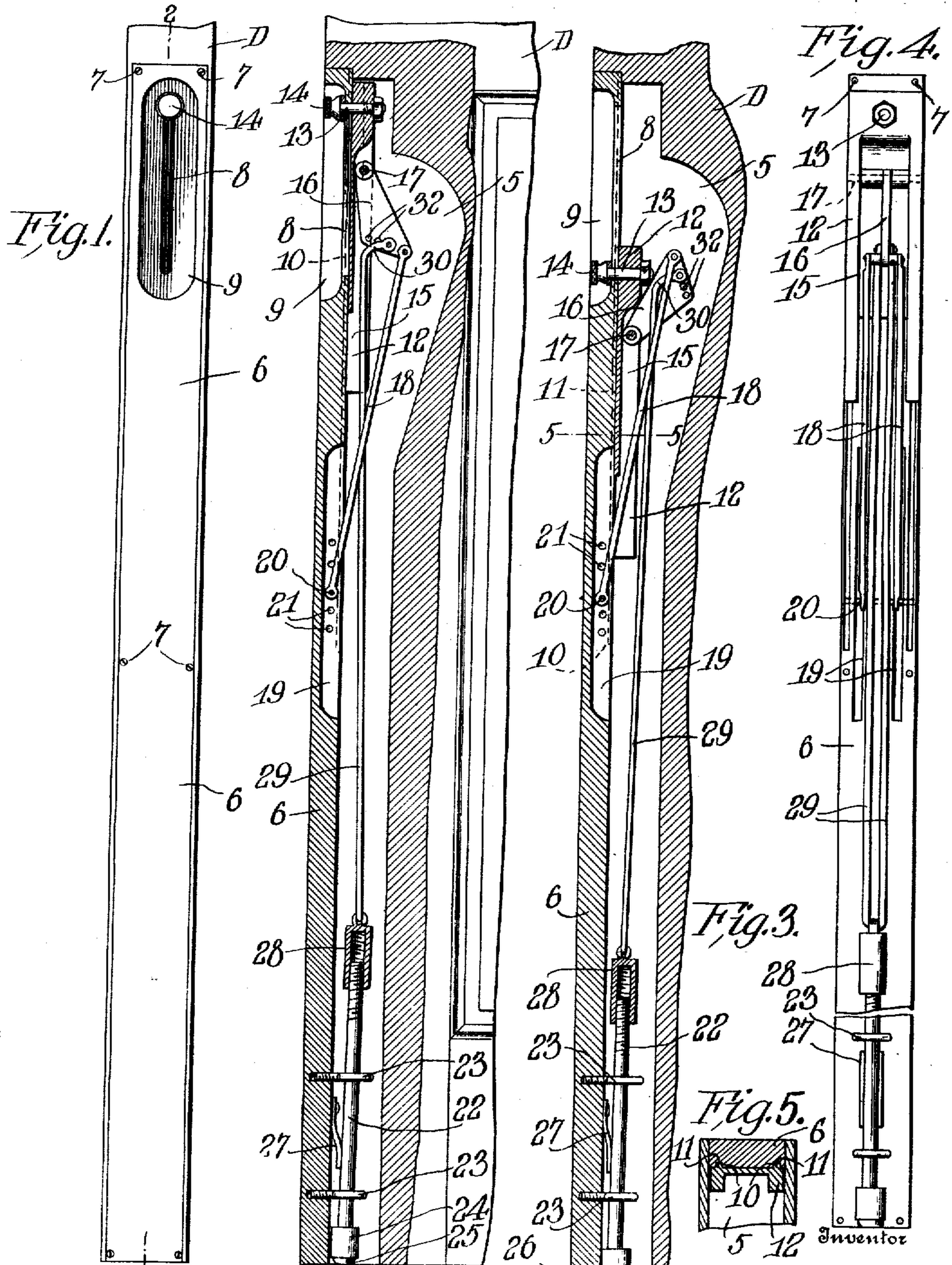


C. S. HENDRICK.
DOOR RETAINER.
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910,815.

Patented Jan. 26, 1909.



Witnesses
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Fig. 2.

By

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UNITED STATES PATENT OFFICE.

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DOOR-RETAINER.

No. 910,815.

Specification of Letters Patent.

Patented Jan. 26, 1909.

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To all whom it may concern:

Be it known that I, CHARLES S. HENDRICK, a citizen of the United States, residing at Clinton, in the county of Dewitt and State of Illinois, have invented certain new and useful Improvements in Door-Retainers, of which the following is a specification.

This invention relates to that class of devices which are known as door retainers, and which are used for the purpose of retaining an open door in the desired position in such a manner that it will not be slammed shut by drafts of air or other causes.

The invention has for its object to simplify and improve the construction and operation of this class of devices; and with these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be resorted to when desired.

In the drawings—Figure 1 is an edge view of a door to which the invention has been applied. Fig. 2 is a vertical sectional view taken on the plane indicated by the line 2--2 in Fig. 1, and showing the retaining device raised to an inoperative position. Fig. 3 is a sectional view similar to Fig. 2, but showing the retaining device lowered into active engagement with the surface of the floor for the purpose of retaining the door in adjusted position. Fig. 4 is a rear elevation showing the retaining device detached from the door. Fig. 5 is a horizontal sectional detailed view taken on the plane indicated by the line 5--5 in Fig. 3.

Corresponding parts in the several figures are denoted by like characters of reference.

The outer edge of the door D to which the improved retaining device is to be applied, is provided with a recess or mortise 5, forming a pocket of suitable dimensions to accommodate the face plate 6, and the parts of the retaining device which are connected with the said face plate will be presently described. The face plate, which extends from the lower

edge of the door upwardly to a point which may be conveniently reached by the operator, may be secured in position by means of screws 7, or equivalent fastening members, and said face plate is provided near its upper end with a vertical slot 8, formed at the bottom of a recess 9 in the outer side or face of the plate. The inner or rear side or face of the plate 6 is provided with vertical grooves 10, for the reception of guide ribs 11, formed upon the adjacent side or face of a slide 12, which is supported for vertical movement upon the rear side of the face plate with which it is connected by means of a bolt 13, the outer end of which constitutes, or is provided with, a thumb piece 14 accommodated in the recess 9; the bolt extending through the slot 8 at the bottom of said recess.

The inner face of the slide 12 has a vertical groove or recess 15, near the upper end of which a triangular plate 16, which may be regarded as constituting a bell-crank lever, is pivotally mounted upon a transverse pin 17. Supporting rods or links 18, one at each side of the plate or lever 16, connect the latter with the face plate 6, the rear side of said face plate being provided with a vertical groove or recess 19, for the accommodation of the lower extremities of the rods or links 18, which are pivotally supported in said recesses upon a transverse pin 20, which latter is capable of adjustment in a plurality of transverse apertures 21, thus enabling vertical adjustment of the supporting rods and allied parts to be readily effected.

22 designates a plunger rod which is slidably supported in a pair of eyes 23, upon the inner side of the face plate 6, near the lower extremity of the latter. Said plunger rod has as its lower end a socket 24, wherein is fitted a cushion 25 of rubber or other suitable material adapted for engagement with the surface of the floor, which is indicated at 26; a spring 27 secured upon the face plate bears against the plunger rod to prevent rattling. The upper extremity of the plunger is screw threaded, and is fitted adjustably in a cap 28, which latter is connected by means of a pair of links or rods 29 with the plate or lever 16; said links or rods being bent near their upper ends, adjacent to the plate 16, as shown at 30, for the purpose of imparting to said rods a degree of resiliency which will be found effective to cause the plunger to be held in contact with the surface of the floor when the device is in operation,

with the proper degree of elasticity. The spring 27 engaging the plunger rod 22 will also serve to retain the latter in adjusted position in the cap 28 without danger of accidental displacement.

The operation and advantages of this invention will be readily understood from the foregoing description taken in connection with the drawings hereto annexed. The improved retaining device is capable of being readily applied to any ordinary door by forming in the outer edge of such door a recess or mortise of proper dimensions to accommodate the retaining device. The latter is capable of being accurately adjusted to the varying distances between the lower edges of the door and floor surfaces, first by properly adjusting the lower extremities of the supporting links or rods 18 with reference to the face plate 6, by shifting the pivotal pin 20 to the proper apertures 21, and afterwards by properly adjusting the plunger rod 22 in the cap 28. By manipulating the thumb-piece 14, the slide 12 may be moved upwardly to the position shown in Fig. 2, thus raising the plunger within the recess or mortise 5, until the cushion 25 is approximately at the level of the lower edge of the door; by manipulating the thumb-piece to push the slide 12 downwardly to the position shown in Fig. 3, the position of the lever 16 will be reversed and the plunger will be forced downward, placing the cushion 25 in frictional engagement with the surface of the floor and thus retaining the door in the partly open position to which it may have been adjusted; the device being securely retained in this position owing to the fact that the upper pivotal extremities of the supporting rods 18 are thrown forward of the pivoted upper ends of the rods 29, thus locking the parts securely in position until readjusted by means of the thumb piece 14.

The plate or lever 16 is preferably provided with a plurality of apertures 32, in order to enable the upper extremities of the rods 29, to be connected adjustably with said plate or lever.

This improved device, as will readily be seen, is simple in construction and may be easily operated; it presents a neat appearance, and will be found thoroughly efficient for the purposes for which it is provided.

Having thus described the invention what is claimed is—

1. In a device of the character described,

the combination of a face-plate having a slot near its upper end and a recess in its front side adjacent to said slot, a slide vertically movable upon the rear side of the face plate and having a bolt extending through the slot in the latter and equipped with a thumb piece accommodated within the recess, a floor engaging plunger guided upon the rear side of the face plate at the lower end of the latter, a lever pivoted upon the slide near the upper end of the face plate, supporting means connecting said lever with the face plate and resilient connecting means connecting the lever with the plunger.

2. A door retaining device comprising, in combination, a face plate, a slide guided upon said plate near its upper end, and having a thumb piece, a floor engaging plunger guided upon the face plate adjacent near its lower end, a triangular plate pivoted upon the slide and constituting a lever, supporting links pivoted upon the opposite sides of said plate, a pivotal pin connecting the lower ends of said links adjustably with the face plate, and bent resilient rods connecting the plate or lever with the plunger.

3. In a door retaining device of the character described, the combination of a face plate having a slot near its upper end, a slide having ribs guided in grooves upon the inner side of the face plate near its upper end, a connecting bolt extending from the slide through the slot of the face plate, said slide and face plate being provided with recesses upon their inner or rear sides, a triangular plate pivoted in the recess of the slide, supporting links connected pivotally with said plate, means for supporting the lower ends of said links pivotally and adjustably in the recess upon the rear side of the face plate, a vertically slidable plunger guided upon the rear side of the face plate near its lower end and comprising a rod having a socket at its lower end, a resilient cushion in said socket and a threaded cap adjustable upon the upper end of the rod, a pressure spring engaging said rod, and bent resilient rods connecting the plunger with the plate or lever pivoted upon the slide.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES S. HENDRICK.

Witnesses:

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