Oct. 8, 1957 C. R. BEYER 2,809,061

DOOR STOP AND HOLDER

Filed Nov. 13, 1953

Fig. 1.

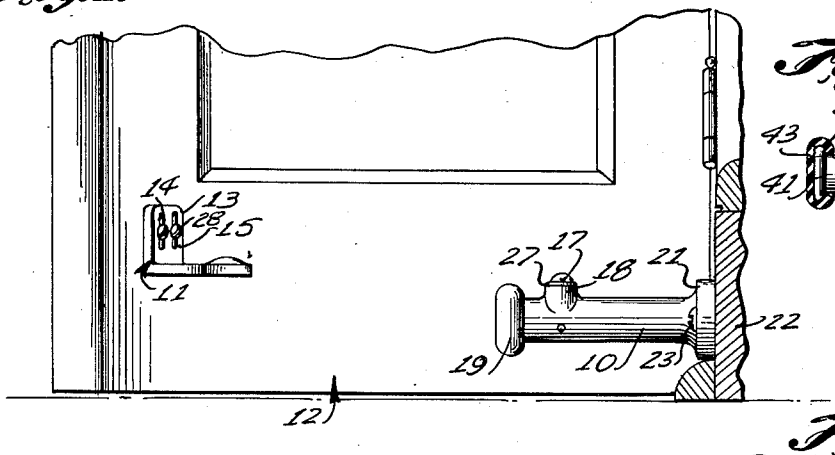


Fig. 7.

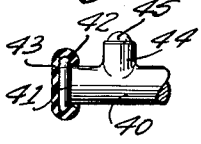


Fig. 4.

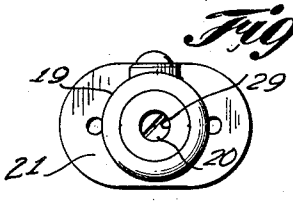


Fig. 2.

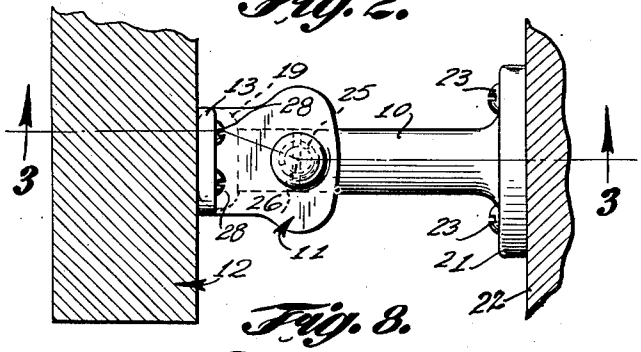


Fig. 5.

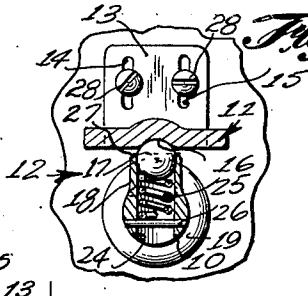


Fig. 8.

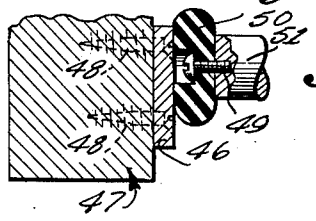


Fig. 3

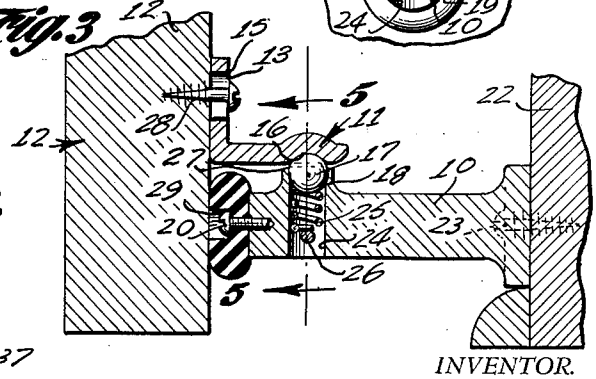
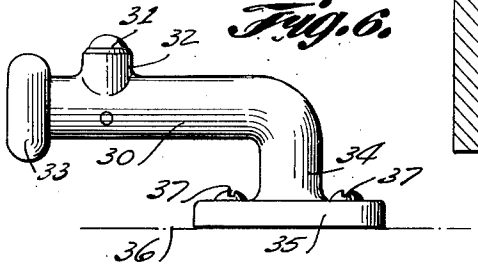


Fig. 6.



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DOOR STOP AND HOLDER

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1 Claim. (Cl. 292—75)

This invention relates to household hardware of the type used in combination with doors, and in particular a combination door stop and holder wherein a resilient bumper element is provided at the end of an arm and a spring loaded or actuated ball positioned in a boss on the arm is adapted to snap into a recess in the under surface of a bracket carried by a door wherein the ball snaps into the recess as the door reaches the open position retaining the door in said open position.

The purpose of this invention is to provide a door stop which not only arrests and limits the opening movement of the door but also grips and holds the door in the open position.

Various types of devices have been provided for retaining doors in the open position and other devices have been provided for halting the opening movement of a door, however, the conventional door stop does not include means for retaining the door in the open position.

With this thought in mind this invention contemplates means for incorporating a door holding device in a door stop so that it is only necessary to provide one element on a door and another element positioned, selectively, on the floor or door frame in order to limit the opening movement of the door and, at the same time, retain the door in the open position.

The object of this invention is, therefore, to provide a combination door stop and holder which limits the opening movement of the door and grips the door for retaining the door in the open position.

Another object of the invention is to provide a combination door stop and holder that may readily be installed on doors now in use without changing parts thereof.

A further object of the invention is to provide a combination door stop and holder which is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies an arm having a bumper of resilient material on one end and a mounting flange positioned parallel to the face of the bumper or at a right angle in relation thereto on the opposite end and an L-shaped bracket having a recess in the lower surface adapted to be adjustably mounted on a door and positioned with the recess adapted to receive a spring actuated ball incorporated in the arm of the bumper.

Other features and advantages of the invention will appear from the following description taken in connection with the drawing, wherein:

Figure 1 is a front elevational view illustrating the use of the combination door stop and holder showing the stop mounted on a base board of a wall extended from a door and showing a retaining clip adjustably mounted on the inner surface of a door.

Figure 2 is a plan view on an enlarged scale illustrating the device with the parts in the position of retaining a door in the open position.

Figure 3 is a longitudinal section through the device taken on line 3—3 of Fig. 2.

Figure 4 is an end elevational view of a bumper of the type shown in Figs. 2 and 3.

Figure 5 is a detail showing a section taken on line 5—5 of Fig. 3 showing the spring actuated ball extended into the recess of the bracket.

Figure 6 is a side elevational view of a bumper showing a modification wherein the bumper is adapted to be mounted on a floor.

Figure 7 is a detail showing a modification wherein the resilient bumper is replaced with a cap of resilient material.

Figure 8 is a detail showing a further modification wherein a bumper plate is provided on a door for receiving the bumper with the door in the open position.

Referring now to the drawing wherein like reference characters denote corresponding parts the combination door stop and holder of this invention includes an arm **10** forming the body of the bumper, a bracket **11** adapted to be positioned on a door as indicated by the numeral **12**, the bracket having a vertically disposed section **13** with spaced slots **14** and **15** therein and a horizontal section having a recess **16** in the under surface and the arm **10** having a spring actuated ball **17** in a boss **18** spaced inwardly from the extended end with a circular bumper **19** of resilient material secured on the extended end with a screw **20** and having an elliptical shaped base flange **21** on the opposite end by which the arm may be mounted upon a base board **22** with screws **23** or the like.

The arm **10** is provided with a vertically disposed bore **24** which extends through the boss **18** and a spring **25** positioned in the bore and retained therein by a pin **26** urges the ball **17** upwardly against a peened edge **27** of the boss **18**. By this means the ball **17** is resiliently held in the recess **16** of the bracket **11** and as the bumper **19** stops the opening movement of a door **12** the ball **17** snaps into the recess retaining the door in the open position.

The bracket **11** is adjustably mounted on the base of the door **12** with screws **28** whereby the bracket may be adjusted so that the ball **17** is urged into the recess with sufficient tension to retain the door in the open position.

The outer surface of the bumper **19** is provided with a recess **29** that is positioned to receive the head of the screw **20**, the screw being threaded into the end of the arm **10**, as shown in Fig. 3.

In the design illustrated in Fig. 6 an arm **30**, similar to the arm **10** and which is provided with a ball **31** in a bore **32** and a bumper **33**, is formed with a right angle bend providing a post **34** on the lower end of which is a flange **35** by which the arm may be secured to a floor surface, as indicated by the numeral **36** with screws **37**. With the parts formed in this manner the bumper may be positioned on a floor and the horizontally disposed arm of the bracket **11** may snap over the ball **31** with a door or the like striking the bumper **33**.

The bumper may, therefore, be positioned on a wall or upon the floor and, with the bracket **11** positioned on a door whereby the recess **16** is adapted to receive the spring actuated ball with the door positioned against the bumper, the opening movement of the door is limited and the door is adapted to be retained in open position by the ball **17**.

To close the door it is only necessary to pull the door whereby the ball **17** moves inwardly and the bracket **11** is released.

In the design illustrated in Figure 7 an arm **40**, similar to the arm **10**, is formed with a ridge **41** on the extended end and an arcuate flange **42** of a cup **43**, of resilient material is snapped over the ridge whereby the cup is frictionally secured in position on the arm. The arm **40** may be provided with a boss **44** having a spring actu-

ated ball **45** therein, similar to the boss **18** and ball **16** shown in Figures 1 to 6.

In Figure 8, a bumper plate **46** is secured to a door **47** with screws **48** and a screw **49**, is used for retaining a bumper **50** on the end of an arm **51**, similar to the arm **10**. The door may, therefore, be held in the open position by a spring actuated ball, or by other means.

It will be understood that other modifications, within the scope of the appended claim, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

A door stop and holder comprising an arm having an elliptical shaped base flange on one end for mounting the arm adjacent a door, a circular bumper of resilient material having a recess positioned in one side thereof, a screw positioned in said recess for connecting said bumper to the end of the arm opposite to that end on which the elliptical shaped base flange is provided, a boss on said arm adjacent the end to which said bumper is connected, said arm having a bore extending transversely thereof and through said boss, a ball positioned in the boss and extending outwardly thereof, said boss having means for limiting the outward movement of said ball, a spring retaining pin mounted in said arm and extending transversely of the bore therein, a spring engaging said pin and said ball for urging said ball outwardly of said boss, and an L-shaped bracket having a longitudinally disposed leg with a recess in the undersurface thereof to receive said ball, and a vertically disposed leg with spaced parallel slots extended vertically thereof to receive screws for adjustably mounting said bracket on the door.

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