

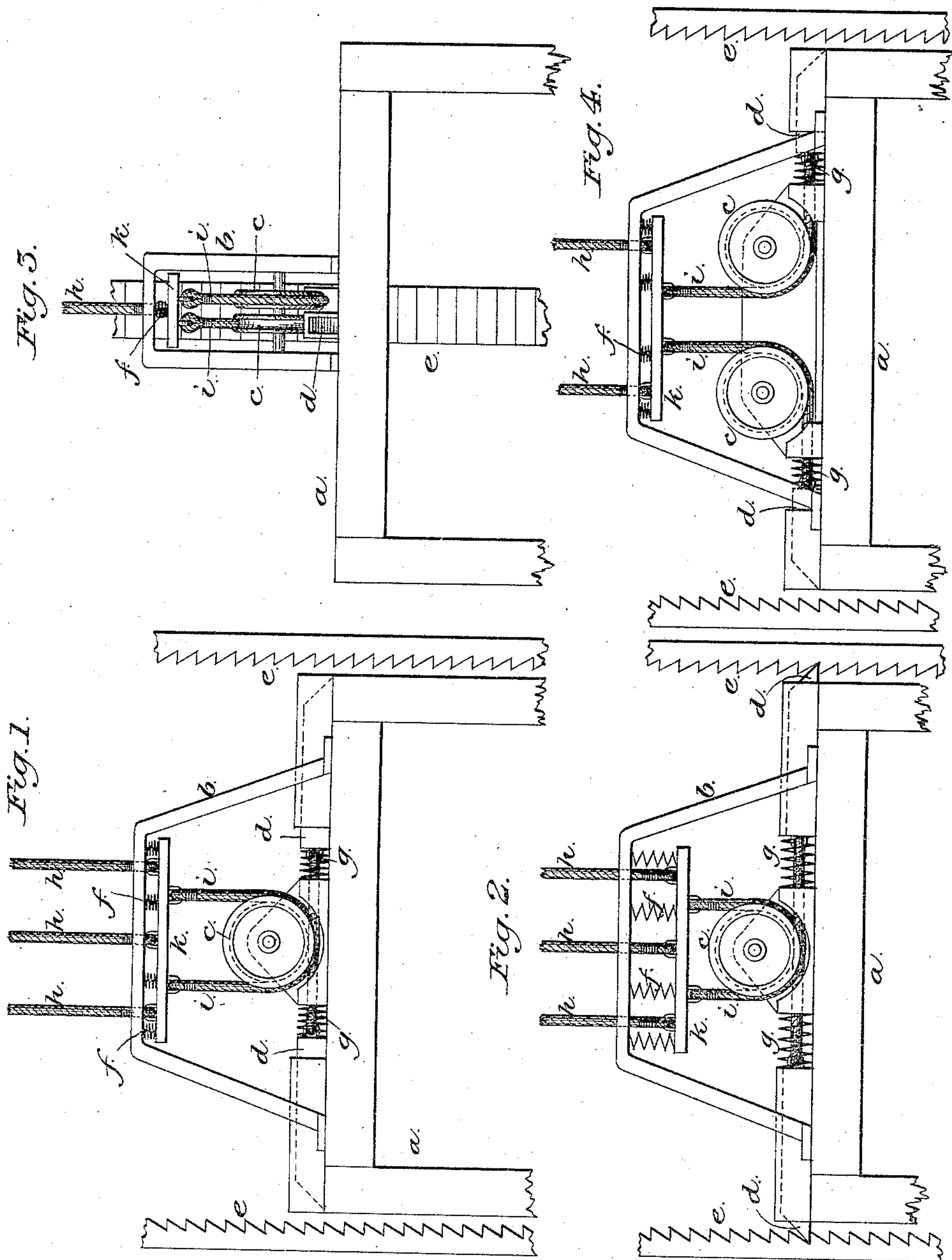
(No Model.)

A. M. BAKER.

SAFETY ATTACHMENT FOR ELEVATORS.

No. 311,279.

Patented Jan. 27, 1885.



Attest:

John A. Ellis.
John Caldwell

Inventor:

Arthur M. Baker
 74 Chas. St. Forbes

Atty.

UNITED STATES PATENT OFFICE.

ARTHUR M. BAKER, OF NEW YORK, N. Y.

SAFETY ATTACHMENT FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 311,279, dated January 27, 1885.

Application filed October 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR M. BAKER, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented a new and useful Safety Attachment for Elevators, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same, in which—

Figure 1 is a side view showing the respective parts in relative position with the elevator suspended; Fig. 2, a similar view with the hoisting-ropes relieved or broken and the elevator arrested; Fig. 3, a cross or end view of Fig. 1, and Fig. 4 a modification of the relative arrangement of the operative parts.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to provide an improved safety attachment to elevators that shall be automatic and certain in action in arresting and holding the elevator should the hoisting rope or cable break or yield, and also provide an elastic support or suspension, which reduces the liability to sudden strain in starting, danger of inaction at the critical time, and gives an easy action in moving or stopping.

In order that others may understand and apply my invention, I will first proceed to describe its construction and operation, and subsequently to set forth in the claim its novel features.

In the drawings, *a* represents the elevator, *b* a strong iron frame firmly connected thereto, *c c* interposed grooved pulleys journaled in the frame *b*, and *d* sliding bars or pawls that engage with the fixed toothed racks *e e* in the operation of the device. The main hoisting ropes or cables *h h* are directly connected with a cross-bar, *k*, arranged within the frame *b*, and between said bar and frame a series of springs, *f f*, are interposed, of sufficient tension to receive the whole weight of the elevator and provide for a slight compression, that will give an easy motion to the elevator and yield under a sudden start. The suspending-ropes *i i* connect the bar *k* and the pawls *d d*, passing around the intermediate pulleys, *c c*. The pawls *d d* are arranged to

slide in guideways in line with the toothed racks *e e*, and connected with springs *g g*, which bear against the rigid part of the elevator *a* or frame *b*. These springs *g g* should be of equal or greater tension than the springs *f f*, in order to allow sufficient clearance to the bar *k* when the elevator is suspended.

The operation of the device will be readily understood from the foregoing description and reference to the drawings, Figs. 1, 3, and 4 showing the elevator in suspension and the various parts in relative position, the pawls *d d* drawn back, the bar *k* drawn up, and the intermediate springs, *f f* and *g g*, under compression.

In Fig. 2 the several operative parts are shown in their opposite relative position when the hoisting-ropes are broken or relieved, the bar *k* being forced down, as shown, by the action of the springs *f f*, which relieves the suspending-ropes *i i* and the compressed springs *g g*, the latter in turn forcing the sliding pawls *d d* into engagement with the toothed racks *e e*, thus holding the elevator securely from descent.

The constant yielding action of this device is an important feature in this class of inventions, the consequent movement of the parts, however slight, maintaining a free action, thus avoiding clogging from dirt or corrosion and insuring certainty of operation.

I do not wish to confine myself to the toothed rack and pawl engagement shown, as my invention is obviously applicable to other common forms of brakes.

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

A safety attachment for elevators, consisting of a suspension-bar connected, respectively, with the hoisting rope or cable and the arresting-pawls by intervening springs, whereby a constant yielding of said springs produces an easy movement of the elevator and forces the arresting-pawls into engagement upon breakage of the hoisting-rope, substantially as described.

ARTHUR M. BAKER.

Witnesses:

CHAS. W. FORBES,
CHAS. S. MILLER.