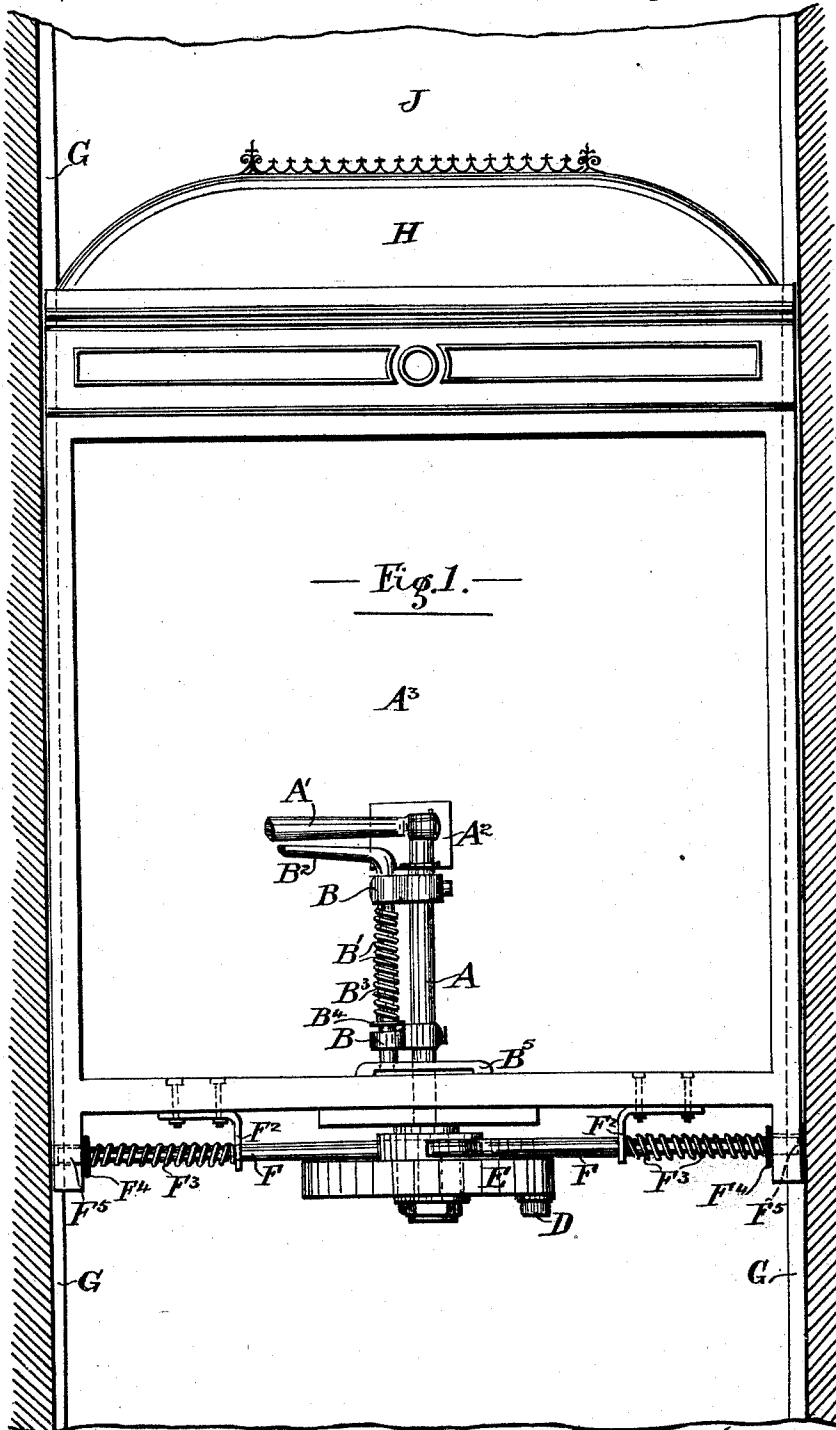


F. GILES.
ELEVATOR.

No. 483,145.

Patented Sept. 27, 1892.



Witnesses } *W. S. Sackes*
Rich. Sparrow

Inventor. *Fredrick B. Giles*

(No Model.)

2 Sheets—Sheet 2.

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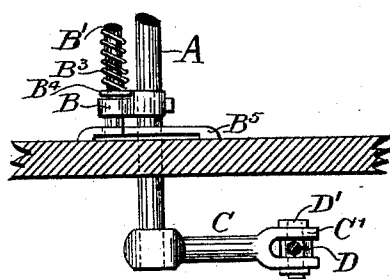
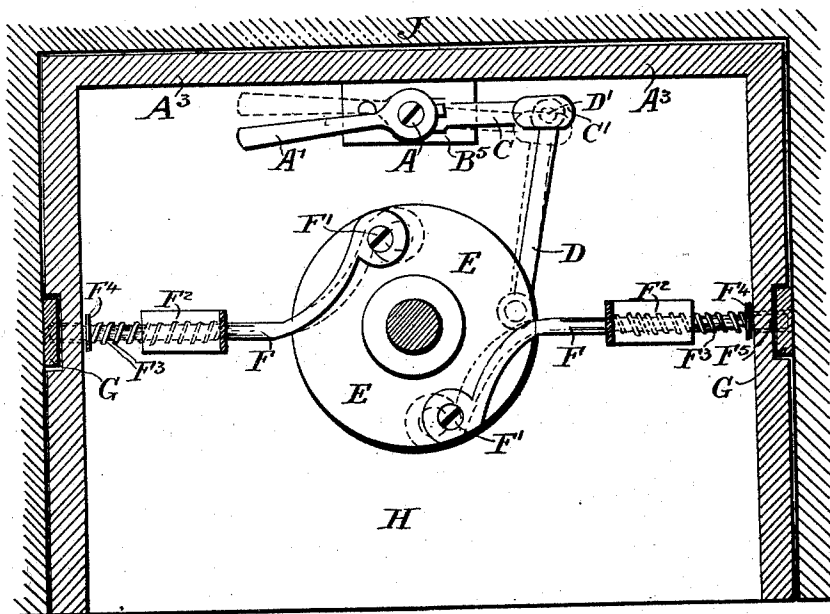


Fig: 3.



—Fig. 2.—

Witnesses.

W. S. Sack
Rich. Sparrow

Inventor.

Frederick C. Giles.

UNITED STATES PATENT OFFICE.

FREDERICK GILES, OF SOUTH YARRA, NEAR MELBOURNE, VICTORIA.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 483,145, dated September 27, 1892.

Application filed November 18, 1891. Serial No. 412,309. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK GILES, a citizen of Melbourne, in the Colony of Victoria, Australia, and a subject of the Queen of Great Britain, and a resident of 15 Fawknor Street, South Yarra, near Melbourne, Victoria, have invented a certain new and useful Improved Apparatus for Retaining Lift Cars or Cages at any Point of their Travel, (and that no patent has been granted me in any country for this invention,) of which the following is a specification.

The object of this invention is to stop lifts, and especially passenger-cars, at any point of their travel, and is particularly for use in stopping them firmly and securely at the floor and for the time during which the passenger is alighting from or entering into the car. The means at present in use—namely, the closing of the lift-cylinder valve by pulling the rope actuating the same—are found insufficient, as when the conductor by said rope stops the car the latter jerks either upward or downward, with the result that nervous or other persons unacquainted with lift traveling are frightened, and consequently the utility of lifts is considerably reduced. Where this invention is in use, the conductor in stopping the car by the valve-rope before referred to simultaneously (by turning the handle conveniently placed in the rear of the car) operates mechanism, which results in the ends of transverse bars proceeding into the guides or skids along which the car works, and the latter is thus made immovable during pleasure, so that the passenger can alight without the disagreeable and dangerous jerks which at present are caused by the means in use. Especially will this invention be found of great value and utility in cases where the conductor is either inexperienced or inattentive, as in the former case considerable practice is required to be gained to know the exact point at which to pull the valve-rope, so as to bring the floor of the car and landing level with each other.

The invention comprises a vertical rod, which is provided with a handle conveniently placed at and suitably affixed to the back of the car, and so out of the way of the passengers. To this rod is attached by means of

guide-brackets another rod, which forms a lock and which is surrounded by a spiral spring and provided with a thumb-piece termination. Said rod enters a base-plate for the purpose of retaining the apparatus in the open or shut position. To the lower end of the vertical rod is affixed a lever provided with a jointed end, into which fits a connecting-rod, the same at its other end being secured to a disk suitably fixed at a central position to the under side of the floor of the car. To this disk are attached by pins or otherwise two transverse rods, which work in guides bolted to the floor of the car, said rods being provided with springs. The ends of these bars when actuated proceed into and remain while desired in the guides or skids against which the car works. On these transverse bars shoulders are formed, between which and the guides the aforesaid the springs exert their force for accelerating the result caused by the car-conductor turning the handle and putting the apparatus in action.

Reference may now be had to the accompanying drawings, in which—

Figure 1 is an elevation of the apparatus as erected in a passenger lift-car, the door of the latter being removed for clearness' sake. Fig. 2 is a plan of same, the car-floor being removed for a similar reason. In this figure the open and locked positions of the mechanism are shown by dotted lines. Fig. 3 is an elevation illustrating the vertical rod and levers.

In the figures, A is the vertical rod, provided at its upper end with the handle A' and suitably mounted in bearing-guide A², bolted to the back A³ of the car. To this rod A are attached guide-brackets B, in which the locking-rod B' works, provided with a thumb or hand piece B² and spiral spring B³, which operates between one of the aforesaid guides B and a shoulder B⁴, formed on the rod B'. The end of the latter rod B' locks into a base-plate B⁵, which also serves as lower bearing for the vertical rod A. This plate B⁵ is fastened to the floor of the car and, if preferred, can be made flush with same. The rod A proceeds downward through the floor of the car, and at its lower end is attached to a lever C. This lever at its other end is formed with a joint

or bifurcation C', in which the end of a connecting-rod D is held by pin D'. The other end of this rod D is affixed to the under side of a disk E, said disk being attached to the floor of the car in such manner that it rotates the desired distance. To this disk E at its upper side are held the transverse bars F by pins F' or otherwise and made of a bent form, as shown. These bars work in guides F², bolted to the car-floor, and are provided with spiral springs F³, which work between the guides F² and shoulders F⁴, formed on the bars. The ends F⁵ of the latter when actuated proceed into the holes or other formations in the skids G. H is the car, J being the shaft of the building in which it travels.

The *modus operandi* of this invention is as follows: Assume a passenger is in a lift-car and desires to alight at the third floor of the building, the conductor upon being notified pulls the valve-rope herein referred to and so stops the car. He also grips the handle A', simultaneously pressing the thumb-piece B² closely thereto, which action lifts rod B' out of the hole in the base-plate B⁵. Thus rod A is released so as to be sufficiently rotated by handle A', and by means of lever C, connecting-rod D, and disk E the ends F⁵ of the transverse bars F are inserted into the holes in the skids G, (said result being accelerated by the spiral springs F³), said ends F⁵ remaining therein until such time as withdrawn by reverse action of handle A', which in practice would be when the passenger has alighted from the car H. In case when a passenger is entering or about to enter a car and the conductor being duly notified he accordingly anchors the car at the desired position in similar manner as above referred to. It will thus be seen that during the time a passenger is either entering or leaving the car the latter is made immovable and no disagreeable feeling is experienced or danger incurred by jerkings or vibrations.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In an apparatus for retaining an elevator car or lift at any point of its travel, the combination, with transverse rods operating in guides secured to the under side of the floor of the car and adapted to enter holes in the skids against which the car works, of an actuating-rod mounted within the car and extending through the bottom thereof, actuating mechanism connecting the lower end of said actuating-rod with the inner ends of said transverse rods, and a movable rod attached to the aforesaid actuating-rod within the car and serving to lock said actuating-rod against

rotation or when elevated to permit its rotation, substantially as set forth.

2. The combination, with transverse rods having bent inner ends operating in guides secured to the under side of the bottom of the elevator and adapted to enter holes in the skids against which the elevator-car works, and a disk supported centrally on the under side of the bottom of the car and having connected thereto the bent inner ends of said transverse rods, of a vertical actuating-rod mounted within the car and extending through the bottom thereof, a lever secured to the lower end of the said actuating-rod, and a connecting-rod jointed to the outer end of said lever and attached at its opposite end to the aforesaid disk, substantially as set forth.

3. The combination, with transverse rods having bent inner ends and operating in guides secured to the under side of the bottom of the elevator-car, and a disk supported centrally on the under side of the bottom of the car and having connected thereto the bent inner ends of said transverse rods, of a vertical actuating-rod mounted within the car and extending through the bottom thereof, a lever secured to the lower end of said actuating-rod, a connecting-rod jointed to the outer end of said lever and having its opposite end attached to the aforesaid disk, and a locking rod or bar connected to the actuating-rod within the car and under control of the elevator-driver, substantially as set forth.

4. The combination, with disk E, transverse rods F, having bent inner ends which are connected to said disk, and spiral springs, as F³, surrounding said rods F, of a vertical actuating-rod provided with a handle and mounted within the car and extending through the bottom thereof, and actuating mechanism connecting the lower end of said vertical actuating-rod to the aforesaid disk, substantially as set forth.

5. The combination, with the transverse rods, as F, adapted to enter holes in the skids against which the car works, disk E, lever C, and rod D, of the vertical actuating-rod A, connected to lever C and having a handle, locking-rod B', having a thumb or hand piece and connected to the actuating-rod A, a spiral spring surrounding said locking-bar, and a base-plate, as B⁵, with which the locking-rod B' co-operates, substantially as set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

FREDERICK GILES.

Witnesses:

A. O. SACHSE,
C. E., Melb.,
RICHD. SPARROW.