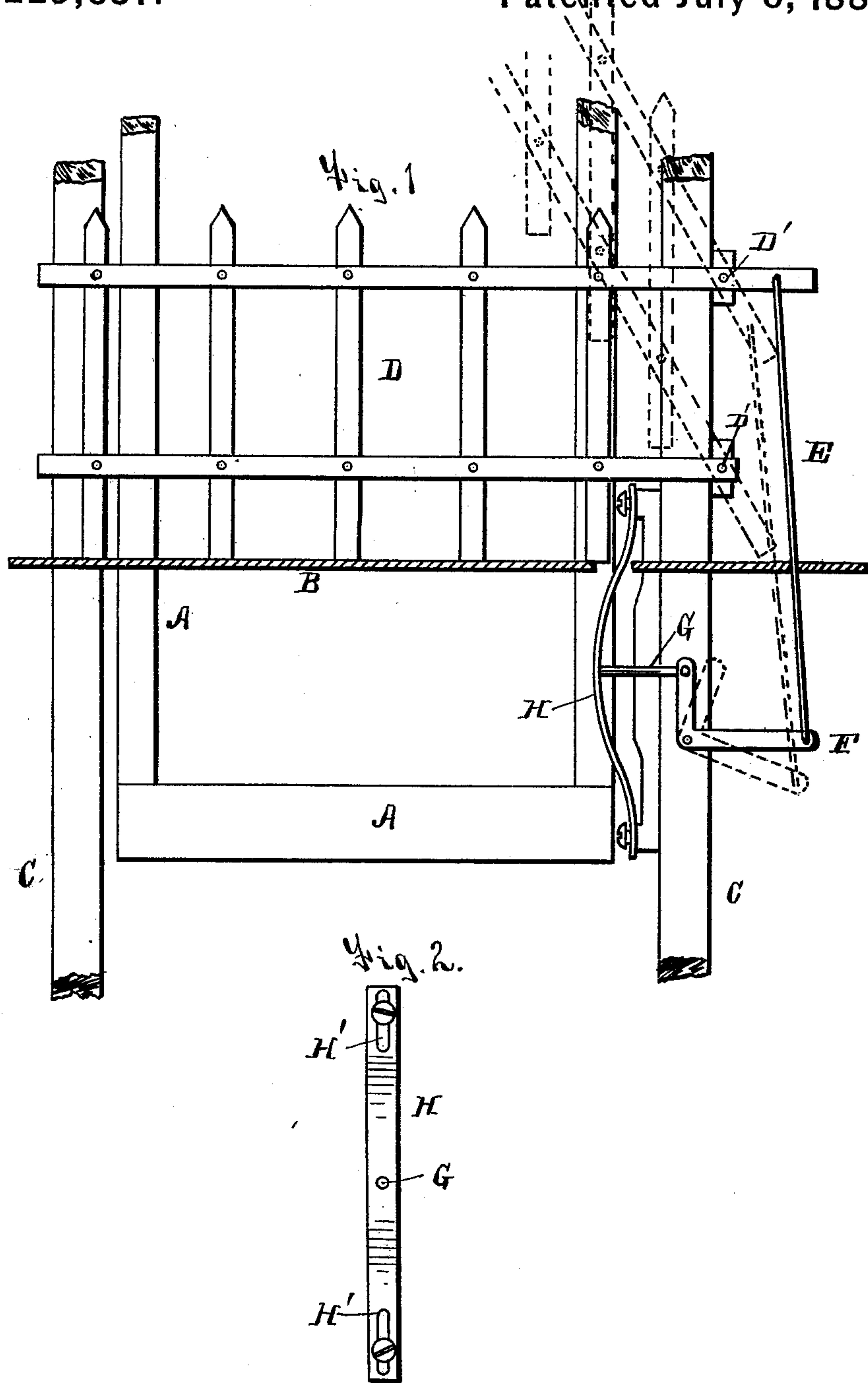


(No Model.)

F. M. BAKER.  
Hatchway Safety Gate.

No. 229,657.

Patented July 6, 1880.



WITNESSES:

Frank M. Yalmer,  
C. W. Weaver.

INVENTOR:

Francis M. Baker,  
By Degett & Degett,  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

FRANCIS M. BAKER, OF SOUTH BEND, INDIANA.

## HATCHWAY SAFETY-GATE.

SPECIFICATION forming part of Letters Patent No. 229,657, dated July 6, 1880.

Application filed April 13, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS M. BAKER, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Elevator Safety-Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to safety-gates for passenger and freight elevators; and it consists in the following-described mechanism, whereby the moving elevator automatically operates to open an exit-gate, which is closed after the elevator has passed the floor at which said gate is placed.

In the drawings, Figure 1 is a view, in side elevation, of a device constructed according to my invention, the solid lines representing the device as closed and the dotted lines showing it open. Fig. 2 is a front view of the spring for closing and operating the gate.

In the said drawings, A is the elevator; B, the floor; C, the guide-posts at the side of the elevator, between which it moves; D, a gate consisting of two parallel stringers united by pickets, said stringers and pickets all pivotally connected and arranged to move together upon the well-known principle of the parallel ruler. Each of the stringers of the gate is pivotally attached, as shown at D', to an upright or gate post.

The upper stringer of the gate extends beyond its pivotal attachment D', to afford an attachment for a link, E, which connects said stringer and right-angled lever or bell-crank F, which is also pivotally attached to the hanger, or to any other convenient place.

I would here state that it makes no difference whether the link E is made to connect the upper or lower stringer of the gate, as either upper or lower stringer might be extended beyond its pivotal attachment to the upright or gate post to afford an attachment for the link E.

To the opposite arm of the bell-crank F to that at which the link E is attached is pivotally connected an arm, which is rigidly attached to the spring H. This spring, at either one or both of its ends, is provided with slots H', through which pass screws or pins for re-

taining it in position against the hanger or other portion of the building convenient for its attachment. There is a rigid connection between the arm G and spring H, so that the pull of the spring, in assuming the position shown by the solid lines in Fig. 1 of the drawings, will operate, as hereinafter shown, to close the gate. This spring H is located and adjusted in such a manner that a sufficient portion of its arched body shall project beyond the plane of motion of the elevator, so that in moving up and down past the spring H the elevator will at the proper time impinge against the spring H and press it inward.

The operation of my device is as follows: When the elevator is not in the vicinity of the floor where my gate is located the spring H will pull forward, through its arm G, the bell-crank F to the position shown by the solid lines in Fig. 1 of the drawings, thus closing the gate D down upon the floor. When, however, the elevator comes to the floor, it will, by impinging against the spring H, push it inward, and thereby turn the bell-crank F and open the gate, as shown by the dotted lines in Fig. 1 of the drawings.

The slots H' of the spring H are provided to permit the spring to be thus operated upon by the elevator without strain or liability to break.

I am aware that a vertically-swinging hatchway gate or guard has been operated by means of a curved bar attached to the elevator-cage and adapted to strike a curved lever connected with the gate by means of a rope, and hence I would have it understood that I make no claim to such construction and combination of parts.

What I claim is—

The combination, with an elevator-cage, of an arched spring, H, attached at both ends to the elevator-guide, an arm, G, bell-crank lever F, and link E, the latter pivoted at one end to the bell-crank lever and at its other end to the vertically-swinging gate, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS M. BAKER.

Witnesses:

TOBIAS F. MILLER,  
JOHN F. SELL.