April 21, 1959 R. E. BACON 2,882,547

DOOR STOP

Filed Dec. 24, 1956

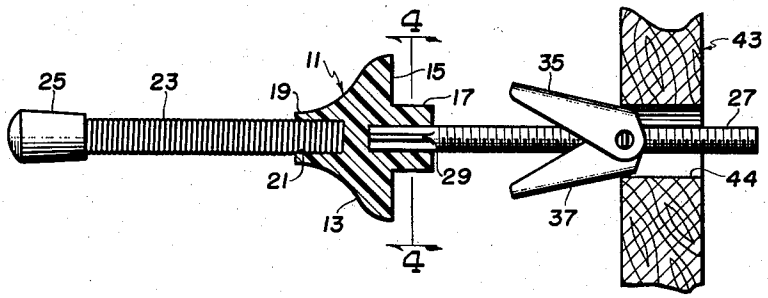


FIG. 1

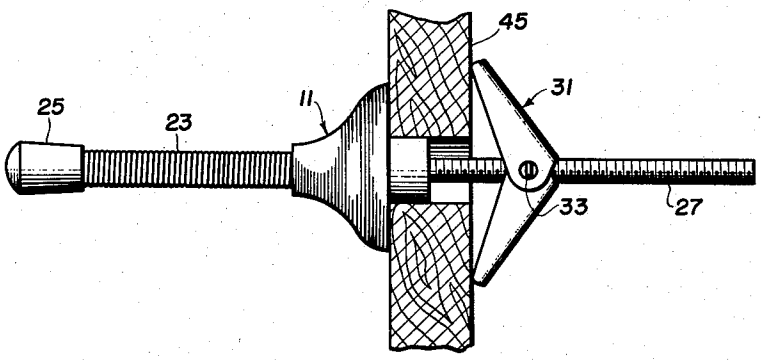


FIG. 2

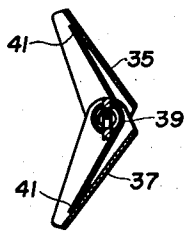


FIG. 3

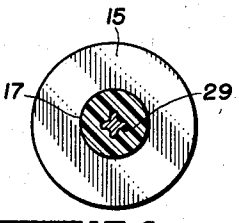


FIG. 4

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DOOR STOP

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Application December 24, 1956, Serial No. 630,371

3 Claims. (Cl. 16—85)

This invention relates to a door stop and more particularly to a door stop having a mounting means which can be used with all wood, plaster and dry wall construction having hollow walls.

A primary object of this invention is the provision of a base mounting member for a door stop which can be mounted in a drilled hole in a baseboard and anchored thereto by a bolt and toggle nut.

Another object of this invention is to provide a resilient member adapted to be mounted on a wall which will cushion the door if it is moved to such open position with a greater momentum than is desired.

A further object of this invention is the provision of a thermo-plastic base member for a door stop wherein the anchoring bolt may be molded.

With the foregoing objects in view, together with such other objects and advantages as may subsequently appear, the invention resides in the parts and in the combination, construction and arrangement of parts hereinafter described and claimed, and illustrated by way of example in the accompanying drawing, in which

Figure 1 is a side elevation with parts in section showing the door stop being mounted on a wall;

Figure 2 is a side elevation of the door stop mounted on a wall;

Figure 3 is a sectional view of the toggle nut with the wings in the expanded position;

Figure 4 is a detail sectional view taken along the line 4—4 in Figure 1.

In order to understand clearly the nature of the invention, and the best means for carrying it out, reference may now be had to the drawing, in which like numerals denote similar parts throughout the several views.

The numeral **11** designates a base member comprising an angular portion **13** forming a shoulder or support **15** and provided with an axial portion or projection **17** having a substantially smaller diameter than the portion **13**. The face portion of the base member is provided with a protuberance **19** having a bore **21** for receiving a coiled spring **23** provided with a buffer cap **25** mounted on the free end. The base member is preferably made from a thermo-plastic setting material such as polyethylene or styrene.

A threaded bolt **27** is provided with spaced axial ribs **29** to prevent the bolt from turning in the base member when molded or secured therein. The bolt may be mounted in the base member by heating the portion **17** until it becomes soft and pressing the end of the bolt therein. The plastic material will form around the ribs **29** and securely connect the bolt thereto.

The numeral **31** designates a toggle nut provided with trunnions **33** on opposite sides and provided with a threaded portion corresponding to the threads on bolt **27**. A pair of wings **35** and **37** are coaxially pivoted on the trunnions **33** so that the wings may be folded down as shown in Figure 1 or in an unfolded position as shown in Figures 2 and 3. The wings are preferably U-shaped

in cross section and adapted to receive a spring **39** having ends **41** which will bear against the underside of the wings so that under normal conditions the wings are unfolded to the positions shown in Figures 2 and 3. The parts of the toggle nut **31** are constructed similar to the parts shown in the patent to Zifferer, No. 1,228,512, dated June 5, 1917; namely, the trunnions **33** are similar to Zifferer trunnions **6**; wings **35** and **37** are similar to Zifferer wings **7** and **8**; and the spring **39** is similar to Zifferer spring **17**.

To mount the door stop on a wall **43**, a hole **44** is drilled therein having a diameter slightly larger than the axial projection **17**. The toggle nut is mounted on the bolt **27** with the wings **35** and **37** folded down against the tension of the spring **39** and inserted into the opening **44** in the wall **43**. As soon as the wings have passed through the opening **44**, they will spring open to bear against the inner wall surface **45**, whereafter the stop is tightened against the wall. It should be noted that only the outer ends of the wings contact the inner surface of the wall which are spaced away from the drilled hole **44**. The ends of the wings together with the axial projection **17** disposed in the opening **44** provide a very stable support for the base mounting **11**.

In view of the foregoing description taken in conjunction with the accompanying drawing, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

What I claim to be new and desire to protect by Letters Patent of the United States is:

1. A door stop comprising a base mounting having a resilient member attached thereto and extending therefrom, said resilient member provided with a cap at one end, said mounting having a radial shoulder defining an axial projection substantially smaller in diameter and extending therefrom, a threaded member having ribs at one end secured integrally within said projection, said projection adapted to be received in an opening in a wall for mounting the stop thereon, and a toggle nut mounted on the threaded member for anchoring said stop in position on a wall.

2. A door stop comprising a base member having a radial shoulder portion substantially intermediate its ends and provided with an axial projection adapted for cooperation with an opening in a wall for mounting the base member thereon, a threaded bolt having a ribbed section to prevent turning of the bolt secured within the axial projection, a nut threaded on the bolt and movable relatively longitudinally of the bolt, a pair of wings pivoted coaxially of each other upon said nut, spring means for causing the wings to be swung laterally with respect to each other into anchoring position to engage the inner face of the wall after insertion through the opening in the wall, and a coiled spring having a buffer cap at one end operatively connected to the base.

3. A door stop comprising a base member having a radial shoulder portion intermediate its ends, said base member having an axial support portion substantially smaller in diameter than the shoulder and adapted for cooperation with an opening in a wall for mounting the base member thereon, a threaded bolt having one end secured within the support portion, a toggle nut having a pair of wings pivoted thereon and spring means for rendering the wings effective for anchoring the stop

against said wall after insertion through the opening therein, said base member provided with a bore on its outer face portion for receiving a coil spring having a buffer cap secured to the free end thereof.

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