

(No Model.)

3 Sheets—Sheet 1.

H. C. WILCOX.
ELEVATOR GUARD.

No. 300,932.

Patented June 24, 1884.

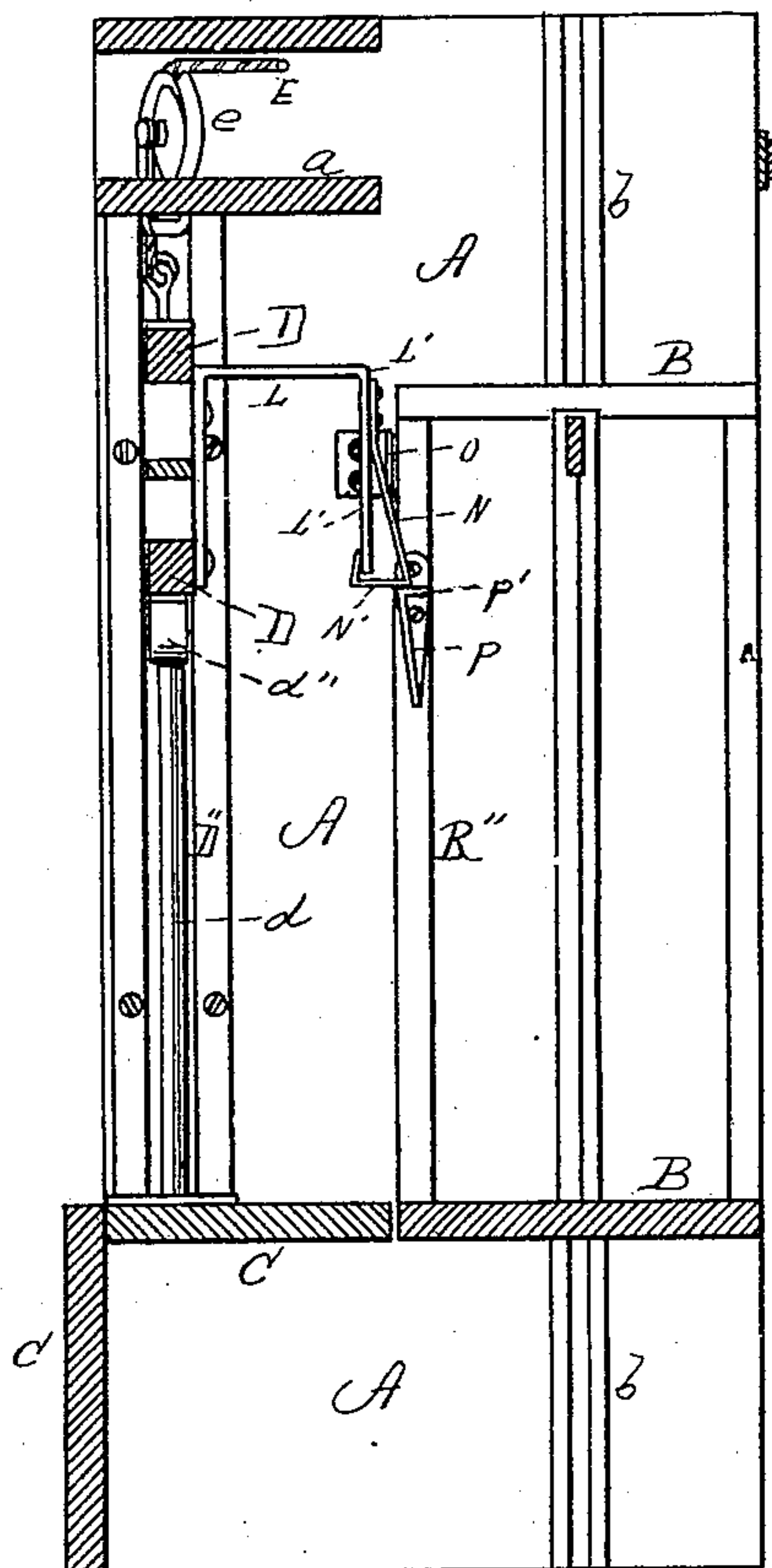


Fig. 1.

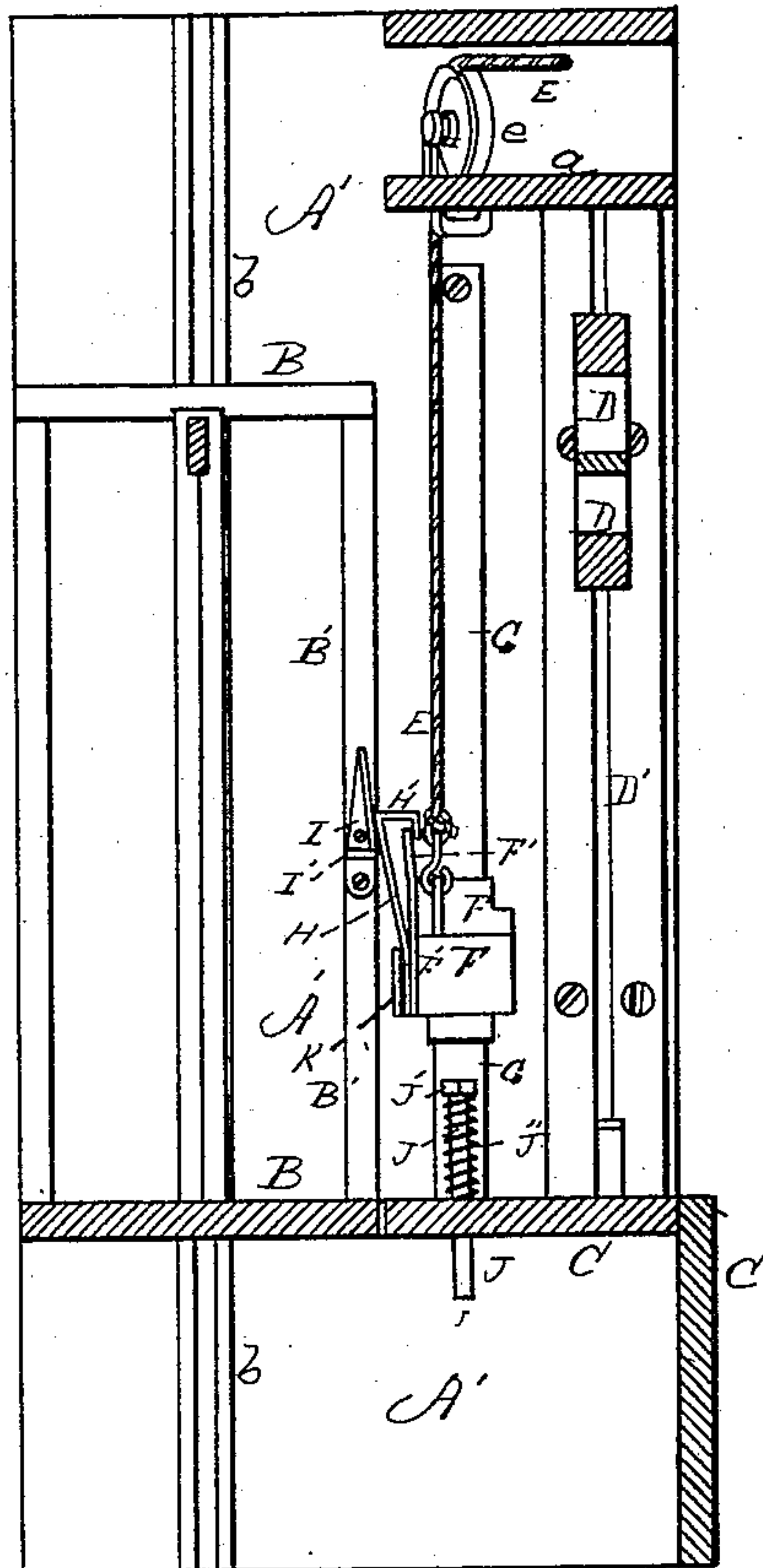


Fig. 2.

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By his Atty.
Henry W. Williams

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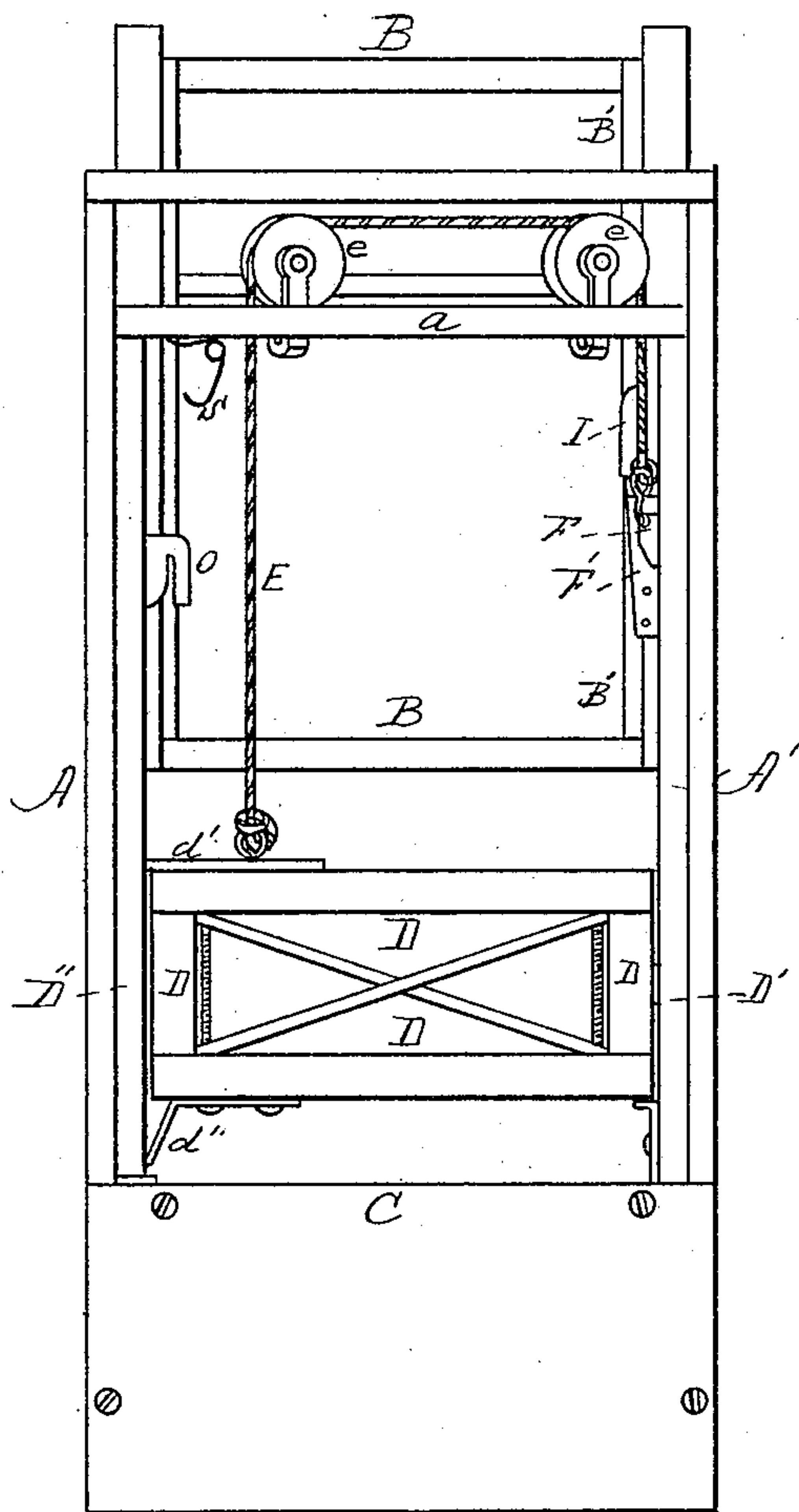


Fig. 3.

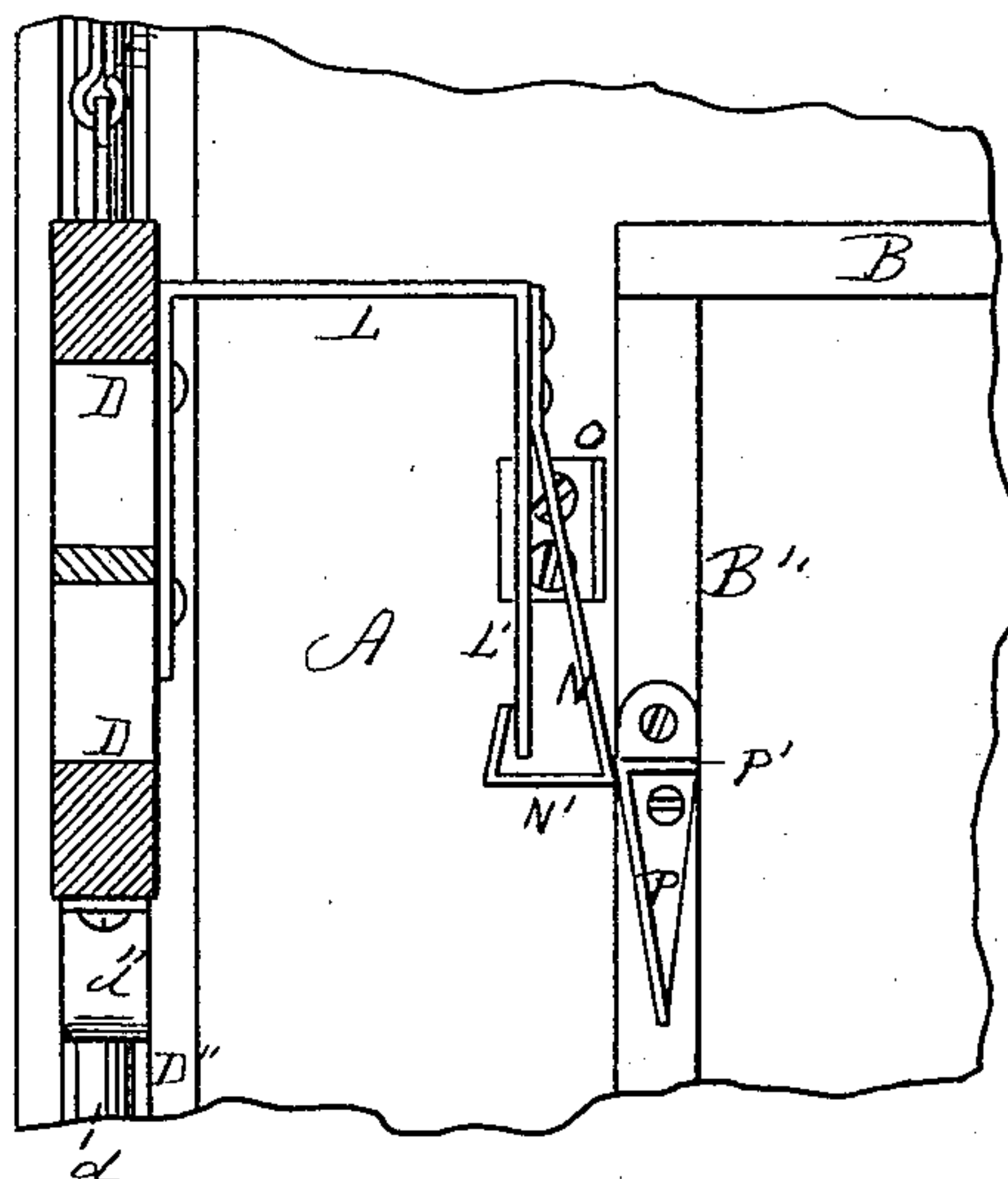


Fig. 4.

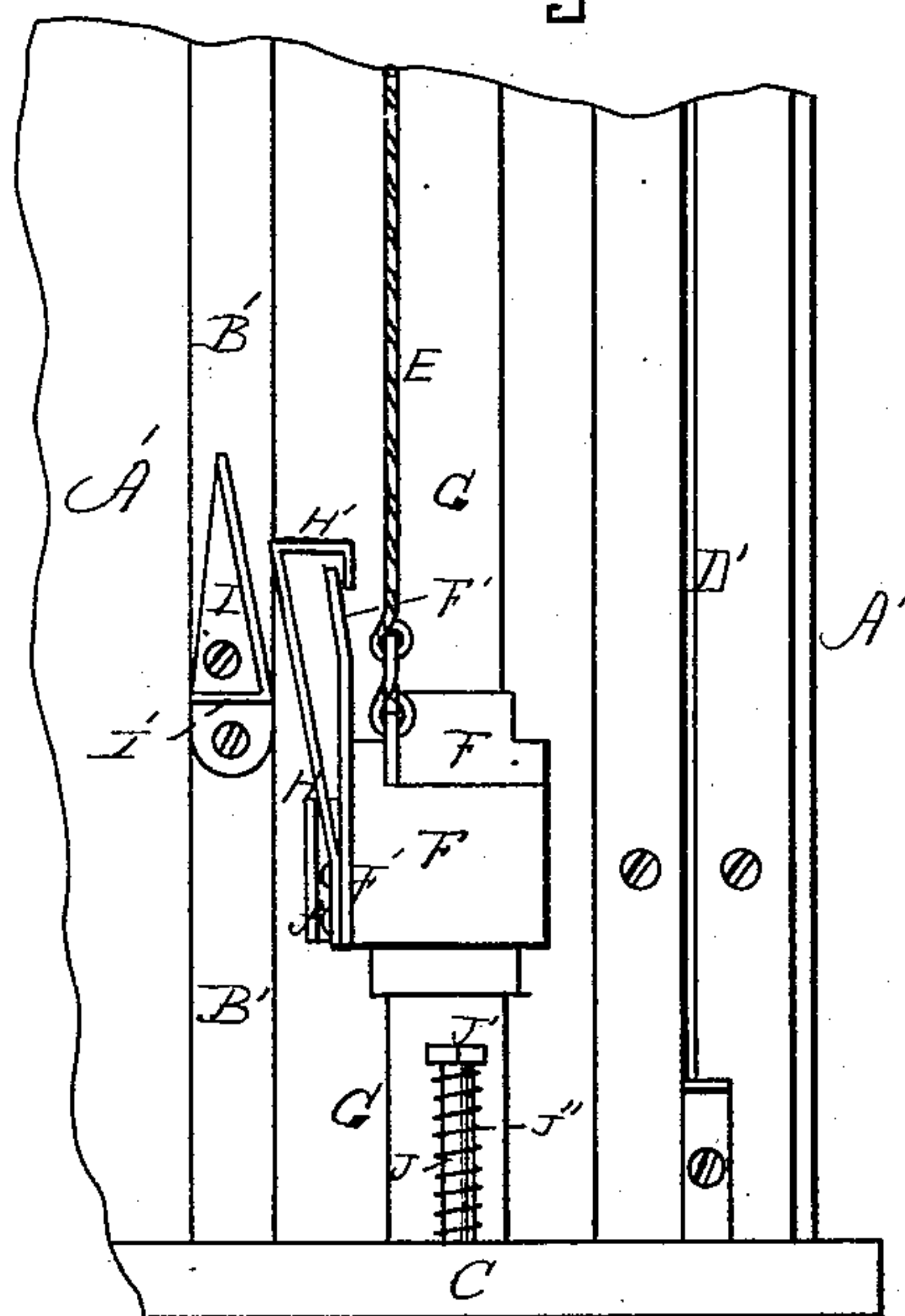


Fig. 5.

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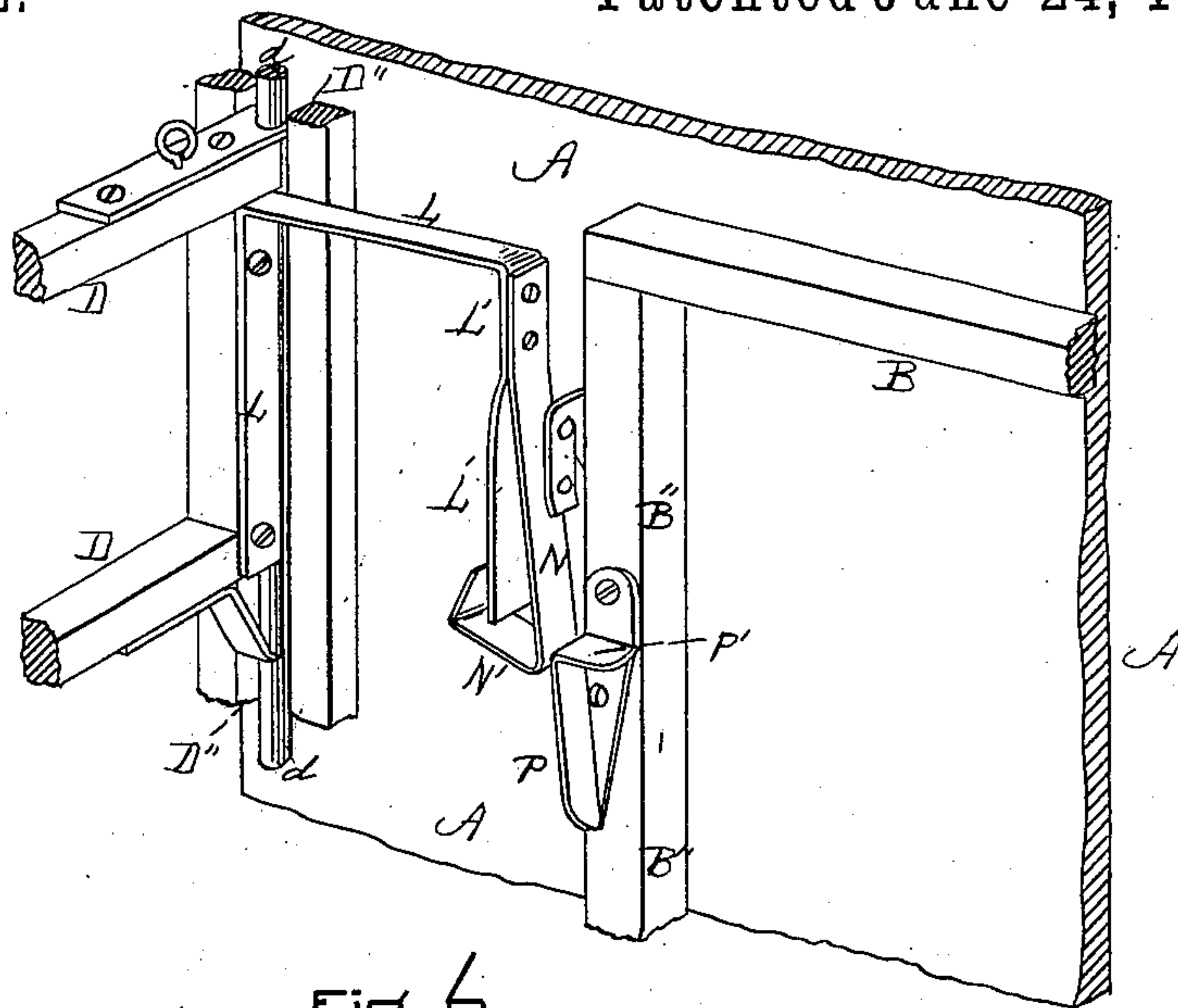


Fig. 6.

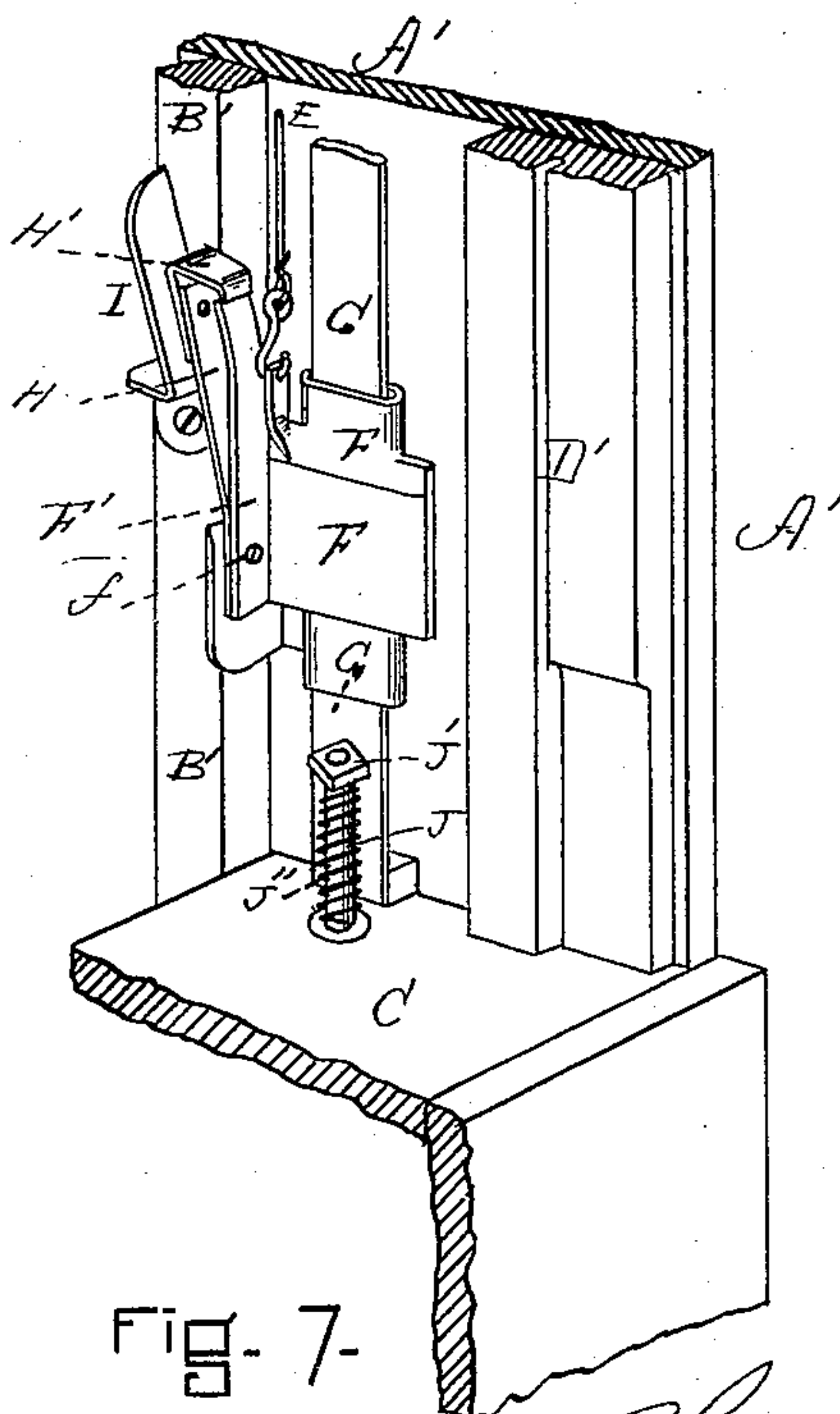


Fig. 7.

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UNITED STATES PATENT OFFICE.

HENRY C. WILCOX, OF BOSTON, MASSACHUSETTS.

ELEVATOR-GUARD.

SPECIFICATION forming part of Letters Patent No. 300,932, dated June 24, 1884.

Application filed April 7, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. WILCOX, a subject of the Queen of Great Britain, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Elevator-Guards, of which the following is a specification.

This invention relates to mechanism adapted to be applied to either passenger or merchandise elevators, whereby a vertically-sliding gate is so arranged that while the elevator is at the floor or landing the gate is up, so as to allow ingress or egress, and as the elevator ascends or descends from said floor or landing the gate descends to the floor and shuts off the elevator-well, the entire operation of said gate being automatic.

In the accompanying drawings, in which, similar letters of reference indicate like parts, Figure 1 is a vertical section showing the elevator at a floor or landing during its passage up. Fig. 2 is a vertical section showing the elevator at a floor or landing during its passage down. Fig. 3 is a front elevation showing the elevator above the floor and the gate in position guarding the entrance to the well. Fig. 4 is a detail view of the mechanism for operating the gate while the elevator is going up. Fig. 5 is a detail view showing the mechanism for operating the gate while the elevator is going down. Fig. 6 is a detail view in perspective of the mechanism shown in Fig. 4. Fig. 7 is a detail view in perspective of the mechanism shown in Fig. 5.

A and A' represent the side walls of the elevator-well; B, an ordinary passenger or merchandise elevator running in the ordinary grooves, b, and C represents one of the floors or landings for the reception or discharge of passengers or freight. The elevator B may be raised and lowered by any suitable mechanism.

D is the gate, adapted to slide vertically in the grooves D' and D'', the groove D' receiving a tongue projecting into it from said gate, and the groove D'' containing a vertical rod, d, preferably metallic, over and upon which the bars d' and d'', secured to the gate, fit. A cord or rope, E, is secured to the gate near that side next the rod d, and, passing over pulleys e, secured in the upper portion, a, of the well, extends downward near the wall A', and is attached to a weight, F, which loosely clasps

the vertical bar G, on which it is adapted to slide, said bar being secured to said wall A'. The sliding weight F is provided with a flange, F', to which is secured at f the spring H, whose free end is bent horizontally, so as to form a seat, H'.

I is a projection substantially of the shape shown rigidly secured to the upright B', forming a portion of the elevator B, and J is a rod provided with the head J', adapted to play vertically in the floor C, and provided with the spiral spring J'', which lies between said head and the floor, as shown.

The elevator mechanism just described comes into use mostly when the elevator is descending. While approaching in the course of its descent a floor the gate is guarding the well, as in Fig. 3, and the lower or horizontal portion, I', of the projection I rests upon the seat H' of the spring H. As the elevator descends the projection I I' forces down the spring H H', hence causing the weight F to slide down on the bar G, and by means of the cord E the gate to ascend. This continues until the elevator-floor reaches the floor or landing C. As soon as the elevator commences to descend below the floor, the descending spring H comes into contact with a horizontal projection, K, Figs. 2 and 5, extending from the elevator-wall A', and at the same time the lower end of the weight F strikes and commences to press the head J' of the bolt J. The spring H, being pressed by the projection K, slips from under the projection I I', and gives the spring J'' on the bolt J an opportunity to start the weight F in an upward direction, the device assuming the position shown in Figs. 2 and 5, and the gate D, being heavier than said weight, descends by its own gravity into the position shown in Fig. 3, the speed of its descent, however, being regulated by the mechanism below described.

L is an arm secured to the rear side of the gate, and bent downward at L', and provided with the spring N, bent horizontally at N'. O is a projection secured to the side A of the elevator-well. P is a projection bent into the shape shown, so as to form a seat at P' and secured to the upright B'' of the elevator. As the elevator ascends from below the floor C, it finds the gate next the floor, and the seat P' engages the portion N' of the spring N, lifting

with it the gate until the said spring N reaches the projection O, which is just as the elevator leaves the floor or landing in its upward movement, when said projection pushes said spring toward the portion L' of the arm L until it is released from the seat P', which then slips by said spring, as shown in Fig. 4, thus allowing the gate to drop by its own gravity.

A spring, S, may be secured to the frame a, if desired, for the purpose of starting the gate in its downward movement. As the gate is hung from one side of its center, in order to balance the weight F it is advisable that the edge or end of said gate nearest the point at which it is hung should slide over a rod, d, set in the groove D'', in order that there should be no binding. It will thus be seen that whether the elevator is moving up or down the gate takes its place on the landing to guard the well when the elevator leaves the landing, and rises to allow passage to and from the elevator as it reaches the landing, so that the elevator-well is always guarded either by the elevator itself or by the gate.

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

1. The combination of the gate D, cord E, and pulleys e and vertical bar G, the weight F, provided with the spring H H', the projection I I', secured to the elevator, and the projection

K, secured to one of the walls of the well, all constructed and arranged substantially as and for the purpose set forth.

2. The combination of the bar G, the weight F, provided with a spring, H H', the projection K, secured to one of the walls of the elevator-well, and the rod J, provided with the head J' and spring J'', substantially as and for the purpose described.

3. The combination of the gate D, provided with the arm L L' and spring N N', the seat or projection P P', secured to the elevator, and the projection O, extending from one of the walls of the well, substantially as and for the purpose set forth.

4. The combination of the gate D, provided with the arm L L' and spring N N', the seat or projection P P', secured to the elevator, the projection O, secured to one of the walls of the well, and spring S, secured to the frame a, substantially as and for the purpose described.

5. The combination of the gate D, hung from one side of its center, and the rod d, over which said gate fits, said rod being placed at the side or end of the gate nearest the point at which it is hung, substantially as and for the purpose set forth.

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Witnesses:

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