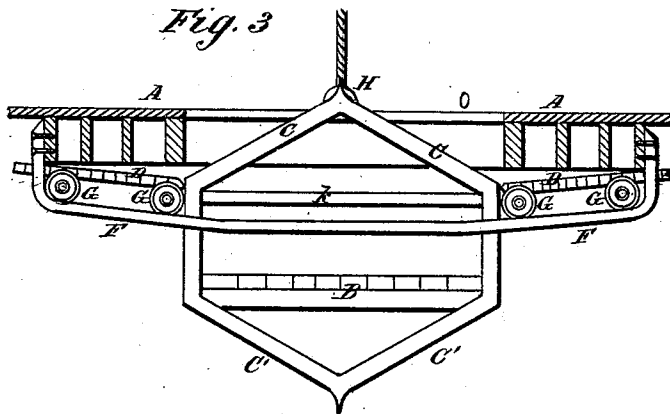
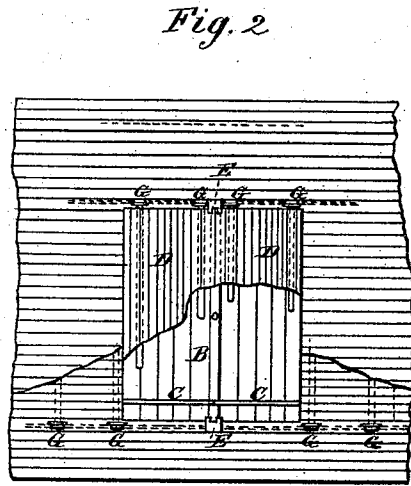
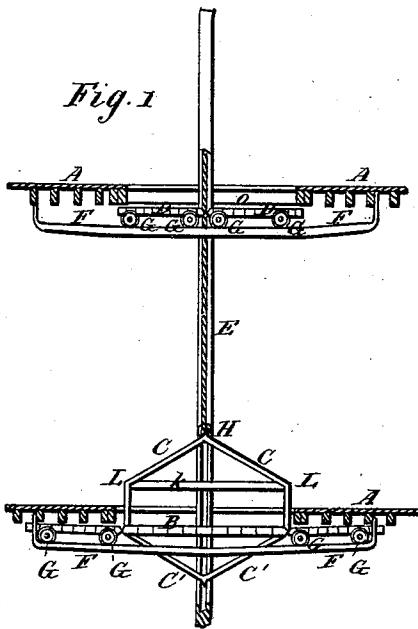


J. M. BRADNER.

Improvement in Mode of Closing Hatchways.

No. 129,646.

Patented July 23, 1872.



Witnesses
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Philip Meiller

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UNITED STATES PATENT OFFICE.

JOHN M. BRADNER, OF WILLIAMSPORT, PENNSYLVANIA.

IMPROVEMENT IN MODES OF CLOSING HATCHWAYS.

Specification forming part of Letters Patent No. 129,646, dated July 23, 1872.

To all whom it may concern:

Be it known that I, JOHN M. BRADNER, of Williamsport, Pennsylvania, have invented a new and useful Mode of Closing Hatchways; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, which is a part of this specification.

The object of this invention is to provide a new and useful means of preventing or diminishing the danger of persons falling through hoistways; and consists in a pair of valves, which close or obstruct the same, except while the car or hoisting-platform is passing, and in the other devices and arrangements of parts, hereinafter more fully described.

In the accompanying drawing, Figure I is a side elevation of a hoistway constructed according to this invention. Fig. II is a perspective view from above, part of the floor and hoisting-car being removed, showing the parts below. Fig. III is an enlarged view, showing the valves separated by the car in the act of passing.

Similar letters of reference indicate corresponding parts.

O is the opening in the floor. B is the car or hoisting-platform, which is constructed in the ordinary manner, and provided with guides C C C' C', and the parts for supporting the same, as shown in the drawing, for the purpose of opening the valves. The guides C C consist in strips of iron or other suitable material, extending from the cross-piece H outward and downward to the line of the outside of the car at L L, where they are supported by the brace or cross-piece K; or the same may be attached to the car in any other way consistent with the object, which is to open the valves by means of a wedge-shaped figure preceding the car to enter between and separate the valves D D sufficiently to admit of the passage of the car. C' C' are corresponding guides placed below the car for the purpose of opening the valves D D when the car is descending. D D are valves or movable platforms for the purpose of intervening across

or partly across the hoistway to prevent or interrupt the descent of persons or things falling through the opening in the floor, and are placed at any convenient distance below the floor. They are constructed of plain rectangular frames of wood covered with boards, all of sufficient strength, or of any other suitable form or materials, and may or may not be provided with a guard or balustrade. E E are the hoistway-guides. F F are rails of any suitable material for the support and guidance of the valves D D. They are attached to the guides E E at one end, and at the other to supports from the floor, and are slightly inclined, as shown, to induce the valves D D to close by their own weight; or the same may be placed or supported in any other manner consistent with the purpose for which they are intended. G G G G are wheels to facilitate the operation of the valves D D, to which they are attached by suitable axles or otherwise, and may or may not be provided with flanges corresponding with the form of the rails F F. In using this invention it is not necessary to have the wheels G G, nor that the valves D D be supported in any particular manner, but they may be supported or operated in any manner consistent with the use for which they are intended. When a hoistway is provided with this invention, as described, the valves D D will be interposed substantially as a floor or partition to the hoistway, which will open and close automatically for the passage of the car.

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

1. Opening and closing hatchways automatically by means of valves running on inclined ways, substantially as described.

2. The valves or their equivalents, substantially as described.

3. In combination with automatically closing and opening valves, the elevating-car with guides C C'.

J. M. BRADNER.

Witnesses:

W. M. MORGAN,
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