

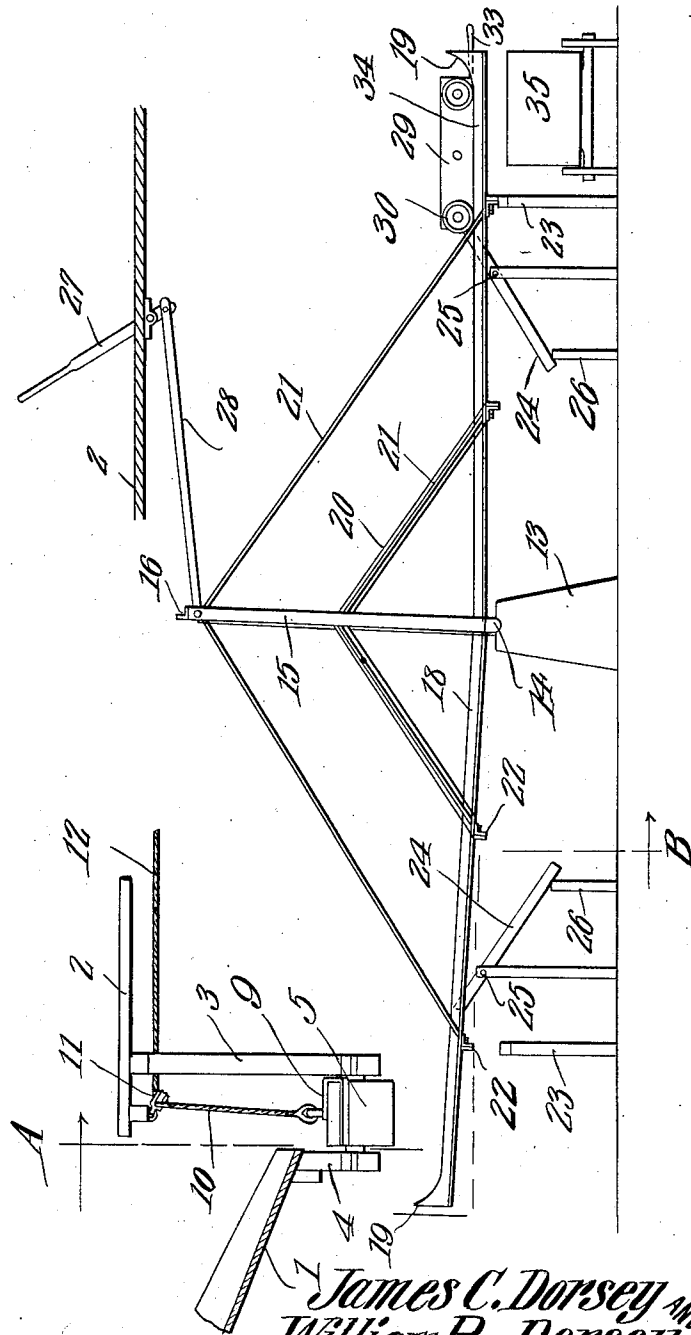
1,047,006.

J. C. & W. R. DORSEY.
DIRT HANDLING APPARATUS.
APPLICATION FILED FEB. 18, 1911.

Patented Dec. 10, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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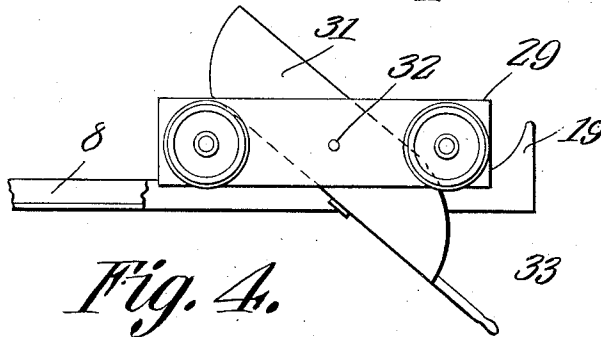
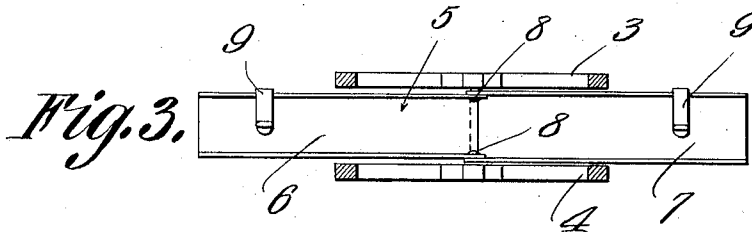
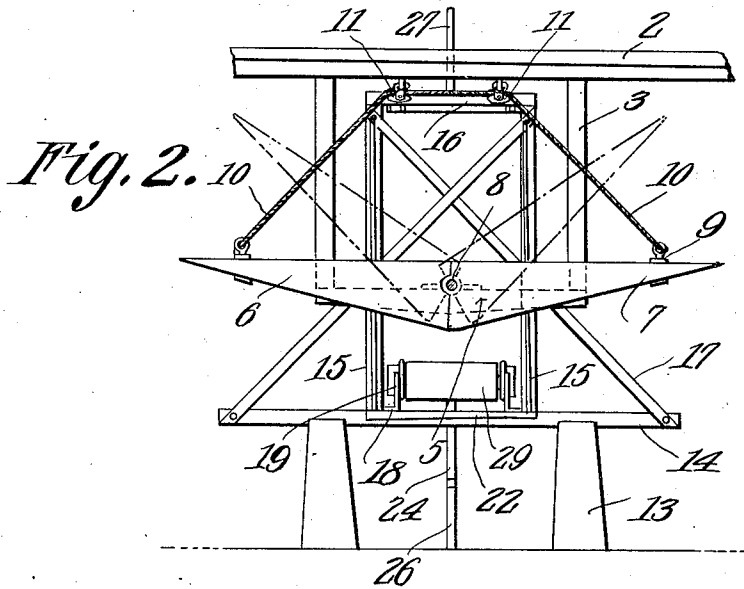
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

JAMES C. DORSEY AND WILLIAM R. DORSEY, OF LAS ANIMAS, COLORADO.

DIRT-HANDLING APPARATUS.

1,047,006.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed February 18, 1911. Serial No. 609,293.

To all whom it may concern:

Be it known that we, JAMES C. DORSEY and WILLIAM R. DORSEY, citizens of the United States, residing at Las Animas, in the county of Bent, State of Colorado, have invented a new and useful Dirt-Handling Apparatus, of which the following is a specification.

This invention relates to apparatus for handling dirt and is more particularly designed for use at sugar beet dumps for the purpose of collecting dirt screened from the beets as they are directed into cars, and then conveying the dirt to wagons or the like provided therefor.

Another object of the invention is to provide an improved form of hopper for receiving the dirt from the screens, said hopper being made up of movably connected members normally so positioned relative to each other as to retain material discharged thereinto but which can be shifted to discharge the contents of the hopper.

Another object is to provide a conveyer for receiving the material discharged from the hopper and carrying it to a point where it is to be discharged.

A further object is to provide novel means for actuating the conveyer.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings, the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a front elevation of the structure constituting the present invention. Fig. 2 is a section on line A—B Fig. 1, the position of the hopper members, when discharging their contents, being indicated by dotted lines. Fig. 3 is a plan view of the hopper, its supporting structure being shown in section. Fig. 4 is an enlarged side elevation of the conveyer car and a portion of its track.

Referring to the figures by characters of reference 1 designates an inclined chute adapted to extend under a screen, not shown, and which is to be of that type ordinarily

employed at sugar beet dumps. A supporting structure 2 is located adjacent this chute and has a frame 3 depending therefrom, there being another frame 4 extending downwardly from the discharge portion of the chute. Arranged between the two frames 3 and 4 and below the discharge end of the chute is an elongated hopper 5 made up of two oppositely disposed similar sections 6 and 7 each of which is preferably triangular in elevation, the two sections being pivotally connected, as at 8, said connections being in the form of lugs or the like extending from the frames 3 and 4. The meeting portions of the two sections 6 and 7 are so proportioned that when the two sections are in their normal positions, the hopper formed thereby is without an outlet and material is thus free to accumulate within the hopper. One of the sections, however, is capable of working within the other section so that, by pulling upwardly on the outer or remote ends of the hopper sections, one of said sections will move between the walls of the other section and the bottoms of the two sections will move apart at the center of the hopper, thus forming an outlet through which the contents of the hopper may fall by gravity. A bracket 9 is attached to the outer end portion of each portion 6 and 7 and operating cables 10 are attached to these brackets and extend upwardly to guide sheaves 11 supported by the structure 2. The cables 10 are connected to a single operating cable 12 so that, when said cable is pulled longitudinally, the remote ends of the hopper will be simultaneously raised, as indicated by dotted lines in Fig. 2, thus moving the adjoining ends of the sections 6 and 7 apart below the pivots 8 and permitting the contents of the hopper to discharge downwardly therefrom. When the cable is released, the hopper sections 6 and 7 will swing downwardly by gravity to their normal positions, thus cutting off the escape of material from the hopper.

Standards 13 are located below and at points removed from the hopper and a beam 14 rests thereon and is adapted to be tilted relative thereto. This beam has uprights 15 projecting therefrom and connected at their upper ends by a top strip 16, there being crossed braces 17 extending from the upper ends of the uprights 15 to the ends of the beam 14. Rails 18 are mounted on the

beam 14 and between the uprights and are of any desired length, these rails extending equal distances beyond each side of the beam 14 and terminating in bumpers 19. The track formed by the rails 18 is connected, by means of braces 20 to the uprights 15 and truss rods also connect these uprights to the track. It is to be understood that the braces and rods are not connected directly to the rails but to the end portions of cross strips or ties 22 extending under, and beyond the sides of the rails. That portion of the track at one side of the uprights 15 does not aline with the remaining portion of the track but is so positioned that, when the beam 14 is tilted in one direction, one half of the track assumes a horizontal position while the other half becomes inclined downwardly in the direction of the beam 14, and vice versa. Stop frames 23 or the like are arranged onto the end portions of the track and serve to limit the tilting movement of the structure. A catch 24 is pivotally mounted below each end portion of the track, as indicated at 25, said catch being held by gravity in normal position and provided with a stop 26 for limiting its movement in one direction. Each catch is so proportioned that, when the adjacent end of the track is lowered the catch projects thereabove between the rails but, when the track is elevated, the upper end of the catch does not project above the rails. An actuating lever 27 is mounted upon the supporting structure 2 and is connected to the top strip 16 by a pitman 28.

A car is mounted to travel on the track hereinbefore described, this car consisting of a frame 29 open at the top and bottom and supported by wheels 30. A box-like body 31 is pivotally mounted, as at 32, within the frame, this body being open at the top and at the back end thereof and being supported slightly off center so that it will remain housed within the frame 29 under normal conditions and thus be capable of retaining a load. An arm 33 is extended from the open end of the body and constitutes means whereby said body can be tilted for the purpose of discharging its contents.

In using the apparatus, the hopper 5 is closed and gradually accumulates the dirt discharged from the chute 1. The rails 18 are then tilted by lever 27 so as to elevate the discharge end thereof, indicated at 34 in Fig. 1, a sufficient distance to raise the car frame 29 above the end of the adjacent catch 24. That portion of the track on which the car is mounted thus becomes inclined while the remaining portion of the track, which extends under the hopper, assumes a horizontal position. The car, as soon as released from the catch, rolls downwardly by gravity along the track and fence along the horizontal portion of the

track and against the bumper 19 located adjacent the hopper. During this movement of the car it moves against and depresses the upper end of the catch 24 in the path thereof and, as soon as the car passes the catch and moves against the bumper 19, said catch swings upwardly into the path of the car and holds it against return movement. The car is thus in position to receive the contents of the hopper as soon as said hopper is shifted in the manner hereinbefore described, and after the car has been filled, the track is tilted by lever 27 so as to elevate that end thereof on which the car is located, thus lifting the car above its holding catch and permitting it to roll downwardly along the inclined portion of the track and on to the discharge end portion of said track, it being understood that during this movement, the car moves against the bumper 19 and past the catch 24 adjacent said bumper, said catch swinging back to normal position and holding the car against return movement. The car when thus held, can be dumped by pulling downwardly on the arm 33. A wagon or the like, such as has been indicated at 35, may be brought into position under the car so that the contents of the car will discharge thereinto.

What is claimed is:—

1. Apparatus of the class described including a track, a car mounted for movement thereon, means for automatically engaging and locking the car against movement along the track when said car reaches either terminal portion of the track, means for tilting the track to elevate the car out of engagement with its locking means and permit the car to move by gravity away from the position in which it was locked, a hopper above one end portion of the track and consisting of pivotally connected sections normally closed together, said hopper constituting means for accumulating material directed thereinto, and means for simultaneously shifting the sections to move them apart and discharge the contents of the hopper.

2. Apparatus of the class described including a tiltable track, a car mounted for movement thereon, and means for directing material into the car, said means including a hopper made up of pivotally connected sections, said sections being oppositely disposed and normally closed together at the bottom, and means for shifting said sections to move the bottom portions thereof apart to form a discharge opening.

3. Apparatus of the class described including a tiltable track, a car movably mounted thereon, and means for directing material into the car, said means including a hopper made up of pivotally connected oppositely extending sections, the bottoms of said sections being normally held together

by gravity, and means for simultaneously tilting said sections in opposite directions to move the bottoms thereof apart.

4. Apparatus of the class described including a centrally supported tiltable track, stop devices at the ends of the track, a car mounted to travel on the track and against said devices, catches for automatically engaging the car to hold it against movement along the track when brought to a position upon either end portion of the track, means for tilting the track to elevate the car out of engagement with the catch and permit it to gravitate on the track, and means for limiting the movement of the track.

5. Apparatus of the class described including a centrally supported tiltable track, a car movably mounted thereon, separate means for automatically engaging the car to lock it against movement along the track when at either end thereof, and means for tilting the track to elevate the car out of engagement with the locking means.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

JAMES C. DORSEY.

WILLIAM R. DORSEY.

Witnesses:

S. W. WORTHINGTON,
CLEVE RAY TURNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
