

J. S. BALDWIN.

Means for Closing Hatchways.

No. 138,984.

Patented May 20, 1873.

Fig. 1

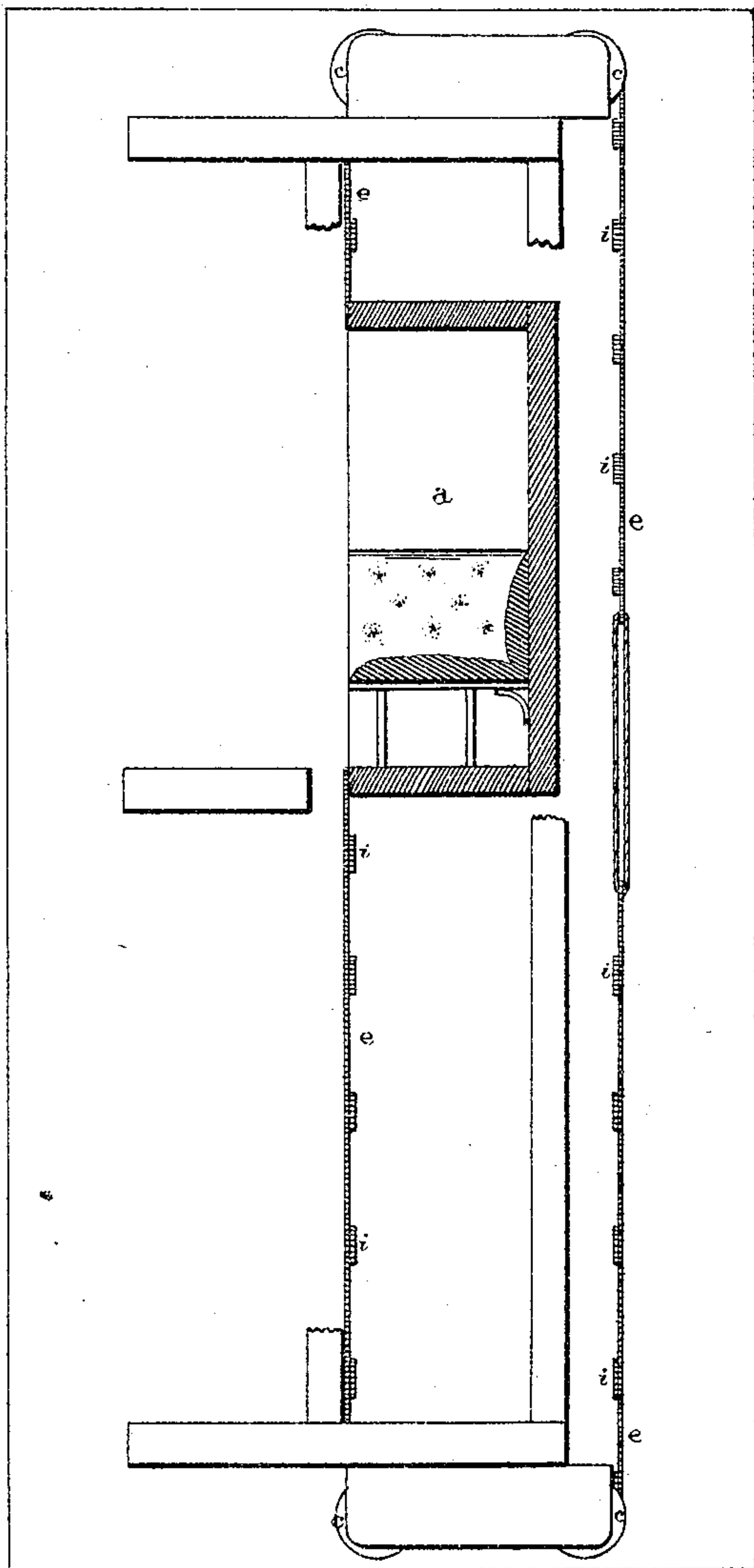
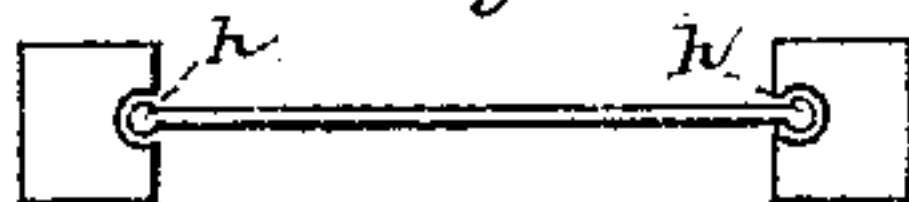


Fig. 2.



WITNESSES.

H. C. Duhamel
Alex Davidson

INVENTOR.

Jas. S. Baldwin
Per H. H. Hot.
att'y.

UNITED STATES PATENT OFFICE.

JAMES S. BALDWIN, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN MEANS FOR CLOSING HATCHWAYS.

Specification forming part of Letters Patent No. **138,984**, dated May 20, 1873; application filed March 17, 1873.

To all whom it may concern:

Be it known that I, JAMES S. BALDWIN, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Elevators, of which the following is a specification:

The nature of my invention relates to an improvement in elevators; and consists in securing an endless apron, or its equivalent, to the elevator-car, so that as the car is raised or lowered from one story to another this apron will close all the doors or entrances to the hatchway, except the one at which the car is stopping, so as to prevent persons from accidentally falling through.

Figure 1 is a vertical section of my invention. Fig. 2 is a detail view of the same.

a represents an ordinary elevator-car, attached to any suitable elevating devices, and operated in the usual manner, for raising either freight or passengers from one story to another. Secured to the front of this car at top and bottom, and passing over the rollers *c* above and below, is the endless apron or belt *e*, which serves to close every door or entrance to the hatchway, either above or below the car, except the one at which the car may be stopping, so as to prevent persons from accidentally falling through. This apron is strengthened and stiffened for this purpose by slats of wood *i*, small iron rods, or other equivalent devices, secured to it in any suit-

able manner, and has its edges secured to endless ropes *h*, which run or work in grooves, as shown in Fig. 2, formed in the side timbers of the frame. By dipping the apron or belt in some fire-proof substance it forms a most excellent protector against fire spreading from one story to another through the hatchway, as it serves to effectually check and prevent currents of air at all times. By the use of this apron accidents are almost impossible, every door to the hatchway except one being constantly closed, so as to require no supervision.

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

1. A car in combination with an endless apron, for the purpose of closing all hatchways except the one in use, and for the purpose of preventing a draft by means of open hatchways, substantially as shown and described.

2. The endless apron *e*, provided with slats *i*, and endless rope *h*, in combination with the car *a*, substantially as shown and described.

In testimony that I claim the foregoing as my invention I hereunto affix my signature this 14th day of March, 1873.

JAMES S. BALDWIN.

Witnesses:

S. A. BALDWIN,
S. BALDWIN.