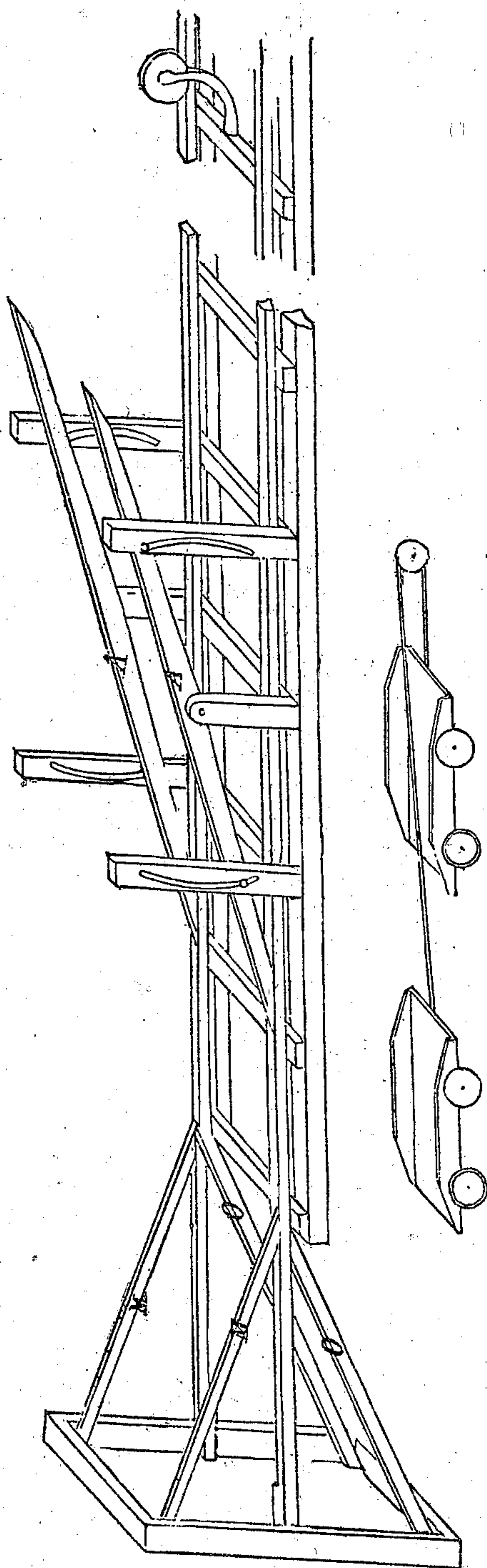


A. C. JOHNSON.  
OPERATING DUMPING CARS.

No. 10,805.

PATENTED APR. 18, 1854.



*TAKEN FROM PATENT OFFICE REPORT  
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ONLY DRAWING ACCESSIBLE (1913)*

# UNITED STATES PATENT OFFICE.

ABRAM C. JOHNSON, OF MEADVILLE, PENNSYLVANIA.

## IMPROVEMENT IN OPERATING DUMPING-CARS.

Specification forming part of Letters Patent No. 10,805, dated April 18, 1854.

*To all whom it may concern:*

Be it known that I, ABRAM C. JOHNSON, of Meadville, county of Crawford, and State of Pennsylvania, have invented a new and useful machine for the purpose of running two self-dumping cars on one inclined railroad-track, the loaded one drawing the empty one up on the same track, to be used in excavating and filling up for railroads and canals and in coal-banks and in other places where such a contrivance would be needed; and I do declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 is a perspective view of my rails with everything adjusted for running the cars, which are not placed on the track in this drawing, but to get a better view are shown at Fig. 2.

C C C C, Fig. 1, are rails laid on the ties N N N', in the usual manner, until they get to the tie N', when they are divided into half-rails, two running down at any desired angle, as seen at O O, and two running up at any desired angle, as seen at M M, being sustained in their places by proper ties, braces, and bends. The rails M M are flush and even with the outside of the rails C C C C, and the rails O O are flush and even with the inside of the rails C C C C.

The hind wheels of my car are placed on the axles with the flange outside, (see 9, Fig. 2,) and the forward wheels with the flange on the inside. (See 8, Fig. 2.) Consequently the hind wheels, 9, run on the outside of the rails, and the forward wheels, 8, on the inside of the rails, and when the car arrives at the tie N' the forward wheels, 8, run down the rails O O, lowering the forward end of the car, and the hind wheels, 9, run by the momentum of the car up on the rails M M, elevating the hind end of the car and throwing the load out, as desired. The hind wheels, running up on the rails M M, check the force and velocity which the car has acquired in running down an inclined plane gradually.

I attach my two cars together by a rope or chain, which rope or chain passes around the pulley H, Fig. 1, in the manner shown at H,

Fig. 2. This rope is of sufficient length to let the cars meet half the distance between the pulley H and the tie N', the loaded car running on the rails C C C C and the empty car running on the rails C C C C until it gets to the balance-beams A A, when it runs up on the balance-beams A A (the loaded car at this time running under the balance-beams) until the said empty car gets past the posts B B, which support the balance-beams near the center, when the balance-beams, by the weight of the empty car, are borne down the shorter ends on the rails C C C C, and the empty car passes down and then on toward the pulley H, thus passing the loaded car on the same track. The balance-beams are kept steady by pins in tops of the posts B B and by means of four upright posts, D D D D, with semicircular slots I I, through which guide bolts are screwed into the balance-beams A A. The rope or chain is hooked onto the under side of the cars near the center, and every time the empty car comes up the rope or chain must be unhooked and reversed on the pulley H and also brought above the car when loaded.

When it is desired to use my invention on a level track, steam, horse, or other suitable power may be used.

I do not claim transporting earth or other substances by means of cars attached to a chain passing over pulleys, the chain being endless or otherwise; nor do I claim the arrangement of an upper track above the lower, so that one set of cars may pass above while the other passes on the lower rails, as this has been done before; but

What I do claim as my invention is—

1. The construction of the balance-beams, arranged as described, for the purpose of passing one set of cars over another set running in an opposite direction on the same track.

2. The arrangement of the rails M M and O O, in combination with that of the car-wheels, as described, for the purpose of rendering the cars self-dumping, or any other modification of the same which may be substantially equivalent to it.

A. C. JOHNSON.

Witnesses:

A. B. RICHMOND,  
SAMUEL COLE, Jr.