No. 720,216. PATENTED FEB. 10, 1903.

J. BAYER & H. W. WIGAN.

HATCHWAY GATE.

APPLICATION FILED MAY 16, 1902.

NO MODEL.

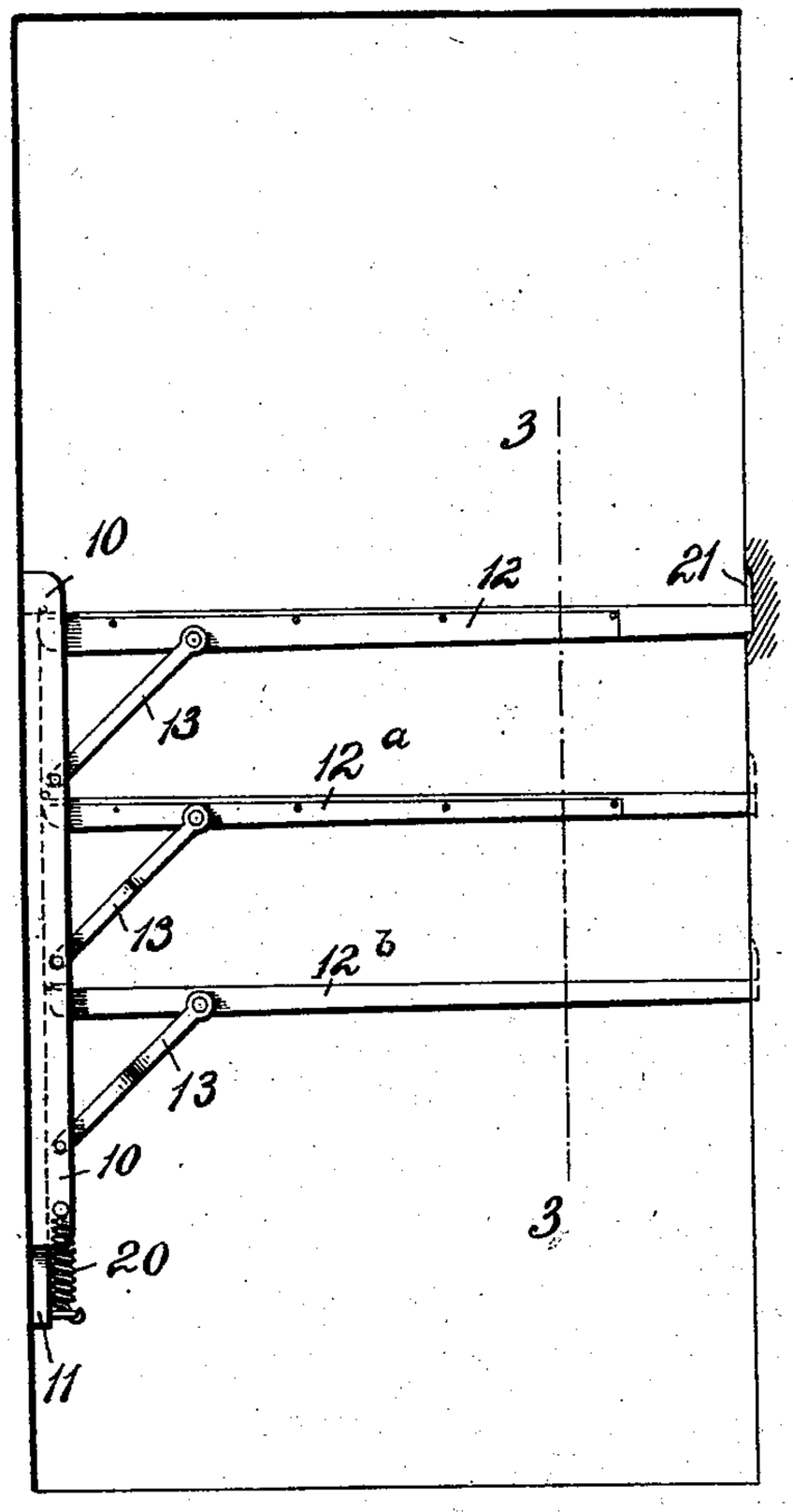

FIG. 1.

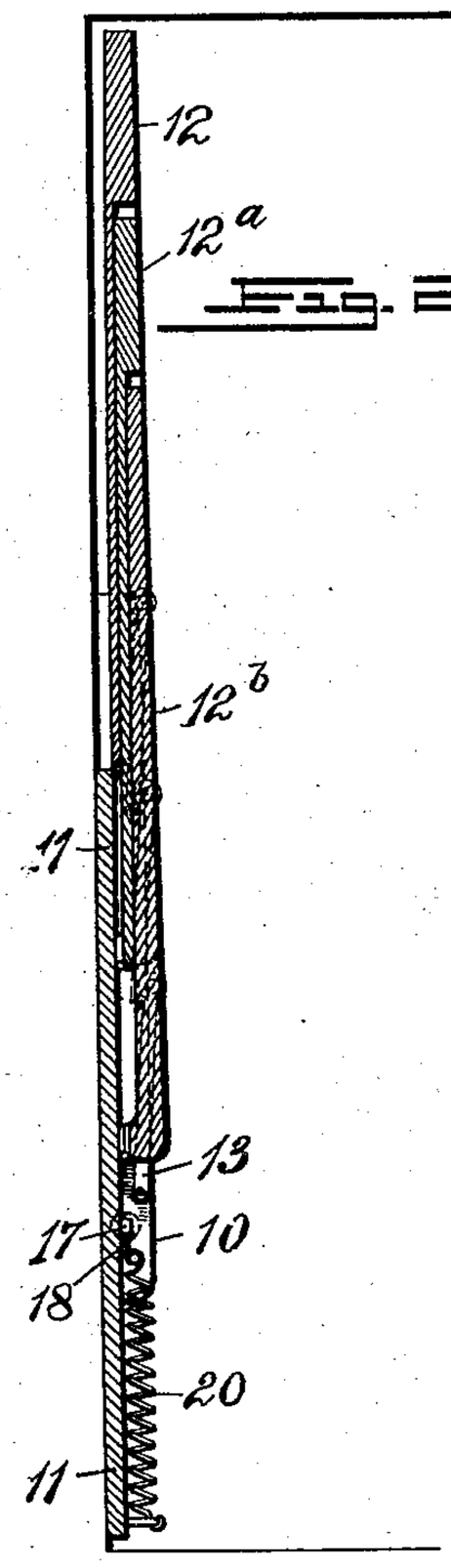

FIG. 2.

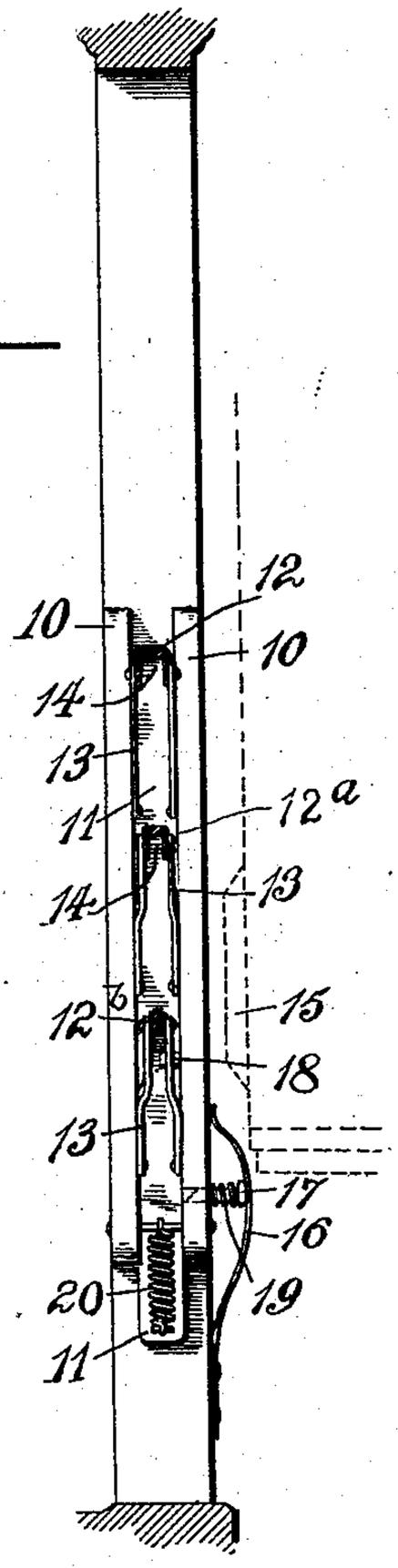

FIG. 3.

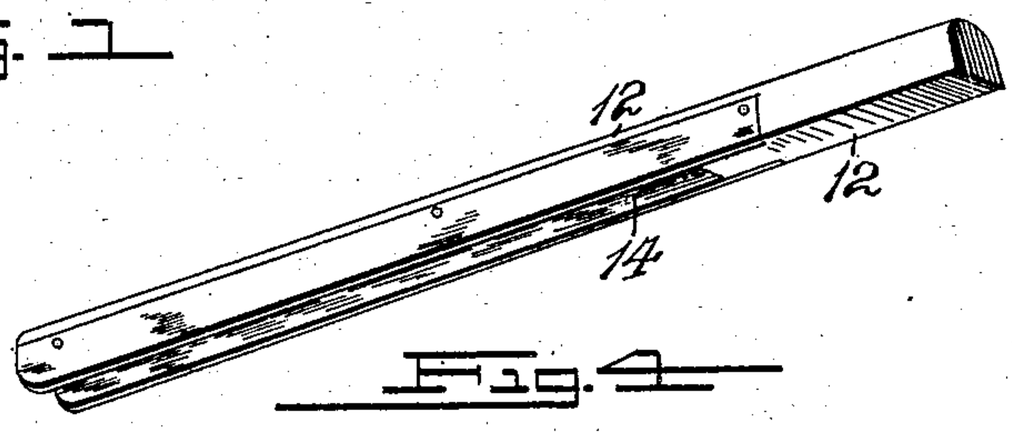

FIG. 4.

WITNESSES:

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HATCHWAY-GATE.

SPECIFICATION forming part of Letters Patent No. 720,216, dated February 10, 1903.

Application filed May 16, 1902. Serial No. 107,651. (No model.)

To all whom it may concern:

Be it known that we, JOHN BAYER and HERBERT W. WIGAN, of the city, county, and State of New York, have invented certain new and useful Improvements in Hatchway-Gates, of which the following is a full, clear, and exact description.

The novel construction herein shown is designed to provide a closure for the doors leading to elevator-shafts or hatchways, and is adapted to provide when closed a series of parallel lateral bars that fold up against one another when opened.

The invention furthermore provides a hatchway-gate that is operated by hand when it is desired to open it, but is closed automatically by the departure of the elevator-car from the doorway.

A special object of our invention is to produce a hatchway-gate which can swing easily in doorways that are too low for an ordinary gate.

A further object is to furnish a guard that will fold up very close to the edge of the door to allow the greatest amount of space for the departure or entrance of passengers or goods from or into the car.

With these ends in view we have devised a hatchway-gate hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a view of a doorway provided with the improved gate. Fig. 2 is a central section thereof with the gate open, and Fig. 3 is a cross-section thereof on line 3 3 in Fig. 1. Fig. 4 is a detail view of one of the bars.

In said views a pair of strips 10 are secured to the inner side of one of the door-frames, forming a guide for the sliding strip 11, which has pivoted thereto a series of any suitable number of bars 12, 12^a, and 12^b, which are each provided with a pair of links 13, which are in turn pivoted to the inner sides of the strips 10. The bars, with the exception of the lower one, are cut away underneath, as at 14, to allow the admission of the next adjacent lower bar when the device is folded. The bars are therefore necessarily of slightly less width, as they are arranged beneath one another, so that they may fit in the cut-away portions 14 aforesaid.

When it is desired to open the gate, any of the bars is raised to swing on its pivot, and the links 13, acting as fulcrums, cause a downward sliding movement of the strip 11, carrying the ends of all the bars with it, and as the bars fit into one another, as above described, they assume the position shown in Fig. 2. The downward movement of the pivotal support drops the bar sufficiently to allow the outer end of the uppermost to clear the under side of the top of the door-frame.

If a car is at the door-level, a projection 15 on the car bears against a strip 16 to move a latch 17 in to engage a block 18 or its equivalent on the strip 11 and hold the gate open, as in Fig. 2. As soon as the car moves sufficiently to cause the block 15 to clear the strip 16 a spring 19 causes the latch to move out of engagement with the block 18, and a spring 20 will move the strip 11 upward to close the bars until their ends come in contact with a suitable stop on the opposite side of the door-frame, a groove 21 being illustrated in the views as one means.

It will be understood that if the pivotal support were fixed the upper bar would strike the upper part of the door-frame or the bars would have to be placed very low.

The sliding pivots allow the clearance necessary, and the top bar is high enough to thoroughly protect the doorway.

We have thus devised a positively-acting compactly-closing hatchway-gate that is adapted to be manually opened and to be automatically closed by the departure or in the absence of the elevator-car.

While we have shown a series of three bars, it is obvious that any necessary or desired number may be used, according to circumstances.

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

1. A gate for doorways comprising a movable support, and parallel bars pivoted to the said support, each of said bars being adapted to lie in the next adjacent bar when the gate is opened.

2. A gate for doorways comprising a movable support, parallel bars pivoted to the support, the bars being arranged so that each bar can lie in the next adjacent when the gate is opened, and links secured to the said bars and to the door-frame.

3. A gate for doorways comprising a mov-

able support, a series of parallel bars pivoted to the said support and swinging in the same plane, each of the said bars being adapted to lie in the next adjacent bar when the gate is open, links secured to the said bars and to the door-frame, and a spring arranged to close said gate on the release of the bars.

4. A gate for doorways, comprising a movable support, a series of parallel bars pivoted to the supports and swinging in the same plane, the bars being arranged to lie one within the other when the gate is opened, links secured to the said bars and to an adjacent stationary support, and means for holding the gate in its open position.

5. A gate for doorways comprising a movable support, a series of parallel bars pivoted to the support and swinging in the same plane, the bars being arranged to lie one within the other when the gate is opened, links secured to the said bars and the door-frame, means for holding the gate in open position, and means for closing said gate on the release of the holding means.

6. A gate for doorways comprising a vertically-movable support, a series of bars pivoted to the support and swinging in the same plane, the bars being recessed on the under side so that one may lie within the other, a latch operating to lock the gate in its open position, and a spring for closing said gate on the release of the latch.

7. A gate for hatchway-doors comprising a vertically-moving support, a series of doors pivoted on the said support and adapted to swing vertically, the bars being recessed on one edge so that one may lie within the other when the gate is opened, a spring-actuated latch arranged to hold the said gate in its open position, said latch being released by the removal of pressure from it, and a spring for closing the gate on the release of the latch.

8. A gate for hatchway-doors comprising guides on the door-frame, a vertically-sliding strip or support in the said guides, a series of bars pivoted on the sliding strip and arranged to lie one within the other when the gate is open or folded, a latch to hold the gate open, means for releasing the latch by the removal of pressure upon it, and means for closing said gate automatically on the release of the latch.

9. A gate for doors comprising a movable support, a gate member pivoted on the said support, said support being arranged to move downward by the upward movement of the gate member, and means actuated by an elevator-car to hold and release the gate.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN BAYER.
HERBERT W. WIGAN.

In presence of—
A. C. KOLB,
J. LOUIS LUTJEN.