T. THORN.

Improvement in Elevator-Brakes.

No. 129,625. Patented July 16, 1872.

Fig: 1.

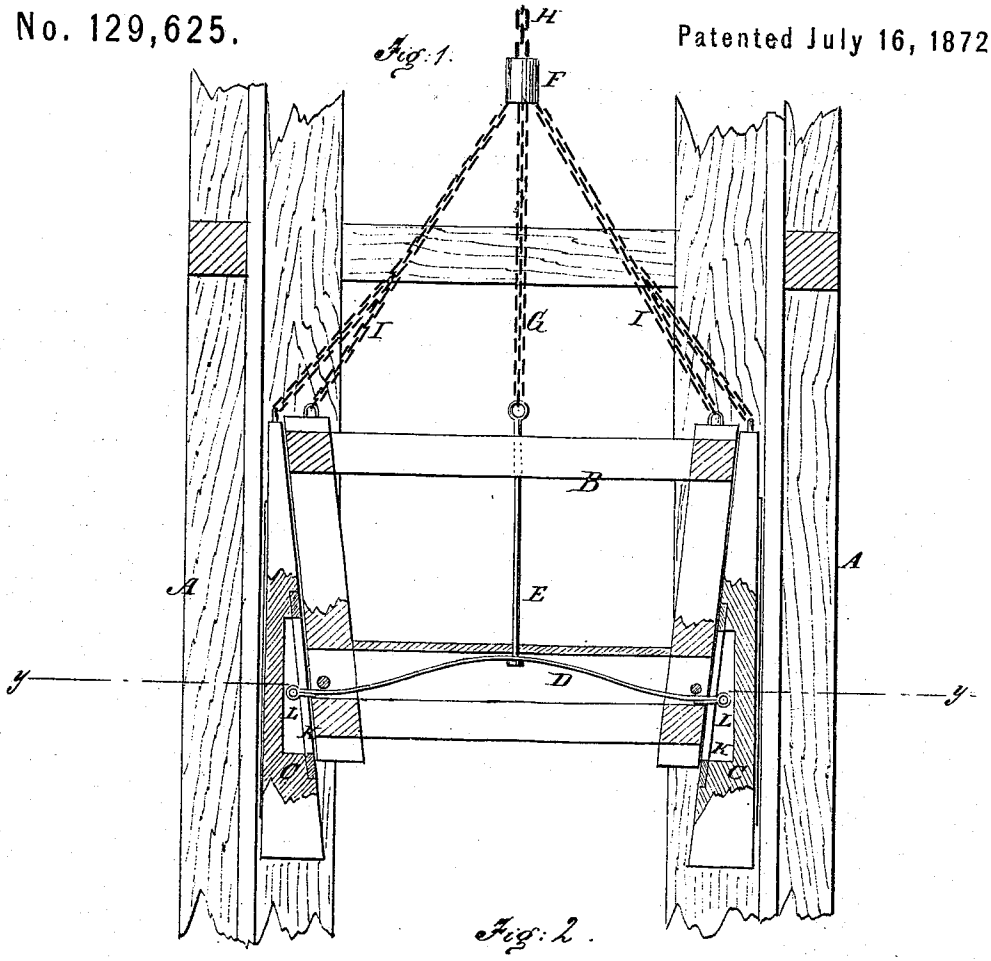


Fig: 2.

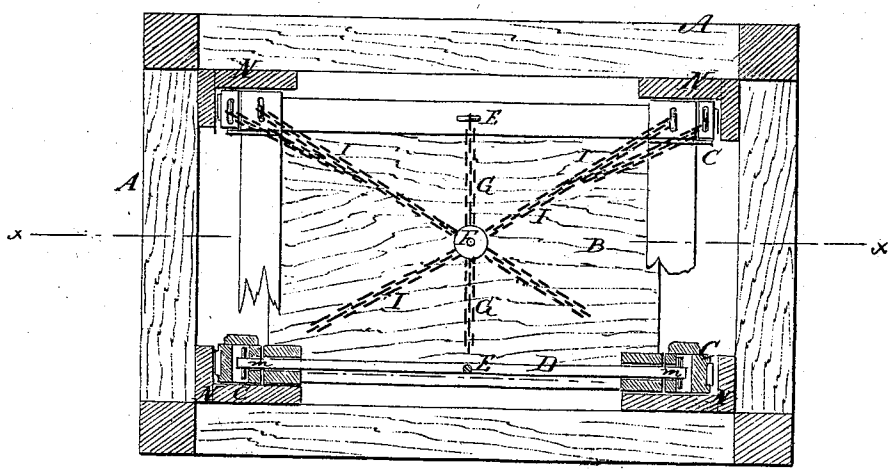
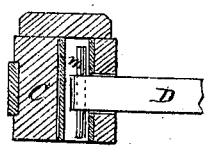


Fig: 3



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

THEODORE THORN, OF ST. CLAIR, PENNSYLVANIA.

IMPROVEMENT IN ELEVATOR-BRAKES.

Specification forming part of Letters Patent No. 129,625, dated July 16, 1872.

Specification describing a new and useful Improvement in Elevator-Brakes, invented by THEODORE THORN, of St. Clair, in the county of Schuylkill and State of Pennsylvania.

My invention is an improvement in the class of brake attachments for elevators wherein wedges are employed; and it consists in the construction and arrangement of parts as hereinafter specified.

In the accompanying drawing, Figure 1 represents a vertical section of the elevator taken on the line *x x* of Fig. 2. Fig. 2 is a horizontal section of Fig. 1 taken on the line *y y*. Fig. 3 is a detail, showing the mode of connecting the spring with the brake-block.

Similar letters of reference indicate corresponding parts.

A is the elevator-frame. B is the car. C represents the brake-blocks. D is the spring, arranged on opposite sides of the car, as seen in the drawing. The lower rails of the car are chambered out, as indicated in Fig. 1, to receive the straight flat steel spring D, to the center of which the rod E is attached, which rod is connected with the central lifting-block F by chains or ropes G G. H is the supporting chain or rope. I represents the lifting chains or ropes, attached to each corner of the car. The brake-blocks C are attached to the lifting-chains by the chains or ropes J, so that they are lifted with the car. On the faces of the brake-blocks C is a slotted metallic plate, K, through which the ends of the spring pass into the recesses L. The ends of the springs are doubled over and form eyes, in which are pins *m*, seen in Fig. 3.

The braking of the car is effected by allowing the spring to react or lengthen after being drawn up in the center, as seen in the drawing, in the act of raising the car. When the car is raised there is always strain enough upon the chains G G to draw upon the spring, which draws the brake-blocks up to the car corners by means of the pins *m*, as represented. The car, being smallest at the bottom, admits the wedge-shaped brake-blocks with their butt-ends down, so that two inclined surfaces are in contact. Now, if the supporting-chain should break, the strain on the brake-springs would be relaxed and the springs would react and straighten themselves and force the brake-blocks against the angle-pieces N in the corners of the elevator-frame. Simultaneously with the reacting of the springs the car would drop a trifle and wedge tightly, and be held by the friction of the backs of the brake-blocks against the angle-pieces N. For the purpose of increasing the friction between the backs of the brake-blocks and the angle-pieces N, strips of rubber or similar material may be attached to either of those surfaces; but such intermediate lining is not indispensable, as when the car ceases to be supported by the chain or rope H the friction produced by its slight descent stops it instantly without any such provision.

With this brake the lifting chains or ropes, and also the chains G G, may be detached from the block F, so as to leave the spaces above the car all clear, which allows the car to be used as a staging for any desired purpose.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The chains G G and I I, rods E E, spring D, pins *m*, slotted plates K, and wedges C C, provided with long recesses L, all arranged with the car B, as shown and described.

THEODORE THORN.

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