(No Model.)

G. A. WELD.

ELEVATOR.

No. 388,469. Patented Aug. 28, 1888.

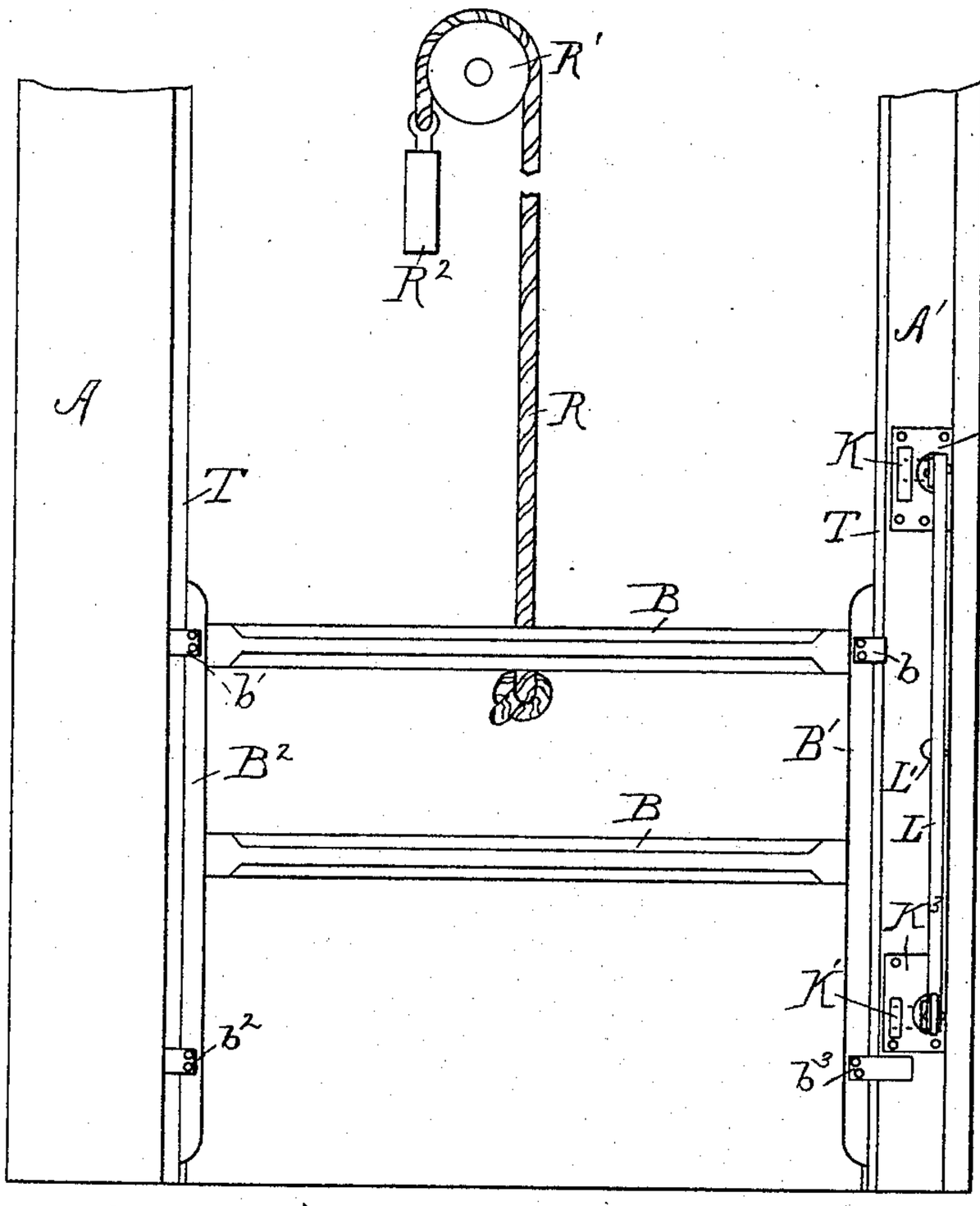


Fig. 1.

Fig. 2.

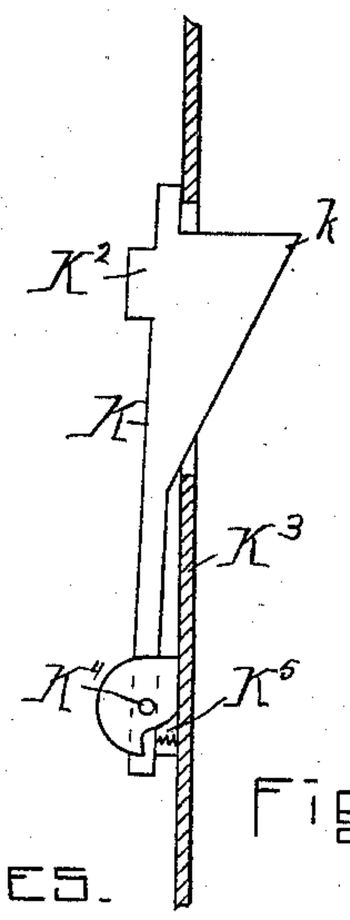
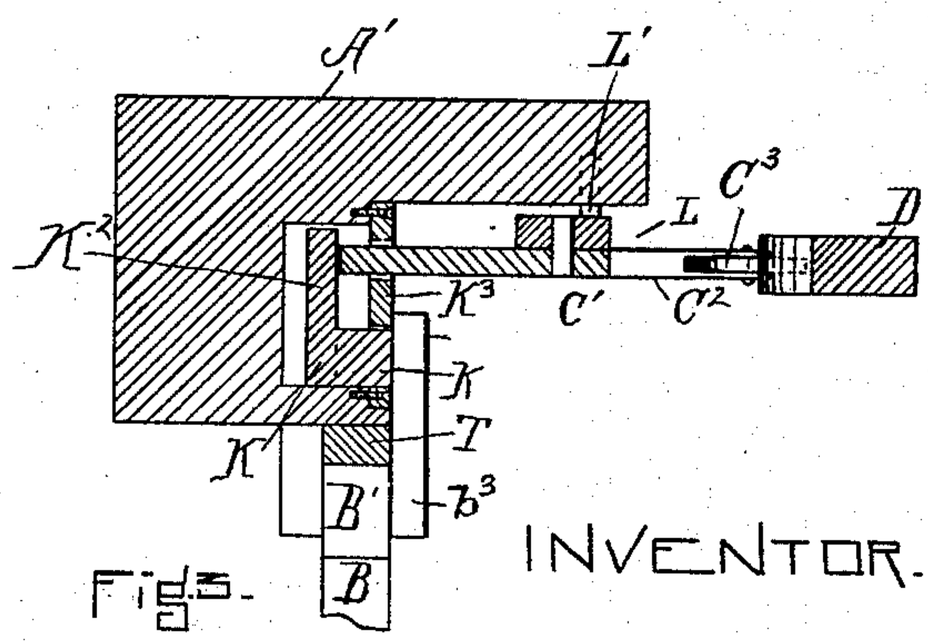


Fig. 4.



Figs. 5.

WITNESSES.

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GEORGE A. WELD, OF WINCHESTER, MASSACHUSETTS.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 388,469, dated August 28, 1888.

Application filed May 1, 1888. Serial No. 272,450. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. WELD, of Winchester, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Elevators, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to so construct and arrange the elevator-car and the gates and their connecting parts that the gates shall be automatically locked when the car is not present, automatically unlocked when the car is present, and also automatically held up out of the way when the car is present. This object I attain by the mechanism shown in the accompanying drawings, in which—

Figure 1 is an elevation of my device, looking from the interior of the elevator-well outward. Fig. 2 is a side elevation of the parts that constitute the locking device, also looking from the interior. Fig. 3 is a cross-section taken on line *x x* of Fig. 2, and Fig. 4 is an enlarged view showing a part of the locking device.

My present invention is an improvement on the device patented to me January 4, 1887, No. 355,427.

In Fig. 1, A and A′ represent two of the elevator guide-posts, and B B B′ B² the gate, which is arranged to slide on the ways T T. R is a rope to one end of which the gate is attached. Said rope R passes over a pulley, R′, and has attached to its end a weight, R², to balance the gate.

b b′ b² b³ in Fig. 1 represent arms projecting from the side post, B′, of the gate, so as to embrace the "ways" T on the side of the elevator-posts A A′, said arms acting as guides for the gate as it slides up and down on the ways. One of these guiding-arms—viz., *b*³—extends over the inner face of the post A′, as shown in Figs. 1 and 3, so as to engage with the latches K K′.

The latches K K′, Figs. 1 and 2, are made as shown in Figs. 3 and 4, and each has a part, *k*, Fig. 4, which projects beyond the plate K³, (at such time as may be desired,) so as to engage with the arm *b*³, Figs. 1 and 3, and thus hold the gate in place, as will be explained. Each of the latches K K′ is pivoted to its plate K³ at K⁴, (see Fig. 4,) and is provided with a spring, K⁵, which serves to throw the upper end, K, outwardly. Each of the latches K K′ is provided with an arm, K², Figs. 3 and 4, by means of which the latch is pushed in out of the way of the arm *b*³ on the gate B B B′ B².

To move the latches K K′, I have the following device:

L, Figs. 1, 2, and 3, is a lever pivoted at L′ to the post A′. The lower end of the lever L has a spring, S, which, being attached to the post A′, has a tendency to throw the lower end of the lever L outwardly and the upper end inwardly, as shown in Fig. 2. At the upper end of the lever L, I have an arm, C, and at the lower end an arm, C′, Fig. 2. At the lower end I also have an arm, C², Figs. 2 and 3, which extends outwardly and has upon it a friction-wheel, C³, Figs. 2 and 3.

D, Figs. 2 and 3, is a cam-piece attached to the elevator-carriage, and, in coming in contact with the wheel C³ on the arm C², forces it inwardly, thus causing the lower end of the lever L to swing inwardly, and, acting through the arm C′, Fig. 2, forces the latch K′ inward out of the way of the arm *b*³ on the gate B B B′ B². The ends of the lever L may be bent so as to form the arms C and C′, and the latches K K′ may be made and attached to the lever L, if desired. In Fig. 2 the upper latch, K, is shown as pressed in out of the way of the arm *b*³; but the lower latch, K′, is out and in a position to prevent the arm *b*³ from moving up—that is, the gate B B B′ B² cannot be raised. Now, if we suppose the elevator-carriage to be raised or lowered, so that the attached cam-piece D is in contact with the wheel C³, then the arm C′ of the lever L will be pressed in, and with it the lower latch, K′. At the same time the upper latch, K, will spring out, in which case the gate may be raised, so that its arm *b*³ will rest upon the upper latch, K, and be held up so long as the cam-piece D rests upon the wheel C³—that is, so long as the elevator-carriage is at the floor to which the gate B B B′ B² belongs. When the elevator-carriage moves away, then the lever L will

be moved by the spring S and the upper latch, K, thrown in, thus releasing the gate and allowing it to fall and protect the hatchway.

I claim—

The combination of an elevator-car having the cam-piece D, the lever L, having an arm, C, and the arm C′, having an extension, C^2, the pivoted latches or stops, and the hatchway-gate having the arm b^3, all substantially as described, and for the purpose set forth.

GEO. A. WELD.

Witnesses:

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