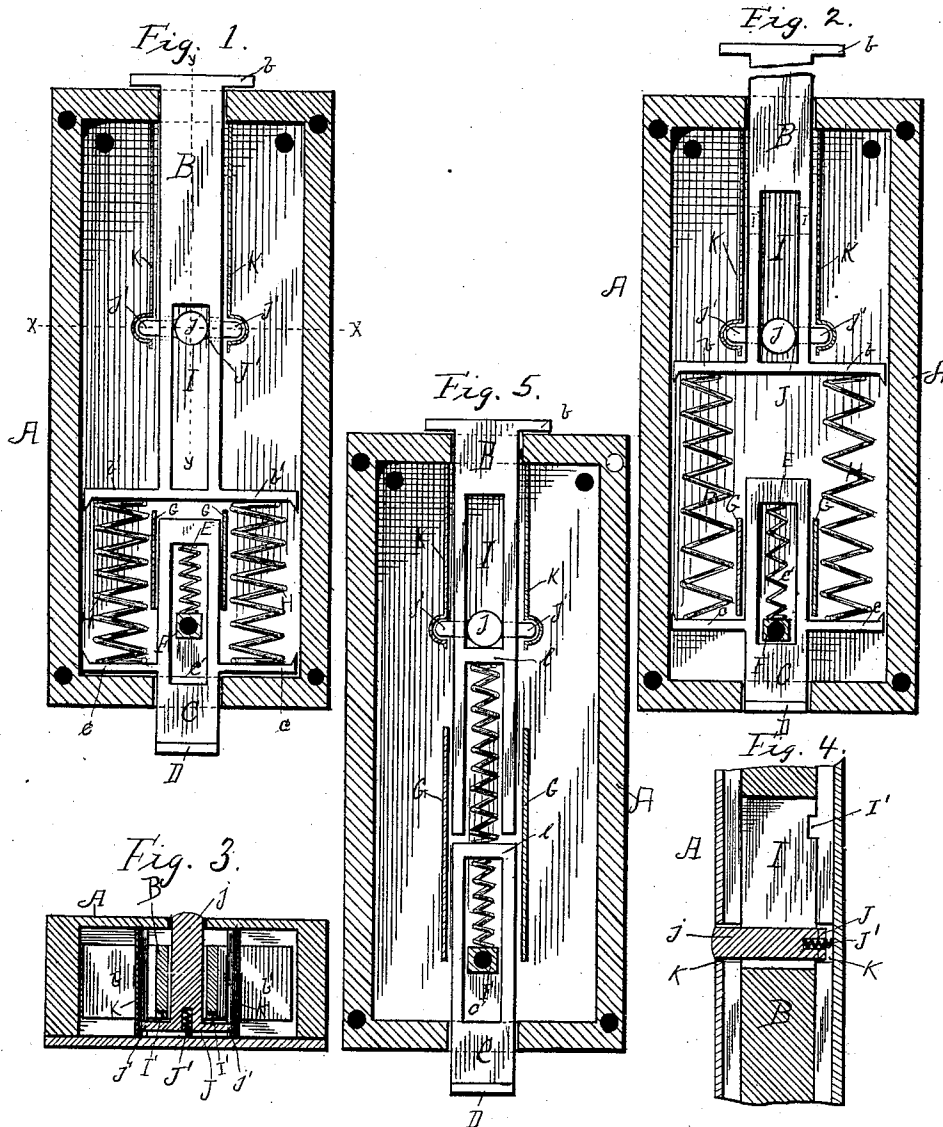


(No Model.)

F. E. WELCH.
DOOR CHECK.

No. 475,368.

Patented May 24, 1892.



Frank Enos Welch. Inventor

Witnesses
Louis S. Thompson
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UNITED STATES PATENT OFFICE.

FRANK ENOS WELCH, OF TRINITY COLLEGE, NORTH CAROLINA.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 475,368, dated May 24, 1892.

Application filed August 3, 1891. Serial No. 401,613. (No model.)

To all whom it may concern:

Be it known that I, FRANK ENOS WELCH, a citizen of the United States, residing at Trinity College, in the county of Randolph and State of North Carolina, have invented certain new and useful Improvements in Door-Holders; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 This invention has relation to door-holders; and it consists in certain peculiarities in the construction, arrangement, and combination of the several parts, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

The object of my invention is to construct a simple, inexpensive, and efficient device for holding doors open, by the use of which the necessity for the operator stooping over to grasp the device by his hands in order to set the parts into position to hold the door open or to release them in order to permit closing of the door is obviated. These objects are accomplished by the mechanism illustrated in the accompanying drawings, in which —

30 Figure 1 is a front view of my improved door-holder with the front plate removed to show the interior parts thereof, said parts being shown in the position they occupy when holding the door open. Fig. 2 is a similar view showing the parts in position to permit shutting of the door. Fig. 3 is a sectional view of the line *x x* of Fig. 1, showing the means for fastening the parts in position to hold the door open. Fig. 4 is a sectional view on line *y y* of Fig. 1. Fig. 5 is a front elevation of a modification.

The same letters and numerals of reference are used to designate the same or corresponding parts in the several figures.

45 A designates the inclosing frame or box of my improved door-holder, which is designed to be secured to the door at the bottom thereof, and B and C the presser-bar and bolt, respectively. Said presser-bar extends through an opening in the top of the box A, is formed at its upper end with a head *b* for conven-

ience in lowering the same, which is accomplished by the operator pressing downward thereon with his foot, and at its lower end 55 with projections *b'*, which extend transversely of the box and preferably terminate near the inner walls thereof. The bolt C is located beneath said presser-bar B in line therewith and extends through the bottom of the box A, 60 its lower extremity being preferably provided with a facing of rubber or other soft or elastic substance D to prevent injury to the carpet or floor with which it comes into contact. It is formed at a suitable point with outward- 65 ly-extending projections *c* and with an elongated slot or opening *c'*. Within this opening *c'* is located a coil-spring E, the upper end of which is in contact with the top of said opening, and the lower end rests on a stationary projection F, extending from the inner wall of the box A. This coil-spring E is designed to raise said bolt out of contact with the floor when pressure on the upper end of said bolt is removed, as will be clearly explained hereinafter, and said bolt is guided 70 in its vertical movements and wobbling thereof prevented by projections G, which extend from the inner wall of said box A.

H designates springs, which are located on 80 opposite sides of said bolt between the projections *b'* and *c*, with which their ends are in contact, thereby connecting said presser-bar and bolt together. These springs operate to automatically raise said presser-bar to 85 its uppermost position (shown in Fig. 2) when the same has been released and also when compressed to keep the lower end of the bolt C in close frictional contact with the floor by pressing downward on the projections *c*. In 90 order to keep said springs in proper position with respect to the projections *b'* downward and those of the projections *c* upward with the inner sides of which bent portion the out- 95 sides of the upper coils contact, the presser-bar B is formed with an opening or slot I, which extends upward a suitable distance from a point contiguous to its lower end and receives the stem *j* of a horizontal movable catch J, which catch is held in its outer or 100 normal position by a spring J', located in a recess formed in its inner end. This stem *j* extends through the box A, so that its outer extremity will be accessible to the operator,

and at its inner end is formed with projections j' , which are received by recesses formed in ways K, which latter guide the presser-bar in its movements. The presser-bar is also formed with notches I' , which are located on opposite sides thereof at points nearly opposite the upper end of the slot I and are engaged by said projections j' when brought opposite thereto in the manner hereinbefore explained, whereby further downward movement of said presser-bar will be prevented and the same and consequently the bolt C held in their lowermost position with the bolt in contact with the floor until the catch is released.

From the above the operation of my device will be readily understood. When the door has been opened or partially opened and it is desired to hold it in such position, the operator places his foot on the head b of the presser-bar B and presses downward thereon, thereby overcoming the tension of the springs H and forcing said presser-bar and by reason of the connection therewith of the bolt C the latter also downward until the lower end of the latter is in sufficient frictional contact with the floor to hold the door open, at which time the notches I' in said presser-bar will be opposite the projections j' and will be engaged by the latter. When it is desired to close said door, the operator presses inward with his foot on the outer end of the stem j of the catch J, thereby throwing the projections j' out of engagement with the notches I' and releasing the presser-bar B, which is thrust upward by the action of the springs H to the point designated by the numeral 1, at which point the springs will be elongated to their fullest extent, when the springs E within the bolt C will act to lift the latter out of contact with the floor and with it the presser-bar B to the point designated by the numeral 2, in which position the presser-bar and bolt will be held by their respective springs.

The advantages of a door-holder constructed in accordance with the plan above set forth are numerous, among others being the overcoming of the necessity of the operator stooping over to operate the device.

I do not wish to be understood as limiting myself to the precise construction herein shown and described, and many modifications thereof will readily suggest themselves to those skilled in the art to which it appertains. For example, in Fig. 5 I have shown a construction in which the springs H are dispensed with and a single spring employed in lieu thereof, which is located within a recess formed in the presser-bar. In such construction the arms b' and c are also dispensed with, the abutments for said springs being formed by the bridge-piece l in the presser and the upper end of the bolt.

In Fig. 3 the stem of the catch is shown as projecting outward away from the door; but it is obvious that the opposite side of the de-

vice can be secured to the door, and that by increasing the length of said stem it can be made to extend through said door, so as to be operated from the outer side thereof, which may be advantageous, in that it is more accessible when the door is open to its full extent.

Having thus described my invention, what I believe to be new, and desire to secure by Letters Patent, is—

1. The herein-described door-holder, comprising a casing, a vertically-movable presser-bar having an opening and notches on its opposite sides, ways within said casing for said presser-bar, having recesses, a spring-pressed catch received by said opening in the presser-bar and having projections located within said recesses in the ways, as described, whereby said projections will be caused to automatically engage said notches in the presser when the same are opposite thereto, said catch also having a horizontal stem adapted to project through the door and by inward pressure thereon to release the projections from the notches in the presser-bar, a bolt beneath said presser-bar, and means for raising said presser-bar and bolt when said projections of the catch are disengaged from the notches of the presser-bar.

2. The herein-described door-holder, comprising the casing, a presser-bar located within said casing, having its upper end projecting above the top thereof and its lower end provided with laterally-extending projections, a bolt beneath said presser-bar, having its lower end projecting through the bottom of said casing and formed within said casing with a longitudinal opening and with outwardly-extending projections in alignment with those of said presser-bar, projections extending from the casing for guiding said bolt in its movements, springs located on opposite sides of said bolt, having their ends secured to said projections of the presser-bar and bolt, a spring of less power than those connecting the presser-bar and bolt, located within said opening in the bolt and having its abutment formed by the top of the wall of said opening and a stationary projection in said opening, and a means for holding said presser and bolt in their lowered position.

3. The herein-described door-holder, comprising a casing, a vertically-movable presser-bar having an opening, notches on opposite sides, and lateral projections, ways for said presser-bar, having recesses, a spring-pressed catch received by said opening in the presser-bar and having projections located within said recesses in the ways, said catch also having a horizontal stem, a bolt beneath said presser-bar, having its lower end projected through the bottom of said casing and formed within said casing with a longitudinal opening and with outwardly-extending projections in alignment with those of said presser-bar, projections extending from the casing for

guiding said presser-bar in its movements,
springs located on opposite side of said bolt
and having their opposite ends secured to said
projections of the presser-bar and bolt, and a
5 spring of less power than those connecting
the presser-bar and bolt, located within said
opening in the bolt and having its abutments
formed by the top of the wall of said open-
ing and a stationary projection in said open-

ing, all substantially as shown, and for the
purposes specified.

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

FRANK ENOS WELCH.

Witnesses:

GEO. A. MATTON,
CHAS. A. MATTON.

Corrections in Letters Patent No. 475,368.

It is hereby certified that in Letters Patent No. 475,368, granted May 24, 1892, upon the application of Frank Enos Welch, of Trinity College, North Carolina, for an improvement in "Door-Checks," errors appear in the printed specification requiring correction as follows: In line 95, page 1, the comma after the word "contact" should be stricken out and a period inserted instead, and the following word "the" should commence with a capital *T*, making a new sentence; and that the said Letters Patent should be read with these corrections therein to conform to the papers pertaining to case in the Patent Office.

Signed, countersigned, and sealed this 31st day of May, A. D. 1892.

[SEAL.]

CYRUS BUSSEY,

Assistant Secretary of the Interior.

Countersigned:

N. L. FROTHINGHAM,
Acting Commissioner of Patents.