No. 742,162. PATENTED OCT. 27, 1903.

O. E. CASEY.

WAGON.

APPLICATION FILED APR. 13, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

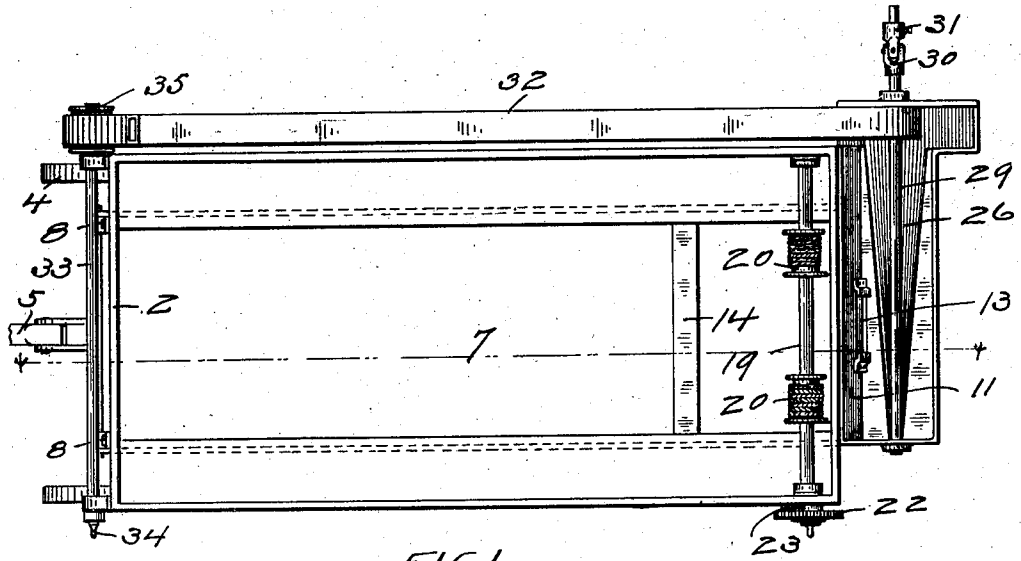


FIG. 1.

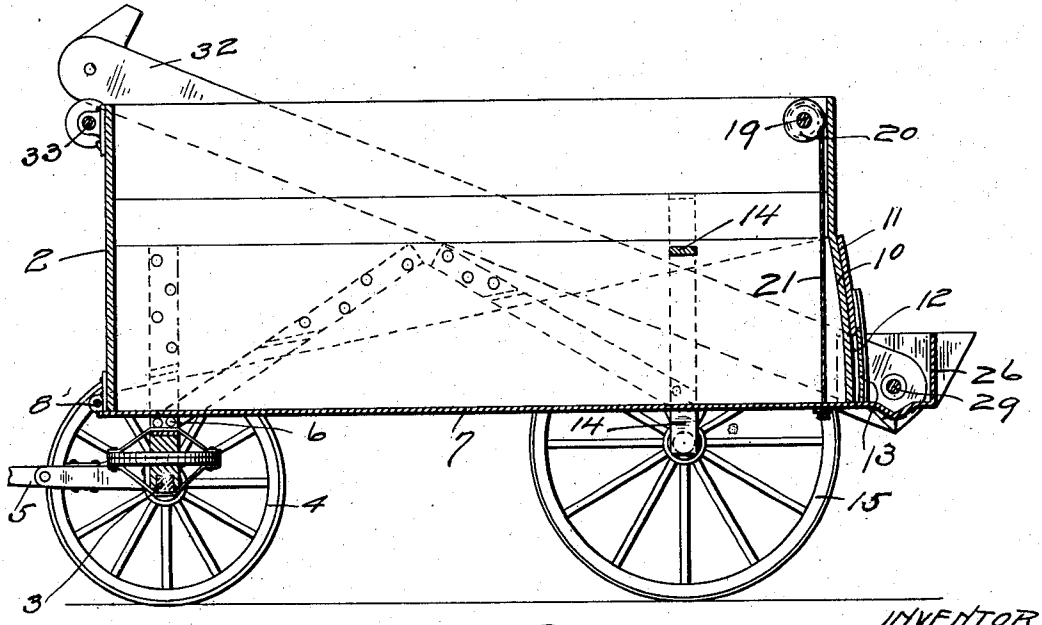


FIG 2.

WITNESSES

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NO MODEL. 2 SHEETS—SHEET 2.

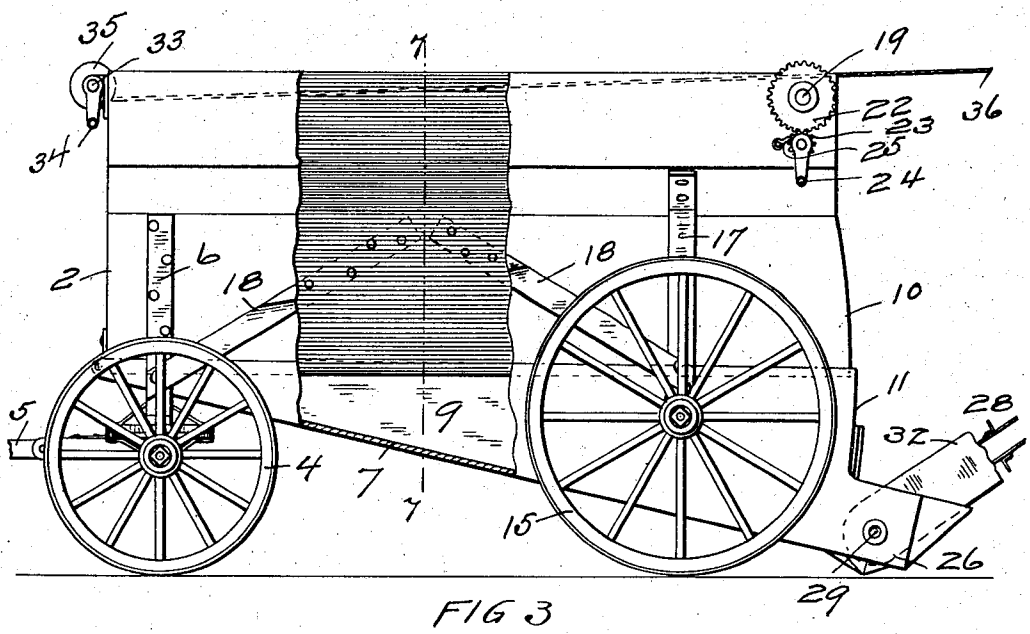


FIG 3

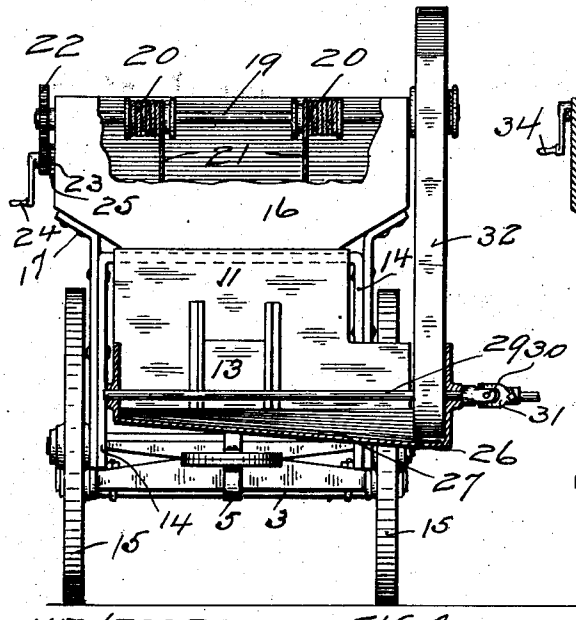


FIG. 4.

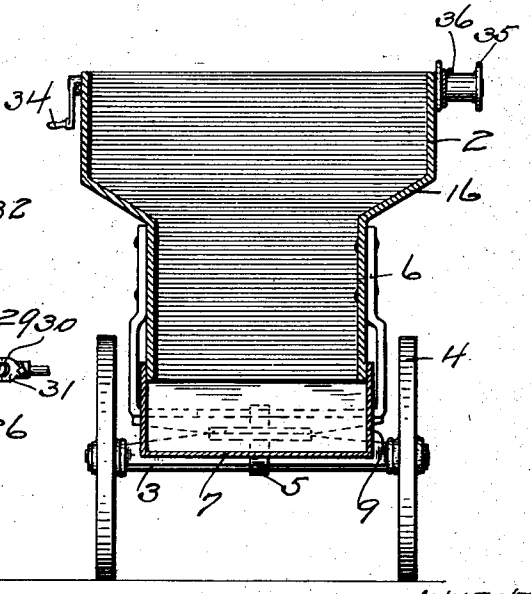


FIG. 5.

WITNESSES
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No. 742,162. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

OWEN E. CASEY, OF NASHUA, MINNESOTA.

WAGON.

SPECIFICATION forming part of Letters Patent No. 742,162, dated October 27, 1903.

Application filed April 13, 1903. Serial No. 152,320. (No model.)

To all whom it may concern:

Be it known that I, OWEN E. CASEY, of Nashua, county of Wilkin, State of Minnesota, have invented certain new and useful Improvements in Wagons, of which the following is a specification.

The object of my invention is to provide an apparatus wherein grain in bulk can be transported from the threshing-machine to the bin or from the bin to the market and rapidly and conveniently unloaded upon reaching its destination.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a wagon embodying my invention. Fig. 2 is a longitudinal vertical section of the same on the line *x x* of Fig. 1. Fig. 3 is a side elevation, a portion of the wagon-box being broken away. Fig. 4 is a rear view of the wagon, and Fig. 5 is a transverse section on the line *y y* of Fig. 3.

In the drawings, 2 represents a suitable wagon-box, and 3 the forward axle, having wheels 4 and a suitable draft appliance 5. The forward end of the wagon-body is elevated sufficiently above the axle by a U-shaped strap 6 to allow the hinged bottom to be raised or lowered, as hereinafter described.

7 represents the bottom of the wagon-box, connected to the front end of the box by hinges 8 and provided with side-boards 9, that are adapted to form a grain-tight joint with the side walls of the box, but slide freely past the same as the bottom is raised or lowered. The side-boards are preferably tapered, as shown, increasing gradually in width from their front toward their rear ends. The rear end of the wagon-box is provided with a curved board 10, that conforms substantially to the curve of the arc described by the rear end of the bottom, and said bottom is provided with a board 11, that fits the outer surface of the board 10 and slides thereover. The board 11 is provided with a discharge-opening 12, that is normally closed by a slide 13.

14 represents a U-shaped axle whereon the rear wheels 15 are mounted, the middle portion of said axle passing through the wagon-box above the side-boards 9, as indicated by full lines in Fig. 2 and dotted lines in Fig. 4. Above the axle the wagon-box has, preferably, a flaring top portion 16, that is braced and supported by straps 17, secured thereto and to the vertical sections of the axle 14. I also prefer to provide obliquely-arranged braces 18, extending from the middle portion of the wagon-body to the forward and rear axles. These braces serve to strengthen the wagon-body and brace the same against undue twisting or straining when heavily loaded.

Any suitable means may be provided for raising or lowering the hinged bottom; but I prefer to provide a windlass device in the upper rear part of the wagon-body consisting of a shaft 19, having drums 20 mounted thereon, connected by ropes 21 with the hinged bottom. A gear 22 is mounted on the shaft 19 and is engaged by a pinion 23 on an operating-crank 24. A ratchet 25 is provided for locking the said pinion in any desired position. To raise or lower the hinged bottom, it is only necessary for the operator to grasp the crank 24 and revolve the shaft 19.

A hopper device 26 is preferably provided at the rear end of the hopper bottom and having a floor 27, that is inclined toward one side of the wagon-box, and an elevator 28, that is supported on a shaft 29, mounted in bearings in the walls of said hopper. (See Fig. 4.) One end of said shaft is connected by a coupling 30 with a tumbling-rod 31, that is driven from any suitable source of power, such as a gasolene-engine. A casing 32 incloses the said elevator and is arranged to oscillate therewith to be adjusted in its operative or inoperative position. A shaft 33 is mounted at the forward end of the wagon-box and provided on one end with a crank 34 and on the other with a drum 35, that is connected with the lever-casing 32 by a rope 36. By means of this drum and rope the elevator can be supported at any desired angle with respect to the wagon, according to the height of the bin or other receptacle wherein the grain is to be discharged. When the elevator is not in use, it is swung down to its forward position, resting on the drum 35, as indicated by full and dotted lines in Fig. 2.

The operation of my improved wagon is as

follows: The wagon-box having been filled with grain and transported to the desired dumping-place, the operator will lower the hinged bottom until it is adjusted for the desired angle, swing the elevator back to its operative position and set it in motion, and then raise the board 12 and allow the grain to flow from the wagon-box into the hopper in the rear. The discharge of grain from the wagon can be easily controlled by means of the board 12, and as fast as the grain flows into the hopper it will be elevated to the storage-bin. As long as there is any grain in the wagon it will continue to flow by gravity down the inclined upper surface of the bottom and pass through the opening in the rear wall of the elevator, and as soon as all the grain has been discharged from the wagon the operator will stop the elevator, swing it back to its normal inoperative position, and lift the hinged bottom, when the wagon will be ready to be filled again. In this way a wagon-box filled with grain in bulk can be easily and very expeditiously unloaded.

I claim as my invention—

1. The combination, with a wagon-box, of a bottom hinged at its forward end, means inclosing the sides and rear end of said bottom to prevent the escape of grain when the bottom is lowered, said rear inclosing means having a discharge-opening, an elevating device connected with said discharge-opening, means for raising and lowering said hinged bottom, and means for changing the position of said elevating device, for the purpose specified.

2. The combination, with a wagon-box and the wheels whereon said box is supported, of a bottom hinged near the forward end of said box, guide-boards provided on said bottom, means for raising and lowering said bottom, and an elevating device provided in connection with said bottom, for the purpose specified.

3. The combination, with a wagon-box and the wheels whereon it is mounted, of a bottom pivotally supported at the forward end of said box, side-boards provided on said bottom, an end-board having a discharge-opening, a hopper, and means for raising and lowering said bottom.

4. The combination, with a wagon-box, of a hinged bottom, a U-shaped axle supporting the rear end of said box above said bottom, wheels for said axle, a forward axle and wheels, means for raising and lowering the rear end of said hinged bottom, and an elevating device connected therewith.

5. The combination, with a wagon-box, of a bottom hinged thereon, a rear axle supporting said box above said bottom and having suitable wheels, a forward axle and wheels, suitable side-boards for said bottom, a rear end-board having a discharge-opening, a hopper, an oscillating elevating device connected with said hopper, and means for adjusting said elevating device to vary the height of its discharge end from the ground.

6. The combination, with a wagon-box, of a hinged bottom therefor, means inclosing the sides and rear end of said bottom to prevent the escape of grain when it is lowered, said rear inclosing means having a discharge-opening, an elevating device connected with said discharge-opening, a windlass provided on said wagon-box for raising and lowering the rear end of said bottom, and a second windlass device connected with said elevating device, for the purpose specified.

7. The combination, with a wagon-box, of a floor or bottom hinged at its forward end thereon, means for raising or lowering the rear end of said bottom, side-boards provided on said bottom, an end-board having a discharge-opening, a slide therefor, a hopper provided at the rear end of said bottom and inclined toward one side thereof, and an elevating device connected with said hopper.

In witness whereof I have hereunto set my hand this 7th day of April, 1903.

OWEN E. CASEY.

In presence of—
RICHARD PAUL,
C. G. HANSON.