

J. J. DEVINE.

CART.

APPLICATION FILED MAY 28, 1908.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.

943,064.

Fig. 2.

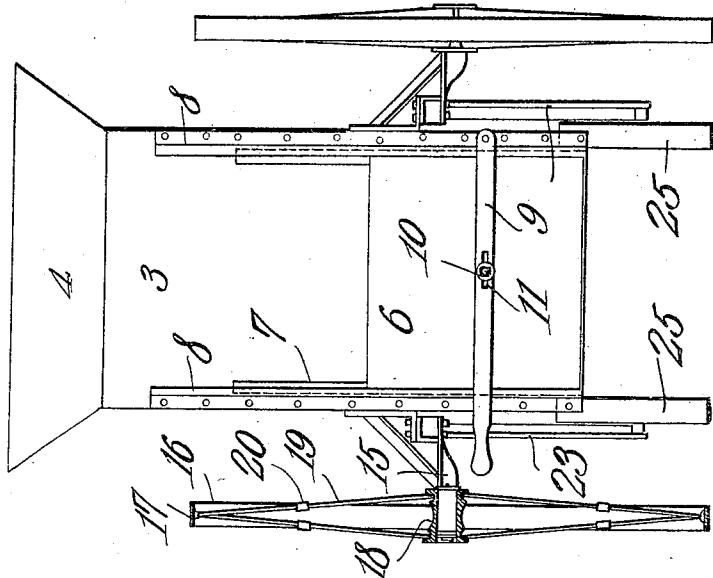
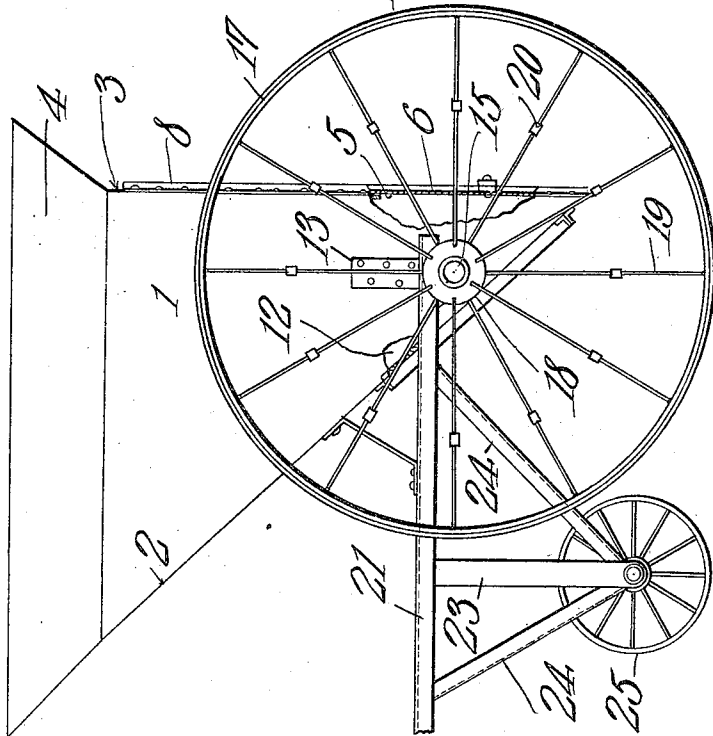


Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 4.

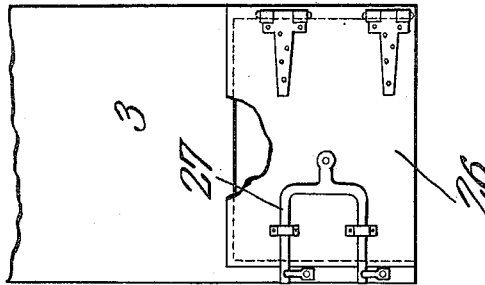
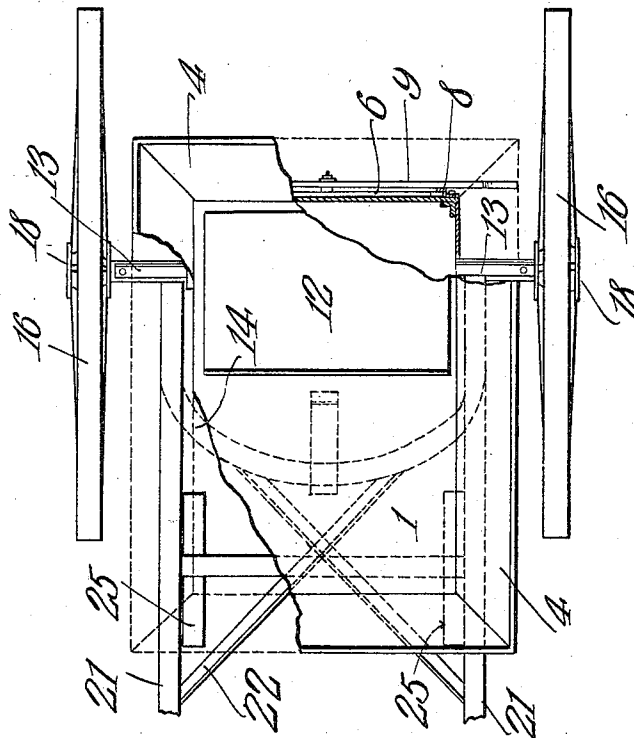


Fig. 3.



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UNITED STATES PATENT OFFICE.

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CART.

943,064.

Specification of Letters Patent.

Patented Dec. 14, 1909.

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To all whom it may concern:

Be it known that I, JAMES J. DEVINE, a citizen of the United States, residing at No. 3617 North Sixth street, Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Cart, of which the following is a specification.

This invention has reference to improvements in carts and its purpose is to provide a means for the transportation of hot coke or cinders from a point of reception to a point of deposit.

This invention is particularly useful in connection with the manufacture of water gas where the hot coke is received into chutes and from them is deposited into carts constructed in accordance with the present invention to be conveyed by the carts to the fire holes into which latter the hot coke is permitted to fall from the carts without waste or spilling.

In accordance with the present invention there is provided a hopper-like body wide at the top and narrow at the bottom and mounted upon a suitable truck for transportation from place to place. The body of the cart is provided on its rear face with a door through which either the whole contents of the cart may be rapidly dumped or only a portion of the contents may be allowed to escape at a time. When the body of the cart is used to receive hot coke or cinders the lower portion of the body is liable to burn out more rapidly than the upper portion and for this reason the lower portion of the body is made separate from the upper portion so as to be readily renewable without the necessity of replacing the entire body.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawing forming a part of this specification in which drawing:—

Figure 1 is a side elevation of the improved cart with parts shown in section. Fig. 2 is a rear elevation of the same with parts shown in section. Fig. 3 is a plan view of the cart with parts shown in section, and Fig. 4 is a detail view illustrating a somewhat similar type of discharge door.

Referring to the drawing there is shown a hopper like body 1 with an inclined front face 2 and a vertical rear face 3. It will be understood however, that the rear face 3

may be inclined like the front face 2 if so desired. The sides of the body are parallel and at the top is a flaring portion 4. The lower end of the rear face 3 is cut away as indicated at 5 to provide a suitable discharge opening, and this opening is normally closed by a door 6 shown as a rectangular plate with guiding extensions 7, the edges of the plate and the guiding extensions being confined to the face 3 of the body by overhanging guide strips 8 extending longitudinally of the rear face 3 at the edges thereof. The door is moved in its guides by means of a suitable handle lever 9 pivotally secured to one of the guides 8 at one end and to the center of the door by a stud pin 10 fastened on the door and extending through a slot 11 formed in the handle 9 longitudinally thereof. The slot 11 provides for the rectilinear movement of the door 6 while the handle 9 is turned about its pivot connection to the guide strip 8.

It is to be observed that the body portion 1 is wide at the upper end and it narrows toward the discharge opening at the lower end. This greatly facilitates the discharge of the contents of the body through the opening 5 when the door 6 is moved out of the path of the material within the hopper or body.

When the cart is used for the transportation of hot coke or ashes and more particularly of coke which is transported in a burning condition it is advisable to make the body portion of cast iron because of its resisting qualities to heat.

The lower narrow portion of the slanting face 2 of the cart body is liable to burn out from the effects of the hot material deposited in the cart before the other portions of the cart and for this reason the face 2 of the cart is made with a removable section 12, which when burned out may be replaced by a new section so that the main portion of the body of the cart need not be discarded when the lower portion becomes burned out as would be the case were the section 12 not made renewable.

The body 1 of the cart is made fast by angle brackets 13 near its lower end to the ends of a yoke axle 14 from which projects stub-axles 15 receiving the main wheels 16, these latter being of comparatively large size and two in number. These wheels consist of a suitable rim 17 and hub 18, the said hub having annular flanges at the ends and

being reduced in the middle portion to save weight. The flanges of the hubs are perforated for the reception of the ends of spokes 19, which latter may be made of two parts 5 with a connecting right and left coupling 20. The wheels 16 are thus of the tension type and are all metal. Fast to and extending forward from the axles are two shafts 21 suitably braced by cross braces 22. In 10 the larger size of course these shafts are used for the attachment of a horse to the cart and in the smaller sizes the shafts may terminate in suitable handles so that a man may manipulate the cart. At an appropriate point each shaft 21 carries a downwardly 15 extending strut 23 made rigid with the shaft by suitable braces 24 and at the lower ends of the struts are journaled small iron wheels 25.

20 The cart is so balanced that while the major portion of the weight is sustained by the large wheels 16 the center of gravity is between the wheels 16 and the wheels 25 so that the cart is stable and not at all liable 25 to upset whether empty or loaded. At the same time but little weight is sustained by the animal or man moving the cart from place to place.

It is of course evident that the wheels 25 30 may be omitted and the struts 23 be made long enough to reach the floor.

Instead of using a sliding door 6 such as shown in Figs. 1, 2 and 3 a hinged door 26 35 as shown in Fig. 4 may be used and when such a door is used, the latch 27 is of the double type so that the door at the end remote from the hinges is held at at least two 40 points and thereby warping under the heat of the hot contents of the body 1 is effectually prevented.

The hot coke is received at the top of the body through a suitable chute and when the body 1 is full then the cart may be transported to the point of deposit. It is to be 45 observed that the direction of travel of the cart is away from the body thereof so that man or animal drawing the cart is not in the path of hot gases arising from the burning contents of the cart. When the point 50 of deposit is reached the opening 5 is

brought into proper relation to the fire hole. If now it be desired to dump the entire contents of the cart at once then the door 6 is opened to its full extent and the contents of the cart rapidly gravitate into the fire hole 55 without waste or scattering of the material, the steep slant of the front 2 of the cart facilitating the discharge thereof. If however, it be desirable to deposit only a portion of the contents of the cart in any one place 60 then the door 6 is opened to the requisite extent and may afterward be closed against the material remaining in the cart with but little effort. The door 26 of the structure shown in Fig. 4 can only be used where it is 65 desirable that the entire contents of the cart be dumped at one place.

What is claimed is:—

1. A cart having a body portion wide at the upper end with the front and rear faces 70 plane and approaching from the top toward the bottom and there meeting at an acute angle, one of the faces having a discharge opening at its lower end, a door for said opening, a removable section at the lower 75 end of the face opposite the face carrying the door, and a truck for the body having supporting wheels and journals for the latter in the form of stub axles attached directly to the exterior of the body on the 80 door side of the vertical plane of the center of gravity taken parallel with the axis of the supporting wheels.

2. A cart having a body portion wide at the upper end with the front and rear faces 85 plane and approaching from the top toward the bottom and there meeting at an acute angle, and one of the faces having a discharge opening at its lower end, a door for said opening, and a removable section at the 90 lower end of the face opposite the face carrying the door.

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

JAMES J. DEVINE.

Witnesses:

L. S. EVANS,
A. J. REED.