H. HARDEN.

COMBINED DOOR HOLDER AND STOP.

APPLICATION FILED OCT. 6, 1919.

1,348,108. Patented July 27, 1920.

Fig. 1.

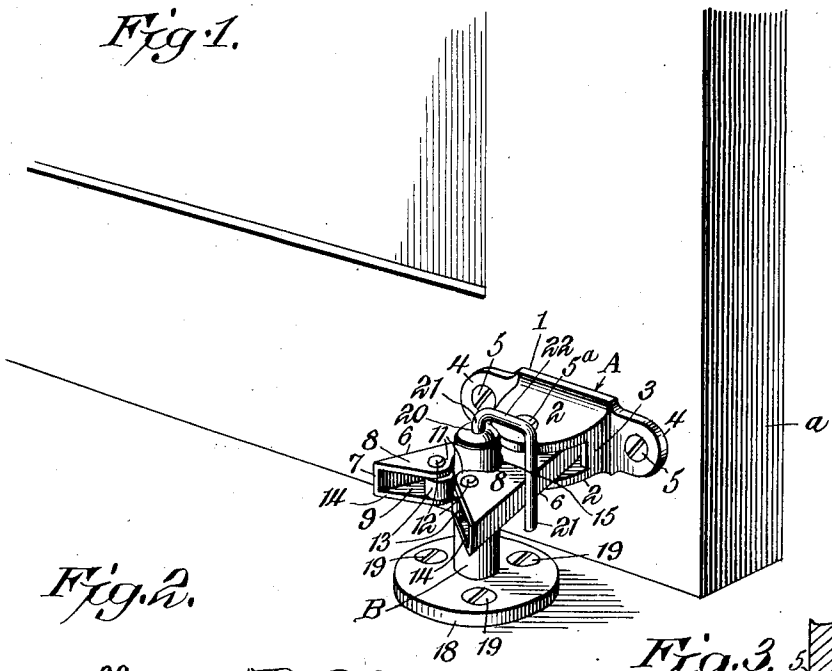


Fig. 2.

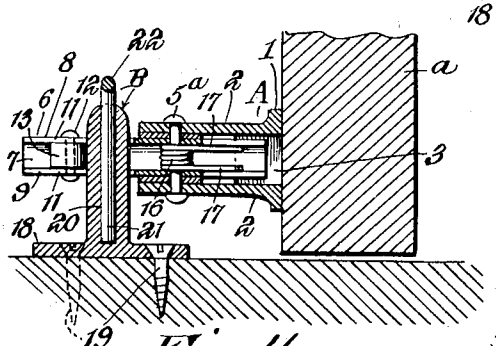


Fig. 3.

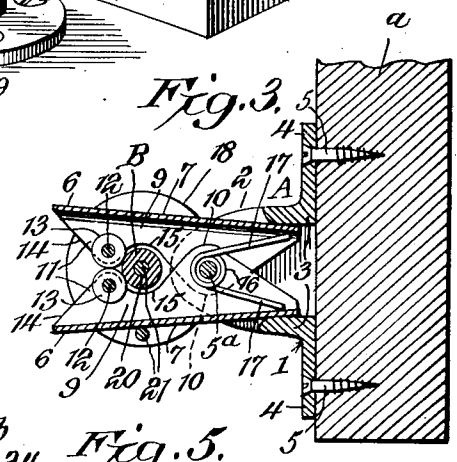


Fig. 4.

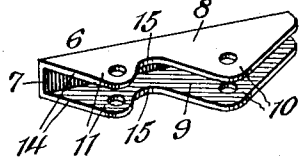
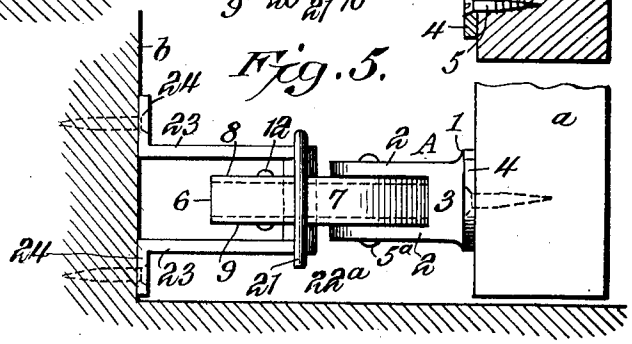


Fig. 5.



WITNESSES

David P. Wagner

Howard D. Ott.

Harry Harden, INVENTOR,

BY E. G. Siggers

ATTORNEY

UNITED STATES PATENT OFFICE.

HARRY HARDEN, OF LONDON, OHIO.

COMBINED DOOR HOLDER AND STOP.

1,348,108. Specification of Letters Patent. Patented July 27, 1920.

Application filed October 6, 1919. Serial No. 328,703.

To all whom it may concern:

Be it known that I, HARRY HARDEN, a citizen of the United States, residing at London, in the county of Madison and State of Ohio, have invented a new and useful Improvement in Combined Door Holders and Stops, of which the following is a specification.

This invention relates to door holders.

The object is to provide a device for holding swinging doors in open or any other predetermined position, which will become automatically engaged therewith by simply pressing the door against the same, and which will freely release the said door when sufficient pressure is brought to bear to cause the disengagement of certain co-acting parts.

Another object is to provide such a device with means which, when applied to the door holding device, will cause the latter to permanently hold the door in the aforesaid position, regardless of the amount of pressure exerted against the door to move the same, said means being readily applicable to or removable from the holding device as desired.

A full and complete understanding of the invention may be obtained from a consideration of the following detailed description, taken in connection with the accompanying drawing; it being understood that while the latter shows a practical form of the invention, the same is not to be strictly confined thereto, but may be changed or modified, so long as such changes or modifications mark no material departure from the salient features of the invention, as specifically pointed out in the appended claims. The invention may be used for other purposes than holding doors, and I wish the claims to be so construed.

In the drawing, in which similar reference characters designate corresponding parts throughout the several figures:—

Figure 1 is a perspective view of the improved door holding device shown applied to a door and holding the latter in open position.

Fig. 2 is a vertical longitudinal sectional view of the same.

Fig. 3 is a horizontal sectional view thereof.

Fig. 4 is a detail perspective view of one of the pivoted jaws forming part of the invention.

Fig. 5 is a side elevation of the holder in locked relation with a slightly modified form of keeper.

The invention is applicable to any form of swinging door, or element, where it is desired to positively hold the same in open position or in any other predetermined or intermediate position, and to this end comprises a jaw-carrying member A adapted to be secured to the face of a door *a*, adjacent to the free edge of the same, as clearly shown in Fig. 1 of the drawing. This jaw-carrying member A is adapted to co-act with a keeper B in the form of a tubular post, which is secured in upright position upon the floor, adjacent to the baseboard of the room, if it is desired to hold the door in entirely open position, or in any other intermediate position so as to be engaged with the jaws of the device A, when the door is swung upon its hinges, as will be readily understood.

The member A comprises a door-engaging bracket 1 including upper and lower, spaced ears 2—2, joined at their side edges adjacent to the door *a* by short vertical walls 3—3 provided with outstanding attaching ears 4—4 having their rear faces flush with the rear edges of the upper and lower ears 2—2 so as to lie flat therewith against the face of said door. The attaching ears 4—4 are suitably apertured for the reception of screws 5—5, which preferably have their heads countersunk into said ears and serve to securely hold the member in position upon the door to properly engage with the upstanding post of the keeper member B.

At a central point adjacent to the outer ends of the ears 2—2, the latter are suitably apertured for the reception of a vertically disposed pivotal post 5^a, having its upper and lower ends upset to prevent its dislodgment.

Mounted upon this post 5 for horizontal swinging action, is a pair of spring-actuated locking jaws 6—6, each composed of sheet metal bent to form an outer wall 7—7 and upper and lower walls 8 and 9, respectively. One of the jaws is of somewhat greater width than the other, and is adapted to snugly fit between the ears 2—2 and to freely swing between the same about the pivotal post 5. The other jaw is of a width to snugly fit between the upper and lower walls of the first mentioned jaw and to likewise swing upon the said pivotal post. The upper and lower walls 8 and 9

of each jaw are formed with inner extensions 10 having suitable alined apertures for the reception of the pivotal post, and are also provided with outer extensions 11, comprising spaced ears directed toward the co-acting spaced ears of the other jaw and provided with alined apertures, located centrally of said ears, for the reception of pivot pins 12. The inner opposed edges of these ears are rounded concentrically with the pins 12, and rollers 13 of a radius slightly greater than the radius of the ears, are mounted upon the said pins and rotate freely thereon. From these rollers 13 to the outer ends of the jaws, the upper and lower walls of the latter are flared outwardly as at 14 to form a gradually narrowing throat or entrance to the rollers, in order to direct the post B therebetween, as will be readily understood.

Immediately in rear of the rollers 13, the upper and lower walls of the jaws are provided with seats 15 into which is adapted to pass the keeper post B, after the same has been forced between the rollers 13.

A coiled spring 16, having rearwardly extending terminals 17 is mounted in surrounding relation to the pivotal post 5, the terminals bearing against the inner faces of the side walls of the jaws and exerting an outward pressure against the same to force the rollers 13 toward each other, so as to cause them to hug around the keeper B. At the same time, the coiled spring 16 holds the inner ends of the jaws against the inner faces of the short vertical walls 3—3, and the jaws may not be moved in either direction together, as will be readily understood, the only action possible being to separate the outer ends of the said jaws.

The keeper post B comprises a base member 18 having a plurality of apertures for the reception of screws 19 for securing the same to a floor. The post B is furthermore provided with a central vertically disposed bore 20, into which is adapted to be inserted one arm 21 of a U-shaped member or staple 22, which is adapted to act as a locking means for the jaws, as the two arms 21 of the member are spaced a sufficient distance apart to allow one of the same to lie against the side wall of one or the other of the jaws when the other arm 21 is inserted in the bore of the keeper post B. It will thus be seen that the two jaws are effectually prevented from disengagement from the post B when the locking member is in position, even though excessive pressure be brought to bear against the door.

In Fig. 5, a slightly modified form of keeper is shown, the jaw carrying member being precisely as already described. In this form the tubular post 22^a is integrally connected at the top and bottom with laterally extending arms 23—23 having oppositely disposed foot portions 24—24 which are suitably apertured for the reception of fastening screws for securing the keeper to a wall *b* in proper position for engagement by the jaws, and performs the function of holding the door in open position in the same manner as the first described keeper.

From the foregoing it will be seen that a simple, effective and durable holding device has been provided which may be easily applied to a door and floor in any desired position and that the locking means is readily inserted or applied and as easily and quickly detached when it is desired to permit of the door being automatically held or released.

What is claimed is.

1. In a holding device, the combination with a jaw carrying member having spaced ears and a pivot pin connecting said ears, of a pair of jaws mounted near their inner ends between said ears on said pin, said jaws extending outwardly from said ears, with their outer ends flared outwardly, a pair of rollers mounted in said jaws at the inner end of the flared portion and normally in engagement with each other, a pair of seats formed in each of said jaws in rear of said rollers, a spring housed within the jaws and ears in rear of said seats and serving to force the rollers together, and a keeper adapted to be engaged with the seats of said jaws.

2. A holding device and stop comprising a jaw carrying member, said member having upper and lower spaced ears, and short walls joining the ears at their rear portions and leaving an open space between the ears at their front portions, pivoted jaws mounted between the ears and swingable in said open space, each jaw having upper and lower walls connected by a side wall, a coiled spring surrounding the pivot of the jaws and normally forcing the inner ends of the jaws against the inner faces of the short walls and the outer ends toward each other, rollers carried by the jaws, seats formed in the upper and lower walls of each of the jaws in rear of the rollers, a keeper adapted to be secured to a fixed point in the path of the jaws, said keeper having an attaching portion, and a post adapted to ride between the rollers of said jaws and to enter the seats therein.

3. A holding device and stop comprising a jaw carrying member, said member having upper and lower spaced ears, and vertical walls joining the ears at their rear portions, pivoted jaws mounted between the ears, each jaw having upper and lower walls connected by a side wall, a coiled spring surrounding the pivot of the jaws and normally forcing the inner ends of the jaws against the inner faces of the vertical walls,

and their outer ends toward each other, rollers carried by the jaws short of their outer ends, seats formed in the jaws in rear of the rollers, a keeper adapted to be secured to a fixed point in the path of the jaws, said keeper having an attaching portion, a tubular post adapted to ride between the rollers of said jaws to enter the seats therein, and a locking member comprising spaced bars joined at one end, one of said bars being inserted in the tubular post, the other being adapted to lie against the side wall of either jaw to prevent removal from the post.

4. In a holding device, the combination with a jaw carrying member having spaced ears and a pivot pin connecting said ears, of a pair of jaws mounted at their inner ends between said ears on said pin, said jaws extending outwardly from said ears, with their outer ends flared outwardly, a pair of rollers mounted in said jaws at the inner end of the flared portion, a pair of seats formed in each of said jaws in rear of said rollers, a spring housed within the jaws and ears in rear of said seats and serving to force the rollers together, a keeper adapted to be engaged with the seats of the jaws, said keeper having a tubular post, and a locking member adapted to enter the post and engage about one of the jaws to lock the keeper in engagement with the jaws.

5. In combination with a jaw carrying member having a pair of spring actuated jaws movable in or out, said jaws having co-acting seats, a keeper having a post with a longitudinal opening, and a locking member having a part to enter said opening and another part to engage one of the jaws to lock the post of the keeper in said seats.

6. In combination with a jaw carrying member having a pair of spring actuated jaws movable in or out, said jaws having co-acting seats, a keeper having a post, and means carried by the post and connecting the keeper with either one of the jaws to lock said post in said seats.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY HARDEN.

Witnesses:
E. E. HULL,
M. S. MURRAY.