(No Model.) 2 Sheets—Sheet 1.

A. NEUBURGER.

SAFETY ATTACHMENT FOR ELEVATORS.

No. 378,899. Patented Mar. 6, 1888.

Fig. 1.

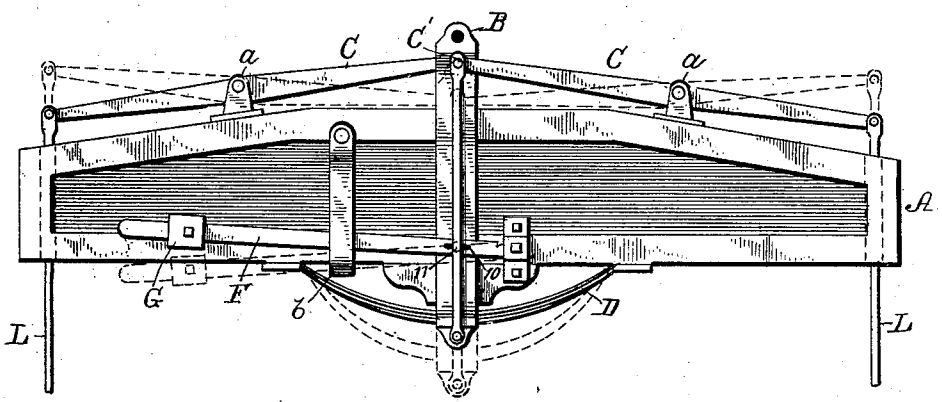


Fig. 2.

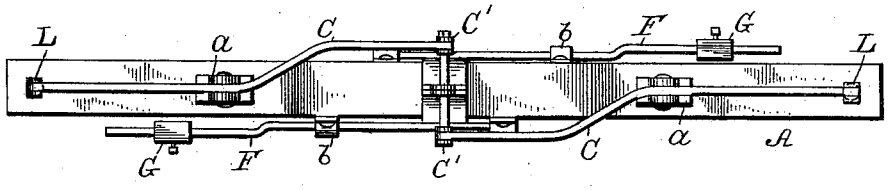
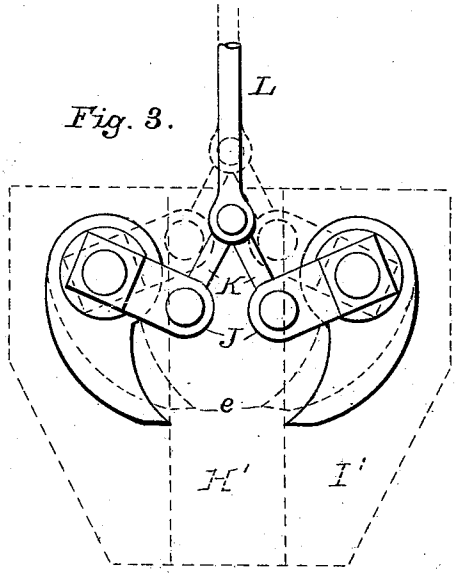


Fig. 3.



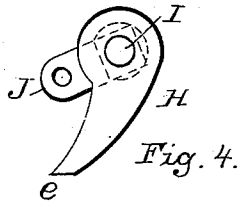


Fig. 4.

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(No Model.) 2 Sheets—Sheet 2.

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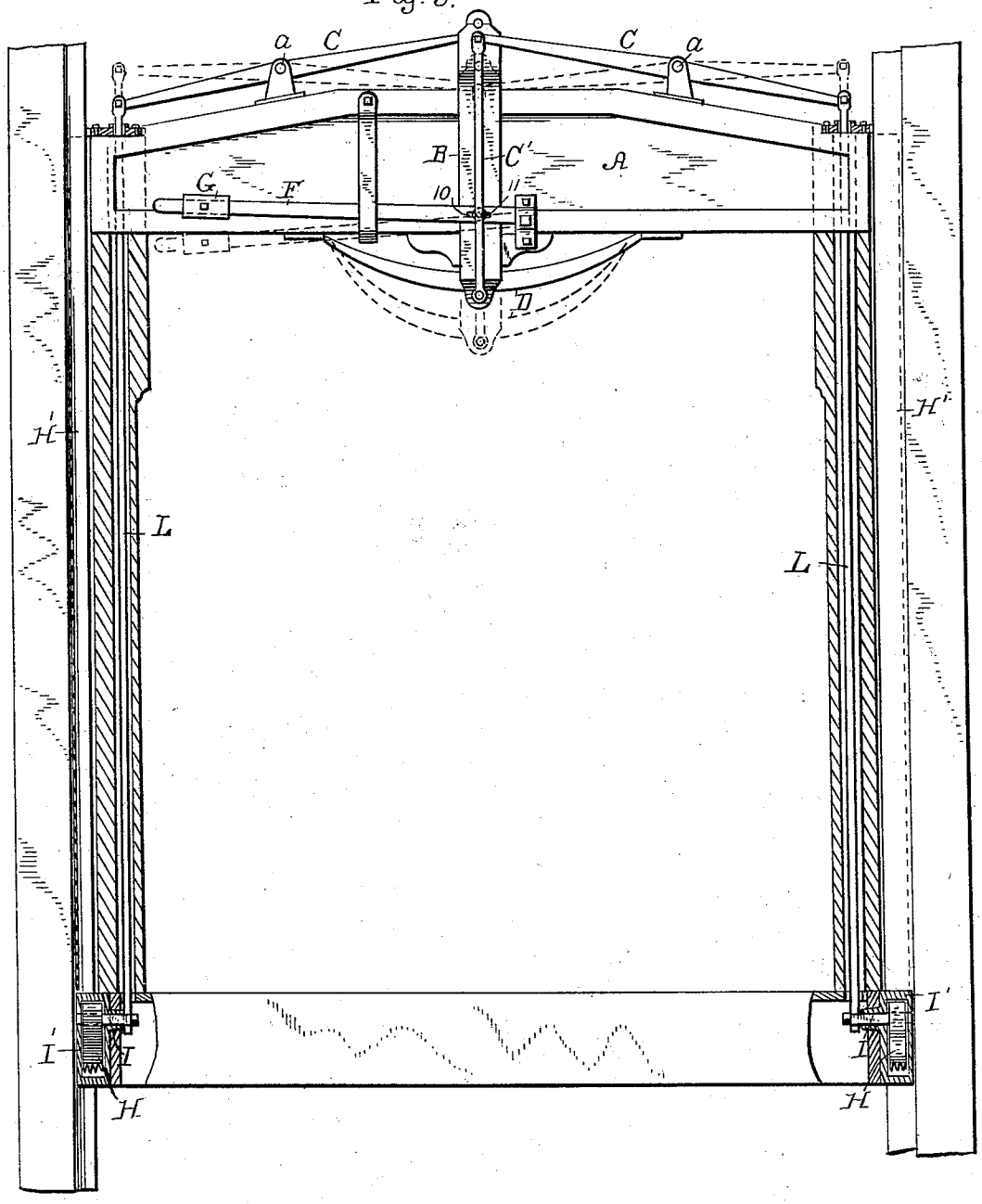
SAFETY ATTACHMENT FOR ELEVATORS.

No. 378,899. Patented Mar. 6, 1888.

Fig. 5.



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UNITED STATES PATENT OFFICE.

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SAFETY ATTACHMENT FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 378,899, dated March 6, 1888.

Application filed August 5, 1887. Serial No. 246,173. (No model.)

To all whom it may concern:

Be it known that I, ALBERT NEUBURGER, of Kansas City, Jackson county, Missouri, have invented a new and useful Improvement in Safety Attachments for Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to devices for controlling the cars or platforms of elevators when the lifting-cable breaks; and it may be said to consist in the devices and the novel combination and arrangement of devices hereinafter set forth, and pointed out in the claims.

In the drawings, which illustrate the manner of carrying out my invention, Figure 1 is a side elevation of a portion of an elevator hoisting frame or gate having safety devices applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a broken detail view of a portion of the car or platform floor and illustrating the operation of the gripping-pawls, and Fig. 4 is a detail view of one of the gripping-pawls used in making up the invention, and Fig. 5 a side elevation.

A represents the beam of the car or platform, to which the hoisting-cable is connected, and which may be of any ordinary construction.

B is a metal strap which embraces beam A, and to which the hoisting-cable is directly attached, it being arranged for vertical play on said beam in the usual way.

C indicates a pair of horizontal levers which are located on the upper side of hoisting-beam A, and having their respective inner ends connected to strap B through short vertical rods C′ and their outer ends connected to vertical pawl-operating rods L, which latter extend down the sides of the car or the styles of the platform and connect with pawls H.

D indicates the spring under beam A, and which is located between said beam and the lower end of strap B, for urging said strap downward when the hoisting cable or cables break or become detached.

F represents an auxiliary or safety lever which is hinged or pivoted at its inner end to the side of beam A and provided with a weight, G, at or near its outer end, and which is connected to strap B, as shown, a pin, 11, projecting from the side of the strap and being engaged by a slot, 10, which is formed in lever F at a suitable point between its inner end and weight G.

It will be observed that a pair of the levers F are made use of, one being located on each side of the beam A, or, in other words, one for each side of the car; and the construction for either side of the car being substantially the same, I do not deem it necessary to speak of them in plural.

The safety-pawls H are mounted on suitable shafts or spindles, I, which are carried by frames or castings I′, located beneath the floor of the car or platform of the elevator. They are preferably mounted oppositely in pairs, and each one making up a pair is connected to the lower end of its operating-rod L by means of a short link, K, said pawls being provided with a crank or lug, J, to which said links are attached.

With this construction the operation of the invention will be about as follows: Should the hoisting-cable break, the spring D will pull down the strap B, and the levers C being pivoted at *a* to the upper side of beam A, the outer ends of said levers will be thrown upwardly, as indicated by dotted lines, and the outer end of lever F is thrown downwardly, and the pawls H will be driven into the sides of guide-strips H′, the weight G on lever F acting entirely independently of spring D with such force and velocity that it will drive said pawls into the guide-strips without delay, which otherwise might occur were said weight not provided, holding them firmly and locking them in such position, and not permitting them in case of the jar which usually accompanies an accident of this kind to slip and disconnect their hold.

Weight G, it will be noticed, is adjustable along lever F, and may be set to suit the weight of any style of car or platform.

In some cases I may dispense with the use of a spring of any kind, relying altogether upon the action of the weighted lever F to force the dogs into operation, which, as I have found by practical experiments, it will do in the manner described.

Having thus described my invention, what I claim is—

1. The combination of a car or cage por-

vided with a strap to which the suspending-cable is attached, spring-dogs or safety-pawls arranged to be thrown into contact with the guide posts or strips of the elevator, and a weighted lever, substantially as described, connected to said strap and acting in conjunction with the spring-power which actuates the pawls.

2. The combination of a car or cage provided with cross-beam A, carrying levers C, strap B, spring D, rods L, two pair of safety-pawls connected to the lower ends of rods L, the guide-strips of the elevator, and the weighted lever F, having one end pivoted to said cross-beam and carrying weight G and connected to said strap at a point intermediate of its inner end and the weight, substantially as described.

3. The combination of a car or cage, a strap to which the cable is attached, safety dogs or pawls arranged to be thrown into contact with the guide-strips of the elevator, a lever connected to said strap, and a weight adjustably located upon said lever, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT NEUBURGER.

Witnesses:

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J. C. HIGDON.