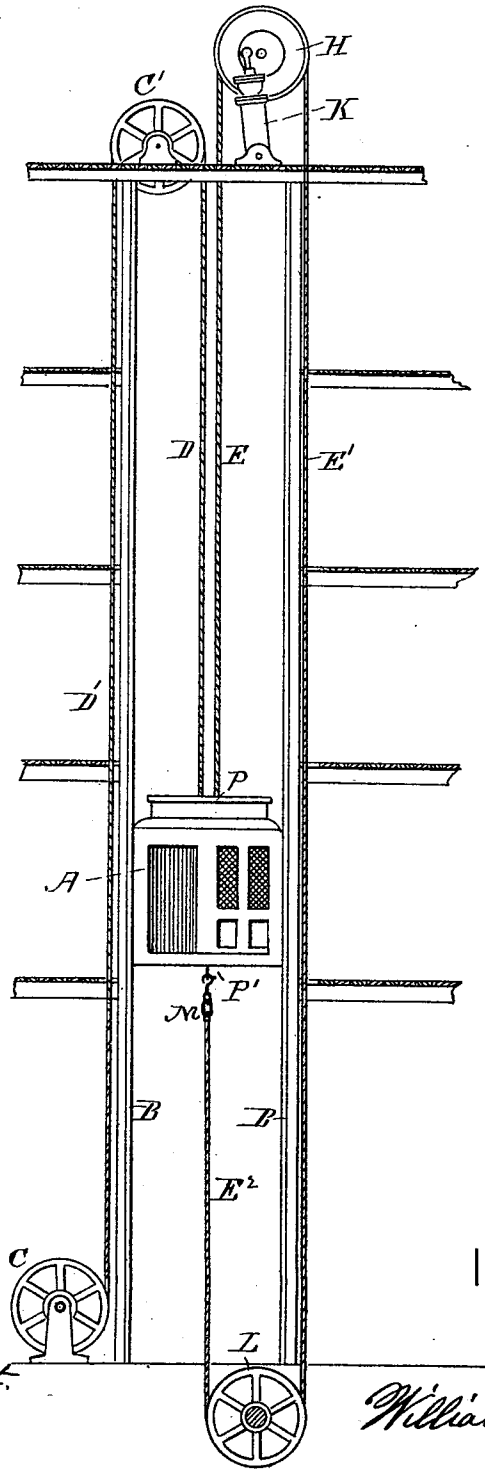
(No Model.)

W. E. NICKERSON.

SPEED REGULATOR FOR ELEVATORS.

No. 394,600. Patented Dec. 18, 1888.



WITNESSES,
Frank G. Parker,
Matthew M. Blunt.

INVENTOR.
William E. Nickerson

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM E. NICKERSON, OF CAMBRIDGE, MASSACHUSETTS.

SPEED-REGULATOR FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 394,600, dated December 18, 1888.

Application filed September 27, 1888. Serial No. 286,620. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. NICKERSON, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented a certain new and useful Improvement in Speed-Regulator Appliances for Elevators, of which the following, taken in connection with the accompanying drawing, is a specification.

The object of my invention is to so connect the speed-regulator to an elevator-carriage or other mechanism that it will regulate the velocity when going in either direction. This object I attain by the mechanism shown in the accompanying drawing, in which I have shown in elevation an elevator with my improvement attached.

Accidents to elevators occur quite frequently from the elevator in its ascent acquiring an abnormal velocity—that is, a velocity so great that when suddenly stopped from any cause the rebound is so violent as to break the connections and allow the elevator-carriage to fall or cause some other damage. This source of danger and injury also exists in all rapidly-driven machinery in which the direction of motion is reversed at intervals, and in which the speed-regulator works in one direction only.

My device is intended more particularly to prevent accidents from occurring from too great a speed in the movement of an elevator-carriage in either descending or ascending.

In the drawing, A represents an elevator-carriage, and B B the ways. The hoisting-rope D D′ and its pulleys or drums C C′ may be made in any of the well-known styles. The drum H, about which the safety-rope E E′ E^2 passes, is connected to a speed-regulator of any approved construction. The one shown in the drawing is of the class termed "the fluid speed-regulators," and is indicated by K. The safety-rope is attached at one end to the top of the elevator-carriage at P, and after passing over and around the speed-regulator drum H descends to the guide-pulley L and around it to the under side of the elevator-carriage A, to which it is attached at P′. The safety-rope E E′ E^2 is made of sufficient strength to hold the carriage under all circumstances, it being rigidly and firmly attached to the elevator-carriage both at the top and bottom.

For convenience in adjusting the length of the rope, I use a turn-buckle at M.

I claim—

The combination of the elevator-carriage A and hoisting-rope D D′ with a speed-regulating device and safety-rope, E E′ E^2, said rope being rigidly attached to the elevator-carriage at both ends, substantially as described, and for the purpose set forth.

WILLIAM E. NICKERSON.

Witnesses:
FRANK G. PARKER,
MATTHEW M. BLUNT.