H. A. DAVIS.

Safety-Apparatus for Lifts, or Hoists.

No. 162,535. Patented April 27, 1875.

Fig 1.

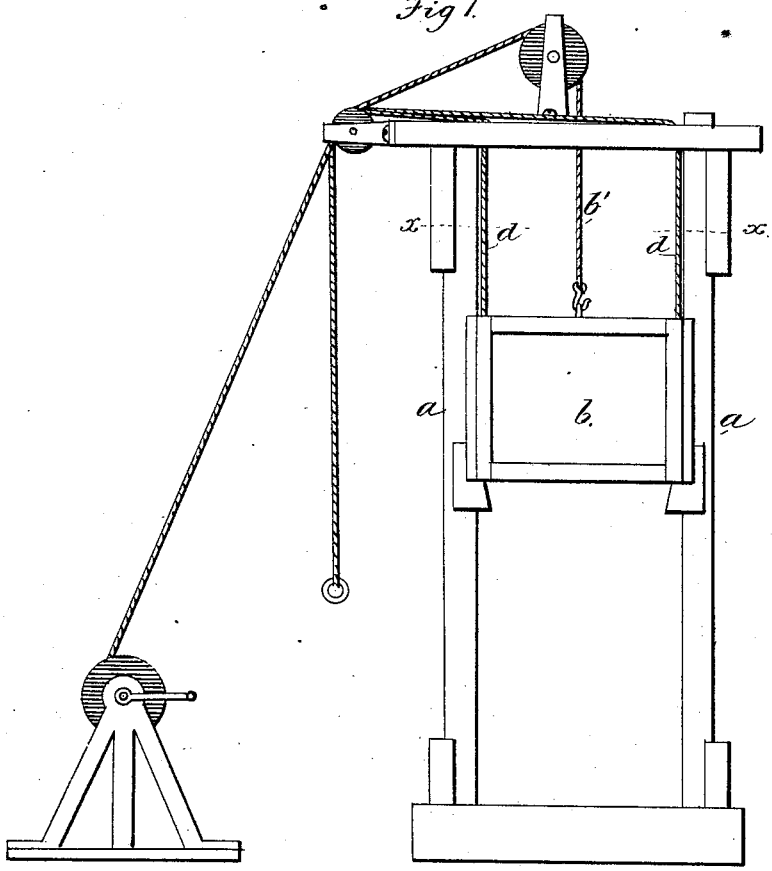


Fig 3.

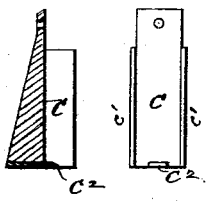


Fig 2.

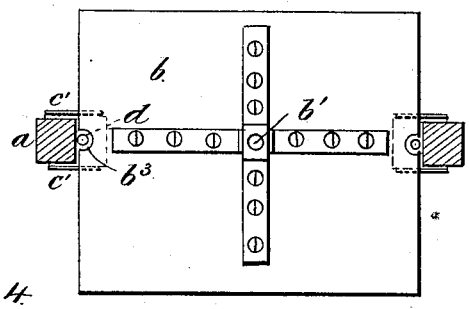
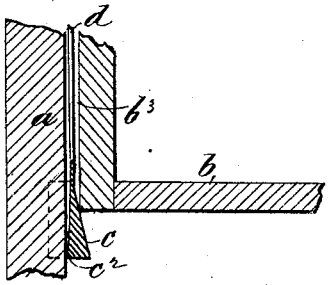


Fig 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

HENRY ALBERT DAVIS, OF LONDON, ENGLAND.

IMPROVEMENT IN SAFETY APPARATUS FOR LIFTS OR HOISTS.

Specification forming part of Letters Patent No. **162,535**, dated April 27, 1875; application filed February 5, 1875.

To all whom it may concern:

Be it known that I, HENRY ALBERT DAVIS, of London, England, have invented an Improved Safety Apparatus for Lifts or Hoists and other like machinery, of which the following is a specification:

My said invention relates to simple apparatus to be applied to the cage, box, chamber, or platform of a hoist or lift used in a hotel, warehouse, or other building, or in mines or otherwise, for raising or lowering persons or merchandise, and is designed to prevent the falling of the said cage or box in case the rope or chain supporting the same should be broken or detached.

My improved safety apparatus is constructed as shown in the accompanying drawing, in which—

Figure 1 represents a side elevation of the elevator and winding mechanism; Fig. 2, a plan view of the cage, box, or chamber; Fig. 3, views of the safety-wedge; Fig. 4, partial sectional elevation of the safety wedge and guide.

Like letters indicate the same parts throughout the drawing.

a a are the vertical guide-posts of the lift. *b* is the cage, box, or chamber, in which the persons or objects are raised or lowered. b^1 is the rope or chain for supporting and operating the said cage or box. *c c* are wedges. *d d* are cords or chains supporting the same. I use one wedge, *c*, or two or more wedges suspended by separate or independent cords, ropes, or chains *d*, or otherwise, in such a position between the said cage or box *b* and the vertical guide posts or standards *a*, between which the said cage or box ascends and descends, that, on the breaking or detachment of the said rope, cord, or chain b^1, the said wedge or wedges will be caught between the said cage or box and posts, and will bind or jam the cage or box *b*, so that its fall or descent will be impossible until it has been released from the said wedges. The said wedge or wedges *c* must be arranged with their thin edge upward, and projecting between the cage or box and the guide-posts, the thick end being below the said cage or box, as clearly shown in Fig. 1. I prefer to form recesses b^2 in the cage or box to receive the thin end of the wedge, and with grooves b^3 for the ropes or chains *d*. The said wedges should have flanges c^1 or pins to guide them upon the posts or standards *a*. I may form a guide by constructing the wedge with a central tongue, fitting and sliding in a central groove or guide-way formed in the vertical guide-post; but I prefer to provide the said wedge with guide-flanges c^1, as shown, projecting over the sides of the said post. In the event of the breaking of the cord, rope, or chain b^1, whereby the cage or box *b* is suspended, the said cage or box, no matter how heavily it may be loaded, cannot drop more than an almost imperceptible distance before it is caught and jammed by the said wedge or wedges, and, therefore, the persons or objects in the said cage will suffer no injury, and no inconvenience will arise beyond a short delay required for repairing the said chain or rope, or releasing the cage or box from the wedge or wedges *c*.

The winding apparatus of the hoist or lift to which my invention is applied may be the same as in other hoists or lifts, with the exception of such slight changes as may be required for the reception of the cords or chains of the aforesaid wedges, and for keeping the said wedges in the proper position with regard to the cage or box.

I claim as my invention—

The wedge *c*, having a tooth, c^2, and flanges c^1, or other suitable guides, as herein set forth, and for the purpose specified.

HENRY ALBERT DAVIS.

Witnesses:

H. J. NOONE,

JAS. EDWARDS.