

(No Model.)

S. M. PHILBRICK.
ELEVATOR ATTACHMENT.

No. 541,790.

Patented June 25, 1895.

Fig: 1.

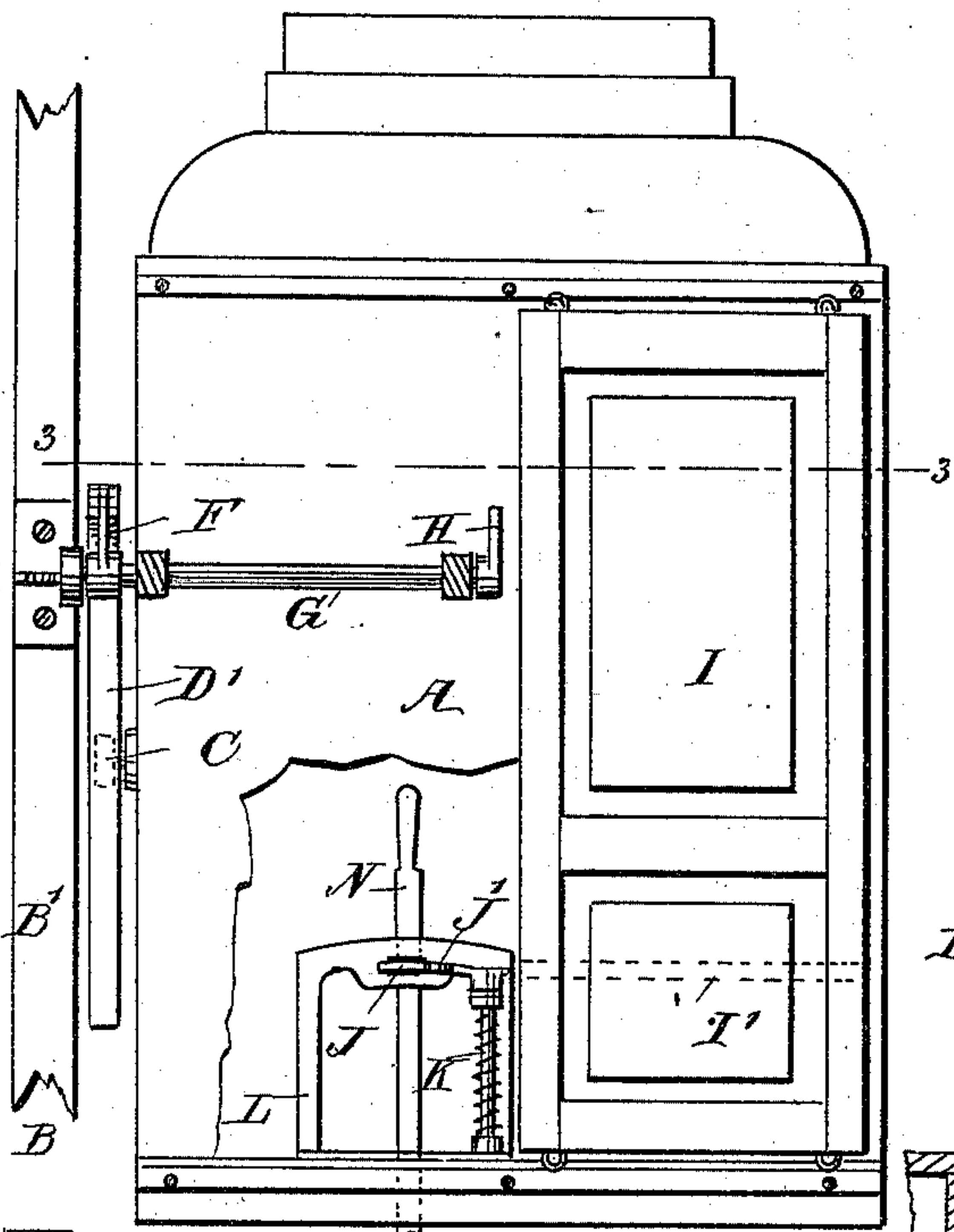


Fig: 2.

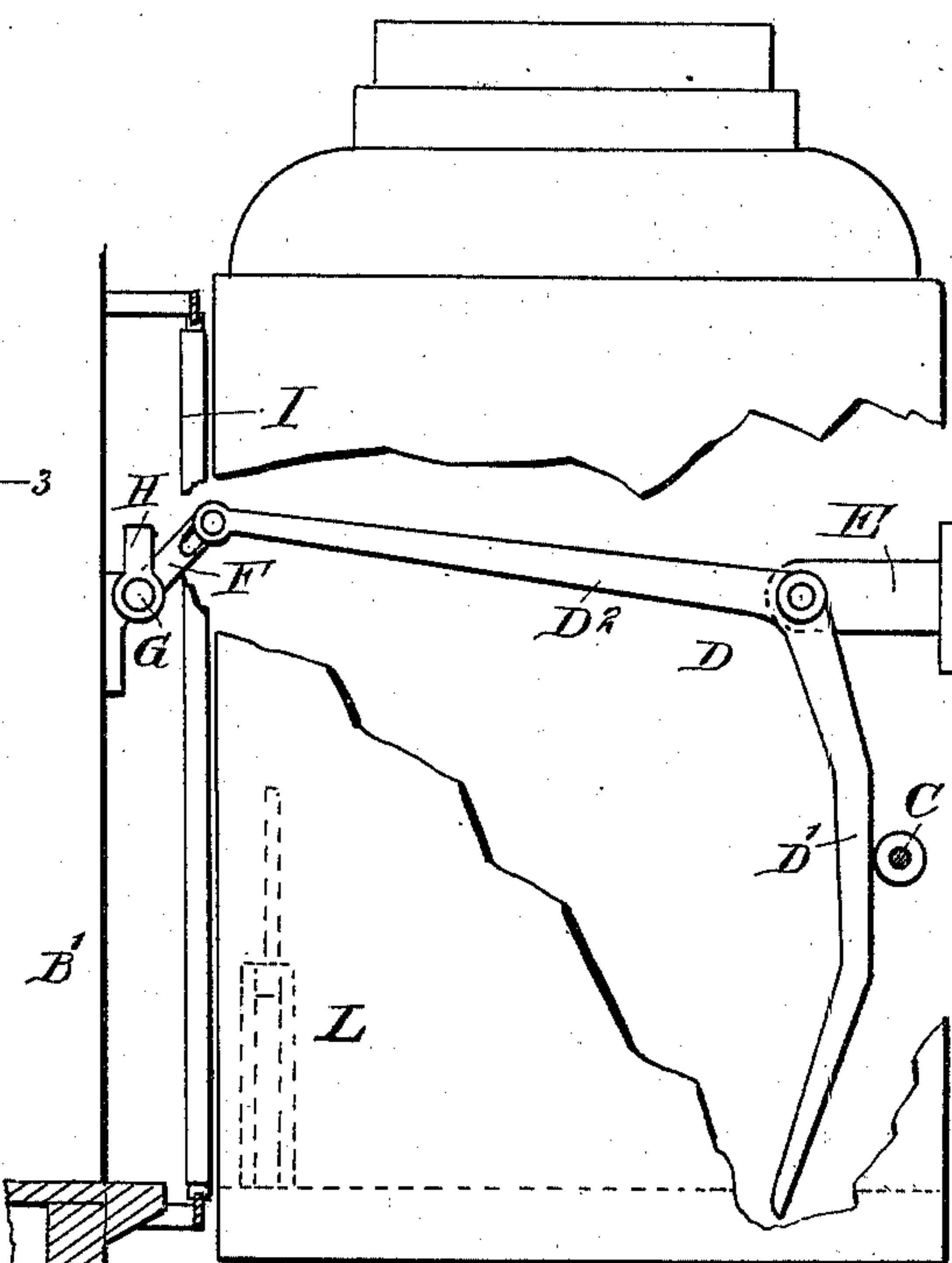


Fig: 3.

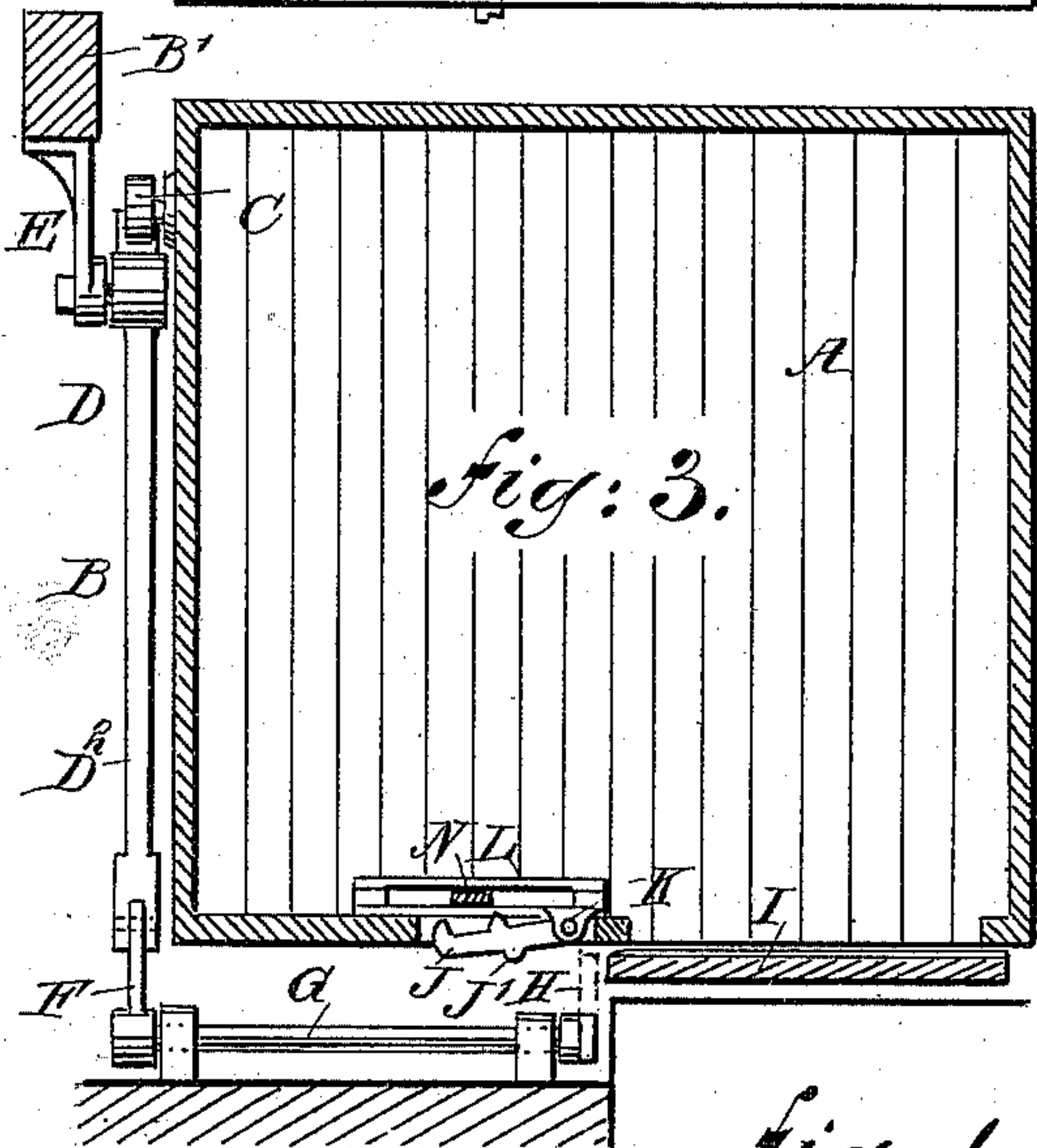
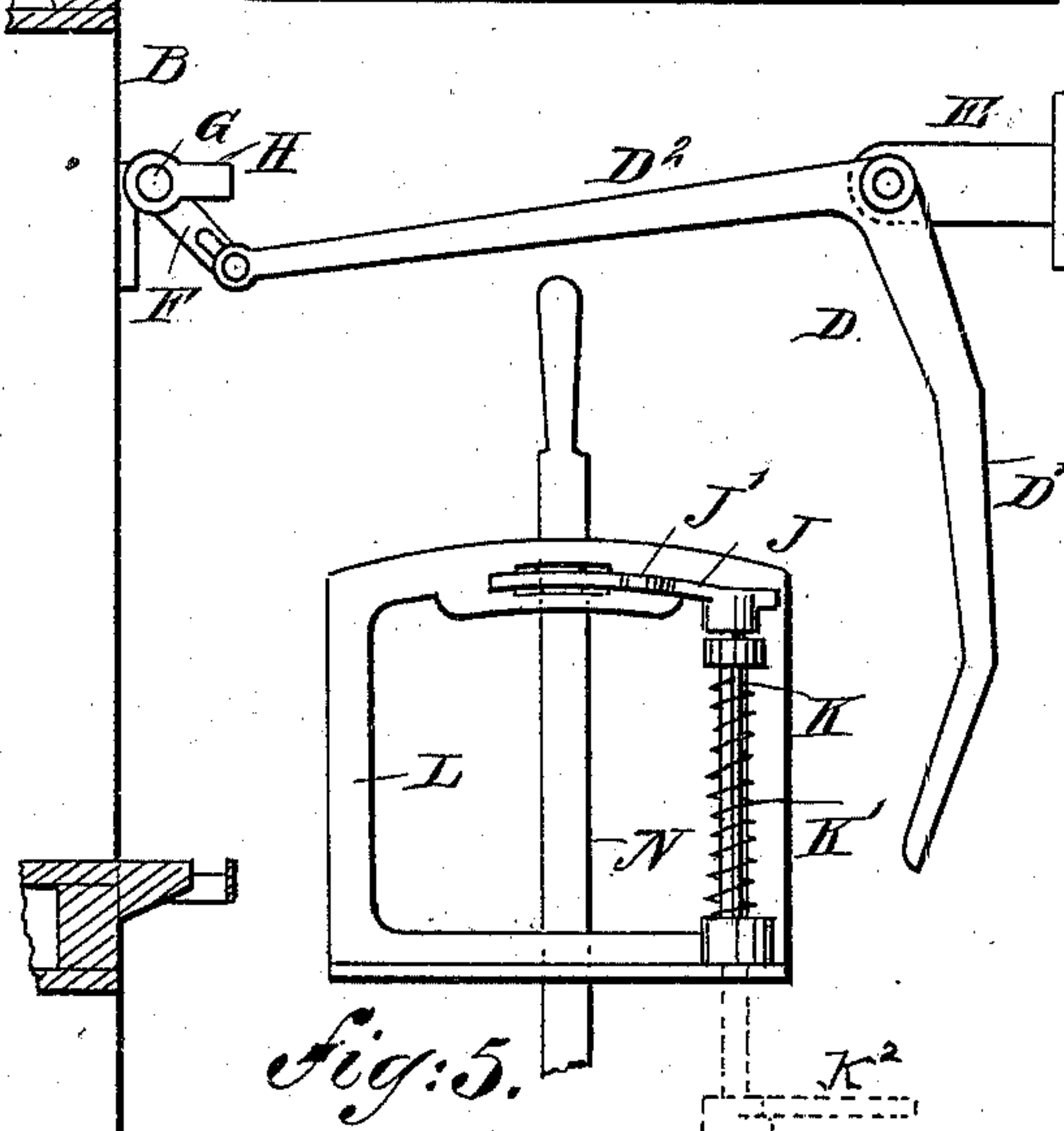


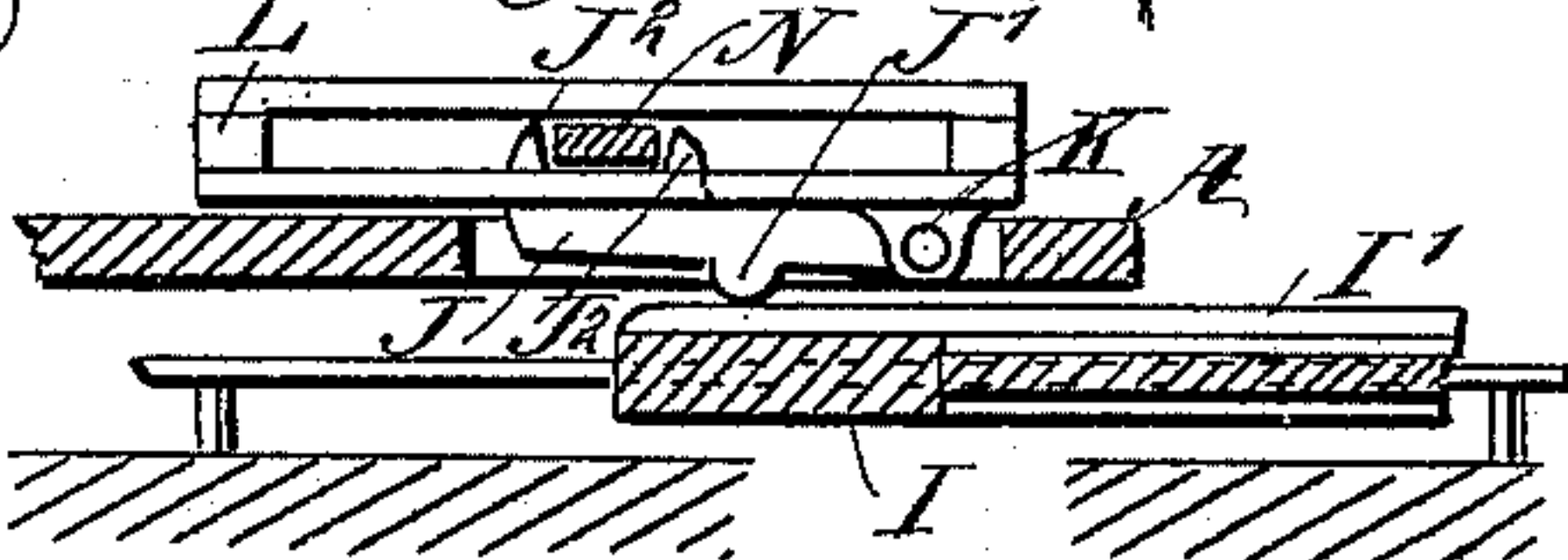
Fig: 5.



WITNESSES:

Chas. Nield
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Fig: 4.



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UNITED STATES PATENT OFFICE.

SAMUEL M. PHILBRICK, OF PORTLAND, OREGON.

ELEVATOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 541,790, dated June 25, 1895.

Application filed May 2, 1894. Serial No. 509,763. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. PHILBRICK, of Portland, in the county of Multnomah and State of Oregon, have invented a new and Improved Elevator Attachment, of which the following is a full, clear, and exact description.

The invention relates to passenger and freight elevators, and its object is to provide a new and improved attachment to prevent the door of the elevator cage from being opened when the latter is not in position to be entered.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the improvement with parts in section and parts broken out. Fig. 2 is a side elevation of the same with parts broken out. Fig. 3 is a sectional plan view of the same on the line 3-3 of Fig. 1. Fig. 4 is an enlarged sectional plan view of the locking device for the starting and stopping lever; and Fig. 5 is a side elevation of the same.

The cage A traveling in the shaft B is provided on one side with a friction roller C adapted to engage the arm D' of a bell crank lever D, fulcrumed on a bracket E attached to one of the posts in the shaft B. The arm D' of the bell crank lever D is preferably made with a middle portion and two angular extensions therefrom, as is plainly illustrated in Fig. 2, so that the roller C in both the up and down motion of the elevator cage engages the said arm D' to impart a swinging motion to the bell crank lever. The other arm D² of the bell crank lever D, is pivotally connected with an arm F, held on a horizontally extending shaft G, journaled in suitable bearings in the shaft B, and provided with a stop arm or projection H, adapted to move in and out of the path of the door I, held to slide on the floor of the shaft B. When the cage A is traveling between floors, and the roller C is out of engagement with the bell crank lever D, then the stop arm H, is in the path of the door I, and remains in this position until the

cage A nears the landing, at which time the roller C engages the arm D' of the bell crank lever D, and imparts a swinging motion to the latter, so that the shaft G is turned, and the arm H swings out of the path of the door I, so that the latter can be opened. Thus, the door I, is locked in place to close the entrance to the shaft as long as the cage is traveling between floors, and as soon as the cage is at a landing, the door I can be opened to give access to the cage A.

In order to prevent the cage A from being started at the landing before the door I is closed, the following device is provided: On the door I, is arranged a longitudinally extending ridge or projection I', adapted to engage a projection J' on a catch J, secured on a shaft K, provided with a torsion spring K' and mounted to turn in suitable bearings held on the frame L, secured to the cage A and carrying the upper part of the stopping and starting lever N. The free end of the catch J, is formed with two inwardly extending lugs J², adapted to engage opposite sides of the stopping and starting lever N, so as to lock the latter in place when in a central or stopping position, as is plainly illustrated in Fig. 4, the catch J being moved inward by the ridge I' of the door engaging the lug J'. This is done at the time the door I is opened and when the cage A stands at the landing, the lever N then being in the stopping or middle position. Now when the door I is opened, the ridge I' travels over the lug J' and consequently presses the catch J inward so that the two lugs J² thereof, engage and lock the lever N in place. Now the operator in the cage, cannot move the starting lever N, until the door I is closed. When this is done the ridge I' disengages the lug J' on the catch J, and the latter swings outward by the action of the spring K' on the shaft K, carrying the said catch. The operator can now move the lever N to the right or left to cause the cage to ascend or descend as the case may be. On the lower end of the shaft K is arranged an arm K² adapted to pass into a recess in the shaft B at or near each floor so that the elevator cage cannot move up or down as long as the arm K² is engaged in a recess, it being understood that the catch J is in the position shown in Fig. 4 when the

arm K² engages a recess. Should the cage move in consequence of a leakage at the valve, the arm K² will come in contact with the floor or other abutment, and thus arrest the movement of the cage. The arm K² is to be made strong enough to stand any strain that may come on it.

It will be seen, that by the arrangement described, accidents are prevented, as the door I will be securely locked in place while the cage travels between floors, and the cage cannot be started from the landing without the door being firmly closed.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

An elevator attachment, comprising a lever pivoted to the elevator shaft and adapted to be actuated from the elevator cage, a shaft mounted to turn adjacent to the door and operatively connected with the said lever, and a projection held on the said shaft and adapted to move into and out of the path of the door, substantially as described.

SAMUEL M. PHILBRICK.

Witnesses:

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MARGARET SIEBOLD.