

(No Model.)

R. D. THACKSTON.  
SELF CLOSING HATCHWAY.

No. 341,074.

Patented May 4, 1886.

Fig. 1

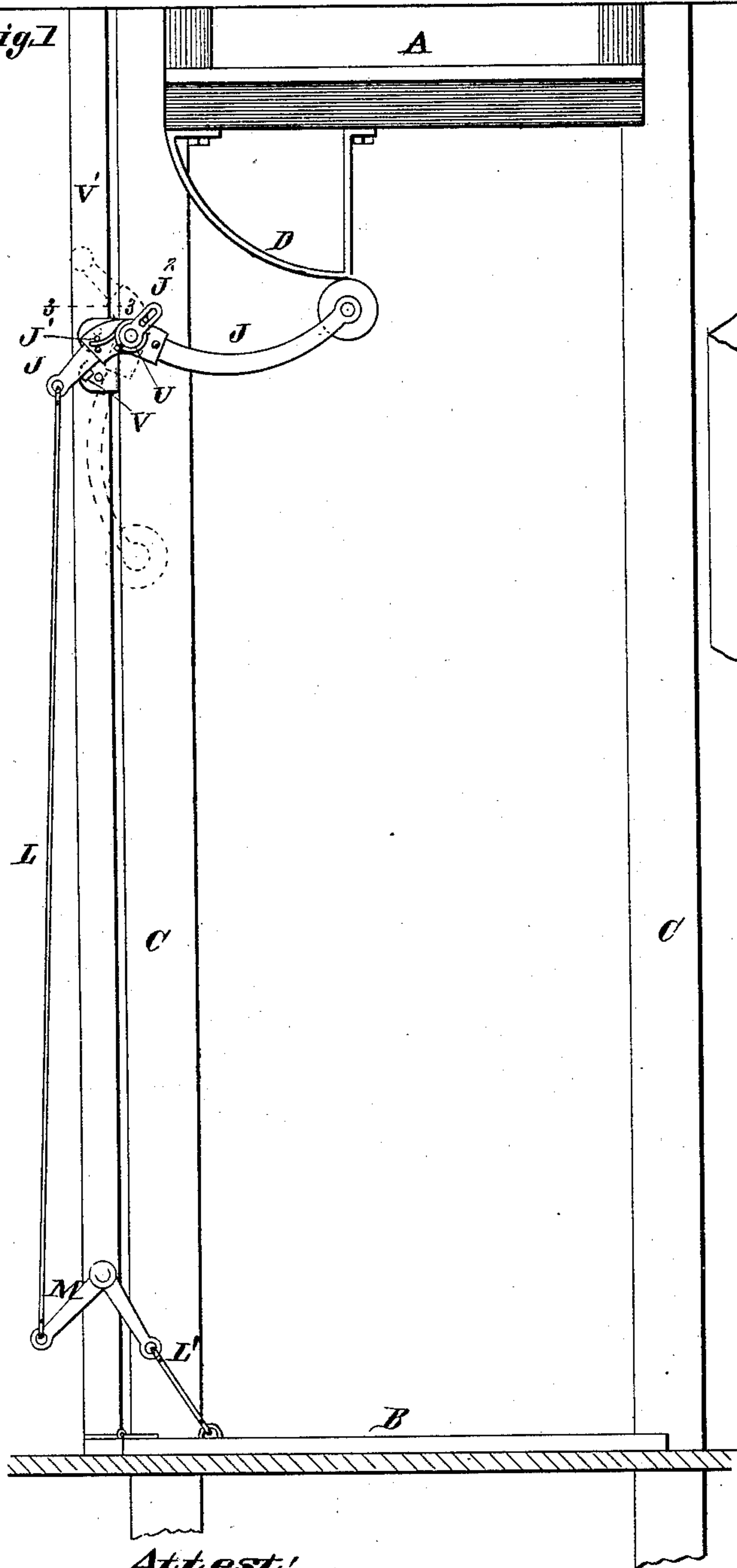


Fig. 2.

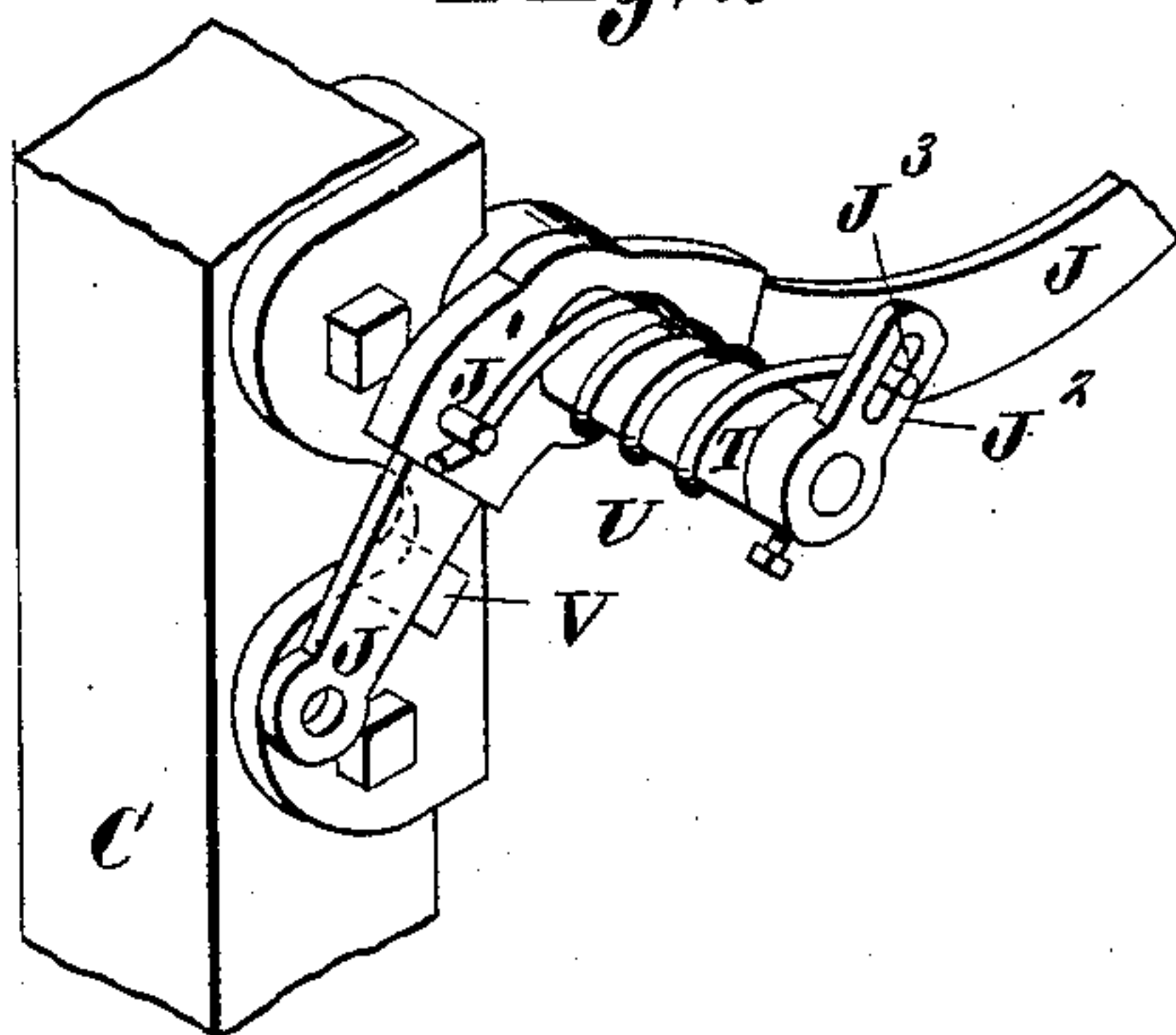
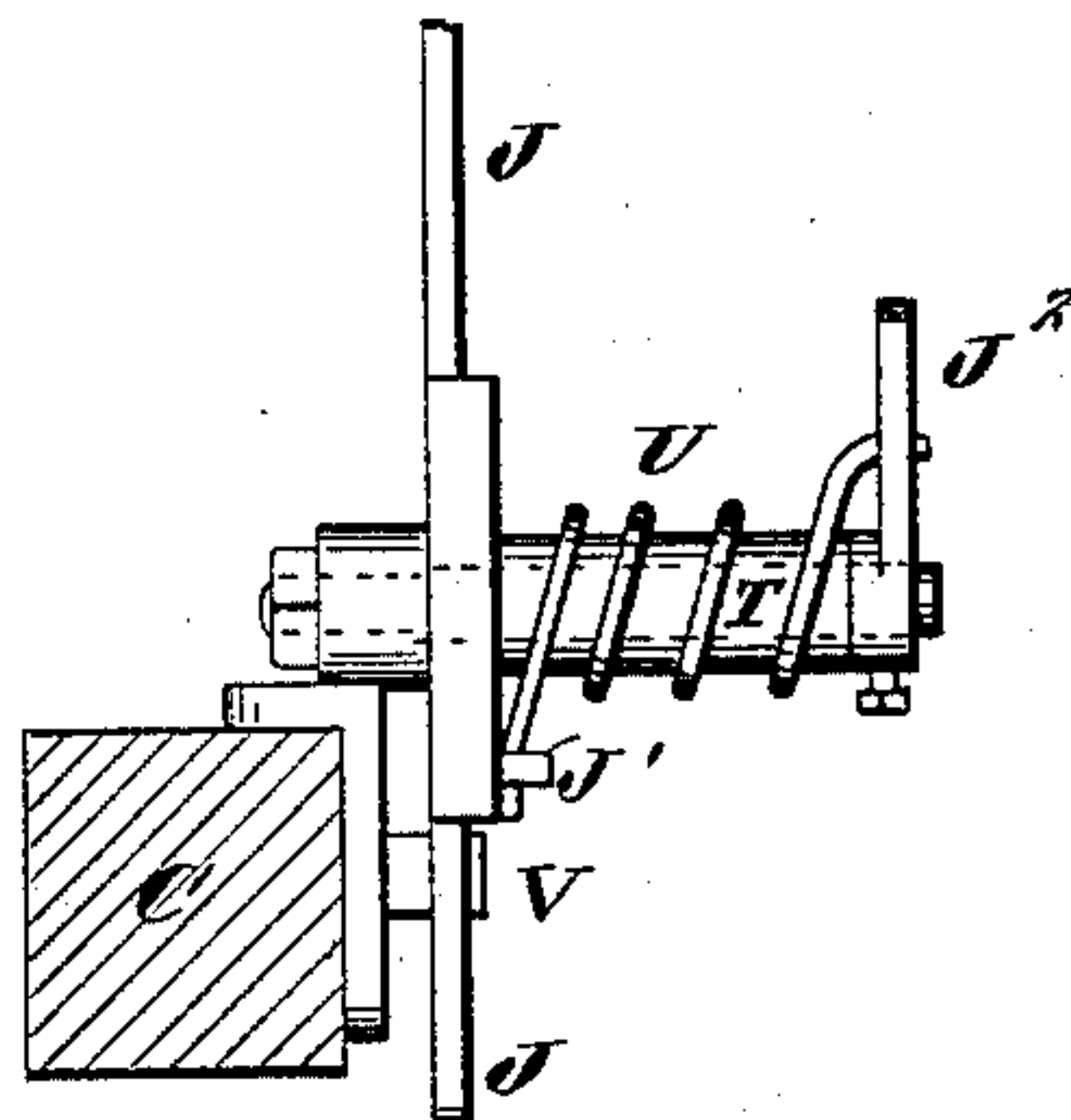


Fig. 3.



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Attest:  
Geo. L. Wheelock

# UNITED STATES PATENT OFFICE.

RICHARD D. THACKSTON, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF  
TO HENRY I. COE, OF SAME PLACE.

## SELF-CLOSING HATCHWAY.

SPECIFICATION forming part of Letters Patent No. 341,074, dated May 4, 1886.

Application filed July 9, 1885. Serial No. 171,079. (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—

10 Figure 1 is an elevation of my improved hatch-closer, showing part of a cage. Fig. 2 is an enlarged perspective view; and Fig. 3 is a transverse section taken on line 3 3, Fig. 1.

My present invention relates to certain improvements in self-closing hatchways; and it consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, A represents the cage, B a door, C the uprights, and D a cam on the bottom of the cage, for opening the door on the descent of the cage by coming against a lever, J, to which the door is connected by rods L L', and a bell-crank lever, M, the latter being pivoted to one of the uprights C.

25 This form of apparatus for opening the doors is similar to that shown in Patent No. 309,993, issued to myself and Henry I. Coe, December 30, 1884, and needs no further description here.

30 The lever J is secured or hinged to the upright by means of a shaft, T, around which is coiled a spring, U, one end of which is made fast to the lever by a pin, J', and the other end is made fast to the shaft by an arm, J<sup>2</sup>, having a slot, J<sup>3</sup>, to receive the end of the spring. It will be understood that as the door closes after the cage has passed this

spring acts to check it, so that it will close gently, and just as the door is closed the lever comes against a stop, V, secured to the upright C.

A form of spring check or cushion for a hatchway-door is shown and described, but not broadly claimed, in Patent No. 315,083, issued to myself and Henry I. Coe, April 7, 1885.

In another application, No. 149,646, filed December 6, 1884, I show and describe but do not claim therein, a spring check or stop somewhat similar to that herein shown and described.

I claim as my invention—

1. In a self-closing hatchway, the combination of a door, cage, device for operating the door, and the check or stop consisting of a shaft, T, a lever, J, spring U, surrounding the shaft, arm J<sup>2</sup> on the outer end of the shaft, having a slot, J<sup>3</sup>, engaged by one end of the spring, and a pin, J', on the lever, engaging the other end of spring, substantially as set forth.

2. In a self-closing hatchway, the combination of the check or stop consisting of a shaft, T, a lever, J, spring U, surrounding the shaft, arm J<sup>2</sup> on the outer end of the shaft, having a slot, J<sup>3</sup>, occupied by one end of the spring, and a pin, J', on the lever, engaging the other end of the spring, and a stop, V, for arresting the lever, substantially as set forth.

RICHARD D. THACKSTON.

In presence of—

GEO. H. KNIGHT,  
BENJN. A. KNIGHT.