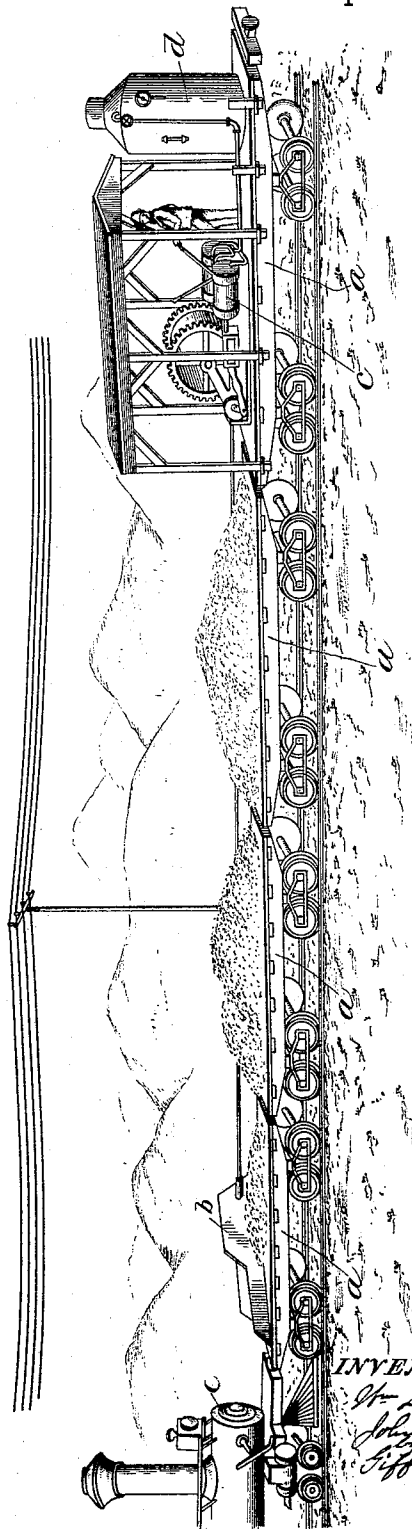


(No Model.)

W. D. STRATTON & J. H. DRAKE.  
MEANS FOR UNLOADING GRAVEL TRAINS.

No. 482,951.

Patented Sept. 20, 1892.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM D. STRATTON AND JOHN H. DRAKE, OF MIDDLETOWN, NEW YORK.

## MEANS FOR UNLOADING GRAVEL-TRAINS.

SPECIFICATION forming part of Letters Patent No. 482,951, dated September 20, 1892.

Application filed June 19, 1891. Serial No. 396,881. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM D. STRATTON and JOHN H. DRAKE, both residing at Middletown, county of Orange, and State of New York, have invented a new and useful Improvement in Means for Unloading Gravel-Trains, of which the following is a specification.

Our invention is an improvement in means for unloading trains of gravel and similar material in which a plow or scraper is drawn along over a train of flat cars holding the gravel. Heretofore the motive power which moved the plow or unloader was the locomotive-engine which propelled the train. The practice was to detach the engine from the train of cars, secure the latter by the brakes or otherwise, so that the cars could not move on the track, attach the plow to the engine by a rope or chain, and then run the latter on ahead of the stationary train, by which the plow was drawn along on top of the cars from one end of the train to the other, scraping off the gravel as it went. By this means it is impossible to operate the plow unless there is a length of track beyond the cars or beyond the place where the gravel or earth is to be unloaded, and the engine must in all cases be at the opposite end of the train from the plow, and, moreover, as the engine is pulling against the brakes or whatever secures the cars from moving, it is very difficult to hold the cars stationary and prevent their moving with or instead of the plow, and particularly when the material to be unloaded is very heavy or difficult to remove. Our improvement is intended to obviate all these disadvantages and provides a method of unloading the cars which can be used at all times, as when the cars are standing on a short siding and when the locomotive is attached to the same end of the train as that from which the plow starts and in which the plow can be drawn over the train, no matter how great the force necessary to remove the load, without moving the cars, and, furthermore, a method by which the cars can be unloaded, if desired, while the train is moving, so that the distribution of the load can be regulated at will, either deposited in a heap at one place, or distributed over a great extent of the road.

Our improved method of unloading gravel-trains consists in moving the plow or unloader by a separate stationary engine attached to the cars at the end opposite to that from which the plow starts.

The drawing illustrates a gravel-train being unloaded by our improved method. The train is composed of the usual flat cars *a a a*, on which the gravel is placed, and has at one end the plow or scraper *b* in position to be drawn along the train. At the opposite end of the train, mounted on one of the cars, is a stationary engine *c* and boilers *d*. The engine *c* is provided with a rope-drum, around which is coiled the rope *f*, by which the scraper is hauled from end to end of the train. The drawing shows the traction or locomotive engine *e* as attached to the same end of the train as that from which the scraper starts.

As will be evident, as both the engine and plow or the power and resistance are on the train itself, the latter does not require to be held by brakes or other means while the plow is being operated, and any power may be used necessary to move the plow.

By keeping the train in motion, either fast or slow, as desired, and keeping the plow moving at the same time material can be deposited in any quantity desired per foot of track. Thus if an ordinary train of sixty-thousand-pound flat cars is used and is kept stationary while being unloaded the deposit is at the rate of about one-half cubic yard per foot of track; but if it requires two minutes to "plow" the train, and at the same time the engine pulls ahead one train length in two minutes, only one-fourth cubic yard per foot is deposited, and so on. On the other hand, if it is desired to deposit a whole train-load in one car length, as at a washout or trestle, it can be done by backing the train as fast as the plow moves forward.

Where convenient, steam for the engine *a* may be taken from the locomotive-engine or from any other source and the boiler *d* on the car dispensed with.

We claim—

1. The combination, with a train of flat cars, of a scraper adapted to be moved from end to end of the train while the engine moving the same remains stationary with relation

to the car upon which it is mounted, a separate rope-drum engine located upon a car coupled to the train at the end opposite to that from which the plow starts, and a rope  
5 connecting the scraper with the rope-drum, substantially as described.

2. In combination with a train of flat cars, a scraper adapted to be moved from end to end of the train, a rope-drum engine located  
10 upon a car coupled to the train, a rope connecting the scraper with the rope-drum, and

a locomotive-engine whereby the whole may be moved to cause the scraper as it advances relatively to the train to occupy a determined position relatively to the track, substantially 15 as described.

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Witnesses:

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