(No Model.)

R. WRIGHT.

PNEUMATIC DOOR CHECK.

No. 560,668. Patented May 26, 1896.

Fig. 1.

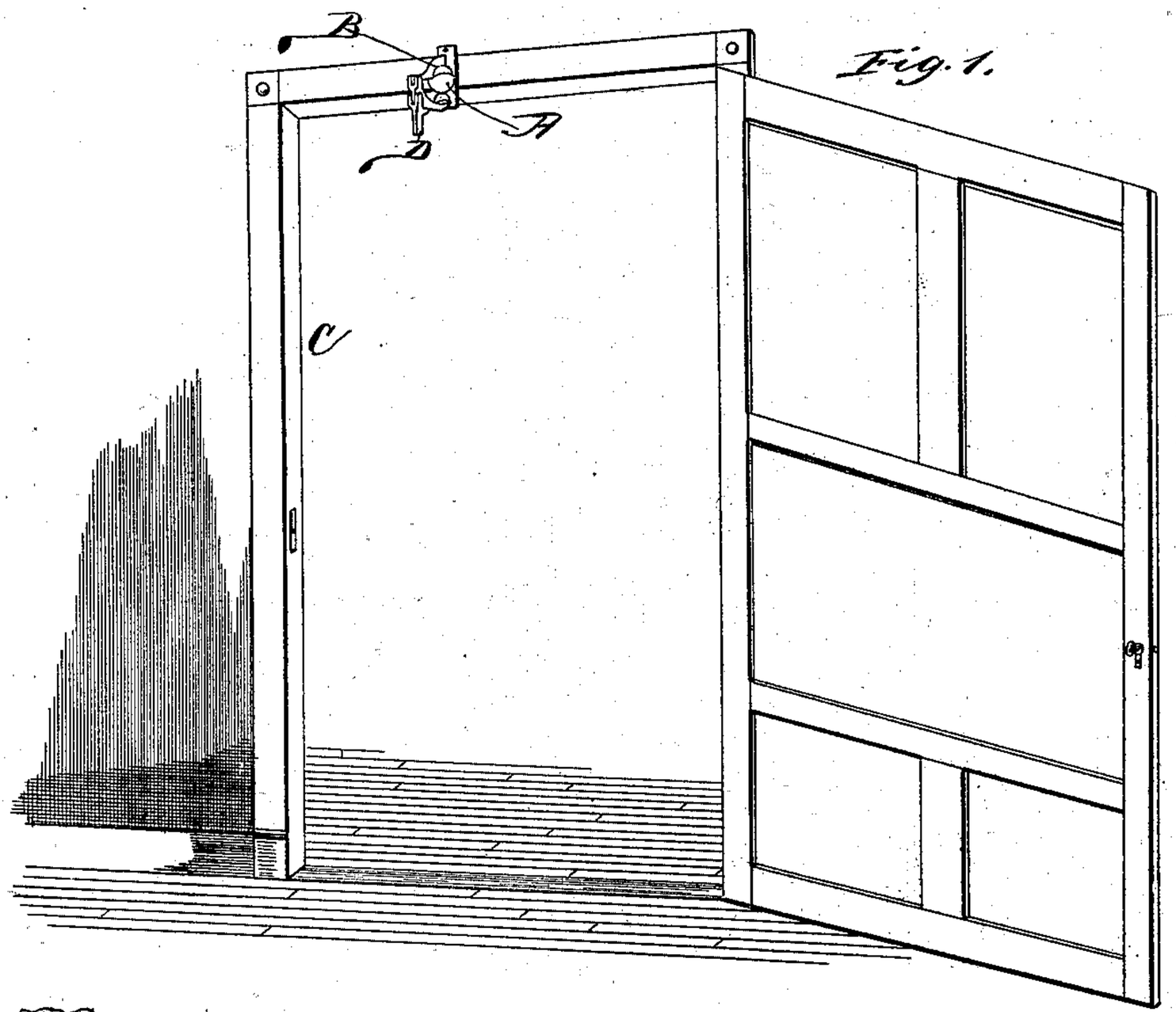


Fig. 2.

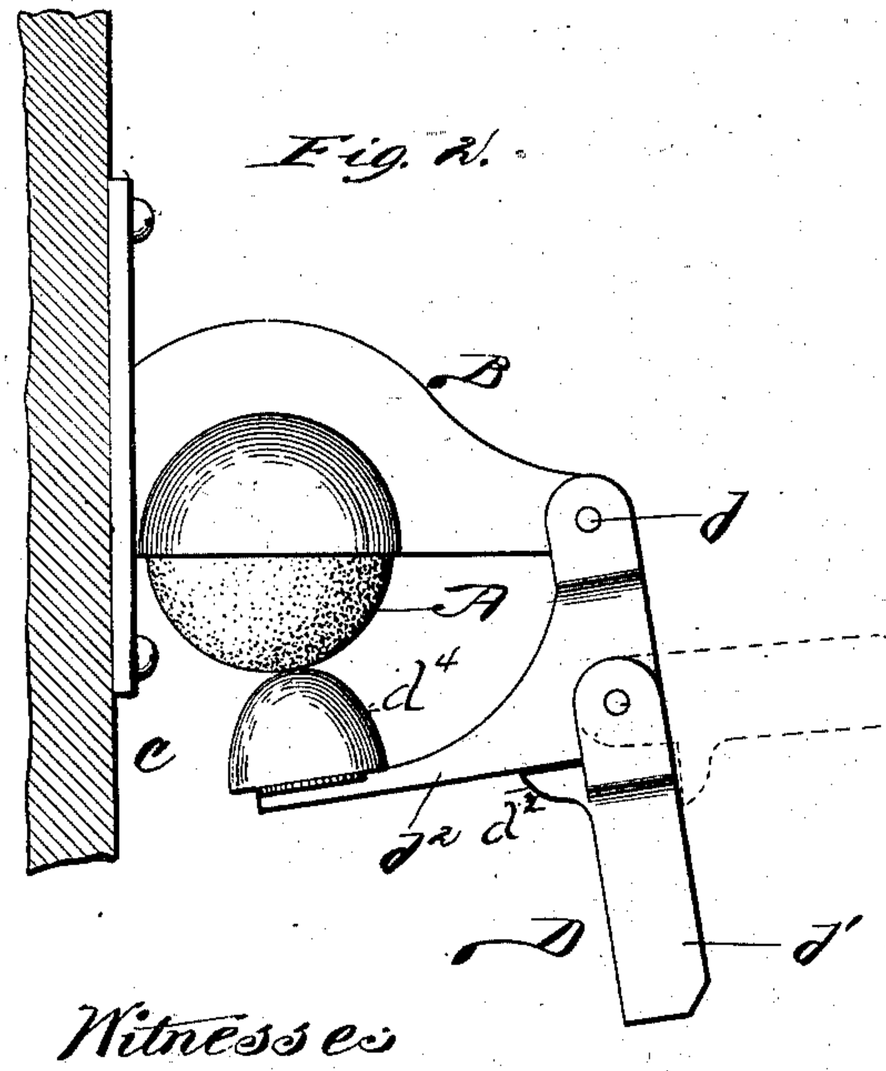
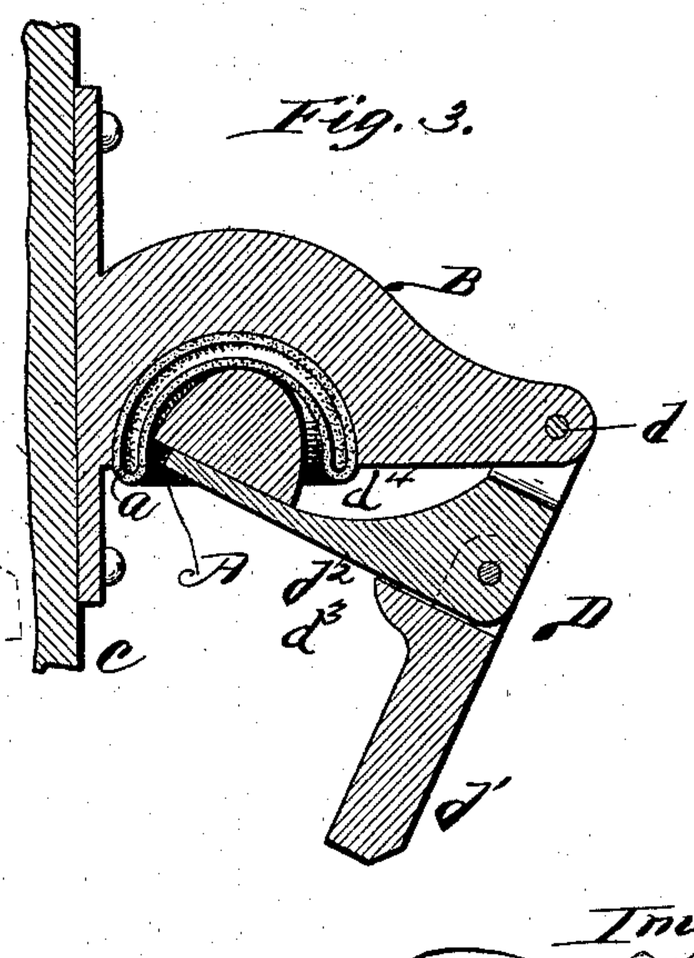


Fig. 3.



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UNITED STATES PATENT OFFICE.

RUFUS WRIGHT, OF CHICAGO, ILLINOIS.

PNEUMATIC DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 560,668, dated May 26, 1896.

Application filed November 19, 1892. Serial No. 452,514. (No model.)

To all whom it may concern:

Be it known that I, RUFUS WRIGHT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Pneumatic Door-Checks, of which the following is a specification.

My improved pneumatic door-check comprises a movable or swinging abutment and an air-cushion arranged in opposition to the action of the abutment, so as to prevent the door from slamming. The abutment carries a latch or dog, which is arranged normally to stand in the way of the door, whereby the latter in closing will engage the dog, and thereby cause the abutment to swing in a direction to engage and compress the elastic air-cushion. In order to permit the door to be easily swung open, the dog is hinged to the abutment in such a manner that it will be free to swing in one direction, and hence when the door is opened it will engage the dog, which will thereupon yield independently of the abutment. The air-cushion is provided with a small vent, which is constantly open, in which way injury to the air-cushion is prevented when the abutment is forcibly backed against it, and, further, a gradual yielding resistance having a comparatively extended range of action is provided. The device can be arranged upon either the door or the frame of the doorway, as may be preferred. When positioned upon the frame of the doorway or other like support adjacent to the latter, the arrangement is such that the door in closing will at a proper moment engage the dog and force the same in a direction to cause the abutment to engage the air-cushion, which will thereupon yield to pressure, but oppose the movement of the door. When the air-cushion has yielded to a suitable extent, the dog will be in position to allow the door to clear it and close.

In the accompanying drawings, Figure 1 represents in perspective a doorway and door with my improved pneumatic check arranged over the doorway. Fig. 2 represents the pneumatic check in side elevation and on a larger scale, a portion of its support, which may be the frame of the doorway, being shown in vertical section. Fig. 3 is a vertical section through the same with the swinging abutment in position to compress the air-cushion.

The elastic air-cushion A is seated within and held by a suitable holder B, which latter can be secured to any preferred support—such, for example, as the frame C of the doorway. The air-cushion is provided with a vent *a* and is formed by a hollow elastic ball, although I may obviously vary its shape, and hence do not confine myself to the spherical form. The swinging abutment D is pivoted to the holder at *d* and is provided with a latch or dog *d'*, arranged to hang normally or stand in the way of the door, so that in closing the latter it will engage and push the dog in a direction to cause the abutment to engage and compress the air-cushion. The air-cushion is adapted to yield to an extent to allow the door to pass the dog at a time when the action of the door has been so impeded as to prevent it from slamming, the position of the dog at such juncture being illustrated in Fig. 3. As soon as the door has cleared the dog and has closed, the air-cushion will resume its normally-distended condition and the dog and abutment will swing back to their original positions. In order to permit the door to be easily opened, I prefer hinging the dog to the portion d^2 of the abutment by a rule-joint, such connection permitting the dog to swing outward and independent of the abutment when the door is opened.

In order to cause the dog to assume a rigid relation to the abutment when the door is being closed, I provide the dog with a lug or stop d^3, adapted to bear upon the abutment, as clearly shown in Fig. 3, and by this arrangement the motion from the door in closing is imparted to the abutment and causes it to compress the air-cushion in the manner already described.

Where a spherical air-cushion is employed, as illustrated in this instance, the free end of the abutment is provided with a rounded knob or button d^4 for compressing the said cushion.

What I claim as my invention is—

1. A door-check comprising an elastic air-cushion, a movable abutment, and a dog or the like hinged to the abutment so as to swing in one direction independently of the same, the abutment being forced against the air-

cushion by the dog when the latter opposes the closing of the door, and the dog being swung independently of the abutment when it opposes the opening of the door, substantially as described.

2. A door-check comprising a holder, an elastic air-cushion held therein and having a normally open vent, a swinging abutment carried by the holder and having its free end provided with a surface for engaging the said cushion, and a dog hinged to the abutment and having a stop, substantially as and for the purpose specified.

RUFUS WRIGHT.

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