

(No Model.)

G. L. BROWNELL.

APPARATUS FOR OPERATING WAREHOUSE DOORS.

No. 314,219.

Patented Mar. 24, 1885.

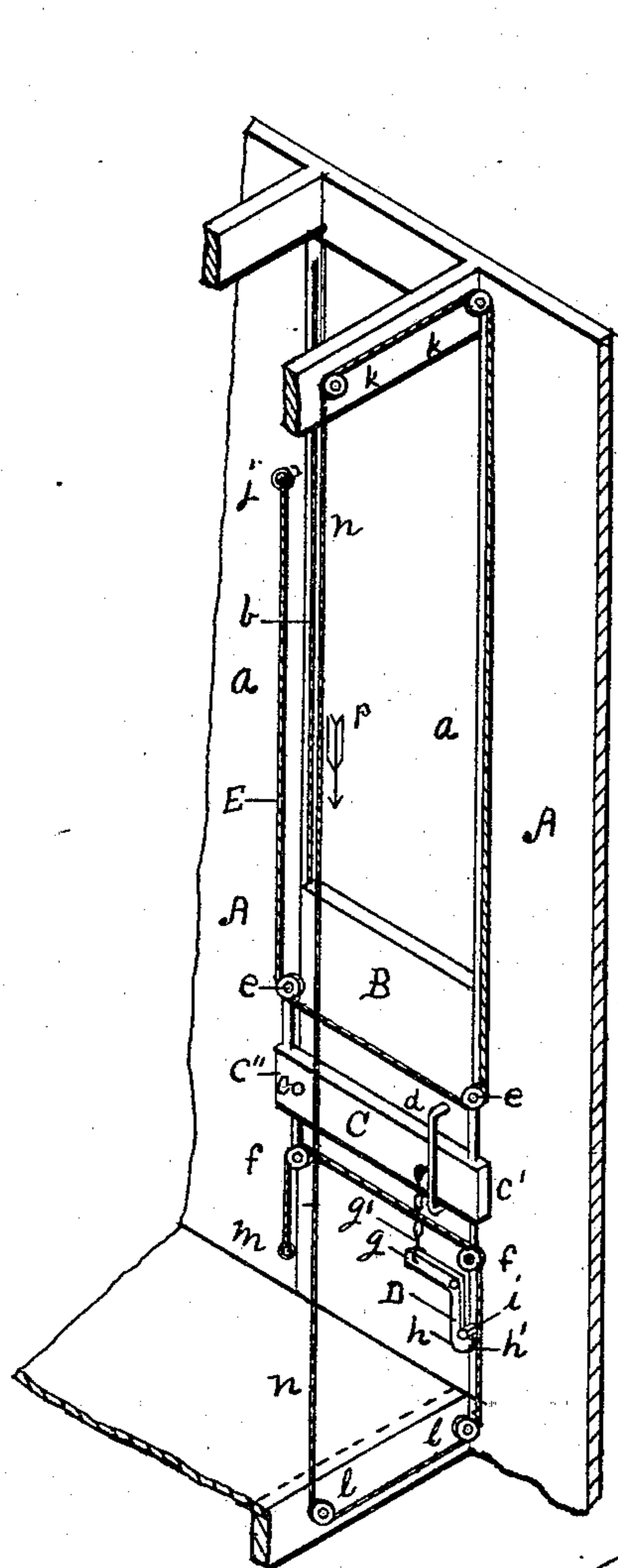


FIG. 1-

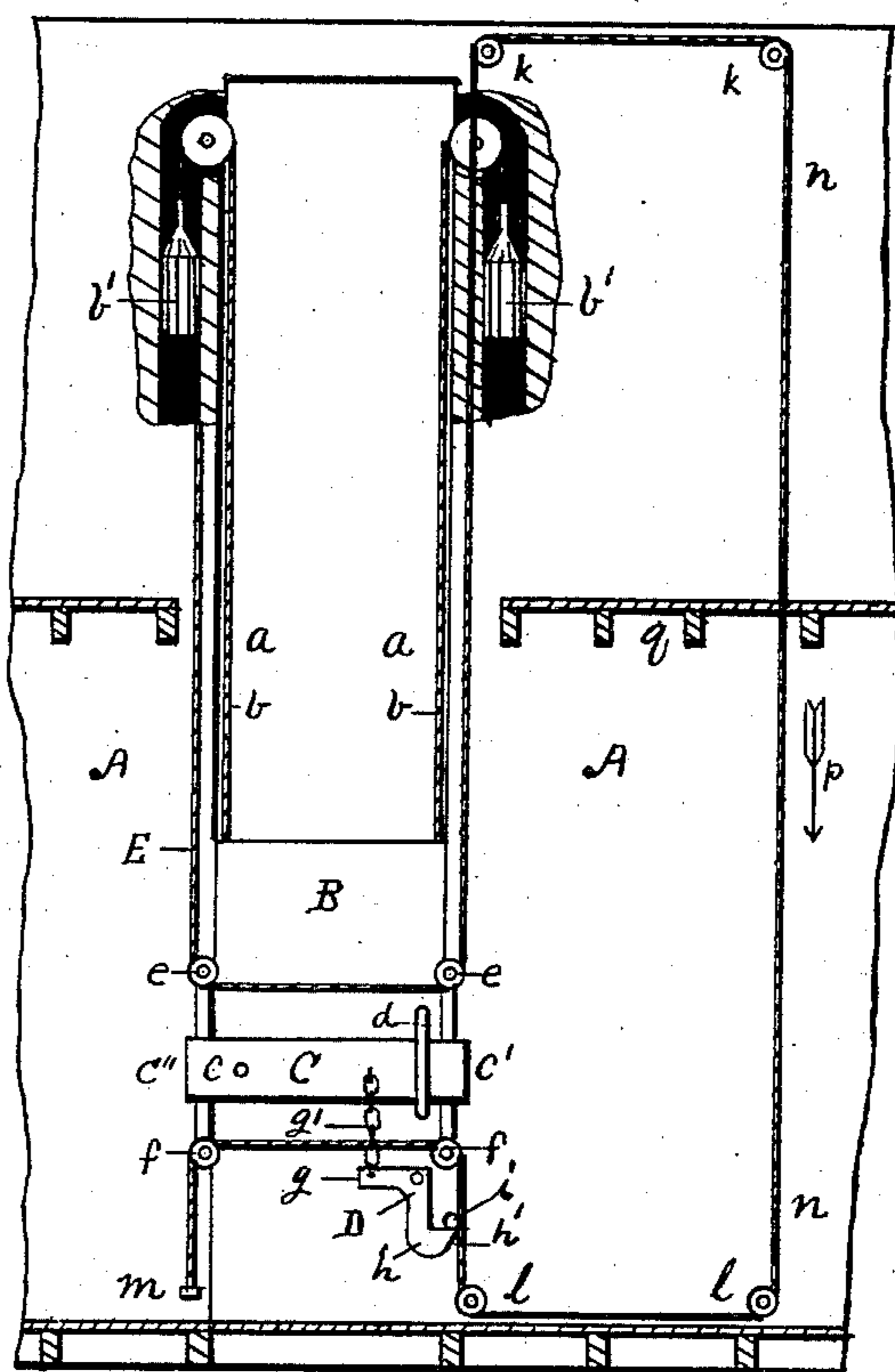


FIG. 2-

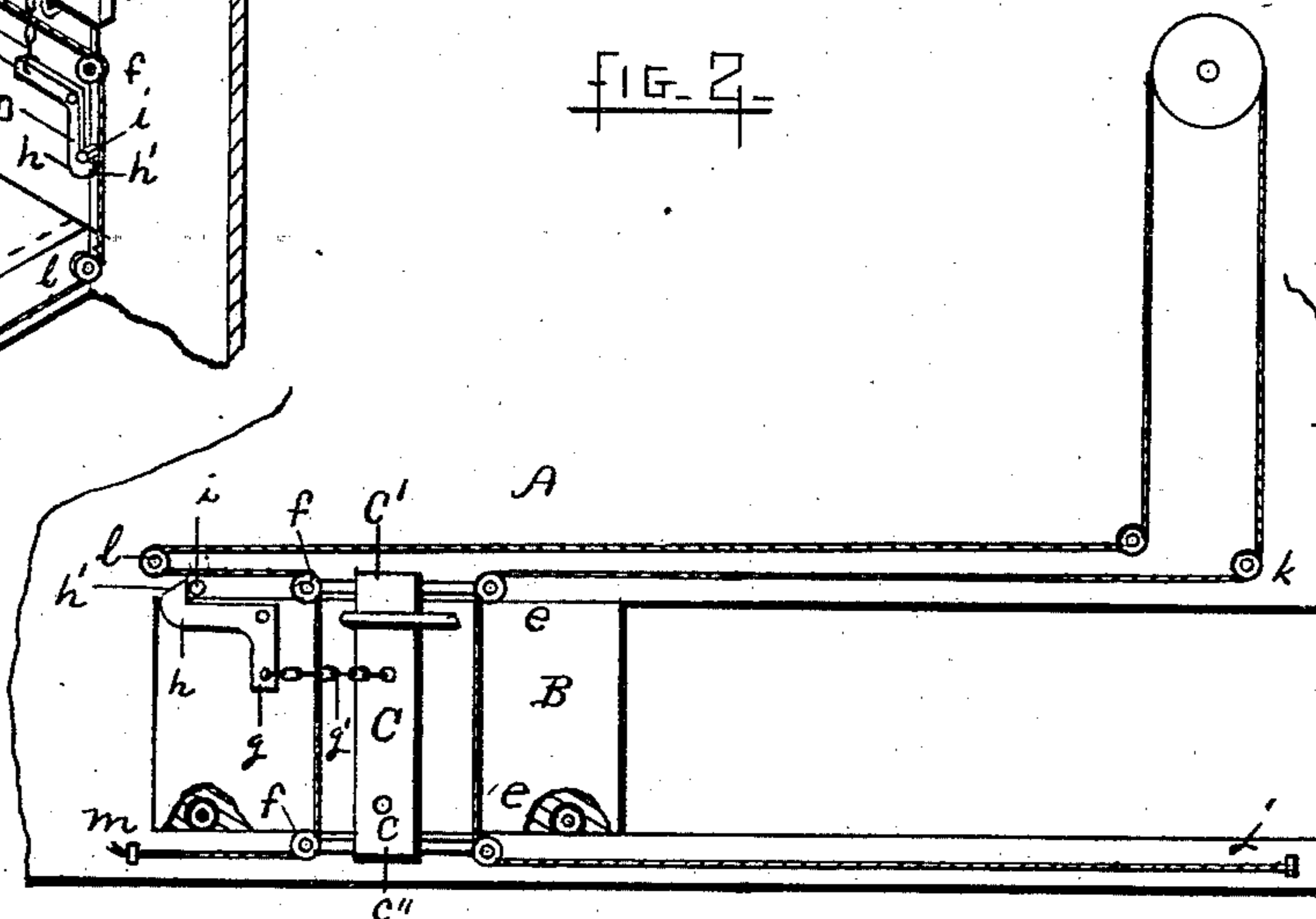


FIG. 3-

WITNESSES.

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APPARATUS FOR OPERATING WAREHOUSE-DOORS.

SPECIFICATION forming part of Letters Patent No. 314,219, dated March 24, 1885.

Application filed December 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LOOMIS BROWNELL, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Apparatus for Operating Warehouse-Doors, of which the following is a specification, illustrated by the accompanying drawings, in which—

10 Figure 1 shows a perspective view; Fig. 2, an elevation with the direction of the hoisting-rope changed; and Fig. 3 shows the device adapted to a horizontally-sliding door.

15 Similar letters refer to similar parts in the several views.

My invention has for its objects to enable sliding doors, such as are usually employed to allow access to elevators, to be unlocked, opened, closed, and again locked by an attendant on other stories of the building or from remote portions of the building; and it consists in a hoisting apparatus applied to the door, in a latching device operated by the hoisting apparatus, and also in the construction and arrangement of the several parts, as hereinafter set forth.

A denotes the side of the building. *a a* are ways for the vertically-sliding door or gate B, counterbalanced by cords *b* and weights *b'*.

30 Extending transversely across the door B is a bar, C, pivoted at *c*, having the motion of its free end *c'* limited by the staple *d*, or by pins or stops projecting from the door, and carrying upon its upper edge the pulleys *e e*, and depending from its lower edge the pulleys *f f*.

35 Pivoted to the door is a bell-crank lever, D, whose horizontal arm *g* is connected by a chain or cord, *g'*, with the bar C, and its vertical arm *h* is provided with a shoulder or hook, *h'*, and the lever D is so pivoted upon the door that in its normal position the shoulder *h'* will engage the stop *i* projecting from the building.

45 Attached to the building at *j* is a rope, E, which is carried beneath the two pulleys *e e*, thence to the desired height and over and across the pulleys *k k*, thence downward beneath and across the pulleys *l l*, over the pulleys *f f*, with its opposite end attached to the building at *m*. The portion of the rope *n n* in Fig. 1 is carried from the upper to the

lower stories in a position inside the elevator-well, so it may be conveniently operated by a person on the elevator.

By drawing the rope at *n n* downward in 55 the direction of the arrow *p*, the free end *c'* of the bar C will be raised, lifting the horizontal arm *g* of the lever D and disengaging the hook *h'* from the stop *i* and unlocking the door. As the bar C is brought against the staple *d*, the 60 door will be carried upward or opened. Reversing the motion of the rope at *n n* will draw the end *c'* of the bar C downward, lowering the arm *h* of the lever D, and placing the hook *h'* in position to engage the stop *i*. As the bar 65 C is brought against the lower foot of the staple *d* the door B will be carried downward or closed, the beveled end of the hook *h'* sliding over the stop *i* and engaging the stop, securely locking the door on the inside. In Fig. 2 the 70 rope is carried to the right outside of the elevator-well, passing through the floor *q*, and the pulleys *k k* and *l l* may be so placed as to change the direction of the hoisting-rope as desired, carrying it through the office-room 75 or to remote portions of the building.

In Fig. 3 substantially the same device is shown as applied to a door sliding in horizontal ways, and in which the guiding-pulleys *k k* and *l l* are placed above the door, and instead 80 of the hooked arm *h* of the lever D being vertical, as in Figs. 1 and 2, the arm *g* is the vertical arm, and should be made heavy enough to hold the hook *h* in position to engage the stop *i*. 85

The pivoted bar C is preferably placed across the central section of the door, and the ends *c'* and *c''*, I extend beyond the door, so the rope E may be carried from the pulleys *e e* and *f f* parallel with the ways *a a*. 90

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a door or gate sliding in ways in a building, of a hoisting-rope having its ends attached to the building 95 and carried around pulleys on the sliding door and building, substantially as described, and for the purpose set forth.

2. The combination, with a sliding door or gate sliding in ways in a building, and a hoisting-rope having its ends attached to the building 100 and passing around pulleys on the door

and building, of a latching device actuated by said hoisting-rope, as and for the purpose set forth.

3. The combination, with a sliding door or
5 gate sliding in ways in a building, of a bar pivoted to the sliding door and having pulleys to receive a hoisting-rope, the free end of said bar vibrating between stops on the door, a
10 hoisting-rope having its ends attached to the building and passing around the pulleys on the pivoted bar, and a latching device connected with said pivoted bar so the motion of the bar will actuate the same, as and for the purpose set forth.

15 4. The combination, with a sliding door sliding in ways in a building, and a hoisting-rope by which said door is operated, of a bell-crank lever pivoted to the door and connected with and actuated by the hoisting-rope, said
20 bell-crank lever having on one arm a hook

adapted to engage a stop on the building, as and for the purpose set forth.

5. The combination, with a door or gate sliding in ways in a building, of a bar pivoted to said door and vibrating between stops on
25 the door and carrying pulleys to receive a hoisting-rope, a hoisting-rope having its ends attached to the building and passing over the pulleys on the pivoted bar and over pulleys on the building changing the direction of the rope,
30 and a bell-crank having one arm connected with and actuated by the pivoted bar and its other arm carrying a hook or latching device to engage a stop on the building, as and for the purpose set forth.

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Witnesses:

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