No. 733,864. PATENTED JULY 14, 1903.

J. S. MUCKLÉ.

ELEVATOR.

APPLICATION FILED MAY 20, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

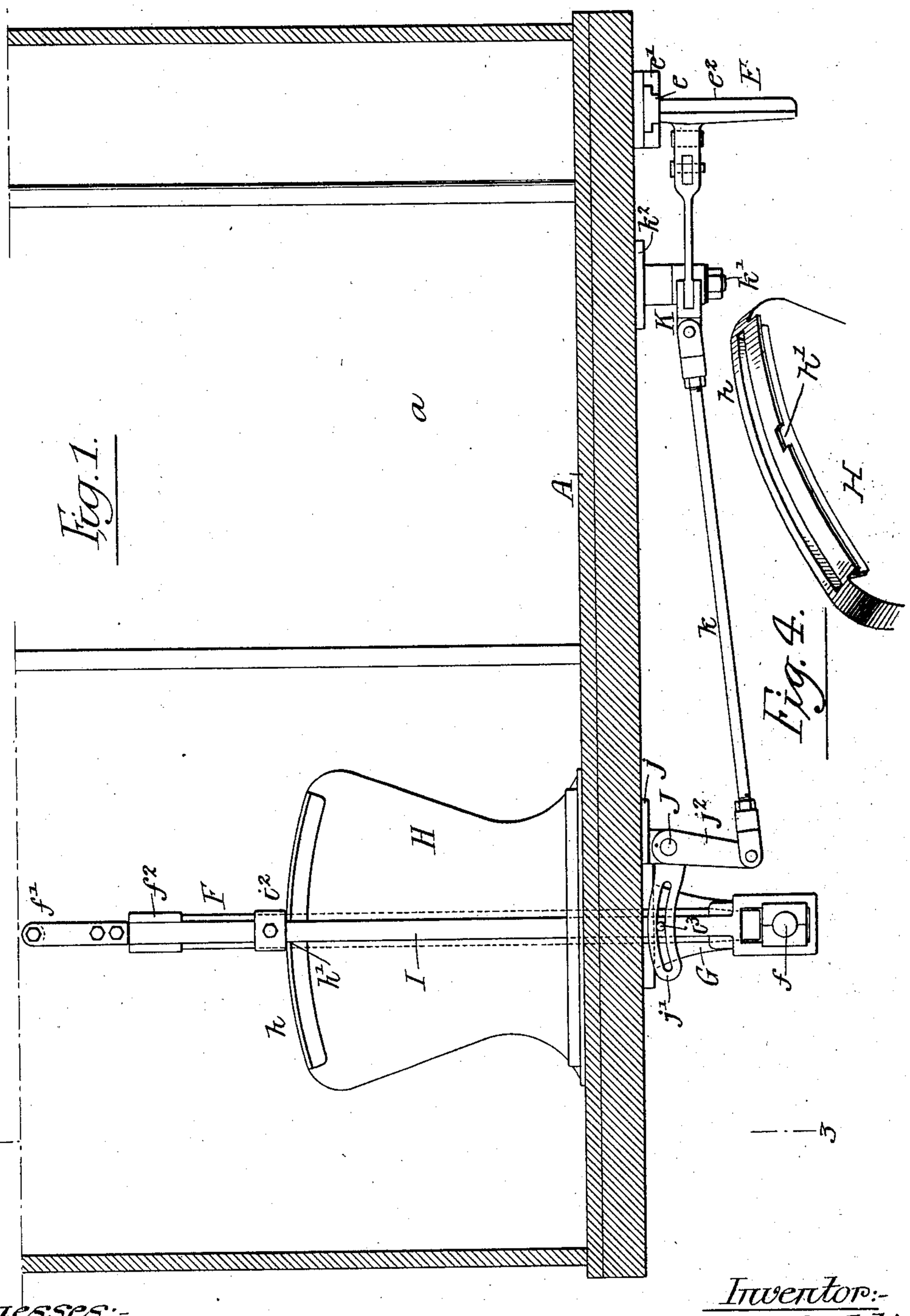

Fig. 1.

Fig. 4.

Witnesses:-

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Frank L. A. Graham.

Inventor:-

John S. Muckle,

by his Attorneys:

Howson & Howson

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 1.

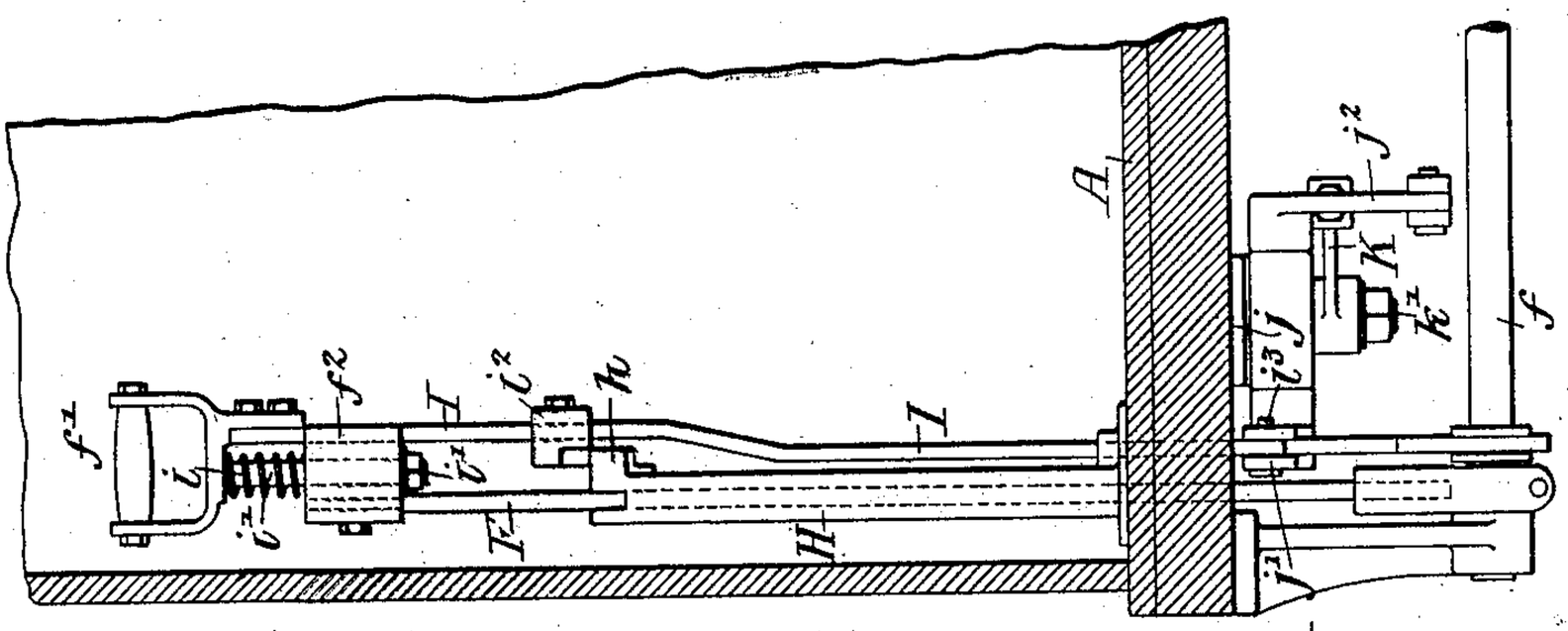
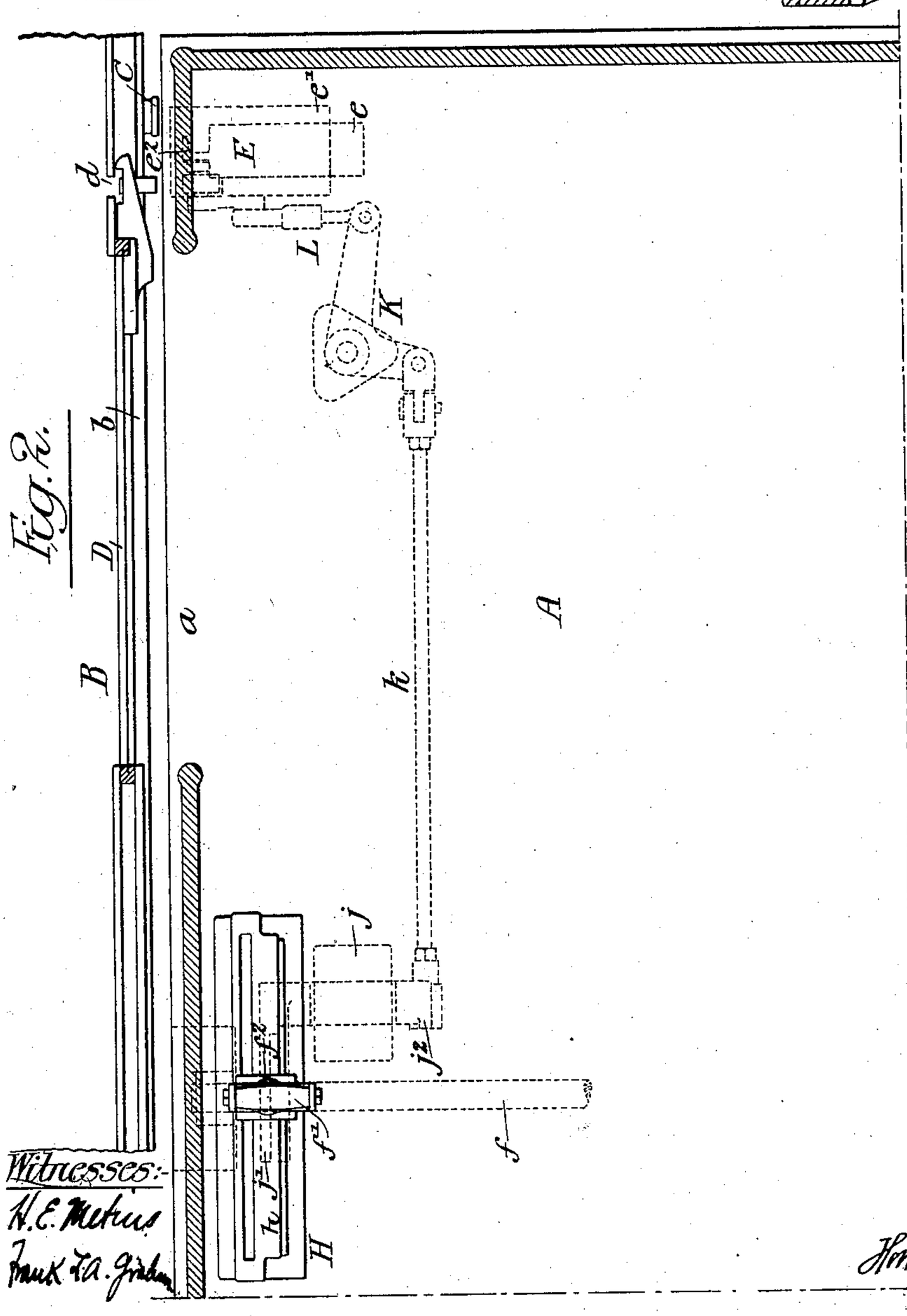


Fig. 2.



Witnesses:-
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No. 733,864. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

JOHN S. MUCKLÉ, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO STANDARD ELEVATOR INTERLOCK COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 733,864, dated July 14, 1903.

Application filed May 20, 1903. Serial No. 157,975. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. MUCKLÉ, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Elevators, of which the following is a specification.

The object of my invention is to provide a simple and effective locking device for locking the car to a landing when the elevator-car comes to a full stop, and at the same time to release the landing-door, so as to allow it to open when the car is at the landing. This object I attain in the following manner, reference beng had to the accompanying drawings, in which—

Figure 1 is a sectional view through the elevator-car, illustrating my invention. Fig. 2 is a sectional plan view. Fig. 3 is a sectional view on the line 3 3, Fig. 1; and Fig. 4 is a detached perspective view of a portion of the segment-frame.

A is the platform of an elevator-car.

a is the doorway.

B is a landing having a doorway *b*.

D is a door suitably hung to guides at the landing and arranged to slide in the present instance so as to be opened and closed. Automatic means may be provided for opening the door when it is released, the door being closed by the operator on the car and held closed by a suitable catch *d*, only accessible from the elevator-well. The catch is actuated by a plunger E on the car. This plunger is so formed that a lock C, pivoted in the present instance to the elevator-well, engages the plunger when it is forced out to release the door, so that it cannot be retracted until the door is again closed. This mechanism is fully illustrated and claimed in a patent granted to John S. Mucklé and W. H. B. Teamer, No. 555,825, dated March 3, 1896. The object of my present invention is to attach this mechanism to a lever-controller such as illustrated in the drawings.

F is a lever secured to a shaft *f*, mounted in a bracket G, secured to the under side of the car in the present instance.

H is a frame mounted on the floor of the car, and on this frame is a segment *h*, having a central opening *h'*.

Carried by the lever F is an operating-rod I, also pivoted to the shaft in the present instance. This operating-rod slides in a block f^2 on the lever F and carries a handhold *f'*. A spring *i* is mounted on a rod *i'*, which extends through said block from the handhold *f'* and tends to keep the handhold in the elevated position. On the rod I is an adjustable block i^2. This block is cut away at the back to allow it to pass into the central opening *h'* in the segment *h*, so that on the depression of the handhold *f'* by the operator when the lever F is in the central position the block i^2 will enter the opening in the segment, and thus lock the lever from any movement on its pivot until the handhold is raised.

In order to lock the handhold in its depressed position, so as to lock the lever when the landing-door is open, I connect the plunger E to the said operating-rod I by a series of rods and levers, so that when the said plunger E is engaged by the locking mechanism C at the landing it will prevent any vertical movement of the rod I and the handhold, and the lever will remain locked until the door is closed by the operator.

In the present instance I have shown a rock-shaft J, pivoted to a bracket *j* on the under side of the car, and on one end of this rock-shaft is a segmentally-slotted arm *j'*, which is engaged by a pin i^3 on the rod I. By making the slot in the form of a segment the lever F can be moved on its pivot without affecting the movement of the rock-shaft J. On the end of the rock-shaft opposite to the arm J' is an arm j^2, connected by a rod *k* to a lever K, hung on the pivot *k'* from a bracket k^2 on the under side of the car. The other arm of this lever K is connected by a rod L, which is secured to the plunger E. This plunger has a slide-plate *e*, which is mounted in a grooved plate *e'*, secured to the bottom of the car, so that when the mechanism above described is operated the plunger will slide toward and from the walls of the elevator-well. The plunger has a flange e^2 at the outer end,

as in the patent above mentioned, with which the locking mechanism engages.

I claim as my invention—

1. The combination in locking mechanism for elevators, of a car, a landing, a door at the landing, means for locking the door in its closed position, a pivoted lever on the car for controlling the movement of said car, a segment, a vertically-movable rod carried by the said lever and arranged to engage the segment whereby the lever can be locked in its central position, a plunger carried by the car and connected to the said locking mechanism, a lock at the landing, said parts being so arranged that when the locking mechanism of the lever is operated, the plunger will release the door and will be locked in turn by the locking mechanism at the landing until the door is again closed, substantially as described.

2. The combination of a car, a landing, a door at the landing, means for locking the door in its closed position, an operating-lever pivoted to the car and controlling the movement thereof, a vertically-movable rod, a handhold carried thereby, a block on the rod, a segment on the car having a central opening to receive the said block, a sliding plunger on the car, lever mechanism connecting the rod with the plunger, said plunger arranged to release the car when the block is moved into the recess in the segment, and mechanism at the landing for locking the plunger, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN S. MUCKLÉ.

Witnesses:
WILL. A. BARR,
JOS. H. KLEIN.