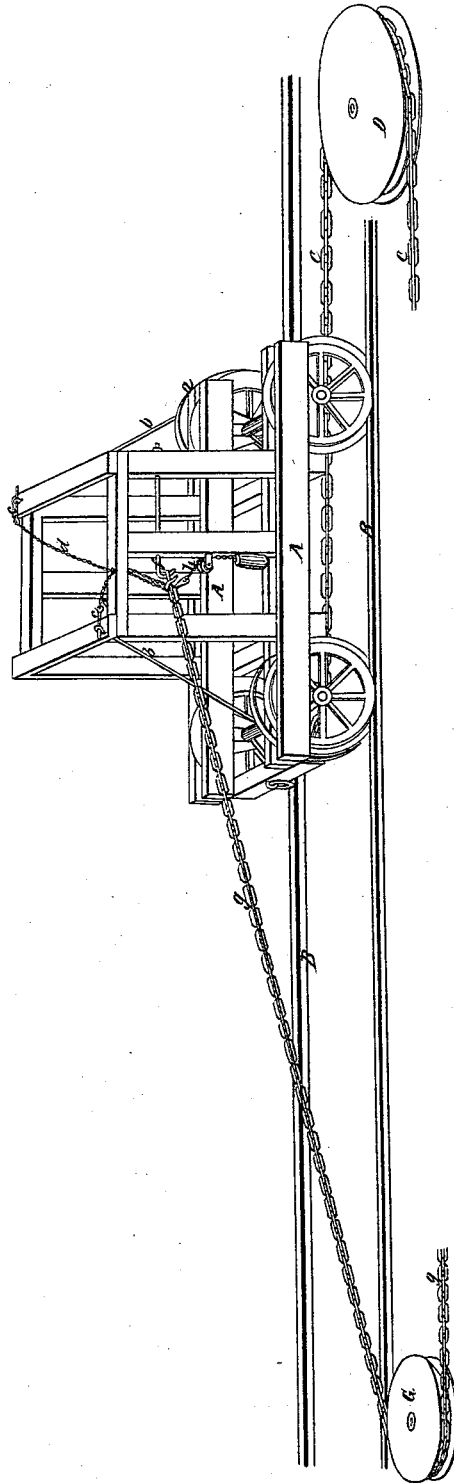


N. SMITH.

Car Brake.

No 2,866.

Patented Nov. 28. 1842.



# UNITED STATES PATENT OFFICE.

NATHAN SMITH, OF WATERLOO, NEW JERSEY.

## SELF-ACTING BRAKES FOR INCLINED PLANES.

Specification of Letters Patent No. 2,866, dated November 28, 1842.

*To all whom it may concern:*

Be it known that I, NATHAN SMITH, of Waterloo, in the county of Suffolk and State of New Jersey, have invented a new and useful Improvement in Stopping Cars on Inclined Planes, which I denominate the "self-acting brake for inclined planes"; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification.

The cars A and inclined plane B are constructed similar to those now in common use; to one or all the wheels of the car, brakes (a) of the following construction are attached to the frame of the cars just forward of the wheels; they consist of a piece of hoop iron affixed to the frame, which passes over the wheels and curved around them and extends down, so that when the cars run back the wheels will run onto them and be prevented from turning. These brakes are held up from the track, by means of supporters (b) attached to their upper side, which extend up to the top of the cars, passing through the upper cross-tie or a staple fastened thereto, which supporters are held up by keys (c) passing through loops in their upper ends, which extend above the upper side of the car frame; from the keys wires, or chains, (d) extend to a hole in the top of the frame of the car, on one side, through which they pass to a weight (e) below; just over this weight a stout hook (f) is affixed having the end turned down, and onto this hook the "back chain" (g) is caught; a chain (h), or lever

from the weight (e) above named is hooked over the "back chain" so that while it is in its proper position it sustains the weight. 40

The main chain C, is connected with the car and passes up around a pulley D, and down to the descending car on the other track (omitted in the drawing for the purpose of showing the other parts more distinctly) from which car the back chain (g) leads down around a small pulley (G.) at the foot of the plane and from thence up to the hook above named on the ascending car. Now should the main chain break during the ascent of the car A, the back chain (g) would slacken, and the weight (e) would detach it from the hook (f), and the weight being deprived of the support of the back chain it would fall and draw out the keys 55 that sustain the brakes which instantly fall under the wheels and stop the descent of the car.

A spring may be substituted for the weight in the above arrangement in a way at once obvious to a mechanic, which would have the same effect and is deemed substantially the same.

What I claim as my invention and desire to secure by Letters Patent is— 65

The combination of a weight or spring, supported by the back chain when in action, with the brakes of a car, in the manner and for the purpose herein set forth.

N. SMITH.

Witnesses:

J. J. GREENOUGH,  
V. H. GODDARD.