

(No Model.)

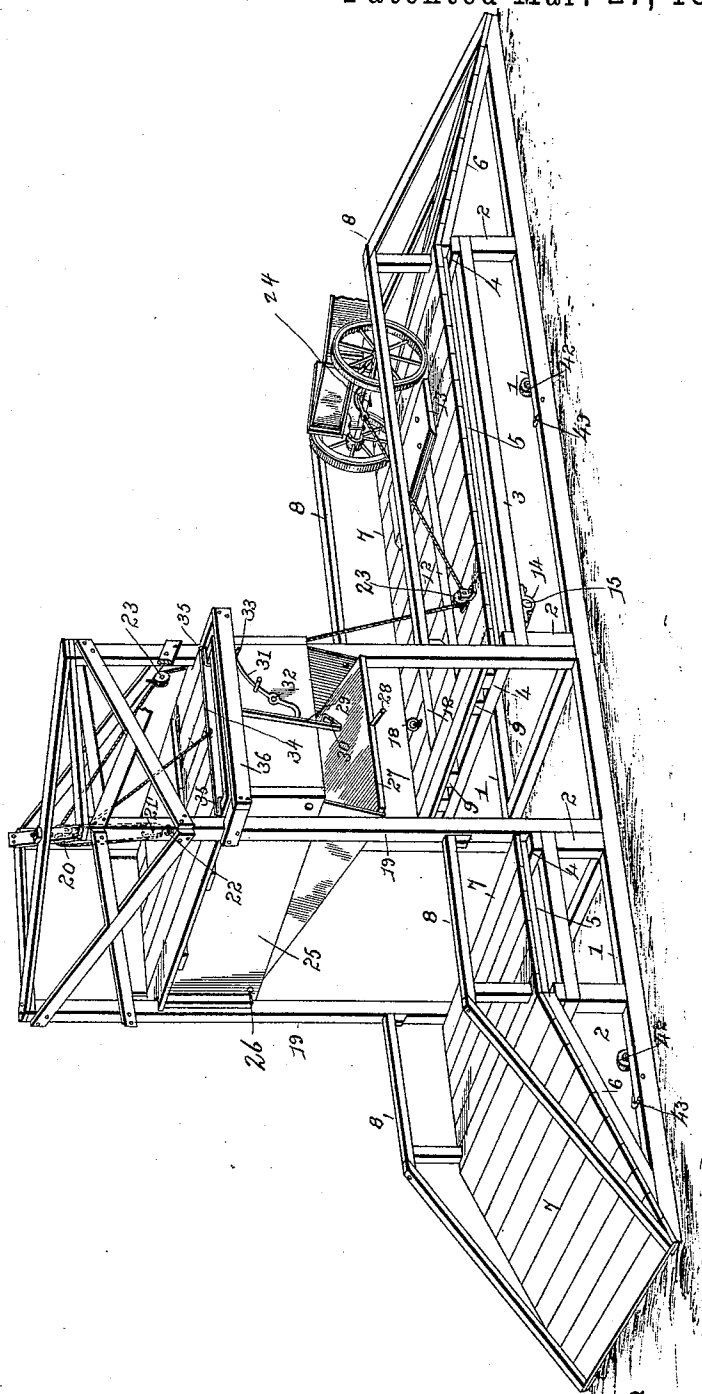
3 Sheets—Sheet 1.

L. M. MILLEN.
MACHINE FOR CRIBBING CORN.

No. 517,355.

Patented Mar. 27, 1894.

Fig. 1.



Witnesses:
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(No Model.)

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Fig. 3.

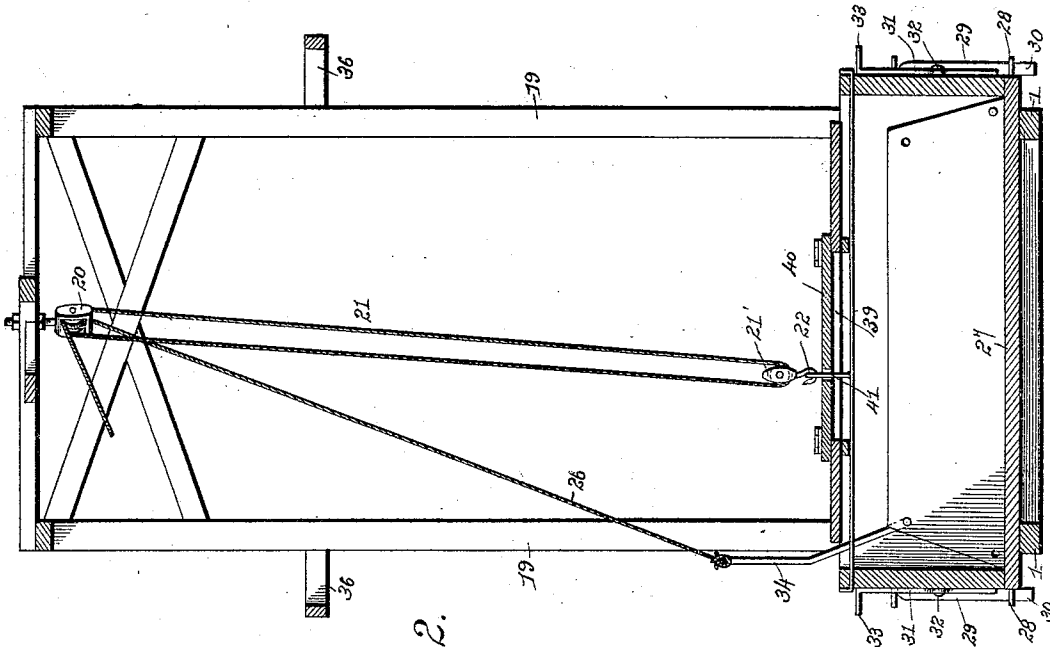
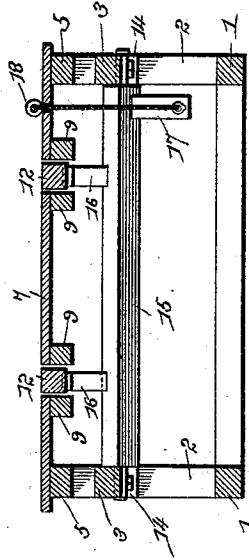


Fig. 2.

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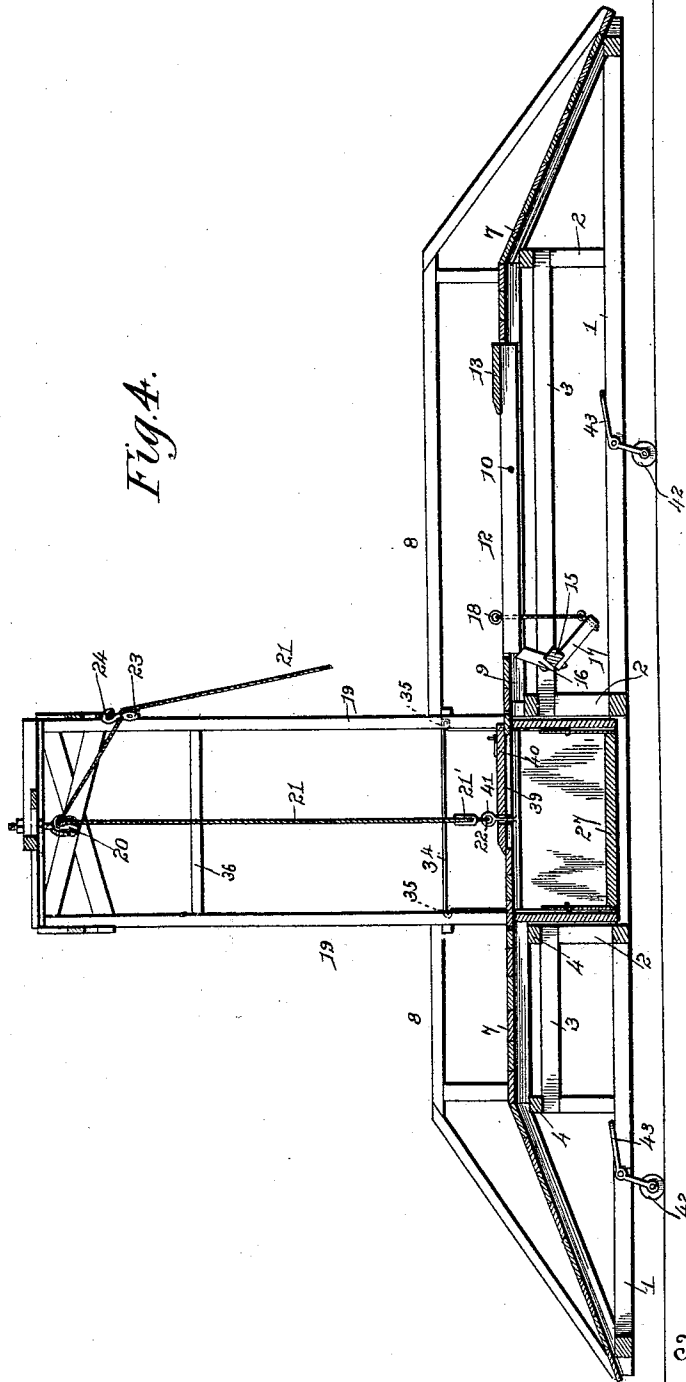
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Fig. 4.



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UNITED STATES PATENT OFFICE.

LODRICK M. MILLEN, OF ELWOOD, NEBRASKA.

MACHINE FOR CRIBBING CORN.

SPECIFICATION forming part of Letters Patent No. 517,355, dated March 27, 1894.

Application filed May 5, 1893. Serial No. 473,157. (No model.)

To all whom it may concern:

Be it known that I, LODRICK M. MILLEN, a citizen of the United States, residing at Elwood, in the county of Gosper and State of Nebraska, have invented a new and useful Machine for Cribbing Corn, of which the following is a specification.

My invention has for its object the production of a portable machine designed to be arranged alongside a corn-crib and to receive and elevate ear-corn to the crib; to construct the machine in a cheap and simple manner and so as to expedite the cribbing of the corn; and to provide for an automatic dumping, whereby the necessity of several operators or attendants for the purpose of operating the machine is avoided.

Various other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a perspective view of a machine constructed in accordance with my invention. Fig. 2 is a vertical transverse sectional view through the tower and cage or car. Fig. 3 is a transverse sectional view through the drive-way illustrating the wagon dumping-mechanism. Fig. 4 is a vertical longitudinal sectional view.

Like numerals of reference indicate like parts in all the figures of the drawings.

It will be understood that the construction of the frame and arrangement of the timbers for the support of the machine may be changed at will, as may also other details of construction not necessary to specifically mention; and I would therefore state at the beginning of the specification that I do not limit my invention to such precise arrangement of details as I herein show and describe, but hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic. For the purpose, however, of illustration, I will proceed to describe a simple form of framework which I consider as best adapted to the circumstances of the case.

1—1 designate a pair of opposite longitudinal parallel base-sills of suitable length, by which is meant a length considerably longer than a wagon and team of horses, and at points at each side of the center thereof I arrange short vertical studding 2, connecting

the same by means of upper sills 3, longitudinally arranged, and in turn supporting above the studs transverse sleepers 4. Supported by the sleepers 4 are floor-beams 5, and similar beams 6 decline from the outer or end-sleepers 4 to the outer ends of the sills 1. The floor-beams 5 and 6 support an ordinary floor 7, and at the opposite sides thereof a guard or hand-rail 8 is located. The two sleepers 4 at one end of the framework have located intermediate the floor-beams 5 two pairs of longitudinal beams 9, the beams of each pair being arranged a slight distance apart, and pivoted between their ends between these pairs of beams 9, as indicated at 10, is a pair of levers 12, whose outer ends are connected by a transverse platform 13.

A pair of transversely opposite bearings 14 are located in the under sides of the upper sills 3, immediately in rear of the rear or inner ends of the levers 12, which I will term "dumping-levers." These bearings have journaled therein a transverse rock-shaft 15, and from said rock-shaft extends a pair of short beveled rock-arms 16, which, when the levers 12 are elevated, take under the free ends of the same and support said levers in position flush with the drive-way or floor 7. The rock-shaft, however, may be oscillated so that its rock-arms 16 are withdrawn from their supporting position under the levers 12, whereupon said levers 12 are capable of being depressed at their rear or inner ends below the plane of the floor or drive-way. For the purpose of accomplishing such unlocking of the levers I provide the rock-shaft with an operating rock-arm 17, and extend from the free end of the same up through a perforation in the floor an operating-rope 18 terminating in a suitable hand-hold or loop.

Arranging the two driveways at opposite sides of an intermediate point of the framework, it will be seen that a space occurs between the inner ends of said ways, which space is rectangular in plan, and I support upon the sills 1 at the four corners of the space the four posts 19 of a vertical tower. The posts 19 are connected at their upper ends by a suitable framing of ordinary construction, and from the central portion thereof there depends a sheave 20, through which an elevator rope 21 passes, the same also pass-

ing through a lower sheave 21', which is provided at its lower end with a hook 22. The rope 21 passes over suitable guide pulleys 23 located in the tower and on the floor or driveway, and finally terminates in a hook 24 designed to be engaged with the axle or other part of the running gear of a wagon, said rope and its adjuncts constituting a fall.

25 designates a car, which is located for vertical movement in the tower, and said car is provided at its four corners with angular recesses for loosely embracing the posts 19 of the tower. The car has pivoted at one end by a rod 26, a swinging bottom 27, the same having opposite side-walls adapted to close within the side-walls of the car. The position of the bottom pivot-rod 26 may be changed from that shown, that is, employed for pivoting the opposite end of the bottom in position, so that the car is capable of dumping at either side, and for such purpose the catch-mechanism together with the devices for releasing the same are duplicated at each side of the car. The ends of the bottom are provided with pins 28, and the ends of the car have secured thereto spring-catches 29, whose lower or shouldered ends 30 are beveled so as to ride over the pins 28 before engaging the same. Levers 31 are pivoted at 32 to the ends of the car and have their upper ends outwardly bent as at 33. A limiting-bail of inverted U-shape and designated as 34 is secured to the upper edges of the sides of the bottom, and at its upper corners is reversely bent as at 35 to form stops, whereby the drop of the bottom is limited by reason of the stops contacting with the upper edges of the sides of the car. A bracket-frame 36 extends outward from the opposite sides of the tower and into the path of the lateral projection or bent end of the lever 31, so that when the car has reached a sufficient elevation the upper bent end of the lever 31 contacting with the bracket will cause said lever to oscillate, and inasmuch as the latter bears at its lower end against the spring-catch, said spring-catch will be forced to one side against its own tendency and from under the pin 28 of the bottom of the car, thereby permitting said bottom to drop and the contents of the car to be discharged from one side thereof. As before stated, by the duplication of this mechanism at the opposite side of the car and an interchanging of the pivot-pin of the bottom from one side of the car to the other, the car is adapted to deliver at either side thereof.

The top of the car, which forms a continuation of the driveway when the car is in its lowered position, is provided with an opening 39, and the same is covered by a door 40. At one side of the door, or, in other words, at the center of the car a ring 41 is located, the same being designed to be engaged removably by the hook 22 of the lower sheave or pulley-block.

This completes the construction of the de-

vice, with the exception of suitable transporting rollers 42 with which the sills 1 are provided. These rollers are preferably mounted upon bell crank levers 43, which are pivoted at their angles to the sills and are designed to be so manipulated as to depress the rollers and thus elevate the structure and support it thereon, or to elevate the rollers and lower the structure so that the latter rests solidly upon the sills. In either of their positions the upper bent ends of the levers act as stops by contacting with the upper edges of the sills so the rollers are supported either above or below the lower edges of the sills. When the rollers are depressed and the structure elevated, transportation is rendered easy, as will be obvious.

The car being lowered to position upon the sills 1, a team for hauling the corn is driven up the incline of the driveway opposite to that portion thereof in which the dumping-levers are located, and, crossing the car, continues its travel until the hind-wheels of the wagon rest upon the rear ends of the dumping-levers 12. The trap-door of the car is now opened and the operator grasping the rope 18 draws the same upward, thus withdrawing the rock-arms 16 from under the rear ends of the dumping levers and permitting the wagon to tilt or dump, its contents falling from thence through the opening in the car and into the latter. The hook 22 is now connected to the eye or ring in the car, and the hook 24 of the elevator rope connected to the rear axle of the wagon, after which the team is started. The weight of the wagon upon the outer ends of the dumping levers 12 causes the latter to be depressed and thus the inner ends of said levers elevated, where they are caught by the rock-arms, which fall to position thereunder. Through the medium of the elevating rope the car is raised in the manner heretofore described, and the trip-lever 31 coming in contact with the trip-bracket disconnects the spring-catch from the pin of the bottom and permits the bottom to fall or drop, forming an inclined chute for discharging the corn into the crib, alongside of which it is understood the structure is arranged. When this has been accomplished, the elevator rope is disconnected from the wagon, and the car permitted to drop back or lower to position.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided an exceedingly cheap and simple machine for elevating and discharging ears of corn into a crib, and that the operations of dumping, elevating, and discharging are all accomplished with facility and dispatch.

Having described my invention, what I claim is—

1. In an apparatus of the class described, the combination with a driveway having a recess, of an intermediate tower arranged within the recess, a car mounted for vertical

movement in the tower, a fall secured to the tower and adapted to removably engage the car, a reversible bottom arranged in the car, a rod for pivoting said bottom to either end of the car, said car and bottom having corresponding end-perforations opposite catches secured to the ends of the car for engaging the bottom, and opposite levers for operating the catches, substantially as specified.

2. In an apparatus of the class described, the combination with a driveway having a recess, of an intermediate tower arranged within the recess, a car mounted for vertical movement in the tower, a fall secured to the tower and adapted to removably engage the car, a pivoted bottom, means for locking the same in position, and an inverted U-shaped bail secured to the bottom and extending above the sides of the car, and having its opposite corners laterally bent to form stops for engaging said sides, substantially as specified.

3. In an apparatus of the class described, the combination with the tower thereof, a car mounted for movement therein and means for raising and lowering the car, of a bottom pivoted to the car, a pin extending outwardly from the bottom, a beveled and shouldered spring-catch secured to the end of the car, a lever pivoted to the end of the car, having its upper end laterally bent, and its lower end contacting with the latch, and a trip-bracket extending from the tower into the path of the upper bent end of the lever, substantially as specified.

4. In an apparatus of the class described, the combination with a driveway having a recess, of an intermediate tower arranged within the recess, a car mounted for vertical movement in the tower, a fall secured to the tower and adapted to removably engage the car, means for discharging the contents of the car, a ring upon the upper side of the car for engaging the fall, which latter terminates in a hook, guide pulleys, a hook arranged upon the end of the elevating rope and adapted to

engage with the running-gear of a wagon, and a trap-door located in the upper side of the car and covering an opening therein, substantially as specified.

5. In an apparatus of the class described, the combination with a driveway, a tower, an elevator car arranged for movement therein, and means for raising, lowering, and discharging the contents of the car, of openings formed in the driveway, a pair of dumping levers pivoted between their ends in the openings, and means for temporarily locking the levers in an elevated position, substantially as specified.

6. In an apparatus of the class described, the combination with a driveway, a tower, an elevator car arranged for movement therein, and means for raising, lowering and discharging the contents of the car, of openings formed in the driveway, a pair of dumping levers pivoted between their ends in the openings, a transverse rock-shaft arranged under the inner ends of the levers, rock-arms extending from the rock-shaft and adapted to support said inner ends of the levers, an operating rock-arm extending from the shaft, and an operating rod connected to the rock-arm and extending up through the floor of the driveway, substantially as specified.

7. An apparatus of the class described having lower base-sills combined with bell-crank levers pivoted to said sills, the upper ends of the levers being laterally bent to engage and bear on the sills when the levers are thrown in one direction, and rollers journaled in the lower ends of the levers, substantially as specified.

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

LODRICK M. MILLEN.

Witnesses:

MATHEW B. REID,
A. M. WHITE.