

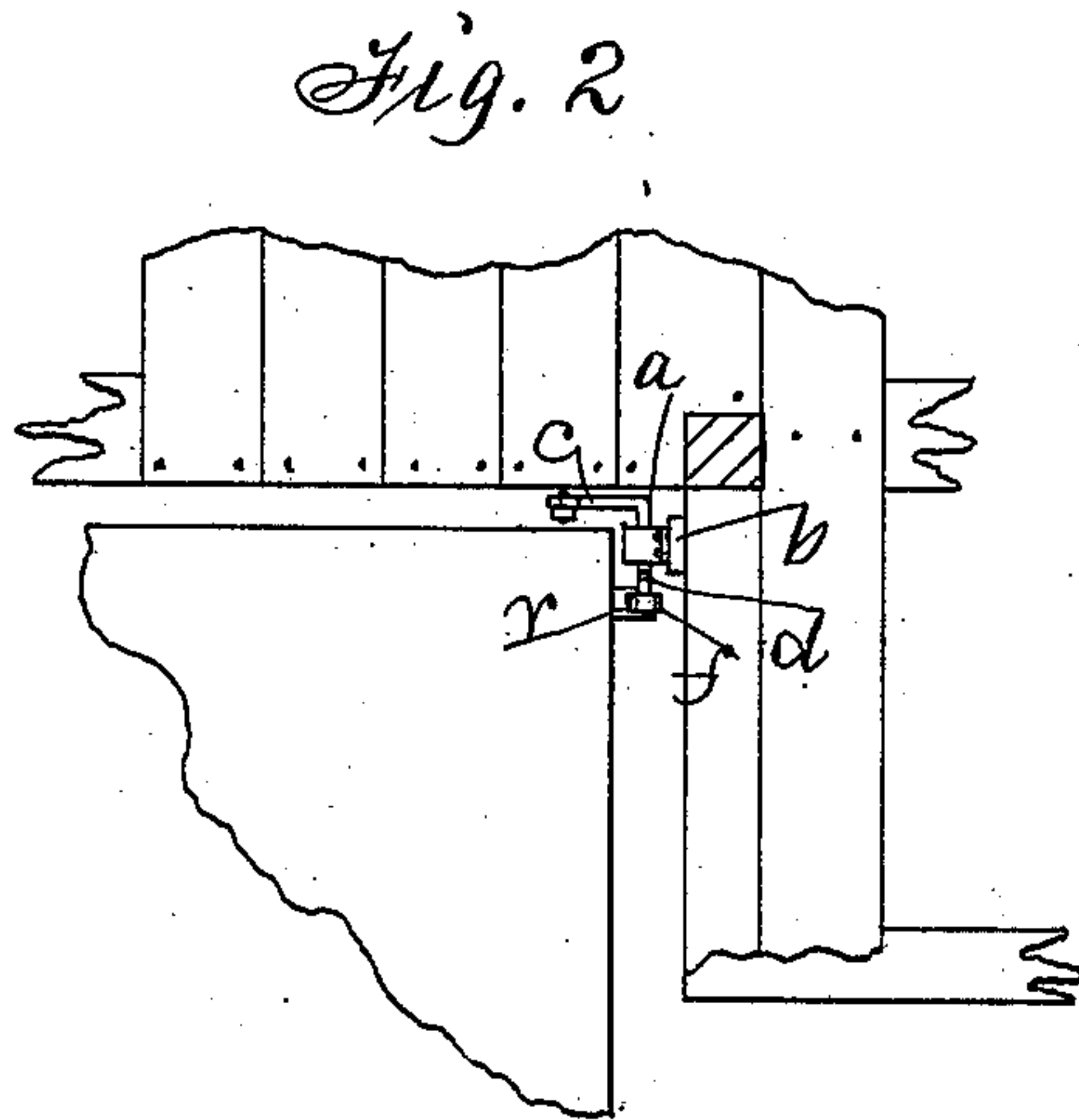
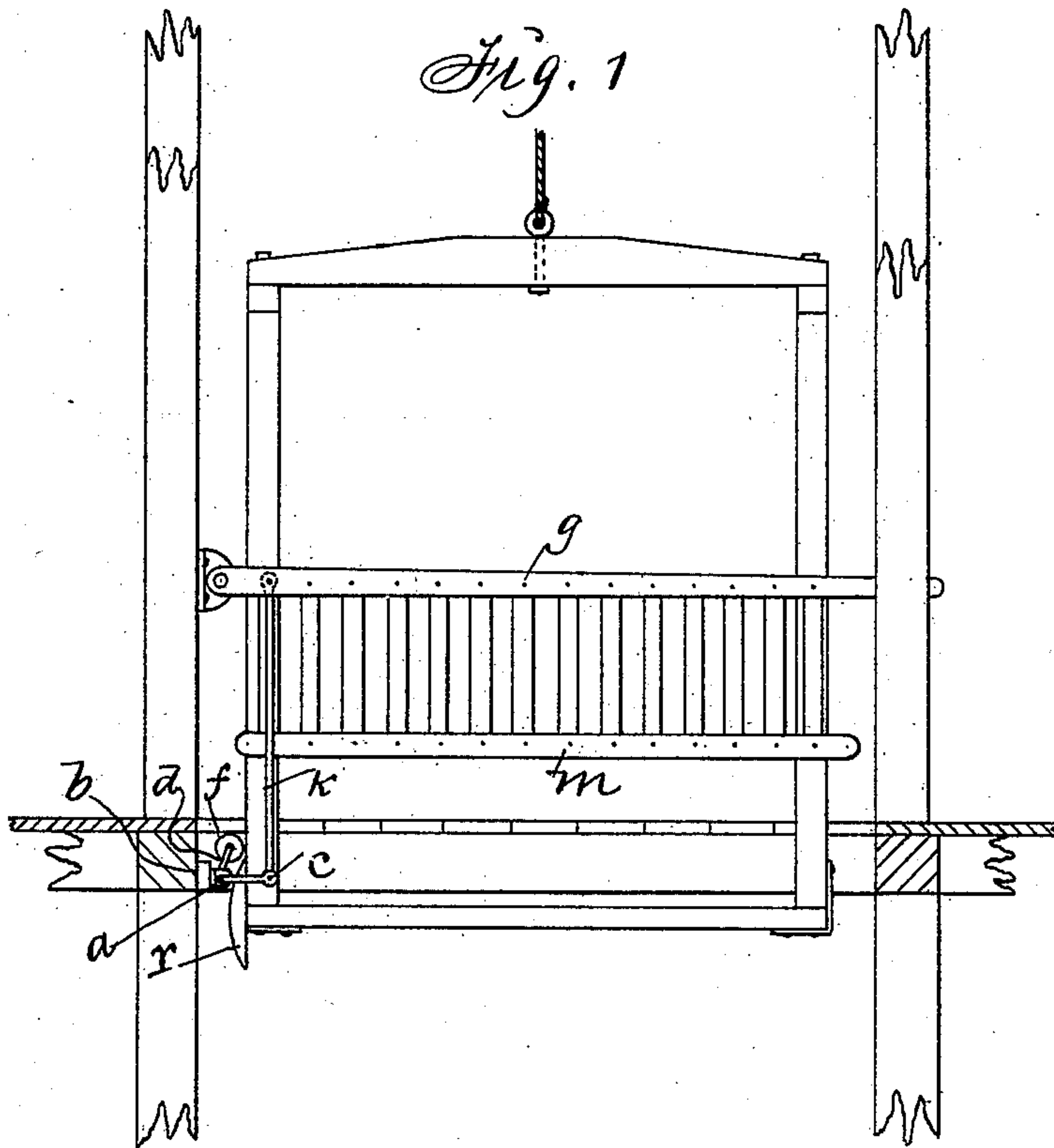
(No Model.)

T. BRADEN.

HATCHWAY GATE FOR ELEVATORS.

No. 361,204.

Patented Apr. 12, 1887.



Witnesses:

R. H. Orwig.

C. N. Stiles.

Inventor:

Tom Braden,

By Thomas G. Orwig, Atty.

UNITED STATES PATENT OFFICE.

TOM BRADEN, OF DES MOINES, IOWA, ASSIGNOR TO WILLIAM H. BRADEN
AND ISABELLA BRADEN, BOTH OF SAME PLACE.

HATCHWAY-GATE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 361,204, dated April 12, 1887.

Application filed May 14, 1886. Serial No. 202,192. (No model.)

To all whom it may concern:

Be it known that I, TOM BRADEN, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Improvement in Guards for Hatchway-Elevators, of which the following is a specification.

Heretofore a bar having a balancing-weight fixed thereto has been fixed direct to a rock-shaft having an arm extending at right angles therefrom and a roller on the end of the arm, and the rock-shaft mounted in an elevated position relative to the floor of the building in such a manner that inclined planes fixed to the vertical guides of the moving cage or platform would engage the roller and rock the shaft, as required, to swing the bar fixed to the shaft. A bar having a weighted end has also been connected with an elevator-frame by means of two fulcrums in such a manner that mechanism connected therewith is actuated by a cam fixed to the platform of the moving elevator, to shift the bar from one fulcrum to the other for the purpose of swinging the bar.

My object is to dispense with balancing-weights, and to impart positive motion to a swinging bar by means of a rock-shaft that is permanently connected with the bar and a single cam fixed to the moving platform, and I accomplish this as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents a section of the floor of a building and an elevator having my invention applied as required for practical use. Fig. 2 is a top view of a section of the floor of a building to which the rock-shaft is attached and a section of the platform of the elevator to which the cam is fixed.

a is a rock-shaft in a bearing, *b*, that is attached to the frame or wall of the opening or hatchway in a floor.

c is a crank on the outer end of the shaft, and *d* is an arm that projects at right angles from the inner end of the same shaft and also at right angles relative to the crank *c*.

f is an anti-friction roller on the end of the arm *d*.

g is a bar pivoted to the corner-post of the elevator-frame, to extend horizontally across the passage-way or approach leading to the hatchway when the platform of the elevator is above or below the level of the floor. A hook may be fixed to the opposite corner of the frame to receive and support the free end of the bar *g*.

k is a connecting-rod pivoted to the bar *g* and the crank *c* in such a manner that when the shaft *a* is rocked and the crank brought into a vertical position the bar *g* will be swung upward into a vertical position.

m represents a flexible gate suspended from the bar *g* in such a manner that it will fold compactly upon the bar when the bar is swung up against the elevator-frame.

r is a cam that has a curved and eccentric face or double-inclined plane. It is fixed against the edge of the elevator-platform in such a position relative to the arm *d* on the rock-shaft *a* that it will come in contact with the roller *f* on the end of the arm whenever the platform is moved from above or below to the level of the floor, and by such contact will rock the shaft, as required, to swing the bar or gate *g* into a vertical position, so that if the platform is retained to receive or discharge freight from the floor the approach or passage-way will be open; and as quick as the platform moves above or below the level of the floor the pressure of the cam upon the arm of the rock-shaft is relaxed and the bar and gate allowed to descend into a horizontal position to close the same passage-way, as required, to prevent persons from falling into the hatchway.

One of my guards or gates may be placed at each end of a hatchway to be operated simultaneously by means of two short rock-shafts and two fixed cams, or by means of a single long shaft that extends across from one corner of the elevator-frame to the other, and has a crank at each end and an arm at its center, and a single cam fixed to the center of the elevator-platform.

I claim as my invention—

The combination of a rock-shaft having a crank, and also an arm extending at right an-

gles therefrom and at right angles to each other in bearings fixed to the elevator wall or frame, a bar pivoted to the corner of the same wall or frame, a rod connected with the
5 crank of the rock-shaft and also with the pivoted bar, and a cam or double-inclined plane fixed to the side of an elevator cage or platform, substantially as shown and described, for the purposes stated.

TOM BRADEN.

Witnesses:

R. H. ORWIG,
THOMAS G. ORWIG.