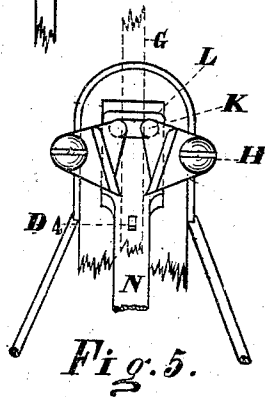
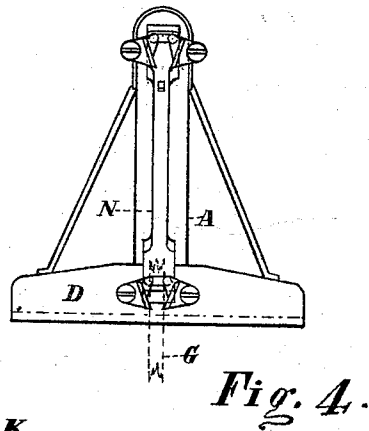
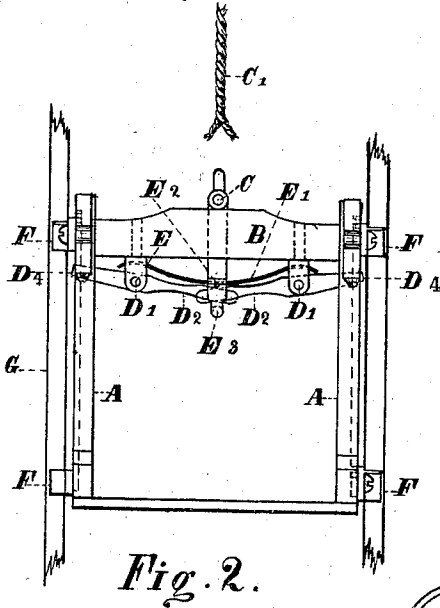
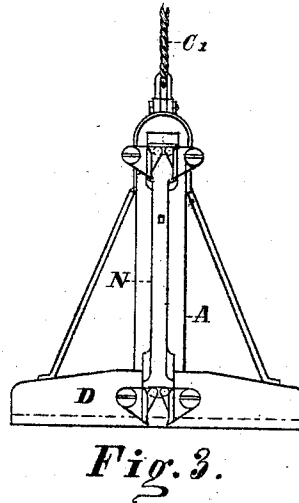
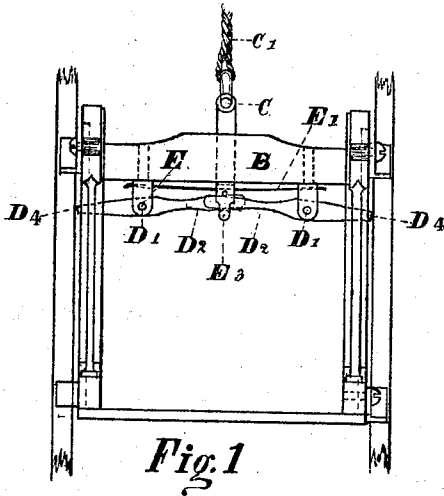


G. C. TIMPE.

Automatic Safety-Locks for Elevators.

No. 135,453.

Patented Feb. 4, 1873.



Witnesses.
J. H. Gurley, Jr.
James B. Mearns

Inventor.
Gustavus C. Timpe,
by Samuel Brock, atty

UNITED STATES PATENT OFFICE.

GUSTAVUS C. TIMPE, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN AUTOMATIC SAFETY-LOCKS FOR ELEVATORS.

Specification forming part of Letters Patent No. 135,453, dated February 4, 1873.

To all whom it may concern:

Be it known that I, GUSTAVUS C. TIMPE, of the city of New Orleans, parish of Orleans, State of Louisiana, have invented certain new and useful Improvements in Automatic Safety-Locks or Clamping-Brakes and Guides for Hoisting-Cages or Elevator-Platforms; and I do declare that the following is a clear and exact description of the same, reference being had to the accompanying drawing with the letters of reference marked thereon and made part of this specification, in which—

Figure 1 is a front view of a hoisting-cage or elevator-platform with my improvement connected to it, and all attached to a hoist rope or cable. Fig. 2 is a front view of the same with the hoist rope or cable broken. Fig. 3 is a side elevation of the same with the hoist rope or cable attached, and showing the automatic safety-locks, clamp-brakes, or guides open. Fig. 4 is a side elevation of the same with the hoist rope or cable broken, and showing the automatic safety-locks, brake-clamps, or guides as they operate when locked on the guide-posts. Fig. 5 is an enlarged view of the same.

Similar letters of reference indicate similar parts in all of the figures.

This invention relates to an automatic safety-lock, clamp-brake, and guide for hoisting-cages or elevator-platforms, that are hoisted by ropes or cables and travel in guide-ways. The object of this improvement is to furnish a cheap, simple, and automatic safety-lock, to prevent the descent of the hoisting-cage or elevator-platform, in cases of the breaking of the hoisting machinery, or the breaking of the hoist rope or cable, as will be hereinafter fully described and claimed.

A A designate the two standards of a hoisting-cage or elevating-platform, and are connected together at their upper ends by the cross-beam B. This cross-beam has the inverted spade-handle C working loosely in and through its vertical center. The upper end of this spade-handle connects with the hoist-rope C¹, and its lower end bears up and actuates the levers D² D². These levers are pivoted as fulcrums to the under side of the cross-beam at D¹ D¹, and their short ends are continued on out, through a slot made in the two standards, and work freely in a slot in the vertical

slide-plate N, as is seen at D⁴. This vertical slide-plate is let in or recessed in the outer vertical faces of the platform-standards, and has a lateral slot cut in it, as shown at L, which engages with lugs or projections K on the automatic lock-plates, clamp-brakes, or guides F, which are pivoted at H, all as shown in Fig. 5. This automatic lock-plate, clamp-brake, or guide is fitted on its faces in a shape best to embrace and engage securely with, by friction or penetrating in, the guide-posts G when the hoist-rope or cable breaks, and also serves, in conjunction, to guide the rectangular platform D in its travels.

The operation is as follows: The spring E¹ is rigidly secured to the inverted spade-handle at E², with its ends pressing up against the cross-beam B at D¹ D¹, and in the lower end of the spade-handle, at E³, rests the ends of the levers D² D². These levers work or slide freely through the opening of the spade-handle as it is raised and lowered, causing the levers to vibrate on their fulcrums D¹ D¹, with their outer ends vibrating in unison through the slots in the two standards, and their extreme ends engage with the vertical sliding plate N, as seen at D⁴. These vertical sliding plates are provided with lateral slots, in which the projections K work as a crank to revolve the automatic locks, clamp-brakes, or guides on the pivots H to close them to or from a center in common. It is plain to be seen that as long as the hoist rope or cable remains unbroken the spade-handle will be drawn up with the inner ends of the levers in it, thus compressing the spring up and underneath the cross-beam, and the outer ends of the levers will be vibrated in unison downward, moving the vertical sliding plates in the same direction and operating the automatic locks, clamp-brakes, or guides to open apart as by a crank motion; and in case of the hoist rope or cable breaking in two, the spring then throws the spade-handle (by expansion) down, carrying with it the inner ends of the levers, and all of the other motions are reversed, and the automatic locks, clamp-brakes, or guides are forced as by a crank motion to revolve to a center in common between them, and engage rigidly with the vertical and stationary guides of a hoisting-machine, thus holding the hoisting-cage or elevator-platform securely from

descent until such time as repairs may have been made.

These automatic - locks, clamp - brakes, or guides can be multiplied in numbers on each cage, in accordance with the length of the vertical sliding plate, if so desired; and

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

The combination and arrangement, in a hoist-

ing-cage or elevator-platform, of the above-described safety-locks, clamp-brakes, or guides F, when arranged and operated to work to and from a center in common, substantially as set forth, and for the purposes described.

GUSTAVUS C. TIMPE.

Witnesses:

SAMUEL BROCK,

THOS. J. BURKE.