

(No Model.)

J. A. WEAVER, Jr.  
SAFETY CATCH FOR DOORS.

No. 526,881.

Patented Oct. 2, 1894.

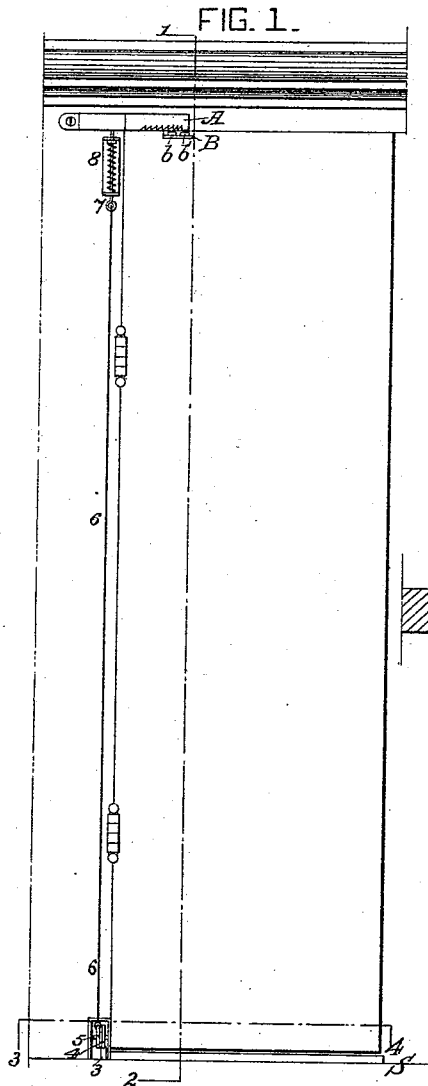


FIG. 3.

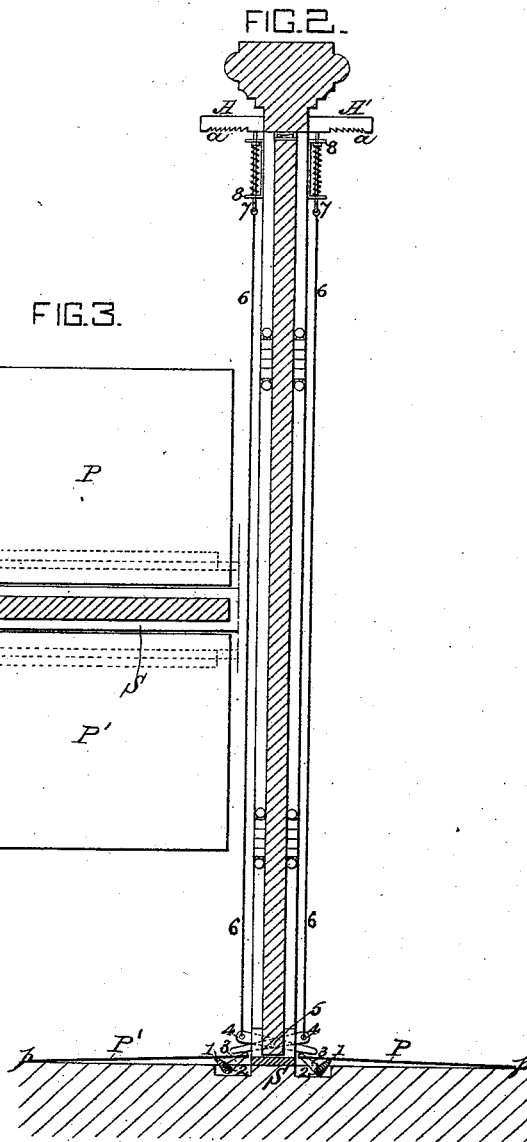
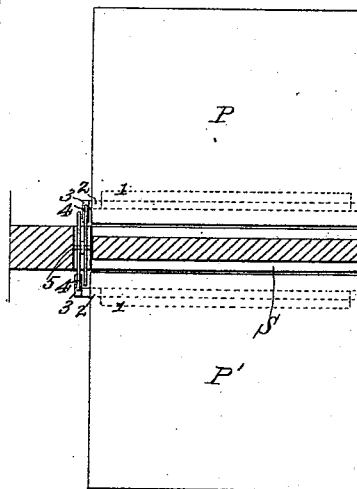


FIG. 4.

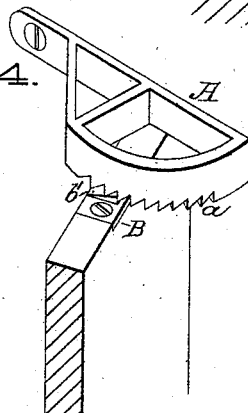


FIG. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOSEPH A. WEAVER, JR., OF NEW YORK, N. Y.

## SAFETY-CATCH FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 526,881, dated October 2, 1894.

Application filed May 15, 1894. Serial No. 511,340. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH A. WEAVER, JR., a citizen of the United States, and a resident of New York city, New York, have invented an Automatic Safety-Catch for Doors, of which the following is a specification.

The object of my invention is to provide swinging doors with means for preventing or avoiding injury to a person about to pass through the doorway by the return swing of the door after a person immediately preceding has passed through. For this purpose I provide an automatic catch which is normally out of position for engagement with the door, but so combined with a platform as to be thrown into position to catch and hold the door-way by the weight of a person stepping on the platform as he approaches and so to hold the door back until he has passed through the doorway sufficiently far to avoid injury from the return swing of the door, when it is released.

In the accompanying drawings, Figure 1 is an elevation of sufficient of a doorway and door provided with my improvement, to illustrate my invention. Fig. 2 is a vertical section on the line 1—2, Fig. 1. Fig. 3 is a sectional plan on the line 3—4, Fig. 1. Fig. 4 is an enlarged perspective view of a form of catch which may be used in carrying out my invention. Fig. 5 is a perspective view of catches which may be employed upon the swinging door.

My invention is more particularly applicable to double-swing doors with spring hinges, as for instance in the case of doorways affording communication between adjoining rooms (dining room and serving room of a hotel for instance), or storm doors of public places, such as ferry-houses, railway stations, large stores, &c. In such places, where persons are apt to pass through the doors in more or less quick succession, it usually happens that a person, after pushing the door open and passing through, lets it fly back with a slam, such that it will be apt to strike against, and in some cases may seriously injure, the next person, if the latter happens to be about to step up to or over the door-sill. My invention is particularly designed to prevent such accidents.

I therefore provide the door with a catch device which is normally out of position for engagement with the door, but is automatically thrown into action to hold the door, which when it has been thrown open by a person passing through, is about to fly back under the action of the spring hinge, and this is accomplished without any care or attention on the part of the person approaching the doorway, for I utilize his weight for the purpose, that is to say, if that person has come sufficiently near to be liable to be struck by the door as it flies back.

While I do not wish to confine myself to special details of construction, I have in the accompanying drawings shown one construction which is suitable for carrying my invention into effect. In these drawings I have only shown my invention in connection with a single door, but it will readily be understood that the construction needs simply to be duplicated for a pair of swing doors.

I provide upon the floor-way on opposite sides of the door-sill *S* platforms *P*, *P'*, which at their outer ends *p*, away from the door, may rest upon the floor, while at their inner ends, near the door-sill, they are normally raised up a very short distance above the level of the floor, so as to be capable of a slight downward movement under the weight of a person stepping on them.

On the door itself preferably at the top, I provide a catch plate or catch plates *B*, and in this instance I have shown it as made in one casting or forging with two teeth *b b'* reversed, as illustrated in Fig. 5. Upon the door frame or jamb, on opposite sides thereof, I provide movable catches to co-operate with those on the door. In the present instance I have shown these movable catches as pivoted gravity catches *A*, *A'* each having a series of teeth *a* like ratchet teeth, formed on the arc of a circle, corresponding with that described by the corresponding catch on the door as the latter swings upon its hinges.

I provide such suitable connection between the platform *P* on the one side of the door with the movable catch *A* on the other side of the door jamb that a person stepping on the platform *P* will throw the catch *A* into action to engage with the catch on the door to hold

it open until the person has passed off the platform P. Similarly catch A' is thrown into action when the platform P' is stepped upon.

As a suitable connection between each platform and the catch to be controlled by it, I may use the following:—In suitable recesses in the floor I provide crank rods 2 mounted in bearings and having elongated cranks 1 which support the raised ends of the platforms P P'. At the end of each of these rods, adjacent to the door jamb is an arm 3 which is arranged to act upon the end of a rod 4 pivoted at 5 on a suitable axis in the door jamb or in a frame adjacent thereto. The opposite end of each of the two levers 4 is connected by a wire 6 or other suitable means to a spring rod or bolt 7 in the guide 8 secured to the door jamb, this spring rod being of such a character as to bear upon the under side of the pivoted gravity catch A (A') and normally keep it raised out of the path of the corresponding catch plate B upon the door. When, however, one of the platforms is stepped on and pressed down, the arm 3 of

the crank rod 2 will so act upon the lever 4 that the spring rod or bolt 7 will be drawn down against the push of its spring, and the gravity catch A (A') will be allowed to drop into position to engage with the catch upon the door, as illustrated in Fig. 4.

I claim as my invention—

The combination of a swinging door with a catch device therefor normally out of position for engagement with the door, a platform and means connecting the platform with the said catch device to throw the latter into position to catch and hold the door by the weight of a person stepping on the platform as he approaches the door, substantially as and for the purpose described.

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

JOSEPH A. WEAVER, JR.

Witnesses:

EDITH J. GRISWOLD,  
HUBERT HOWSON.