Haase & Rost,

Dump Car.

No. 65,743. Patented June 11. 1867.

Fig 1

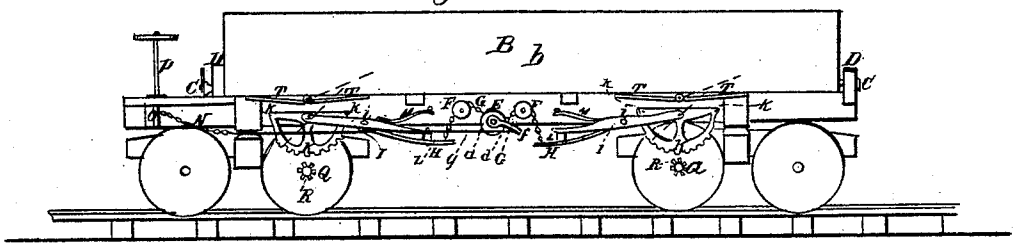


Fig 2

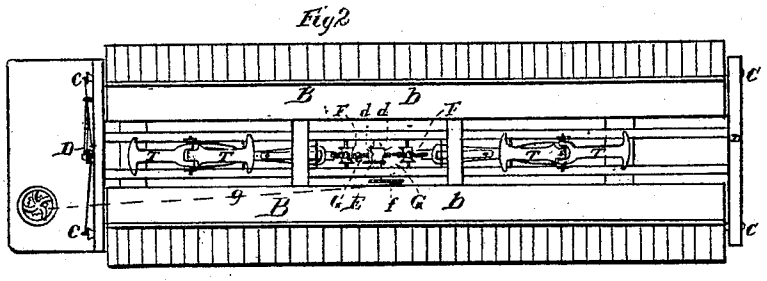


Fig 3

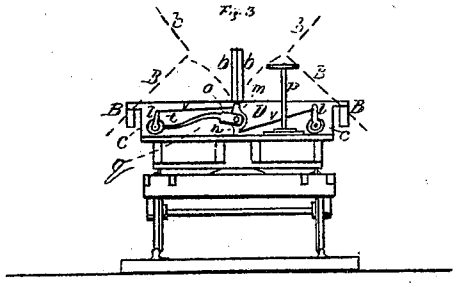


Fig 4

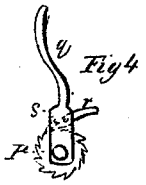
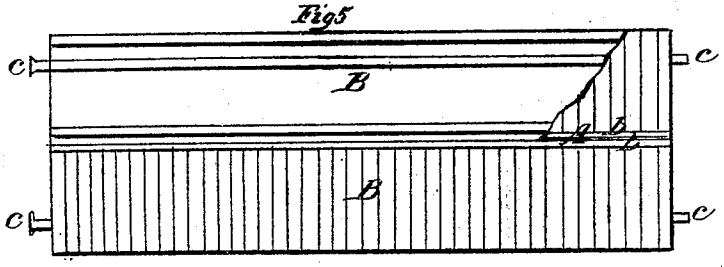


Fig 5



Witnesses
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Ferdinand Haase
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FERDINAND HAASE AND WILLIAM ROST, OF OAK PARK, ILLINOIS.

Letters Patent No. 65,743, *dated June* 11, 1867.

IMPROVED METHOD OF UNLOADING RAILROAD CARS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, FERDINAND HAASE and WILLIAM ROST, of Oak Park, in the county of Cook, and State of Illinois, have invented a new and useful "Self-Unloading Railway Car;" and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings.

The nature of our invention consists in a folding, partially-revolving platform, set in the frame of a flat car, and operated by machinery so arranged that by turning the brake and starting the car the platform unfolds itself and unloads the cargo, as will be hereinafter fully explained.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A double or folding platform, A, consists of two single platforms, B B, each of which is provided at the ends with pins C C, that enter the corresponding openings in the cross-pieces D D of the car, and on which the platforms B B can revolve. Boards *b b* are secured to the inner edges of the said platforms for the purpose of facilitating the throwing off the load when the platforms open. In the centre of the car-frame, and under the platform A, are set three pulleys, the central one, F, being larger than the pulleys F F. This pulley E has two pins *d d* secured to its flanges and diametrically opposed to each other, to each of which chains G G are secured; the axle of the pulley E being also provided with a bracket, F, to which a rod, *g'*, is attached. The chains G G, passing over the pulleys F F, are attached to the plates H H secured to the levers I I working on the fulcrum-pins *i i*, to the other end of which levers half-circular cog-wheels K K are pinned, the corners of the wheels being provided with small rollers *k k* to diminish the friction of said corners when in contact with plates T T. India-rubber cushions L L are put between the plates H H and the levers I I, and springs M M are abutting to the car-frame and secured to the levers I I, both for the purpose of preventing sudden jerks on the levers and cog-wheels when unloading the platform. Plates T T are hinged to the top of the timber of the car-frame and lying on the same. They are to be acted upon by the corner rollers *k k* of the cog-wheels K K, and to raise and revolve the platforms B B. The rod *g'* terminates with a chain, N, whose end is secured to the drum O of the brake P. The axles Q Q of the car are provided with pinions R R, whose teeth may gear into the teeth of the cog-wheels K K when these are brought down.

The operation consists in the following: When a train consists of several cars of the above description, loaded with gravel or other material, each car is provided with a brakeman. To unload the cars the train is stopped, a brakeman turns the brake, whose drum O winds up the chain N, pulls the rod *g'*, and turns the pulley E, which in its turn, by means of chains G G, acts on the levers I I and brings down the cog-wheels K K, whose teeth mesh into the teeth of the axle-pinions R R. When this is done the locomotive starts, the axle-pinions R R revolve the cog-wheels K K, whose ends, provided with rollers *k k*, raise up the plates T T, and these, in their turn, uplift the platforms B B in the centre of the car, and the load slides on both sides down to the ground. The locomotive needs to move but a short distance. It is evident that one car may be unloaded after another at any distance, or the whole train unloaded at once.

There is a device put outside of the platform, and where the brakeman stands, whose purpose is to fold the platform again gradually. It consists in the brackets *l l*, set firmly on the pins C C of the platforms B B, and connected, by rods *v v*, with the brackets *m n* of the central wheel, revolving on a pin, *o*, set in the cross-piece D, and containing a ratchet-wheel, *p*, secured to it. A lever, *q*, provided on one of its sides with a pawl, *r*, and a spring, *s*, to hold the pawl in place, is also set on the pin *o*. There is a pin, *t*, to hold in place the handle of the lever *q*.

The operation of this device consists in this, that when the platform is shut, or is in a horizontal position, the end of the lever *q* is under the pin *t*, and when the platform opens the brackets *l l m n* and the rods move freely, as also moves freely the ratchet-wheel *p*; but when the platform has opened it will not shut again by itself, the pawl *r* being caught into the teeth of the ratchet-wheel *p*. In order to let down the platforms, the brakeman disengages the end of the lever *q* from under the pin *t*, and, by the aid of the ratchet-wheel and pawl can fold the platforms gradually, and when it is closed he has to press with his foot the end of the pawl, so as to disengage it from the ratchet-wheel and move the lever back to its original position.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The folding platform A, constructed and operating substantially as set forth.

2. The pulleys E F F, rod *g'*, and chains G G, in combination with plates H H, levers I I, cog-wheels K K, and the drum O of the brake, the whole arranged so as to bring down the cog-wheels K K, when desirable, and mesh their teeth into the teeth of the pinions R R of the car-axle, substantially as herein described and specified.

3. The pinions R R set on the car-axles, in combination with the described device, to automatically unload the folding platform A, substantially as set forth.

4. The device to gradually fold the platform A, consisting of brackets *l l* and *m n*, rods *v v*, ratchet-wheel *p*, and lever *q*, constructed as described, the whole arranged and operating substantially as herein described and for the purpose specified.

5. The plates T T, hinged to the car-frame to raise the platforms B B, in combination with the said platforms, substantially as described and specified.

FERDINAND HAASE,
WILLIAM ROST.

Witnesses:
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