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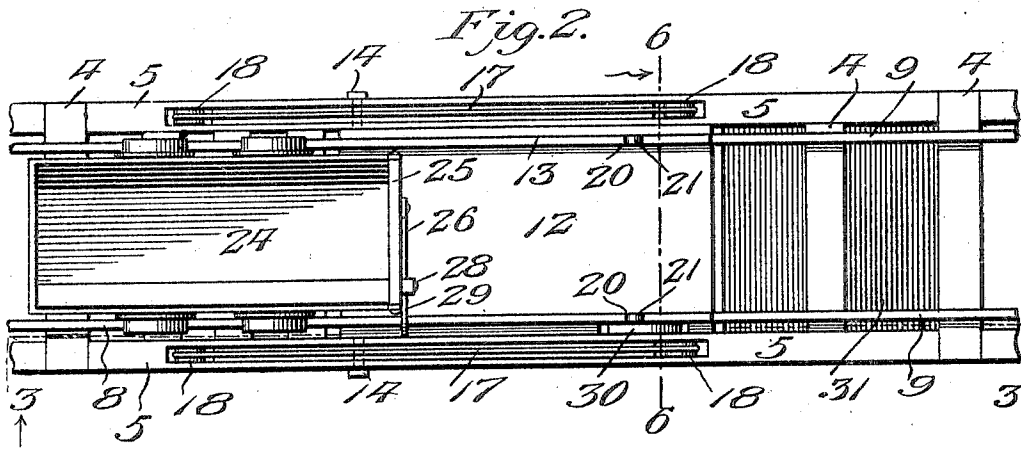
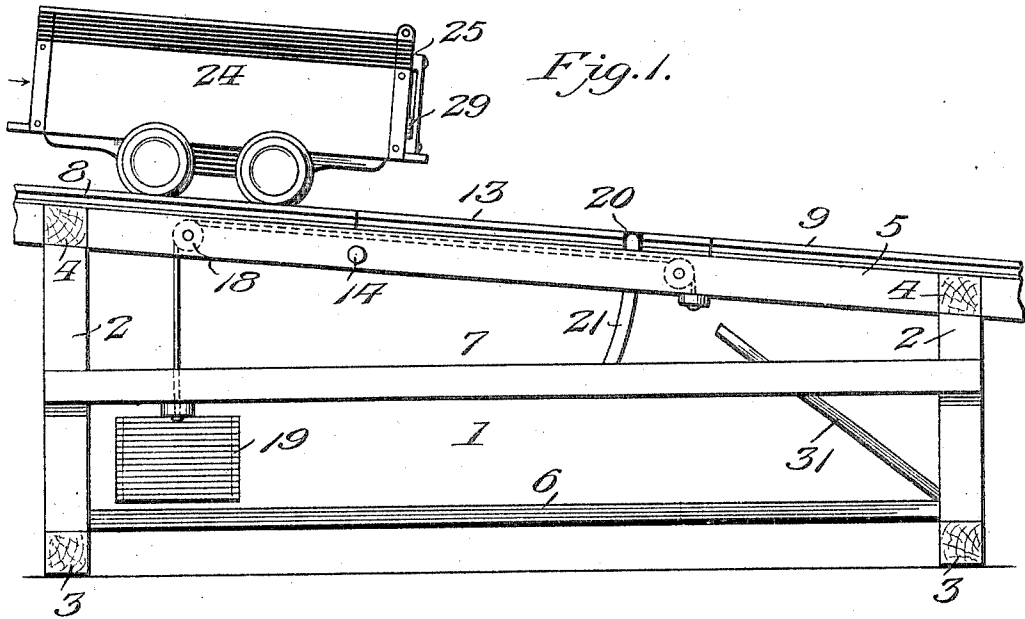
PATENTED JAN. 30, 1906.

C. R. CONNOR.

TIPPLE.

APPLICATION FILED JAN. 4, 1905.

3 SHEETS—SHEET 1.



Inventor

Charles R. Connor

Witnesses

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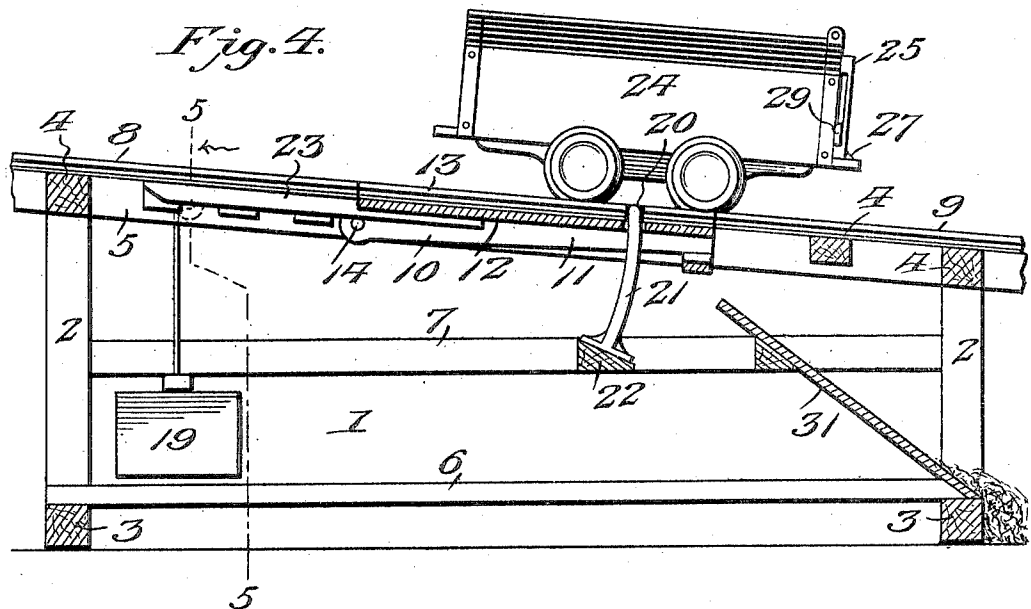
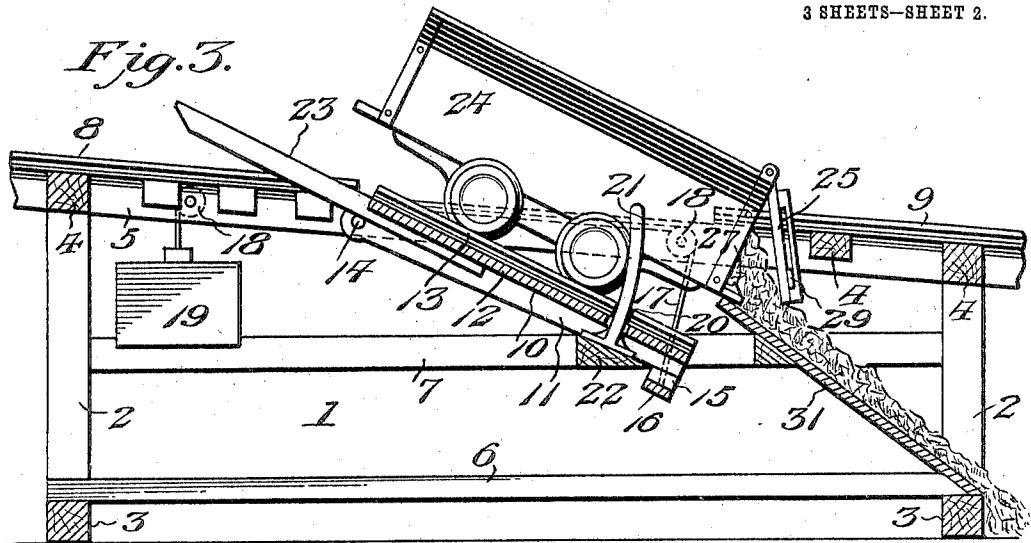
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 5.

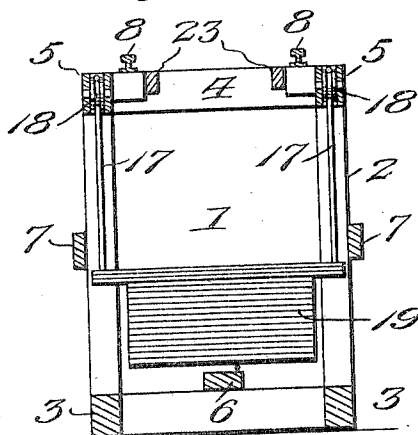


Fig. 6.

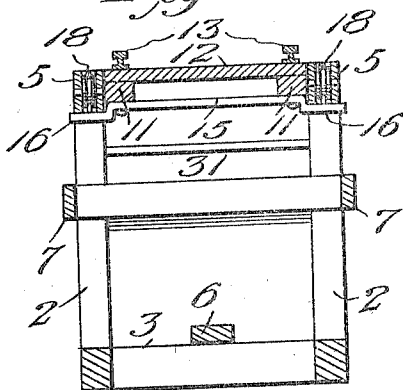
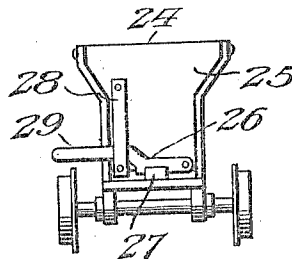


Fig. 7.



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UNITED STATES PATENT OFFICE.

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TO JOHN W. WILKES, OF JEFFERSON COUNTY, ALABAMA.

TIPPLE.

No. 811,486.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed January 4, 1905. Serial No. 239,685.

To all whom it may concern:

Be it known that I, CHARLES R. CONNOR, a citizen of the United States, residing at Ensley, in the county of Jefferson and State of Alabama, have invented new and useful Improvements in Tipples, of which the following is a specification.

This invention relates to means for automatically dumping loaded cars, one object of the invention being to provide a gravity-runway for the cars and an automatic tippie which is tilted when the cars run thereon and automatically brings into operation means for stopping the car and opening the door thereof to dump the load, and also projecting stops to prevent a following car from running onto the occupied tippie, means also being provided for restoring the tippie to its normal position after the load is dumped to permit the car to pass beyond the dumping-point for return to the loading-point.

Another object of the invention is to provide simple and effective means for restoring the tippie to its normal position, which may be weighted to suit the weight of the cars employed, and generally to simplify and improve the construction and increase the practical efficiency of devices of this character.

With these and other objects in view the invention consists of the features of construction, combination, and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a runway and tippie embodying my invention, showing a car descending the runway and about to pass upon the tippie, the parts being in normal position. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal section on the line 3 3 of Fig. 2, showing the car upon the tippie and the latter tilted to dump the load. Fig. 4 is a view similar to Fig. 3, showing the car and tippie elevated after dumping the load to permit the car to travel down the runway past the dumping-point. Fig. 5 is a vertical cross-section taken on the line 5 5 of Fig. 4. Fig. 6 is a similar view taken on the line 6 6 of Fig. 2, and Fig. 7 is a front end elevation of a car.

Referring now more particularly to the drawings, 1 represents a frame or elevated structure comprising standards or uprights 2,

arranged at the sides thereof and at suitable distances apart, sills 3, supporting said uprights, cross-ties or pieces 4, supported by the uprights, longitudinal side bars 5, suitably secured to said cross-ties or uprights, also longitudinal braces 6, extending between and suitably connected to adjacent sills, and intermediate longitudinal rails 7, secured to the uprights, which parts may be of any preferred construction and bolted or otherwise secured together.

Side rails 5 are arranged to form an inclined track-bed, and upon the cross-ties 4, which form part of said bed, are laid rails 8 and 9, forming an inclined runway down which cars may pass by gravity from an elevated loading-point to a dumping-point at a level therebelow and at a suitable distance therefrom. The rails 8 extend continuously from the loading-point and are there separated from the rails 9, which latter lead from the dumping-point to a return portion of the trackway, (not shown,) whereby the cars may be run back or hoisted in any approved manner to the loading-point.

In the space between the adjacent ends of the rails 8 and 9 is arranged a tippie or tilting platform 10, comprising two parallel longitudinal sills or side bars 11, which may be suitably connected and braced and upon which is laid a flooring 12, carrying track-rails 13, which are adapted to aline with the rails 8 and 9 when the tippie is in its normal position. The upper or rear ends of the side bars 11 are suitably pivoted, as indicated at 14, to the side bars 5 or some other suitable part of the frame 1, so as to permit the tippie to swing in a vertical plane, and at their free ends the side bars 11 are connected by a metallic cross bar or piece 15, provided with extended ends 16, which are offset, as shown in Fig. 6, to project beneath and bear against the side beams 5 and form stops to limit the upward swing of the free end of the tippie. To the said stops or extended ends of the bar 15 are attached ropes or cables 17, which pass rearwardly over pulleys 18 at the sides of the frame 1 to a point in rear of or above the tippie and support at their upper or rear ends a counterbalancing-weight 19, consisting of a box or other suitable receptacle in which earth, stones, or other weighty material may be placed to counterbalance the weight of the

tipple 10 and an unloaded car resting thereon and to automatically swing the table back to its normal position. By the employment of a box or receptacle in which the weights may be freely placed the action of the counterweight may be quickly and conveniently regulated to adapt it to operate under different conditions of service and to compensate for the weight of various kinds of cars or cars varying materially in weight. It is proposed to so weight the box or receptacle that it will permit a loaded car on the platform to tilt the platform down and to restore the car and platform to normal position after the load has been dumped.

Each of the rails 13 on the tipple is divided to form a slot or passage 20, which aligns with an opening or passage below it in the flooring 12 and is adapted to normally receive the upper end of a wheel chock or stop 21. The wheel chocks or stops are fixed to a cross bar or beam 22, extending transversely of and secured to the frame 1 below the tipple, and said stops are curved longitudinally, so that when the tipple tilts or descends under the weight of a car they will project upwardly through the passages 20 and lie in the path of the forward wheels of the car, as shown in Fig. 3, thus holding the car from downward movement while it is being dumped. The stops are of such length or so arranged that when the tipple is in normal position the upper end of said stops will lie in the passages 20 just beneath the heads of the rails, so that they will not oppose interference with the passage of a car, but will permit an unloaded car to pass from the tipple onto the track-rails 9. Suitably secured to and projecting rearwardly from the tipple are stop-bars 23, which when the tipple is in normal position lie below the plane of the rails 8, but when the tipple is tilted downward are projected thereby above said rails to lie in the path of a following car and prevent a car from passing from the upper portion of the runway onto the tipple when the latter is occupied.

The car 24 may be of any preferred construction, but as shown in the present instance is provided with a door 25, which is hinged or pivoted thereto at its upper end and carries a pivoted latch-lever 26 to engage a keeper bar or block 27, whereby the door is held in closed position. The free end of the lever swings in a guide 28 on the door and projects laterally beyond one side of the car to form a trip-arm 29, which is adapted to be engaged and raised by a fixed striker or abutment 30 on one of the side beams 5 in proximity to the stop 21, whereby when the car runs upon the tipple the latch will be raised, allowing the door to swing open and the load to dump through the open forward end of the car by gravity as the tipple descends. The downward motion of the free end of the

tipple is limited by the counterweight 19, and the tipple is supported firmly in its lowered position by the cross-beam 22. An inclined board or chute 31 is suitably supported upon the frame 1 below the upper ends of the track-rails 9 and receives the load dumped from the car, the load descending the same by gravity to the desired dumping-point or place of deposit.

In the operation of the device each loaded car passes from the track-rails 8 onto the tipple 10, which descends under the weight of the load thereof and causes the elevation of the counterweight 19. As the tipple begins to descend the stops 21 are projected upwardly and engage the front wheels of the car, thus holding it from forward and backward movement, and at or about the same time the trip-arm 29 of the latch-lever 26 engages the striker 30, thereby allowing the door 25 of the car to swing open and discharge the load. When the weight of the load is released from the car, the counterweight 19 restores the car and tipple to normal position, whereby the rails 13 are again brought above the plane of the stop 21, thus permitting the unloaded car to pass from the tipple and descend on the track-rails 9 to the point where it is to be turned or again conducted to the loading-point. The descent of the tipple when a loaded car passes thereon projects the rear stops 23, thus preventing more than one car from passing at a time onto the tipple. When the tipple is restored to its normal position, the door 25 of the car swings back, and the latch then gravitates to its normal position and engages the keeper 27, thus locking the door closed.

From the foregoing description, taken in connection with the accompanying drawings, the construction and mode of operation of my invention will be clearly understood, and it will be seen that it provides simple and effective automatic means for dumping a load and permitting the emptied car to pass beyond the dumping-point for return to the loading-point, also that the parts are so constructed and arranged as to simplify the unloading operation and prevent all liability of accidents caused by the passage of more than one car at a time to the tipple.

Having thus described the invention, what is claimed as new is—

1. In an automatic dumping means for cars, the combination of an inclined runway having two portions, a tilting tipple having openings and arranged between said portions and adapted to be tilted by the weight of a car running thereon, stationary stop devices below the tipple adapted to project through said openings and engage the car-wheels when the tipple descends, and means for restoring the tipple and dumped car to normal position and permit the same to run from the tipple to the dumping-point.

2. In a dumping apparatus for cars, the combination of an inclined runway having two portions, a tilting tippie arranged between said portions and adapted to descend under the weight of the car passing thereon from the upper portion of the runway, stationary wheel-engaging devices brought into action by the downward movement of the tippie to hold the car from downward movement thereon, automatic means for discharging the load upon the descent of the tippie, and means for automatically restoring the tippie and car to normal position after the load is dumped, the upward movement of the tippie disengaging the wheels from said wheel-engaging devices, thus permitting the car to pass from the tippie to the lower portion of the runway.

3. In an automatic car-dumping apparatus, a tilting tippie carrying a stop projected rearwardly therefrom when the tippie is

dumped to prevent a car from passing onto the tippie when the latter is loaded.

4. In an automatic dumping apparatus for cars, a frame having track-rails, a tilting tippie, a stop adapted to project upward through the tippie when the latter descends to arrest the movement of a car thereon, and stops carried by the tippie and projectable above the rails to arrest a following car.

5. In an automatic dumping apparatus for cars, the combination of an inclined runway, a tilting tippie, stops limiting the upward movement of the tippie, and a counterweight coacting with said stops to return the tippie to normal position.

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

CHARLES R. CONNOR.

Witnesses:

WILBER J. SYX.

W. J. STACEY.