

P. DENITZ & A. JACOBS.

DOOR HOLDER.

APPLICATION FILED MAR. 11, 1912.

1,045,127.

Patented Nov. 26, 1912.

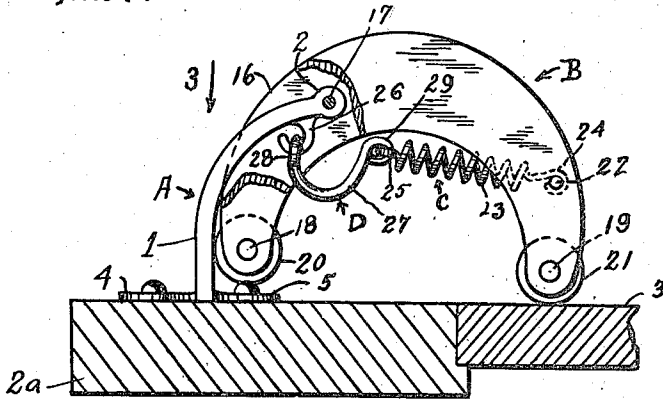


Fig. 1.

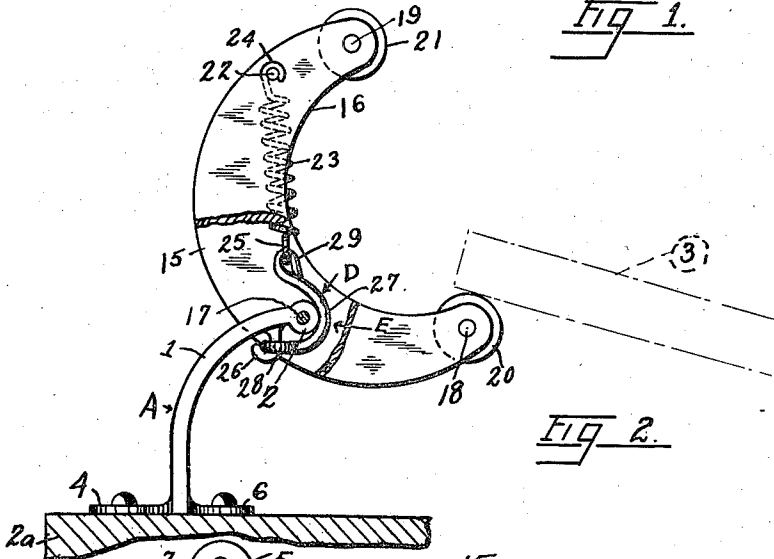


Fig. 2.

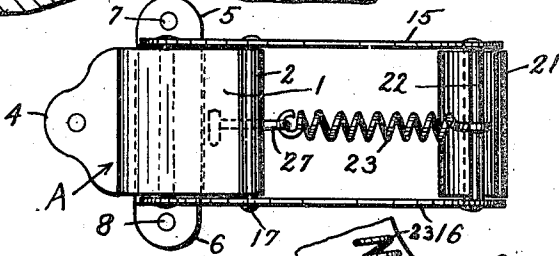


Fig. 3.

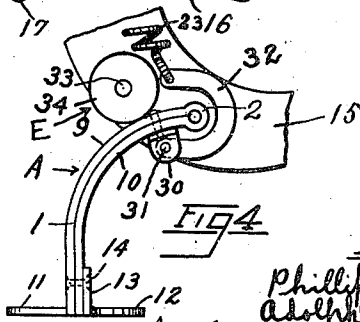


Fig. 4.

WITNESSES

Frank Waterfield.
B. M. Master

INVENTORS

Phillip Denitz
Adolph Jacobs.
by Lemuel S. Wells, atty.

UNITED STATES PATENT OFFICE.

PHILLIP DENITZ, OF LOS ANGELES, AND ADOLPH JACOBS, OF BAKERSFIELD, CALIFORNIA, ASSIGNORS TO CRESCENT DOOR HOLDER COMPANY, OF LOS ANGELES, CALIFORNIA.

DOOR-HOLDER.

1,045,127.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed March 11, 1912. Serial No. 683,027.

To all whom it may concern:

Be it known that we, PHILLIP DENITZ and ADOLPH JACOBS, citizens of the United States, and residents, respectively, of Los Angeles, county of Los Angeles, California, and of Bakersfield, county of Kern, California, have invented a new and useful Door-Holder, of which the following is a specification.

Our object is to make an automatic door holder which will hold swinging doors yieldingly closed to prevent their slamming when the wind blows and to prevent their being opened by cats and dogs; and our invention consists of the novel features herein shown, described, and claimed.

In the drawings—Figure 1 is a top plan view of a door holder embodying the principles of our invention in position for use, the door and casing being shown in section and broken away to economize space, and the holder being shown in position with the door closed. Fig. 2 is a view analogous to Fig. 1 with the holder in position with the door open. Fig. 3 is a front view as seen looking in the direction indicated by the arrow 3 in Fig. 1, the door and casing being omitted. Fig. 4 is a fragmentary view analogous to Fig. 2 and showing a modified form of construction, the base shown in Figs. 1, 2 and 3 being a casting and the base shown in Fig. 4 being made up of sheet metal and the curved link in Fig. 2 serving as a stop to limit the backward or open motion, while in Fig. 4 a rubber buffer is inserted for this purpose.

Referring to the drawings in detail: A door holder embodying the principles of our invention preferably comprises—A, a base for attachment to the door casing and having an offset central bearing. B, a crescent shaped arm adapted to embrace the central bearing and having rubber buffers for engagement with the inner face and outer face of the door. C, a spring mechanism for snapping the crescent shaped arm open and closed. D, a link mechanism for carrying the inner end of the spring mechanism back and forth from one side of the pivot to the other, so as to produce the snapping action. E, buffer mechanism for yieldingly limiting the back action of the crescent shaped arm, the forward action being limited by the door.

The details of the base A are as follows:

The post 1 extends straight out from the door casing 2^a and then is curved toward the edge of the door 3 and the central bearing 2 is formed upon the outer end of the post 1 parallel with the face of the casing 2^a. The attaching plate 4 extends from the inner end of the post 1 at right angles and in a direction opposite from the door 3. The attaching plates 5 and 6 extend from the inner end of the post 1 toward the door 3 and in alinement with the plate 4 and up and down, so that the screw-holes 7 and 8 are outside of the side faces of the post 1 as shown in Fig. 3.

The base A may be constructed in the form of a casting as shown in Figs. 1, 2 and 3 or it may be built up of sheet metal as shown in Fig. 4. In Fig. 4 the base A is produced by bending a strip of sheet metal at its center to form a bearing 2 and then bending the two leaves 9 and 10 together to form the post 1 and then bending the extreme end of the leaf 9 outwardly at right angles to produce an attaching plate 11 similar to the attaching plate 4; the attaching plates 12 similar to the attaching plates 5 and 6 are formed upon the ends of a piece of sheet metal having a flange 13 extending upwardly at right angles and secured to the post 1 by rivets 14.

The details of the crescent shaped arm B are as follows: Two plates 15 and 16, preferably formed of sheet metal and substantially alike, are spaced apart so as to fit one upon each side of the bearing 2. These plates are crescent shaped and are secured pivotally to the post by a pin or shaft 17 inserted through the plates and through the bearing 2 and riveted. The location of the pivot 17 in the plates 15 and 16 is slightly outside of the transverse center of the plates so that the arm is longer outside of the pivot than inside. Rubber rollers are mounted between the ends of the plates 15 and 16 upon spindles 18 and 19 to form the inner buffer 20 and the outer buffer 21.

The parts are so proportioned that when the buffer 20 is engaged by the door 3 in closing as shown in Fig. 2 the door will swing the buffer 20 toward the casing 2^a and the buffer will pass above the attaching plates 5 and 6 and engage against the face of the post 1 as shown in Fig. 1, and the buffer 21 will swing against the face of the door 3 and hold the door tightly closed.

The details of the spring mechanism C are as follows: A pin 22 is inserted through the plates 15 and 16 some distance from the spindle 19 and a retractile coil spring 23 has an eye 24 adapted to hook around the pin 22 and an eye 25 at its opposite end adapted to hook onto the link mechanism D.

The details of the link mechanism D are as follows: An eye 26 extends backwardly from the forward end of the post 1 near the bearing 2 and a curved link 27 has an eye 28 for forming a hook connection with the eye 26 and an eye 29 forming a hook connection with the eye 25, so that the tension of the spring mechanism C is exerted to press the buffer 21 against the outer face of the door 3 to hold the door tightly closed and so that when the door is forcibly opened the buffer 21 will be swung forwardly until the eye 29 passes in front of the pivot 17 and then the tension of the spring mechanism will throw the buffer 21 laterally until a straight line between the pin 22 and the eye 26 is outside of the pivot 17. The curved link 27 is designed to pass around in front of the bearing 2 so as to carry the inner end of the spring 23 back and forth over the center, so as to make the arm B snap open and snap closed.

The details of the buffer mechanism E are as follows: In the preferred form shown in Figs. 1, 2 and 3 the link 27 is curved exactly right so that the center of the link strikes against the bearing 2 in the backward action and the tension of the spring 23 holds the arm B from going too far backwardly and forms a yielding buffer mechanism and holds the buffer 20 exactly in the right position to be caught by the door in closing.

In the construction shown in Figs. 1, 2 and 3 the eye 26 is an open hook formed in the casting base A, while in Fig. 4 the eye 30 is a small sheet metal angle secured to the upper end of the post 1 by a rivet 31 or it may be soldered.

In Fig. 4 the link 32 taking the place of the link 27 is curved upon a larger circle and does not strike the bearing 2 and a rubber roller is inserted between the plates 15 and 16 upon the spindle 33 to form the back action buffer 34, said buffer striking against the outer face and the outer end of the post 1.

The details of construction may be varied in many ways without departing from the

spirit of our invention as set up in the following claims.

We desire to call especial attention to the form of the base A which makes it possible to have a central bearing 2 between the plates 15 and 16 of the arm B and at the same time have a buffer 20 between the inner ends of said plates.

We claim—

1. A door holder comprising a supporting base having an offset central bearing; a crescent shaped arm adapted to fit against the sides of the central bearing; a pivot mounted in the crescent shaped arm and in the central bearing; and spring mechanism for snapping the crescent shaped arm back and forth.

2. A door holder comprising a supporting base having an offset central bearing; a crescent shaped arm comprising two sides fitting against the central bearing and pivotally mounted upon the bearing, one end of the crescent shaped arm swinging backwardly behind the central bearing to the base; spring mechanism connecting the crescent shaped arm to the base and adapted to snap the arm back and forth; and buffer mechanism for yieldingly limiting the back action of the crescent shaped arm.

3. A door holder comprising a supporting base having an offset central bearing; a crescent shaped arm consisting of parallel plates spaced apart so as to fit against the sides of the central bearing; a curved link pivotally connected to the base below the central bearing and adapted to swing around the central bearing; and a spring connecting the curved link to the crescent shaped arm so that the crescent shaped arm will snap back and forth, one end of the crescent shaped arm passing behind the bearing to the base.

4. A door holder comprising a base having an offset central bearing; a crescent shaped arm having two side plates spaced apart and fitting against the sides of the central bearing; buffers between the ends of the side plates; one buffer passing behind the bearing to the base; and spring mechanism for snapping the arm back and forth.

PHILLIP DENITZ.
ADOLPH JACOBS.

Witnesses:

B. McMASTER,
P. N. MYERS.