

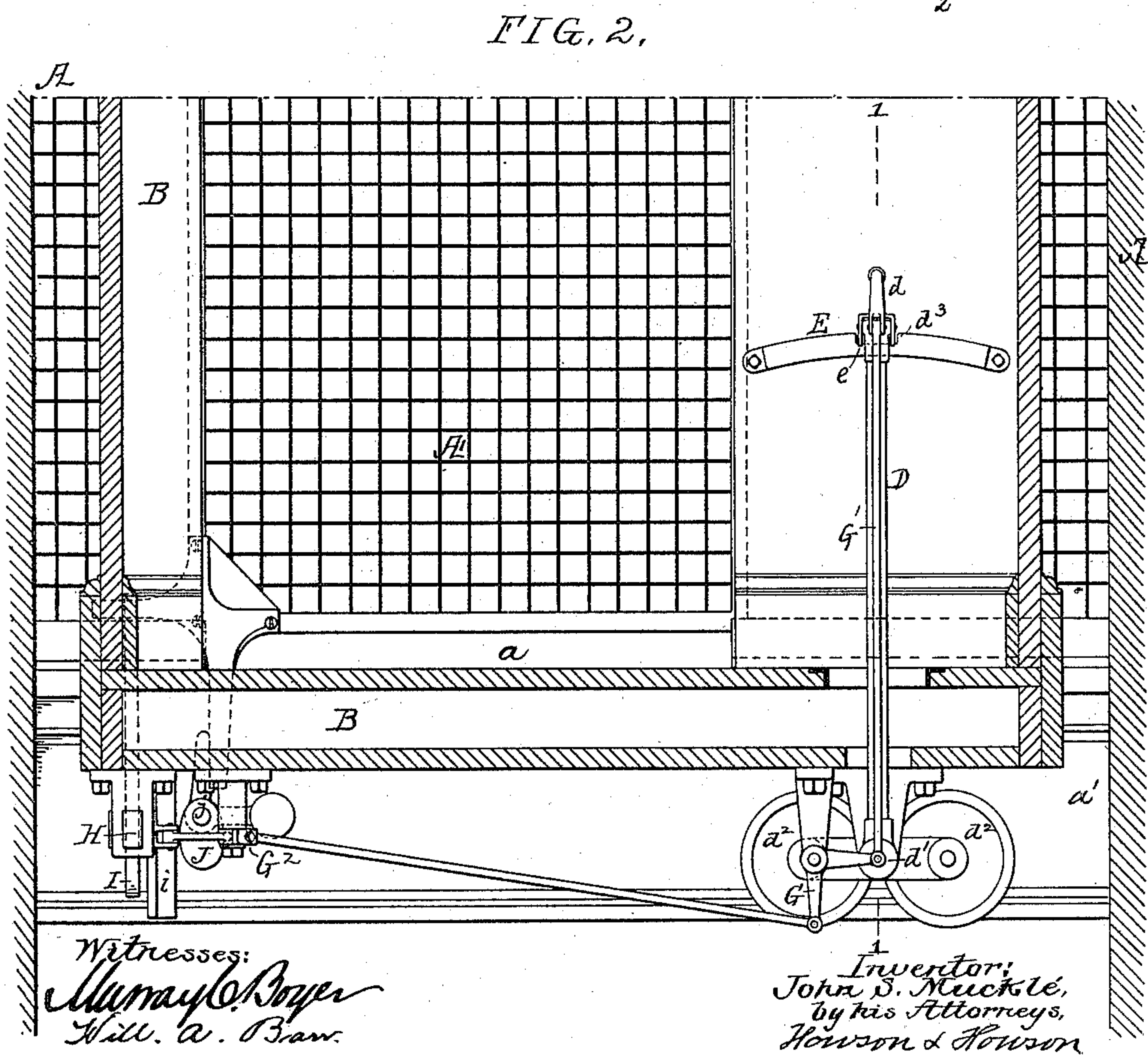
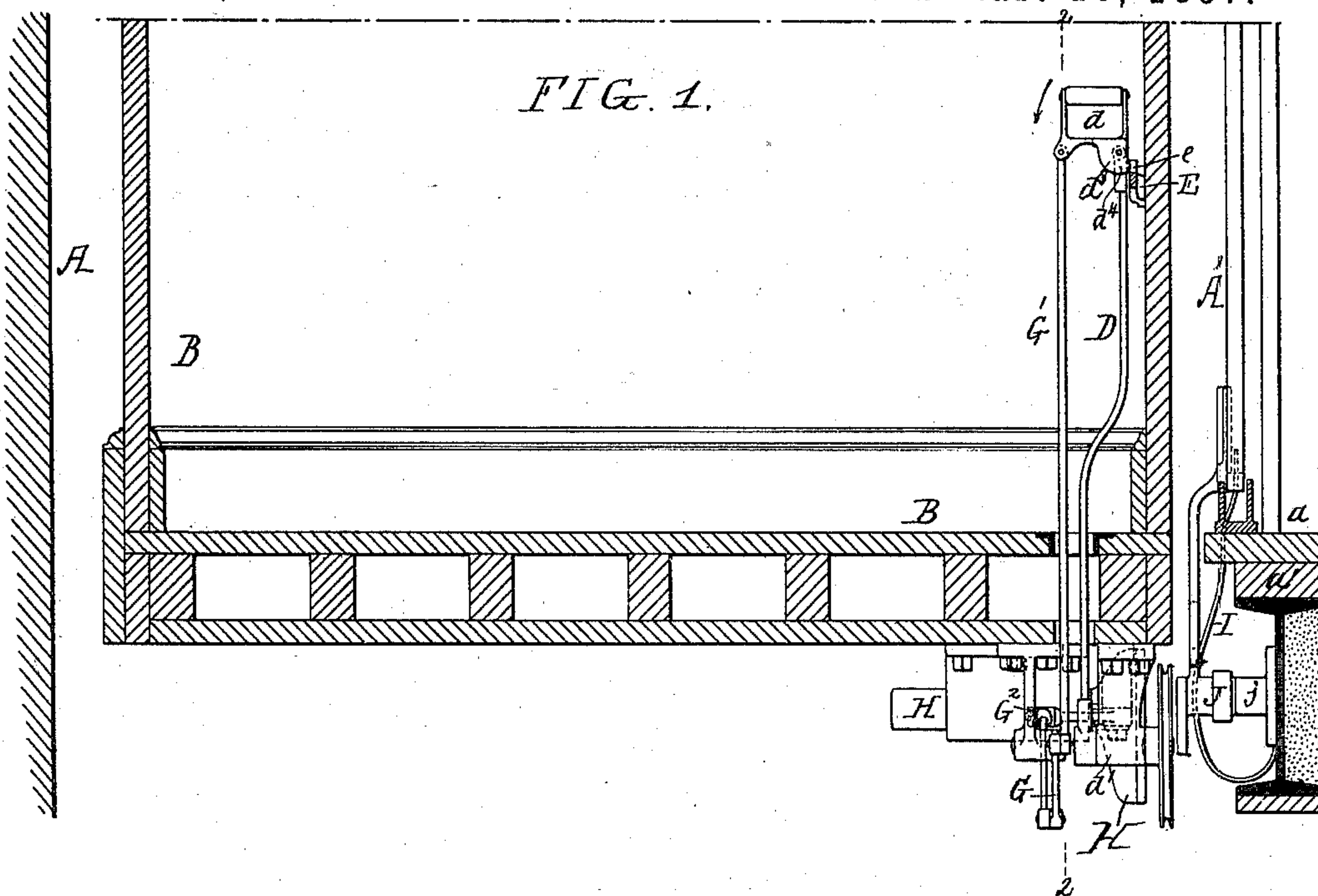
(No Model.)

2 Sheets—Sheet 1.

J. S. MUCKLÉ.  
ELEVATOR MECHANISM.

No. 579,072.

Patented Mar. 16, 1897.



Witnesses:

*Samuel C. Boyer*  
*Will. A. Brown*

Inventor:  
*John S. Mucklé,*  
by his Attorneys,  
*Hawson & Hawson*

(No Model.)

2 Sheets—Sheet 2.

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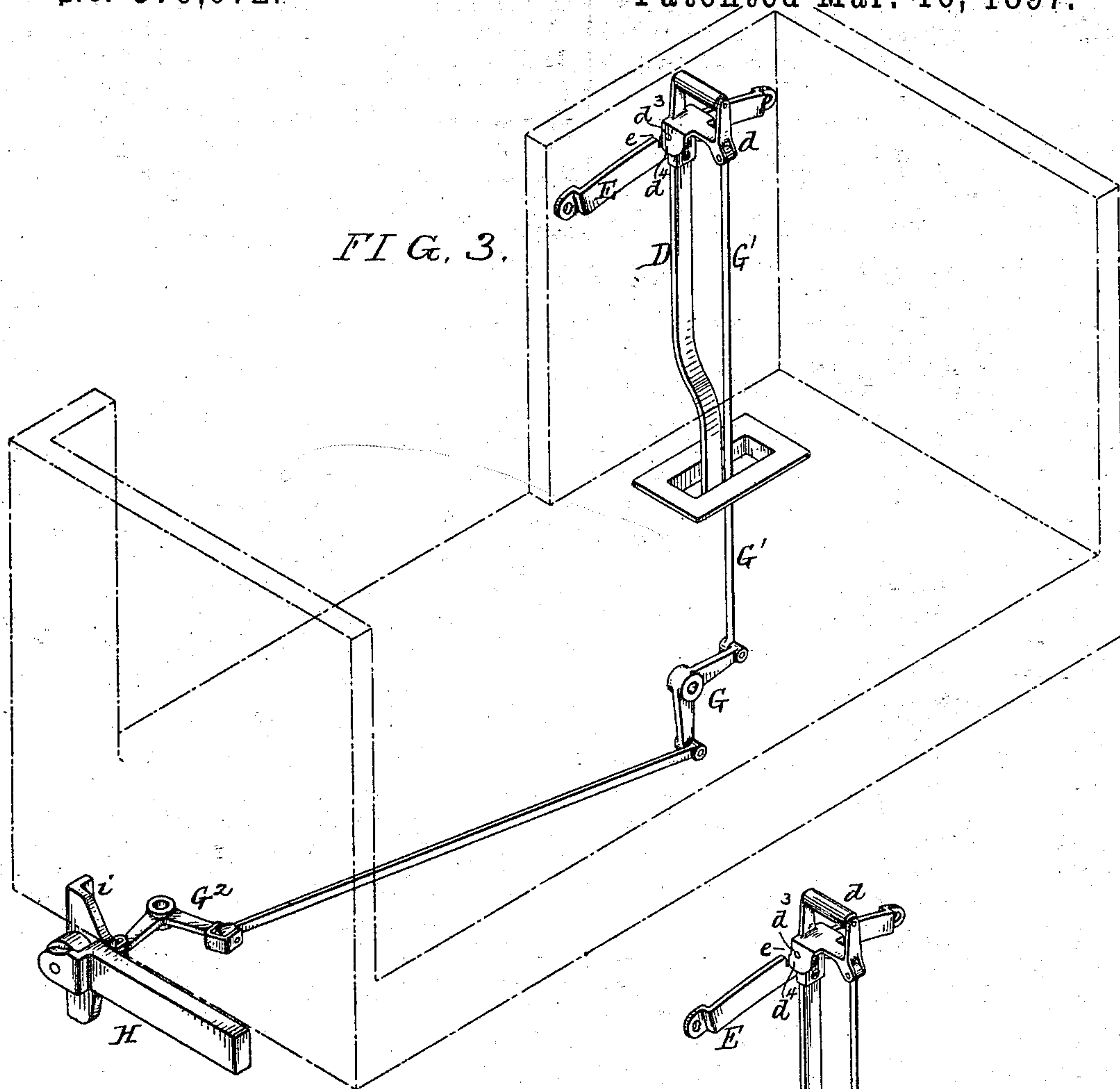


FIG. 4.

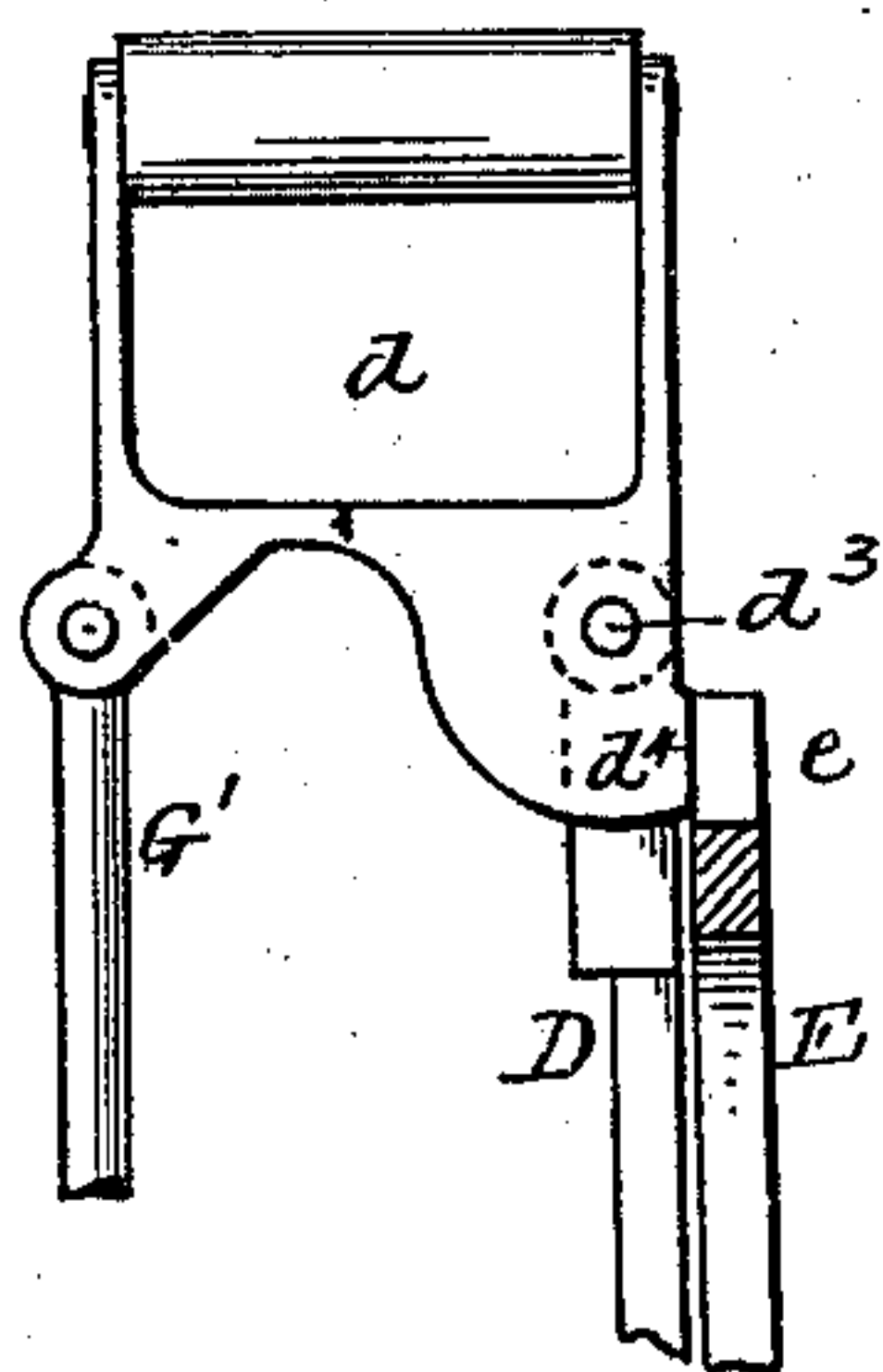
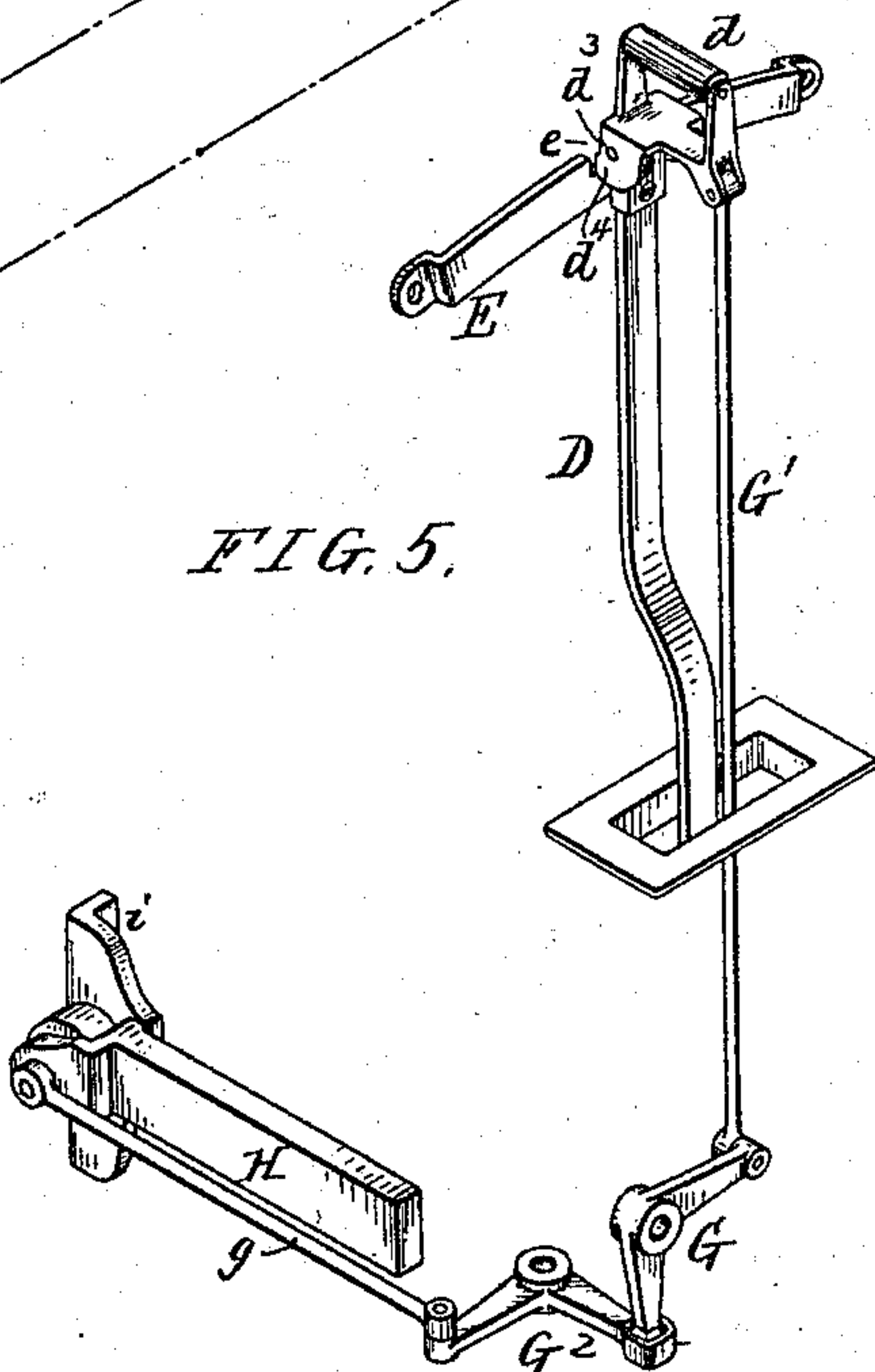


FIG. 5.



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# UNITED STATES PATENT OFFICE.

JOHN S. MUCKLÉ, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO M. R. MUCKLÉ, JR., & CO., OF SAME PLACE.

## ELEVATOR MECHANISM.

SPECIFICATION forming part of Letters Patent No. 579,072, dated March 16, 1897.

Application filed December 31, 1896. Serial No. 617,640. (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  
5 Improvements in Elevator Mechanism, of which the following is a specification.

The object of my invention is to provide means for locking the landing-doors of elevator-wells when the operating mechanism is  
10 free and to lock the said mechanism when one of the doors is open.

My invention is especially adapted for use in connection with elevator-cars having lever  
15 mechanism for stopping and starting in lieu of either wheels or ropes or rods passing through the car.

In the accompanying drawings, Figure 1 is a vertical sectional view of an elevator car and well on the line 1 1, Fig. 2. Fig. 2 is a  
20 vertical sectional view on the line 2 2, Fig. 1. Fig. 3 is a perspective diagram. Fig. 4 is an enlarged view of one end of the hand-lever, and Fig. 5 is a diagram view of a modification.

A are the walls of an elevator-well having  
25 doorways  $a$  for the different landing-floors  $a'$ .

B is an elevator-car.

D is a hand-lever having a handhold  $d$ , and this lever is pivoted at  $d'$  to the car and in the present instance has two wheels  $d^2$ ,  
30 around which passes the rope or chain connected to the controlling mechanism in the well, so that when the lever is moved to a central position the car will remain stationary and when moved to one side of the center the  
35 mechanism will be so shifted that the elevating mechanism will lift the car and when moved to the opposite side of the same the mechanism will be so shifted as to allow the car to descend.

40 I pivot the handhold  $d$  at  $d^3$  to the lever D, so that it will have a motion in the direction of the arrow, Fig. 1. At the rear of the handle is a lug  $d^4$ , which may enter a notch  $e$  in a segment E, secured to the car, when  
45 the operator moves the lever to the center position to stop the car.

The pivoted handhold  $d$  is connected to a lever G by a rod  $G'$ . This lever G is pivoted to bearings on the under side of the car and  
50 its other arm is connected to an arm of a lever  $G^2$ , arranged on a vertical pivot, and an

arm of this lever is connected to the locking-slide H, which is mounted in bearings on the under side of the car and on its outward movement presses against a spring-catch I, 55 which locks the door  $A'$  in its closed position. The further movement of the slide H releases the door, so that the operator can open it. On the slide is a flange  $i$ , with which engages a locking-lever J, hung at  $j$  to the side of the  
60 elevator-well. One arm of this lever is controlled by the door, while the other arm is weighted.

The moment the door is released and opened by the operator after bringing the car to a stop 65 the locking-lever is free and swings in front of the flange  $i$  of the slide H, preventing the slide from being operated until the door is again closed. On the closing of the door a projection thereon strikes the locking-lever 70 J, moves it away from the slide, so that the slide is released, and the operator can then move the handhold clear of the notch, and the lever can then be moved in either direction.

75 It will be seen that the car cannot move when the elevator-door is open and the door cannot be operated except when the elevator-car is at the landing and at rest, so that the operator can release the door by the move- 80 ment of the mechanism described above.

In Fig. 5 I have shown a slight modification in which the levers G  $G^2$  are directly connected and the lever  $G^2$  connected to the slide by a rod  $g$ . It will be understood that the 85 arrangement of parts can be modified to accord with different elevator constructions.

I claim as my invention—

1. The combination of an elevator-car, a lever connected to controlling mechanism, a 90 portion of said lever being independently movable, door-releasing means on the car connected to the independently-movable portion of the lever, a landing-door, and catch therefor adapted to be operated by the releasing 95 means on the car, substantially as described.

2. The combination of an elevator-car, a landing-door, a slide, a pivoted controlling-lever mounted on the car, having a pivoted handhold connected to the slide, a notched 100 segment fixed in the car, the pivoted handhold having a lug adapted to a notch in the



segment, so that the lever must be opposite the notch in the segment before the slide can be operated to release the door, and means for locking the handhold to the segment while  
5 the door is open, substantially as described.

3. The combination of the elevator-well, the door, an elevator-car, a pivoted lever D connected to the controlling mechanism, and having a pivoted handhold  $d$ , a bell-crank  
10 lever G on a horizontal pivot, a rod connecting the bell-crank lever with the handhold  $d$ , a second bell-crank lever  $G^2$  arranged on a vertical pivot and connected to the bell-crank lever G, a slide H connected to the said lever

$G^2$ , a notched segment fixed in the car, the  
pivoted handhold  $d$  having a lug adapted to rest in the notch of the segment so that the lever cannot be moved in either direction until the handhold is turned on its pivot, substantially as described. 15 20

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.