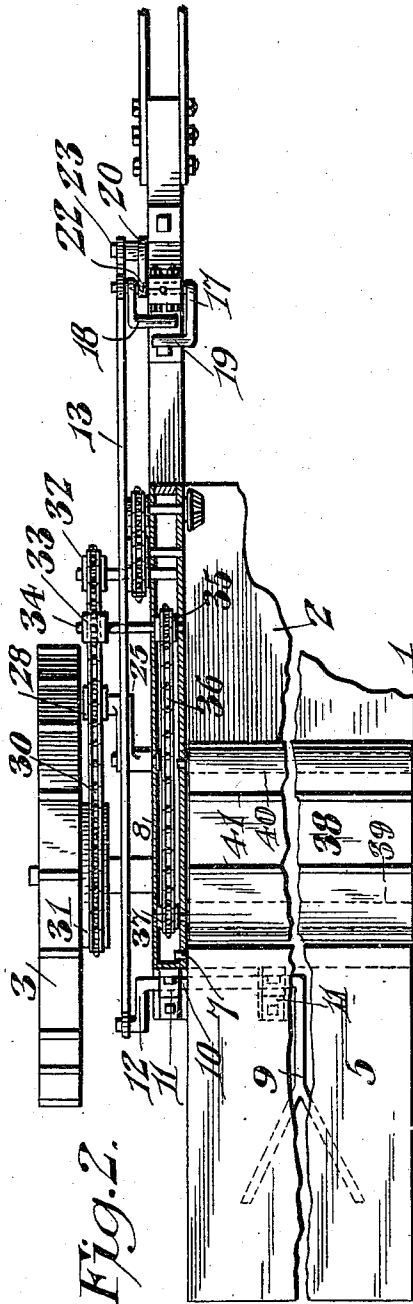


Fig. 2.

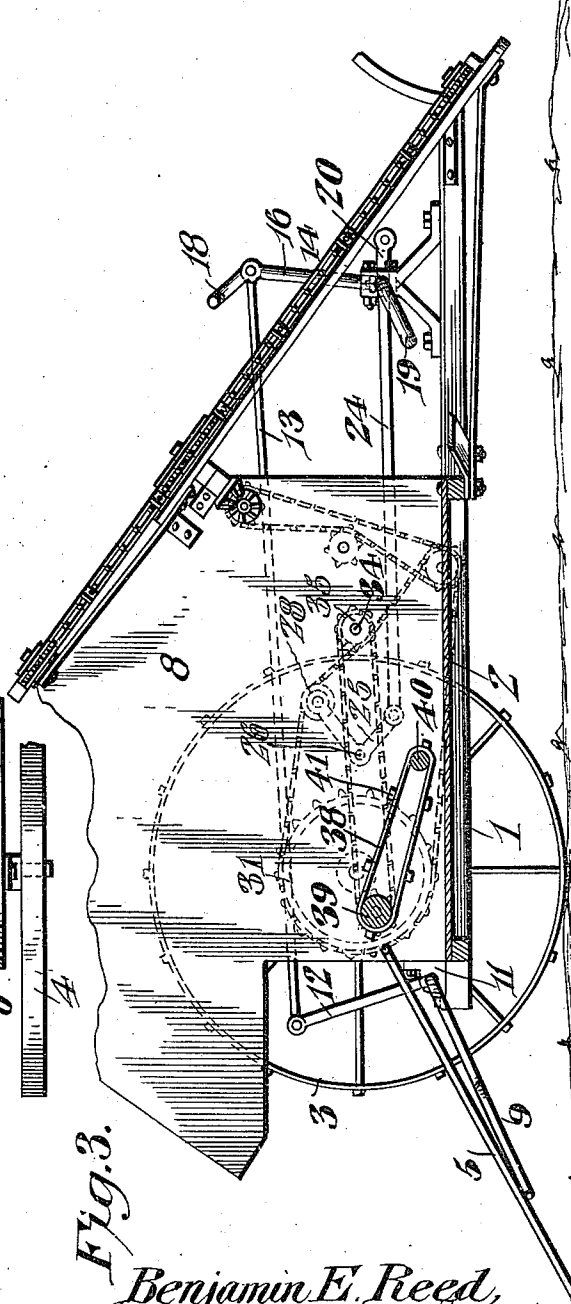


Fig. 3.

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UNITED STATES PATENT OFFICE.

BENJAMIN ERNEST REED, OF GOLDSBORO, MARYLAND.

CORN-HARVESTER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJAMIN E. REED, a citizen of the United States, residing at Goldsboro, in the county of Caroline and State of Maryland, have invented a new and useful Corn-Harvester, of which the following is a specification.

The invention relates to improvements in corn harvesters.

The object of the present invention is to improve the construction of corn harvesters, more especially that shown and described in Patent No. 938,335, granted to me Oct. 26, 1909, and to provide an endless carrier arranged in advance of the dumping table or platform and adapted, when the latter is dumped, to be simultaneously operated, whereby all of the corn accumulated on the rear portion of the machine will be carried rearwardly clear of the same to render the dumping operation complete.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is an elevation of a corn harvester provided with dumping mechanism, constructed in accordance with this invention, the dumping table or platform being elevated. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view, the dumping table or platform being dropped to the ground. Fig. 4 is a detail perspective view of construction for simultaneously operating the dumping table or platform and the endless carrier.

Like numerals of reference designates corresponding parts in all the figures of the drawings.

1 designates a horizontal frame, supporting a floor 2 and designed to be constructed of any suitable material, preferably as shown and described in the aforesaid application. The frame is supported at the rear portion by a traction wheel 3 and a carrying wheel 4. Hinged to the frame at the rear end thereof is a dumping table or platform 5, extending rearwardly from the frame and provided at opposite sides of its inner or

front end with pivots 6 and 7. The pivot 6 is arranged in a suitable bearing of the frame at one side thereof, and the other pivot 7 is mounted in a perforation of a vertical casing 8, located at the opposite side of the frame and constructed similar to that shown and described in the said application. The dumping table or platform, which is elevated with respect to the horizontal frame, is normally arranged in an upwardly and rearwardly inclined position, as illustrated in Fig. 1 of the drawings, and it is supported in such elevated position by an approximately Y-shaped arm 9 of a transverse rock shaft 10, the fork of the arm 9 forming spaced supporting portions for the dumping table or platform. The transverse rock shaft 10 is journaled in suitable bearing brackets 11, located at the rear end of the frame near the center and at one side of the same. The Y-shaped supporting arm occupies a position centrally of the dumping table or platform, and the said rock shaft is provided at its outer end with a crank arm 12, which is connected by a rod 13 with a foot lever 14. The foot lever 14 is provided with a transverse pivot portion 15, and it is provided at one end thereof with a forwardly extending arm 16, and at the other end with an upwardly extending arm 17. The forwardly extending arm is located at the outer end of the transverse pivot portion 15, and is angularly bent near its front end and is extended transversely thereat to provide a foot-receiving portion 18, extending inwardly with respect to the arm 16. The arm 17, which is disposed at an obtuse angle to the arm 16, has its terminal portion extended transversely of the lever 14 to provide a foot-receiving portion 19. The transverse pivot portion 15 and the arms 16 and 17 may be advantageously constructed of a single piece of rod metal, or other suitable material, and the lever is also equipped with a depending arm 20, extending downwardly from the outer end of the transverse pivot portion 15. The upper terminal 21 of the arm 20 is bifurcated to straddle the transverse pivot portion 15, and is secured to a squared or flattened portion thereof by means of a pin or rivet 22.

The depending arm is connected by a pin or pivot 23 with the front end of a connecting rod 24, extending rearwardly to a bell crank lever 25 and pivoted to one of the arms thereof. The bell crank lever 25 is

fulcrumed at its angle to the casing by a pin or pivot 26, and its arm 27, which is relatively wide, is bifurcated at the outer end to receive a pulley or anti-friction wheel 28, which is mounted on a suitable pivot 29. The antifriction wheel or pulley 28 is located beneath an inclined flight of a sprocket chain 30, which is driven by the traction wheel 3 of the machine. A sprocket wheel 31 is connected with the traction wheel, and the sprocket chain extends from the sprocket wheel 31 to a sprocket pinion 32 for communicating motion to the cutting mechanism and the means for feeding the corn rearwardly, preferably constructed as shown and described in the aforesaid application. As the cutting mechanism and the feeding means do not constitute portions of the present invention, illustration and description thereof are deemed unnecessary.

The sprocket pinion 32 is located in advance of the sprocket wheel 31, and the upper flight of the sprocket chain 30 extends beneath a sprocket gear 33, mounted on a transverse shaft 34, which is journaled in suitable bearings of the casing 8. The transverse shaft 34 carries a front sprocket pinion 35, which is connected by a sprocket chain 36 with a rear sprocket pinion 37 for communicating motion to an inclined endless conveyer 38, located in advance of the dumping table or platform and extending downwardly therefrom. The endless conveyer 38, which extends entirely across the frame, may be constructed in any desired manner, but it preferably consists of an endless belt or apron mounted on upper and lower rolls 39 and 40 and equipped with transverse slats or bars 41. The upper roll is provided at its ends with suitable journals or gudgeons, and the rear sprocket pinion 37 is mounted on one of the same.

When the upwardly or rearwardly extending arm of the foot lever is depressed by the driver or operator, the connecting rod 13, which is located above the connecting rod 24, is moved rearwardly and the lower connecting rod 24 is carried forwardly. These movements rock the shaft 10 and oscillate the bell crank lever 25, thereby dumping the table or platform and simultaneously lifting the upper flight of the sprocket chain 30 and causing the same to mesh with the sprocket pinion 33, whereby motion is communicated to the endless carrier. As the corn accumulates at the back of the machine upon the inclined endless carrier and the dumping table or platform, a complete dumping of the severed corn will be effected by dropping the dumping table or platform and operating the endless carrier.

After the corn has been deposited on the ground, the dumping table or platform is elevated or reset by depressing the forwardly extending arm of the foot lever, which move-

ment carries the upper connecting rod 13 forwardly and moves the lower connecting rod 24 rearwardly, whereby the rock shaft is partially rotated to raise the dumping table or platform, and the bell crank lever is oscillated to permit the sprocket chain 30 to drop out of mesh with the sprocket pinion 33. Such downward movement of the forwardly extending arm of the foot lever carries the connecting rod 13 slightly below the pivotal point of the foot lever, whereby the parts form a lock for maintaining the dumping table or platform in an elevated position.

While I have illustrated the dumping mechanism applied to a corn harvesting machine, yet it will be readily apparent that the dumping mechanism is applicable to various machines for cutting grain, or other material and depositing the severed material at intervals upon the ground. And while I have illustrated the conveyer 38 as consisting of an endless belt or apron provided with transverse slats or bars and mounted on upper and lower rolls, various other forms of conveyers of that general type may be employed, as will be readily understood.

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

1. A machine of the class described including a dumping table or platform, an endless carrier located in advance of the dumping table or platform, and manually operable means for simultaneously dumping the table or platform and for operating the endless carrier.

2. A machine of the class described including a frame, a dumping table or platform extending rearwardly from the frame, an endless carrier located in advance of the dumping table or platform and extending entirely across the frame, said endless carrier being normally stationary, and means for simultaneously dumping the table or platform and for operating the endless carrier.

3. A machine of the class described including a dumping table or platform, an endless conveyer located in advance of the same, gearing for operating the endless carrier, and manually operable means for dumping the table or platform and for throwing the gearing into mesh to operate the endless carrier simultaneously with the dumping of the table or platform.

4. A machine of the class described including a dumping table or platform elevated with respect to the frame, an inclined endless carrier extending downwardly and forwardly with respect to the dumping table or platform, and means for simultaneously dumping the table or platform and for operating the endless carrier.

5. A machine of the class described in-

cluding a dumping table or platform, an endless carrier located in advance of the dumping table or platform, gearing for operating the endless carrier having an element movable into and out of mesh, a manually operable lever, and connections between the same and the dumping table or platform and the said element for simultaneously dumping the table or platform and for moving the said element into mesh to operate the endless carrier.

6. A machine of the class described including a dumping table or platform, an endless carrier located in advance of the same, gearing for operating the endless carrier having an element movable into and out of mesh, a foot lever fulcrumed at an intermediate point and having opposite foot-receiving arms, and mechanism connected with the foot lever for raising and lowering the dumping table or platform and for simultaneously moving the said element into and out of mesh.

7. A machine of the class described including a dumping table or platform, a carrier located in advance of the same, a rock shaft extending beneath the dumping table or platform and having an arm supporting the same, a foot lever, and connections between the foot lever and the rock shaft for raising and lowering the dumping table or platform, said connections and foot lever being arranged to form a lock for holding the dumping table or platform in an elevated position.

8. A machine of the class described including a dumping table or platform, a carrier located in advance of the same, a rock shaft extending beneath the dumping table or platform and provided at one end with a crank arm having a substantially Y-shaped arm at the other end for supporting the dumping table or platform, and an operating lever connected with the rock shaft for raising and lowering the platform.

9. In a machine of the class described, the combination with a platform, and an endless carrier located in advance of the same, of gearing for operating the endless carrier including a gear, and a sprocket chain having a portion movable into and out of mesh with the gear, a lever arranged to carry the sprocket chain into mesh with the gear, and an operating lever connected with the said lever.

10. In a machine of the class described, the combination with a platform, and an endless carrier located in advance of the same, of gearing for operating the same including a gear, a sprocket chain having a portion located adjacent to and movable into and out of mesh with the gear, a lever provided with an anti-friction device arranged to engage the sprocket chain to carry the same into mesh with the said gear, and op-

erating means connected with the said lever for oscillating the same.

11. In a machine of the class described, the combination with a platform, and an endless carrier located in advance of the same, of gearing for operating the same including a gear, a sprocket chain extending beneath the gear, a lever arranged to move the sprocket chain upward into mesh with the said gear, and an operating lever connected with the said lever for oscillating the same.

12. In a machine of the class described, the combination with a platform, and an endless carrier located in advance of the same, of gearing for operating the same including a gear, a sprocket chain extending beneath the gear, a bell crank lever provided at one of its arms with an anti-friction device arranged to move the sprocket chain upward into mesh with the said gear, and an operating lever connected with the other arm of the bell crank lever.

13. A machine of the class described including a dumping platform, an endless carrier located in advance of the platform, gearing for operating the endless carrier including an element movable into and out of mesh, a lever arranged to move the said element into mesh, a rock shaft having an arm located beneath the table or platform for supporting the same, a foot lever, and rods connecting the foot lever with the rock shaft and with the first-mentioned lever.

14. A machine of the class described including a dumping platform, an endless carrier located in advance of the platform, gearing for operating the endless carrier including an element movable into and out of mesh, a lever arranged to move the said element into mesh, a rock shaft having an arm located beneath the table or platform for supporting the same, a foot lever comprising angularly related foot-receiving arms and having a depending arm, and means for connecting the forwardly extending arm with the rock shaft and the depending arm with the first-mentioned lever.

15. A machine of the class described including a dumping platform, an endless carrier located in advance of the platform, gearing for operating the endless carrier including an element movable into and out of mesh, a lever arranged to move the said element into mesh, a rock shaft having an arm located beneath the table or platform for supporting the same, a foot lever comprising a transverse pivot portion, foot-receiving arms arranged at an angle to each other and extending from the ends of the transverse pivot portion, and a pendent arm secured to the pivot portion of the lever, an upper rod extending from one of the foot-receiving arms to the rock shaft and movable beyond the pivot portion of the

lever to form a lock for holding the dumping platform in an elevated position, and a lower rod connecting the depending arm of the foot lever with the first mentioned lever.

- 5 16. A machine of the class described including a dumping platform, a carrier located in advance of the same, a rock shaft having a supporting arm receiving the platform, said rock shaft being also provided
10 with a crank arm, a foot lever pivoted at an intermediate point and having angularly related foot-receiving arms, and a rod con-

nected with the crank arm and with one of the foot-receiving arms and arranged to be carried beyond the pivot of the foot lever 15 to form a lock for holding the dumping table or platform in an elevated position.

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

BENJAMIN ERNEST REED.

Witnesses:

MADISON BROWN,
J. FRANK HARPER.