

(No Model.)

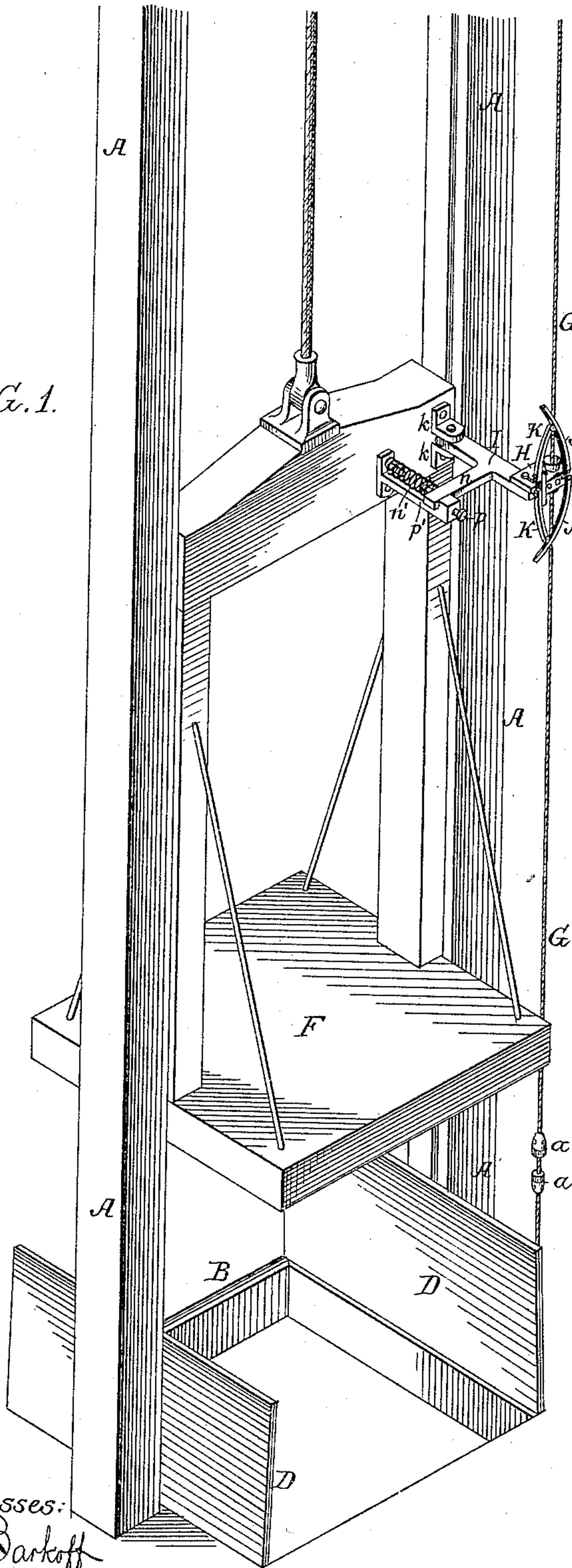
2 Sheets—Sheet 1.

J. J. SEELAR.
CONTROLLING DEVICE FOR ELEVATORS.

No. 446,717.

Patented Feb. 17, 1891.

FIG. 1.



Witnesses:
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FIG. 2.

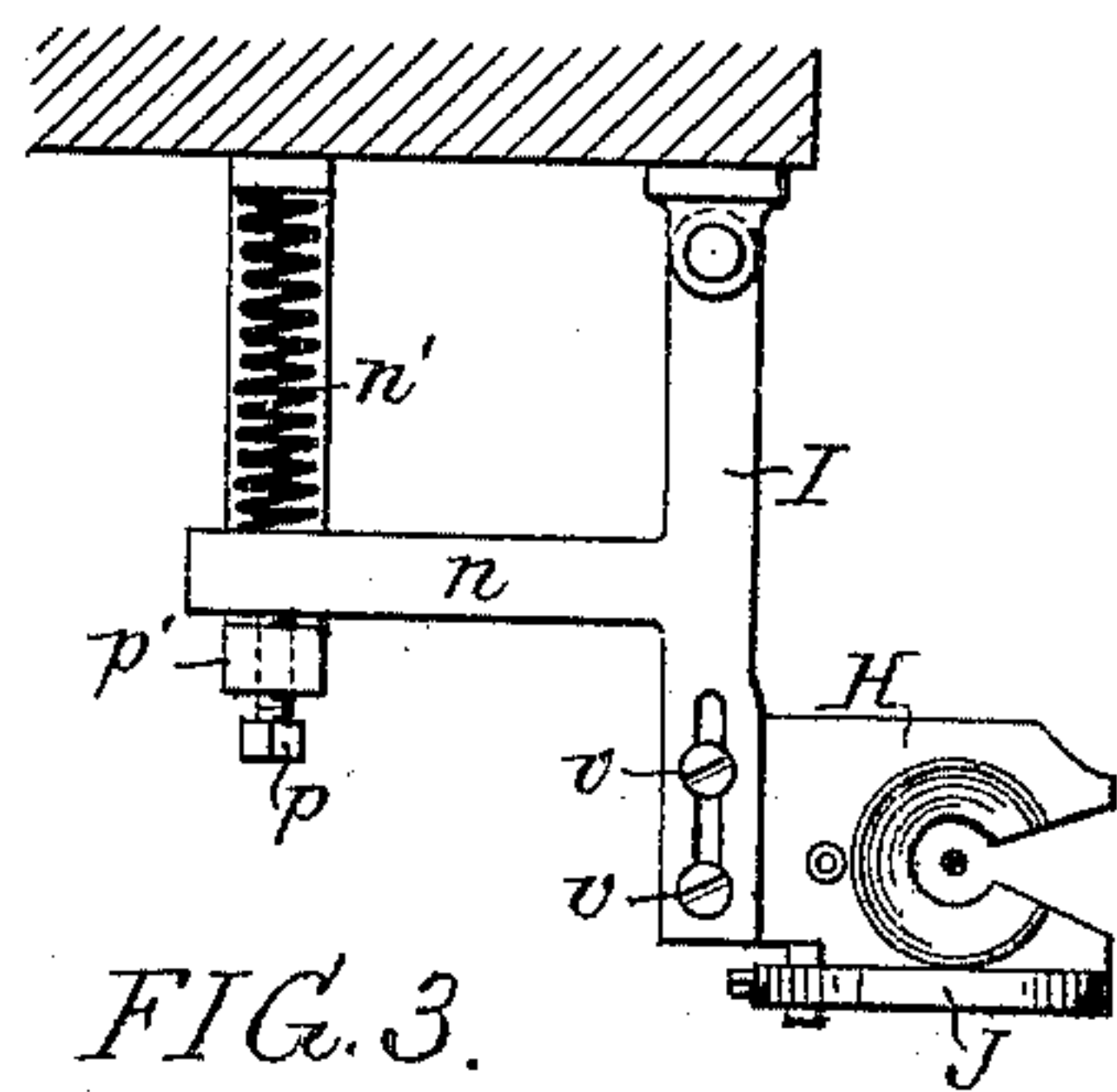
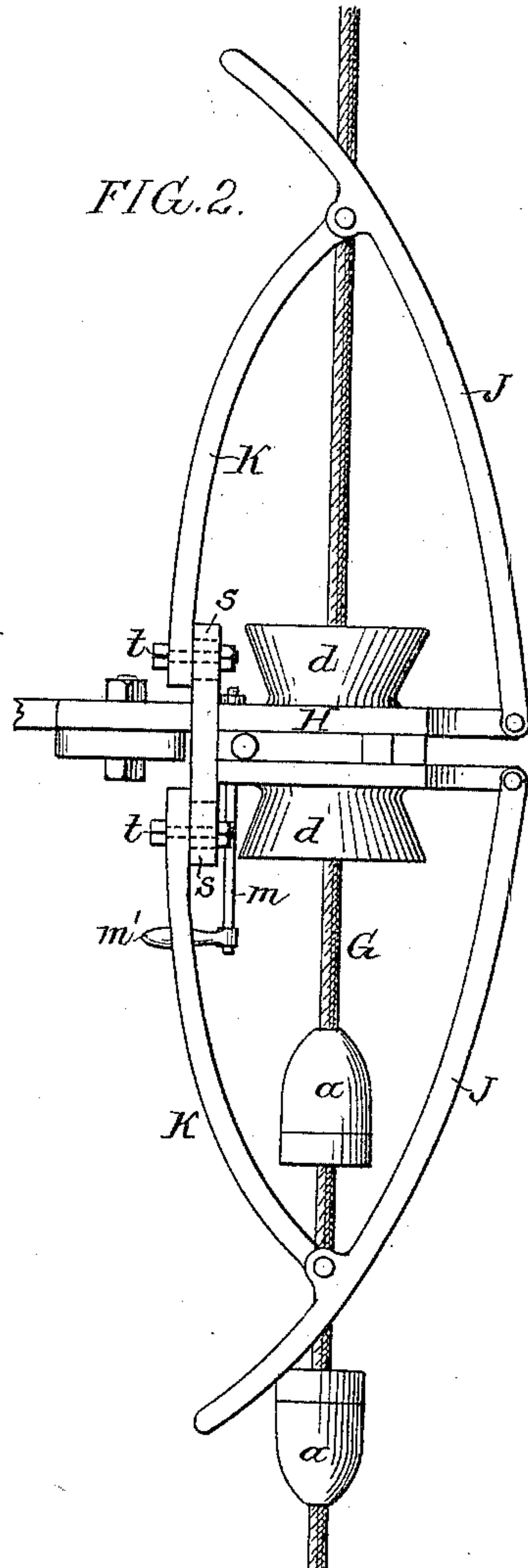


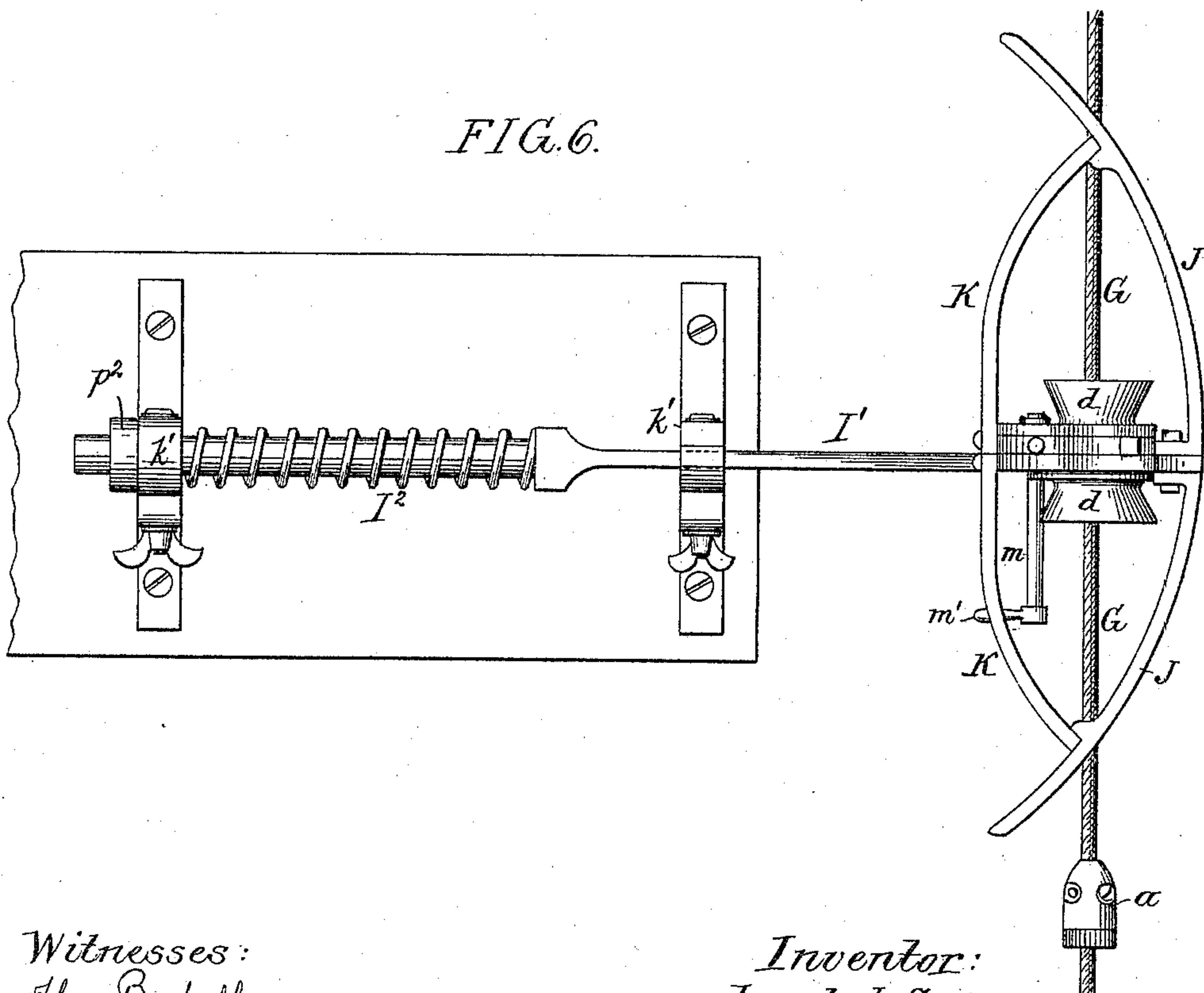
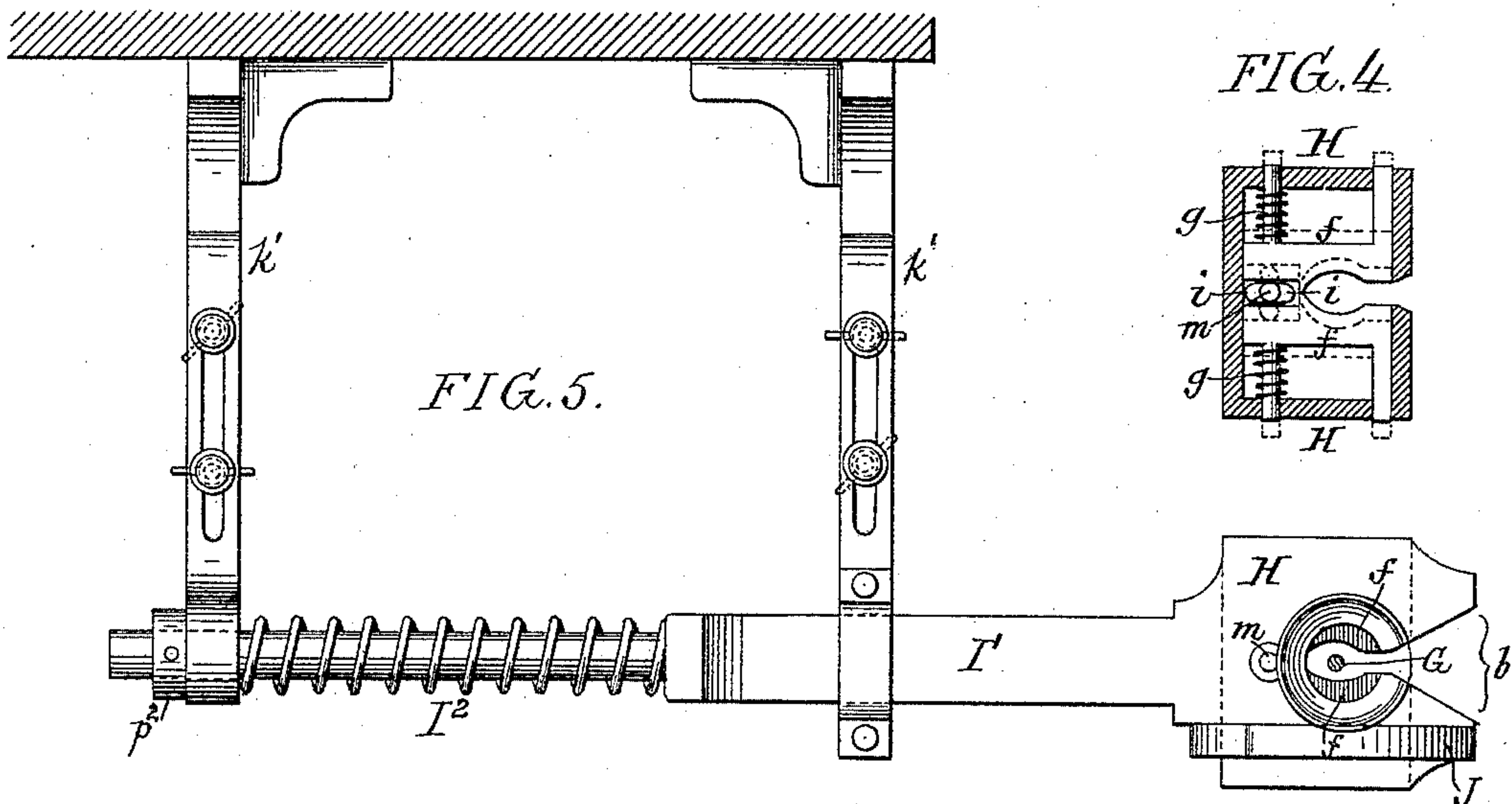
FIG. 3.

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UNITED STATES PATENT OFFICE.

JACOB J. SEELAR, OF PHILADELPHIA, PENNSYLVANIA.

CONTROLLING DEVICE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 446,717, dated February 17, 1891.

Application filed April 14, 1890. Serial No. 347,840. (No model.)

To all whom it may concern:

Be it known that I, JACOB J. SEELAR, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Stopping and Locking Devices for Elevators, of which the following is a specification.

My invention relates to a clutching device for acting upon the controlling-cord of a power-actuated elevator, so as to effect the automatic stoppage and locking of the cage or platform at any desired story or landing of the building, the object of my invention being to so construct such a clutching device that it will readily pass the safety-gates at the different floors, the governing-cord being located beyond the limits of the elevator well or opening, as is desirable when such safety-gates are used.

In the accompanying drawings, Figure 1 is a perspective view of part of an elevator-well with its cage, the latter being provided with my improved clutching device for the governing-cord. Fig. 2 is a side view of the clutching device. Fig. 3 is a plan view of the same on a smaller scale. Fig. 4 is a sectional plan view; and Figs. 5 and 6 are respectively a plan and side view showing a modified form of the clutching device.

In Fig. 1, A A represent the opposite uprights or standards of the elevator, and B one of the floors or landings of the building, the opening in which is provided with doors D, which are closed except at such times as the elevator-cage F is passing through the opening, means being usually provided for effecting the automatic opening and closing of these doors as the cage passes through the opening. Passing through an opening in the floor beyond the opening for the cage or platform is the governing cord or rope G, which has protuberances *a* for each floor or landing, and on the elevator cage or platform is mounted a casing or box H, having in front a flaring opening *b* and provided at top and bottom with funnel-shaped guides *d* for the rope or cord G. Within the box H are a pair of jaws *f*, Fig. 4, which are suitably guided in the box and are acted upon by springs *g*, tending to close them; but said jaws can be forced apart, as shown by dotted lines in

Fig. 4, by the action of arms *i* upon an operating-rod *m*, which is adapted to bearings in the box H and has at the lower end a handle *m'*. Normally these jaws are forced apart, so that they will pass the protuberances *a* upon the rope or cord G without engaging therewith; but just before approaching the floor at which it is desired to stop the cage or platform the rod *m* is turned, so as to permit the jaws to spring together. Hence when said jaws strike the tapering end of either of the protuberances *a* they will be forced apart thereby, and after passing said protuberance will close behind the same, and will thus be confined between the two protuberances, so as to cause the movement of the cage to be imparted to the rope or cord G, thus operating the latter to effect the stoppage of the cage when it reaches the level of the floor.

It is advisable to avoid, if possible, any slotting of the safety-doors, which in many elevators are employed for closing the elevator well or opening at the different floors. Hence it is the usual practice to locate the rope or cord G beyond the limits of the elevator well or opening in such cases, and automatic clutching devices have not, therefore, been heretofore used in connection with ropes or cords so located. In carrying out my invention, however, the box carrying the jaws *f* is mounted upon the frame of the cage or platform, so as to be free to swing inward to clear the successive floors and the safety-doors, which close the openings therein, and in order to effect the automatic swinging of the clutch-box as the cage approaches the opening in its ascent or descent said box is provided with a shield or guard having curved or inclined ends, which by contact with the floor-joist, or with the framing of the opening in the floor, or with the safety-gate causes the pushing of the clutch-box and its jaws back out of the way, the jaws yielding as the box swings backward and the rope passing through the opening *b* in the front of the box. When the cage has passed through the opening, the box is again swung outward, so as to bring the jaws into clutching position again.

As shown in Fig. 1, the box H is carried by an arm I, pivoted to brackets *k* on the transverse beam of the elevator-cage, and having

an arm n , which is acted on by the spring n' , tending to cause such movement of the arm I as to throw the box H and its clutching-jaws outward or toward the rope G to an extent
 5 limited by contact of said arm n with a set-screw p , carried by a projecting bracket p' on the cross-beam of the elevator-cage.

The shield or guard for the box H consists of curved arms J, pivoted to said box and
 10 connected by bracing-arms K to projections s on said box, these projections being slotted for the reception of securing-bolts t , so that the arms J can be adjusted to vary the curve of the shield or guard formed thereby.
 15 The arm I is likewise slotted longitudinally for the reception of a securing-bolt v , whereby the box H is secured thereto. By this construction and the use of the adjustable stop-screw p the box H can be adjusted both laterally and longitudinally to suit the position
 20 of the rope or cord G.

In Figs. 5 and 6 I have shown a modified form of device embodying my invention. In this device the box H is carried by a stem I' ,
 25 sliding laterally in brackets k' on the cross-beam of the elevator-cage, this stem being acted upon by a spring I^2 , the stem I' having an adjustable stop-collar p^2 and the outer portions of the brackets being slotted and
 30 adjustable for the same reason that the box H is rendered adjustable on the arm I in the construction shown in Figs. 1, 2, and 3.

The clutching device may be hung to the cage so as to swing outward by gravity, if desired, although the use of the springs for projecting the device is preferred.
 35

Having thus described my invention, I claim and desire to secure by Letters Patent—

40 1. The combination of an elevator-cage and the governing rope or cord located beyond the limits of the elevator-well with a device for clutching said cord, and a laterally-movable carrier for said clutching device on the

cage, whereby the clutch can be caused to swing from the said rope and clear the successive floors and their safety-doors, substantially as specified. 45

2. The combination of the elevator-cage and the governing rope or cord with the clutching device mounted upon the cage, so as to be free to yield laterally, and a guard or shield for effecting the inward movement of the clutching device as it passes successive floors, substantially as specified. 50

3. The combination of the elevator-cage, the controlling rope or cord, the clutching device free to move laterally on the cage, the guard or shield for effecting the inward movement of said device, and a spring for moving the same outward, substantially as specified. 55 60

4. The combination of the elevator-cage, the controlling cord or rope, and a clutching device carried by an arm pivoted to the cage, so that said device can be thrown inward or outward or in a direction from and toward the rope, substantially as specified. 65

5. The combination of the elevator-cage, the governing cord or rope, the clutching device therefor, and a carrier for said device, having portions adjustable longitudinally and laterally to adapt the clutch to the varying position of the governing cord or rope, substantially as specified. 70 75

6. The combination of the cage, the governing cord or rope, the clutching device, the movable arm carrying the same, and the guard or shield composed of pivoted bars with adjustable braces, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 80

JACOB J. SEELAR.

Witnesses:

EUGENE ELTERICH,
 HARRY SMITH.