Sept. 19, 1933. L. N. HOFFMAN 1.927,264

DOOR HOLDER

Filed Sept. 16, 1932

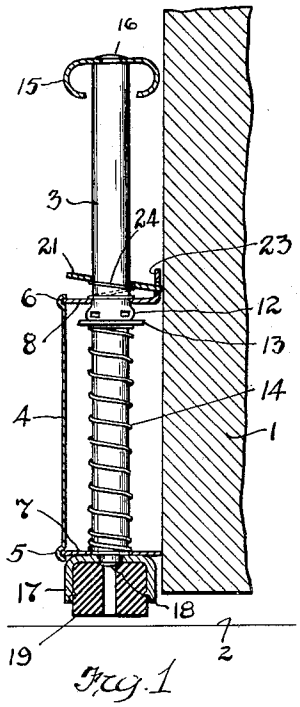


Fig. 1

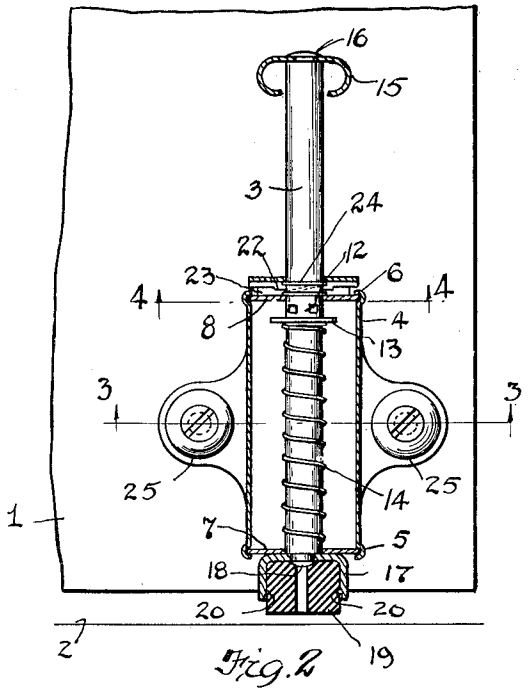


Fig. 2

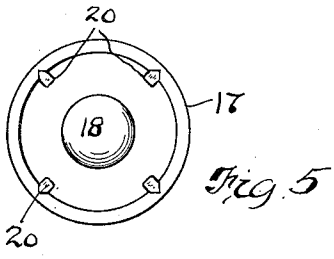


Fig. 5

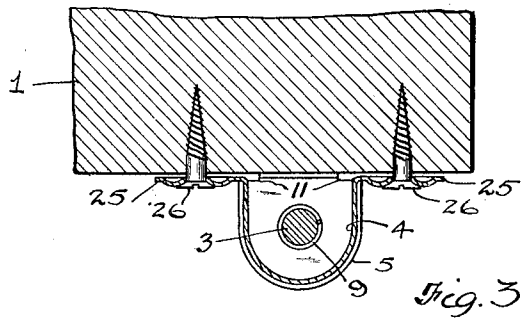


Fig. 3

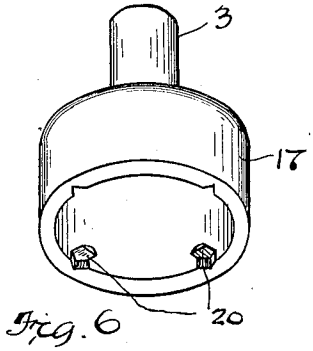


Fig. 6

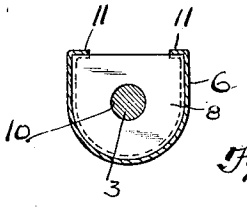


Fig. 4.

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DOOR HOLDER

Laurence N. Hoffman, Shelby, Ohio, assignor to Shelby Metal Products Company, Shelby, Ohio, a corporation of Ohio

Application September 16, 1932
Serial No. 633,498

2 Claims. (Cl. 292—175)

The present invention relates to a novel construction for a spring loaded plunger type of door holder. It is the general object and nature of my invention to provide such a door holder which may be fabricated entirely from stamped metal parts, requiring no welding, machining or threaded parts in order to effect the assembly of the component elements. In other words, the principle of my invention contemplates the provision of a door holder construction which may be manufactured economically and in quantity production lots, thereby producing an article which may be marketed at lowest possible prices. Additional objects and advantages shall become apparent as the following description proceeds. To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:

Fig. 1 is a half section elevational view taken through my door holder as installed in position upon the lower edge of a door or any similar closure device; Fig. 2 is another sectioned elevation taken on a plane normal to Fig. 1; Fig. 3 is a horizontal section of Fig. 2, taken substantially upon line 3—3 thereof; Fig. 4 is a sectional view taken substantially upon line 4—4 of Fig. 2; Fig. 5 is an enlarged bottom plan view of the rubber-retaining cup; Fig. 6 is a perspective view of the element shown in Fig. 5.

Now referring more particularly to the drawing, my device is adapted to be applied to the lower outer edge of a door 1. The numeral 2 represents the floor level, with which the lower end of the plunger of the door holder is adapted to form frictional contact in order to retain the door at any desired open position. My device consists of a vertically disposed plunger 3 which is surrounded by the U-shaped housing member 4. The bottom and top edges of the housing 4 have a marginal bead and grooves 5 and 6 respectively stamped therein. The pair of end plates 7 and 8 are adapted to fit into the grooves 5 and 6 respectively and have the centrally disposed apertures 9 and 10 for the reception of the plunger 3. The end plates 7 and 8 are permanently retained in position in the housing 4 by means of the crimped-over projections 11, which are best shown in Figs. 3 and 4.

A bulge or projecting lug 12 is stamped out of the exact center of the plunger 3. A washer 13 is then slipped over the plunger 3 and bears against the shoulder formed by the lug 12. A coil spring is positioned between the washer 13 and the bottom plate 7 and serves as the means for spring loading the plunger and normally tending to urge it toward its uppermost position, as shown in the drawing. A knob 15 is attached to the upper end of the plunger 3 by means of upsetting a rivet head 16 thereon. A stamped metal cup 17 is similarly attached to the lower end of the plunger 3 by means of the rivet head 18. The resilient friction element 19, preferably composed of rubber is carried by the cup 17. The rubber element 19 is firmly secured in the cup 17 by virtue of the provision of a plurality of inwardly projecting lugs or lips 20.

A trigger plate 21 is positioned over the plunger 3 immediately adjacent the top end plate 8. The trigger plate 21 is pivotally mounted by means of a tongue 22 positioned in a suitable slot in the vertically extending portion 23 of the end plate 8. A small coil spring 24 is positioned between the trigger plate 21 and the end plate 8 and normally urges the former into an angularly inclined position with respect to the plunger 3. A pair of laterally extending portions 25 are provided on the housing 4 in order that the latter may be secured to the face of the door 1 by means of suitable fastening screws 26.

It will thus be seen that my above described construction may be fabricated entirely from stamped metal parts. In assembling the parts the operator may insert the plunger 3 through the end plates 7 and 8 without having to worry about which end is uppermost, due to the fact that the bulge or lug 12 is positioned in the exact center thereof. The knob 15 and the cup 17 are formed from the same blank with the exception that the rounding or crimping operation is omitted in the case of the bottom cup. The knob 15 and the cup 17 are then slipped over their respective ends of the plunger 3 and permanently secured thereto simultaneously in a double ended riveting machine. The housing 4 and the end plates 7 and 8 may all be blanked out from the same piece of sheet stock.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means

stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. In a door holder of the character described, the combination of a U-shaped sheet metal housing member, end closure plate members for each end of said housing, grooves on the inner side of said housing member adjacent each end thereof, said closure plates being adapted to be received in said grooves.

2. In a door holder of the character described, the combination of a U-shaped sheet metal housing member, end closure plate members for each end of said housing, grooves on the inner side of said housing member adjacent each end thereof, said closure plates being adapted to be received in said grooves, integral tabs projecting from the sides of said housing member and forming substantially a continuation of said grooves, said tabs being crimped over the edge of said closure plates to retain the latter in position.

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