

G. LANE.
Elevators.

No. 147,411.

Patented Feb. 10, 1874.

Fig. 1.

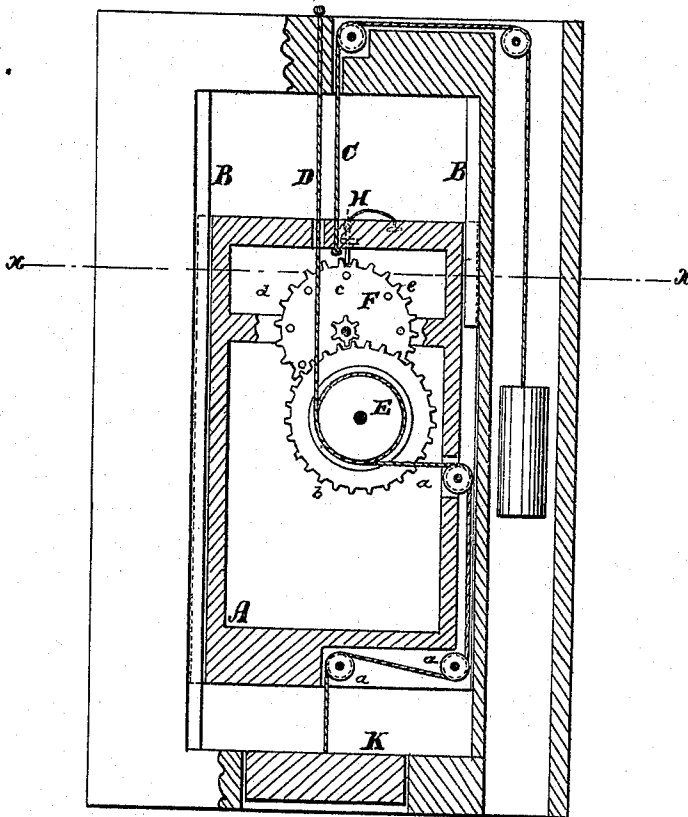
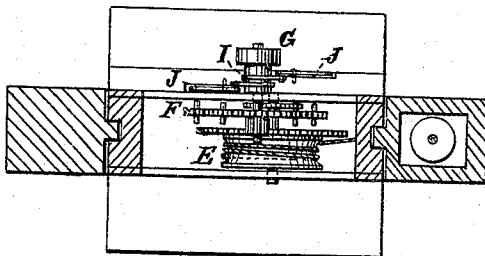


Fig. 2.



WITNESSES:

A. Bennekenendorf.
A. Edgine

INVENTOR:

BY

G. Lane
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE LANE, OF NEW YORK, N. Y., ASSIGNOR TO COLUMBIAN ELEVATOR ASSOCIATION.

IMPROVEMENT IN ELEVATORS.

Specification forming part of Letters Patent No. **147,411**, dated February 10, 1874; application filed October 25, 1873.

To all whom it may concern:

Be it known that I, GEORGE LANE, of the city, county, and State of New York, have invented a new and Improved Hoisting Apparatus or Elevator, of which the following is a specification:

This invention relates to certain improvements in means for operating elevators by power carried on the elevator-carriage itself; the object of such being to place the power for hoisting the carriage under the immediate control of the attendant. To this end my invention consists in combining, with the carriage of an elevator or hoisting apparatus, a power-wheel provided with a pinion meshing into a drum made to traverse the hoisting-rope, which latter is connected at one end to the elevator-frame, and at its opposite end to a weight, which keeps said rope in a taut or strained condition at all times.

In the drawings, Figure 1 is a sectional elevation of an elevator-frame and its carriage with my improvements applied thereto. Fig. 2 is a horizontal section thereof on the line *x x*.

In the accompanying drawings, A represents the carriage of the elevator, which works on and is guided by ways B. C is a rope, which is attached to the upper end of the carriage A, and passes upward over pulleys and downward into the frame, where it is provided with a counterbalance-weight. D represents the rope or chain for operating the carriage of the elevator. It is connected at its upper end to the frame of the elevator, and passes around a drum, E, journaled in the carriage A, and thence around the pulleys *a a a*, and is attached at its lower end to the weight K, or its equivalent. The drum E is provided with cogs or teeth *b*, which engage with a pinion, *c*, on the shaft carrying the power or driving wheel

F, which latter may be provided with a crank for operating it, or provided on either or both sides with projecting arms *d*, so that it may be operated by the feet of the operator. H represents a locking-pin, attached to the upper side of the carriage of the elevator, or in other convenient and suitable position for engaging with stops or teeth *e* on the power-wheel F, for the purpose of arresting the motion of said wheel to retain the elevator-carriage at any desired position. As a further means of arresting the motion of the elevator-carriage, I arrange around the shaft carrying the power-wheel F a friction brake or band, I, which encircles said shaft, and is operated by pivoted levers J J, in order to compress said friction-band I and cause it to grasp the shaft of the power-wheel, by which means the revolution of the same is arrested. By means of the hoisting-rope D, attached to the upper end of the elevator-carriage, and passing around the drum E, and attached at its lower end to the weight K, or its equivalent, the said drum is caused to traverse and travel on the hoisting-rope, by which means much more power is obtained, and the apparatus is greatly simplified, and, furthermore, the hoisting apparatus is placed under the immediate control of the attendant on the elevator-carriage.

I claim as my invention—

In combination with the carriage A, rope D, and traversing drum E, the rising and falling weight K, power-wheel F, and pinion *c*, all constructed to operate substantially in the manner herein shown and described.

GEORGE LANE.

Witnesses:

A. P. THAYER,
T. B. MOSHER.