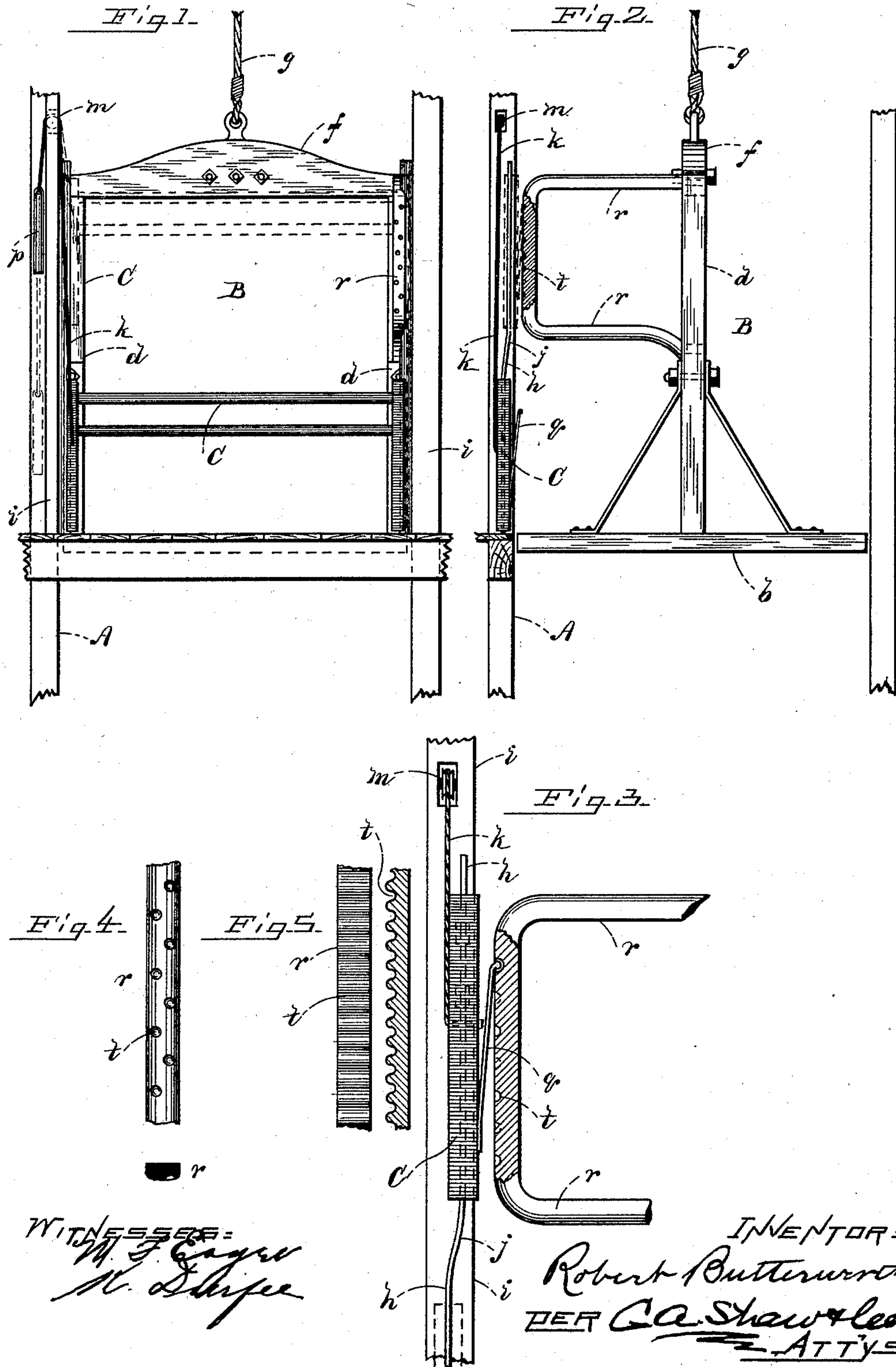


(No Model.)

R. BUTTERWORTH.
ELEVATOR.

No. 441,824.

Patented Dec. 2, 1890.



UNITED STATES PATENT OFFICE.

ROBERT BUTTERWORTH, OF SOMERVILLE, MASSACHUSETTS.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 441,824, dated December 2, 1890.

Application filed July 14, 1890. Serial No. 358,637. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BUTTERWORTH, of Somerville, in the county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Elevators, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional front elevation showing an elevator-car provided with my improvement; Fig. 2, a side elevation of the same; Fig. 3, a sectional elevation, enlarged, showing the gate-locking mechanism; and Figs. 4 and 5, elevations illustrating certain details of construction.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates especially to a device for locking the sliding gate of freight-elevator wells when opened; and it consists in certain novel features, hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the well, and B the car considered as a whole.

The car is of the ordinary form of platform-cars used in freight-elevators, and consists of a flooring *b*, two vertical standards *d*, connected by a cross-bar *f* at the top, to which a lifting-rope is attached in the usual manner.

A gate *C*, of ordinary construction, is fitted to slide vertically on tracks *h* on the side beams *i* of the well. A cord *k*, secured to the gate, passes over a pulley *m* in the casing, and is provided on its outer end with a balance-weight *p*. The gate-track *h* is so arranged that its upper portion is nearer the inner edge of the studding *i* than its lower portion, said track being bent or curved in-

ward at *j*. On the inner face of the gate a stiff flat spring *q* is secured. To one of the standards *d* of the car a bracket *r* is secured, and projects laterally in position to engage the free end of said spring, the outer face *t* of the bracket being corrugated or indented, as shown in Figs. 4 and 5, to prevent it slipping too readily on the head of said spring. Instead of said corrugations or indentations, the face of said bracket may be covered with rubber, wood, or similar material.

In the use of my improvement the gate, being elevated in the ordinary manner, passes over the curved portions *j*, of the bracket *h*, and is drawn inward toward the car, as best shown in Fig. 3. The car arriving at the landing, the spring *q*, engaging the face of the bracket *r*, sustains said gate in its elevated position. As soon as the car leaves the landing and the bracket *r* becomes disengaged from the spring *q*, the gate falls by its own weight into its normal position, passing over the curved portion *j* of the track, and outward onto the lower portion thereof, in which position the spring *q* is withdrawn from the well sufficiently so that a car passing the landing will not engage it.

Having thus explained my invention, what I claim is—

1. In a device of the character described, a well-gate fitted to slide on tracks vertically offset toward said well, and provided with a spring on its inner face, in combination with a car provided with an arm or projection having a roughened or serrated surface adapted to engage the gate projection and support said gate when opened or elevated, substantially as described.

2. The gate *C*, fitted to slide on the vertically-offset tracks *h*, and provided with the spring *q*, in combination with the car *B*, provided with the bracket *r*, having the roughened or friction surface *t*, substantially as described.

ROBERT BUTTERWORTH.

Witnesses:

O. M. SHAW,
K. DUFFEE.