(No Model.)

G. HANCOCK.

ELEVATOR.

No. 457,645. Patented Aug. 11, 1891.

Fig. 1.

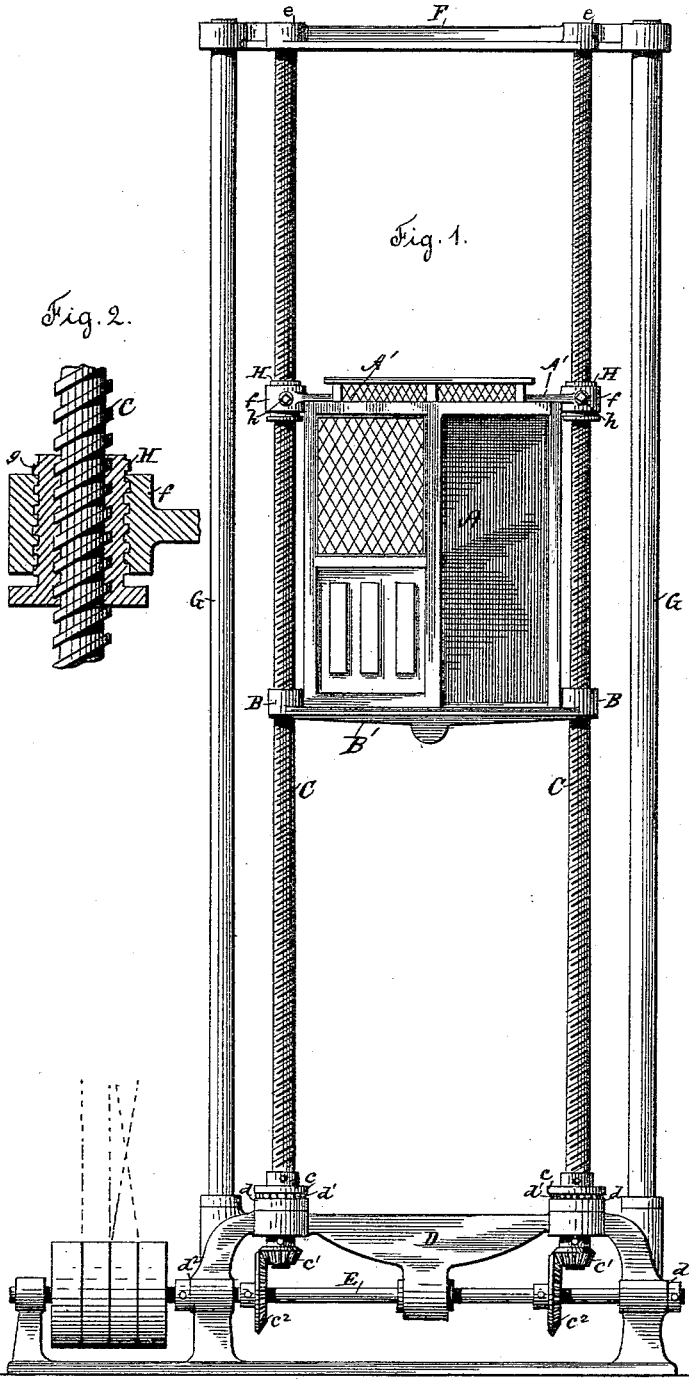

Fig. 2.

Witnesses
Chas. F. Schmelz
John S. Lynch.

Inventor
George Hancock,
By his Attorney
J. Schoffield

UNITED STATES PATENT OFFICE.

GEORGE HANCOCK, OF PROVIDENCE, RHODE ISLAND.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 457,645, dated August 11, 1891.

Application filed November 3, 1890. Serial No. 370,214. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HANCOCK, a citizen of the United States, and a resident of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Elevators, of which the following is a specification.

The object of my invention is to provide a perfectly safe passenger-elevator which is operated by means of revolving screws instead of ropes; and it consists in the improved construction and arrangement of the guiding nuts and screws, as hereinafter fully set forth.

Figure 1 represents a front elevation of an elevator embodying my improvement. Fig. 2 represents a detail section showing the construction of the adjustable nut.

In the accompanying drawings, A represents the elevator-car, and C C the operating-screws, by means of which the car is to be raised and lowered, the said screws being made to extend in the elevator-well from the lower floor to the top of the building. Near the lower end of the screw C is placed a collar c, which rests upon a series of rollers or balls d', placed in an annular groove provided in the top of the bearing d of the bed-frame D, and upon the lower ends of the screws are attached the bevel-pinions c', which are adapted to engage with the bevel-gears c^2, secured to a shaft E, which is journaled in the bearings d^2 of the bed-frame and carries tight and loose pulleys, which are adapted for open and crossed belts, by means of which rotary movement may be imparted to the shaft in either direction. The screws C are journaled with their upper ends in the bearings e of the bar F, or in a frame attached to the wall of the building, the said bar being preferably supported by means of the parallel upright rods G G, which are secured to the bed-frame D, so that in this case the elevator will be self-supported and be independent of the building in which it is placed.

At about the middle line of the bottom of the car is attached the bar B′, provided at its opposite ends with the nuts B B, which are adapted to receive the screws C C, and at the top of the car and in line with the bar B′ is attached the cross-bar A′, provided at its opposite ends with the nuts f f, which have their axes in line with the axes of the nuts B B, and within which are placed the adjustable nuts H H, as shown enlarged in the section, Fig. 2, the said nuts H H being provided with an inner screw-thread adapted to fit the thread of the screw C, and an outer screw-thread g, adapted to fit the screw-thread of the nut f, and by turning the nuts H within the nuts f of the bar A′ the proper adjustment relatively to each other can be made to prevent the cramping of the screws C C within the nuts B B and H H, the nuts H H being retained in their adjusted position by means of the set-screw h, which passes through the side of the nut f and bears with its point against the side of the nut H. The several nuts above described may also be made in halves in order to facilitate the ready attachment of the car to the screws or its ready removal therefrom.

I claim as my invention—

The combination, with the revolving screws C C, of an elevator-car A, provided with the cross-bar B′, having thereon the nuts B B, and the cross-bar A′, having thereon the nuts f f, the nuts H H, provided with an outer screw-thread adapted to fit the thread of the screw C, and the screw h for holding the nut H in its adjusted position, substantially as described.

GEORGE HANCOCK.

Witnesses:
S. SCHOLFIELD,
H. S. BABCOCK.