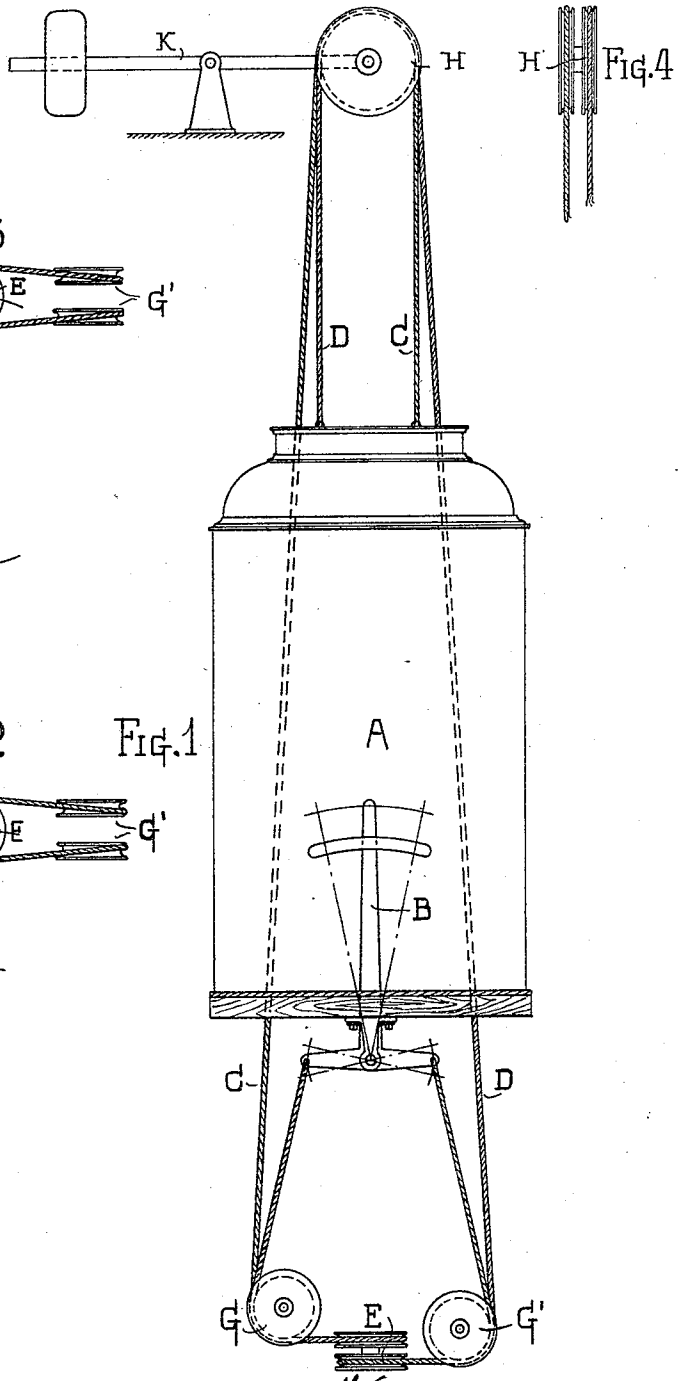
(No Model.)

# W. H. WELLS, Jr.

## DEVICE FOR CONTROLLING ELEVATORS.

No. 457,845. Patented Aug. 18, 1891.




Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

WILLIAM H. WELLS, JR., OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO THE STANDARD ELEVATOR COMPANY, OF SAME PLACE.

## DEVICE FOR CONTROLLING ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 457,845, dated August 18, 1891.

Application filed June 13, 1891. Serial No. 396,080. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. WELLS, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Means for Controlling the Valves of Elevators, of which the following is a specification.

This invention relates to means for controlling the valves of elevators and similar appliances; and it consists in the construction and arrangement substantially as hereinafter described and claimed.

Like letters refer to the same parts in the several figures of the drawings, in which—

Figure 1 represents a side elevation of the invention as applied to an elevator. Fig. 2 represents a detail view and plan of the lever and sheaves at the bottom of the elevator-shaft. Fig. 3 represents a similar view of a modified manner of pivoting the lever, and Fig. 4 represents a detail view in the rear elevation of the tension-pulleys at the top of the elevator-shaft.

In the drawings, A designates the cage or carriage of the elevator, which is of the usual construction, and B designates a lever carried in such cage, which is likewise of a common form. At the bottom of the elevator-shaft is mounted a lever F upon a vertical pivot, so that such lever has a movement in a horizontal plane. This pivot or axis may be at the end of the lever, as shown in Fig. 2, or between the ends, as shown in Fig. 3, and to the lever is pivoted a connecting-rod I, which is secured to the valve and operates the same. To the outer end of the lever F is pivoted a pair of sheaves E E, which freely revolve on their axis or pivot. On each side of the end of the lever carrying the sheaves, and in proximity to such end, are mounted on horizontal axes other sheaves, respectively designated by the letters G G′. Near the top of the elevator-shaft are mounted two sheaves H, carried by a suitable hanger and weight, preferably through the medium of a lever K, and these sheaves may be guided in the customary manner in a slotted bracket or otherwise. A rope or similar flexible connection has one of its ends secured to a branch of the lever B and passes down around the pulley G, and thence around the sheave E and back under the other pulley G upward over the sheave H and thence downward to the cage, where it is fastened in any convenient manner. Another similar rope or flexible connection has one of its ends secured to the other branch of the lever B and passes around the sheaves G′, E, G′, and H and has its other end connected with the top of the cage.

It is obvious that variations might be made in the details of this construction without departing from the spirit of my invention.

The operation of this invention is as follows: The operator in the carriage may, by manipulating the lever B in either direction, draw upon the cord C or the cord D and cause the free end of the lever F with its sheaves E E to be moved laterally, and through its connection with the valve thereby open or close the latter. As both of the ropes pass over the sheaves H H, any slack in said ropes will be taken up by the weighted lever to which said sheaves are connected.

I disclaim, and declare that I am not the inventor of, first, the combination of a cage, two operating cables connected to travel with the cage, supports for the cables, and a counterweight for the support; second, in a cable-operating mechanism for elevators comprising two controlled cables attached to the car, a weighted lever having sheaves over which cables run for regulating and maintaining the tension of the cables.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, in an elevator, with a traveling carriage, of two ropes having one of their ends connected with a controlling device on the carriage and their other ends secured to the car, horizontally-movable sheaves around which the two cords respectively pass in opposite directions, a guiding-sheave near each side of such pair of movable sheaves, and an adjustable support near the top of the well for the loops of the ropes, substantially as and for the purpose set forth.

2. The combination, in an elevator, of a traveling carriage, a horizontally-movable le-

ver carrying sheaves and connected to the valve, a guiding-sheave near each side of such lever, a vertically-movable lever carrying sheaves at one end and a weight at the other end located near the top of the elevator-shaft, and two ropes secured at one end to controlling devices on the car and passing around the appropriate sheaves and secured to the top of the carriage, substantially as and for the purpose set forth.

WILLIAM H. WELLS, JR.

Witnesses:
WILLIAM J. STAPLETON,
LUKE B. BROOKS.