

(No Model.)

R. D. THACKSTON.
SELF CLOSING HATCHWAY.

No. 302,172.

Patented July 15, 1884.

Fig. 1.

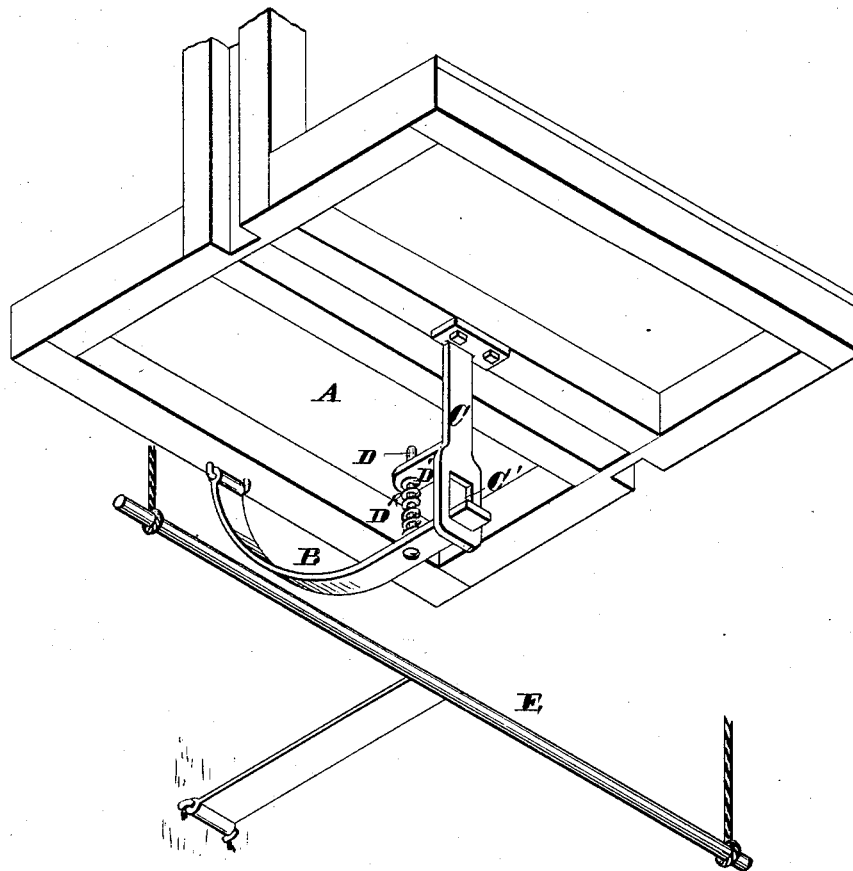
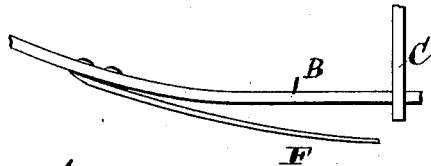


Fig. 2.



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UNITED STATES PATENT OFFICE.

RICHARD D. THACKSTON, OF ST. LOUIS, MISSOURI.

SELF-CLOSING HATCHWAY.

SPECIFICATION forming part of Letters Patent No. 302,172, dated July 15, 1884.

Application filed January 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, RICHARD D. THACKSTON, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Self-Closing Hatchways, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a perspective view, and Fig. 2 a modification.

My invention relates to a cam secured to the bottom of the cage, for opening the doors in the descent of the cage, and is intended more particularly for use where the doors to be operated by it are connected to a rod or bar, against which the cam strikes, as in the patent granted to myself and assignee, Henry J. Coe, November 28, 1882, No. 268,146; and my invention consists in the construction hereinafter more fully described, and pointed out in the claims.

Referring to the drawings, A represents part of a cage, and B a cam secured to one side thereof, beneath it, by one end, its other end extending downward and inward to a little past the center of the cage, as shown, where it passes through a slot, C', of an arm, C, secured to and depending from the bottom of the cage. This arm holds the end of the cam in place, and the slot allows for a vertical movement of this end of the cam. Projecting up from the cam is a pin or rod, D, passing through a guide-arm, D', extending out

at right angles from the pendant C. A spiral spring, D², surrounds the pin D beneath the arm D', whose office it is to hold the free end of the cam down, except when it strikes the rod E, which connects with the door to be raised or opened, when it yields, giving to the cam a cushioning effect, to avoid too sudden an operation of the parts, and a consequent straining or breakage, and also to avoid noise.

In the modification shown in Fig. 2, the cam has a leaf-spring, F, beneath, instead of a coiled spring above, which would strike the rod E in advance of the cam.

I have shown a cam only on one side of the cage; but of course it may be applied to both.

I claim as my invention—

1. In combination with an elevator-cage, a rigid arm depending therefrom, and a cam secured to the cage at one end and supported by the arm at the other end, and provided with cushioning-spring.

2. The combination of cage A, cam B, secured to the cage at one end, arm C, depending from the bottom of the cage and having slot C', in which the free end of the cam fits, pin D, secured to the cam and extending up through the guide D' on the arm C, and spiral spring D², surrounding the pin D beneath the guide D', all substantially as shown and described, for the purpose set forth.

RICHARD D. THACKSTON.

In presence of—

GEO. H. KNIGHT,
ALBERT G. FISH.