G. S. PARKER.

DOOR CATCH.

APPLICATION FILED JUNE 25, 1914.

1,111,759. Patented Sept. 29, 1914.

Fig. 1

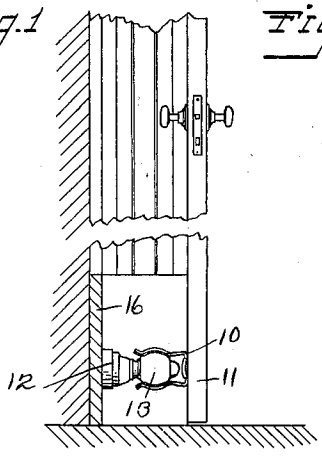


Fig. 6

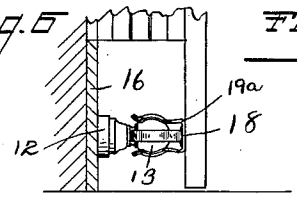


Fig. 7

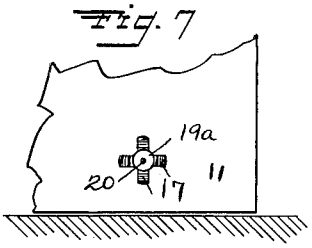


Fig. 2

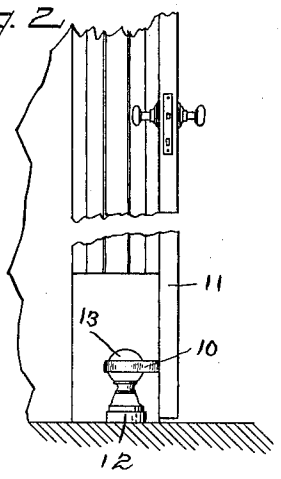


Fig. 3

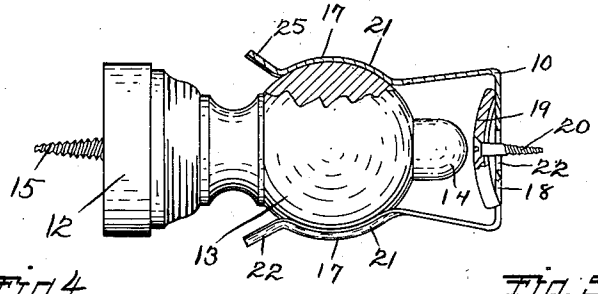


Fig. 4

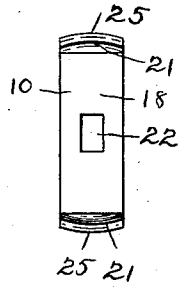
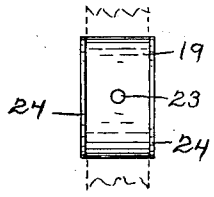


Fig. 5



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DOOR-CATCH.

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To all whom it may concern:

Be it known that I, GENIO S. PARKER, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Door-Catches, of which the following is a specification.

My invention relates to improvements in door catches, and the object of my improvement is to produce a spring catch suitable to be mounted on a door and to coöperate with a door stop or bumper having a ball shaped head of well known form to hold a door in open position.

In the accompanying drawing:—Figure 1 is a front elevation of part of a door and adjacent parts equipped with my invention. Fig. 2 is a similar view, showing the door catch and bumper in different positions from those shown in Fig. 1. Fig. 3 is a view on an enlarged scale, part in side elevation and part in section, of the door catch and bumper arranged as shown in Fig. 1. Fig. 4 is an end view of the spring catch. Fig. 5 is a similar view of the securing plate. Fig. 6 is a view corresponding to Fig. 1 and on the same scale, showing a modified form of my door catch. Fig. 7 is an end elevation of the door catch shown in Fig. 6.

My improved door catch 10 is mounted on the side of the door 11 and engages with the bumper or cushion knob 12 and thereby holds the door in the open position.

The bumper 12 is of the type that has for the body portion 13 a ball-like or special form, and is provided with a cushion member 14 of rubber at the outer or free end, and has a screw 15 at the rear end by which it is secured in place. The bumper 12 is usually secured to the mopboard 16, in proper position to serve as a stop for the door, and according to the location of the door in the walls of the room may in some cases be located so as to permit a swing of the door of essentially 180 degrees, as when the door is sufficiently remote from the corner and in others, as when the door is adjacent the corner, may be positioned to permit an opening of only approximately 90 degrees.

My door catch 10 operates similarly in either of the extreme cases, or in cases where there is an appreciable deviation from these so long as the same is properly positioned on the door 11 to coöperate with the bumper 10 by engaging with the ball-like portion 13. As shown in Fig. 1, the bumper 12 is secured to the mopboard 16, and extends outwardly at right angles thereto. The door catch comprises a pair of spring catch members 17 that project outwardly from the door 11 and these are connected together by a base 18, having a slot 22, and is held in place by means of a securing plate 19 and screw 20. As shown the said catch 10 is formed of a strip of sheet metal bent into approximately U-shape to form the base 18 and arms 17 that serve as the spring members. The arms 17 are of sufficient length and suitably spread apart to resiliently engage the ball 13, the bearing portions 21 being preferably concaved to correspond to the shape thereof. The outer free ends 25 of the arms 17 are out-turned or divergent suitably to operate in coöperation with the outer face of the ball 13 to spring the arms 17 apart in bringing the same into engagement with the ball 13. It is desirable that the door catch 10 be secured to the door 11 in a positive manner, and especially to prevent non-rotative movement, as well as to permit of some lateral adjustment. The adjustment referred to is obtained by providing the slot 22 in the base 18, through which the securing screw 19 passes.

The feature of positively securing the catch to the door and by the use of the single screw 20 is obtained in the following manner:—The base 18 is made of appreciable length, so as to make an extended bearing surface for engagement with the door 11, as distinct from a local bearing surface adjacent the securing screw 20. In order to insure engagement of the end portions of the base 18 with the door the securing plate 19 is made arched or of any suitable form providing an open space at the middle portion, adjacent the screw 20, so that the end portions thereof engage with the base 18, the screw 20 passing through a hole 23 in the middle portion. The bearing plate 19 is somewhat shorter than the base 18 to permit of the lateral adjustment thereof described. I furthermore provide side ribs 24 on the bearing plate 19 that overhang the edges of the base 18, and thereby insure a proper adjustment of the base 18 and the plate 19. The ribs 24 also serve to stiffen the plate 19.

As described, the catch 10 is first placed on the door in approximately the correct position, is then adjusted to the correct posi-

tion, and finally secured in place by tightening the screw 20. As shown in Fig. 1 the catch 10 is positioned with the arms 17 in a vertical plane. The said arms 17 may be positioned in a horizontal plane, and they will operate in substantially the same manner.

In some cases the bumper 12 is mounted on the floor instead of on the mopboard. This arrangement is shown in Fig. 2, and in which the arms 17 are shown positioned in a horizontal plane, which is the correct position for the particular location of the bumper 12.

In the modified form of door catch shown in Figs. 6 and 7 there are two of the U-shaped catches 10 arranged with the spring arms 17 of each positioned in a plane at right angles to the other, the bases 18 crossing at right angles, and being held by a single screw 20, passing through the slots 22. With this form, in lieu of the securing plate 19 I prefer to use a plate in the form of a cupped washer 19ª. The said washer 19ª is of sufficient size and is suitably dished to engage by its edges with the bases 18 of both of the catches 10 and appreciably remote from the central hole in which is positioned the screw 20. Therefore, the bearing or engaging portion of the washer 19ª with the bases 18 is adjacent the ends of the bases, as in the case of the bearing plate 19. Thus there is effected an interlocking of the bases 18, such as to hold the same against rotative movement and to hold the same securely in place with a single holding screw.

I claim as my invention:—

A door catch comprising a spring catch made of a strip of sheet metal bent into U-shape so as to provide a base portion and a pair of spring arms suitable for engaging with a bumper, the said base portion having a slot, a securing plate of arched form engaging with the outer face of the said base portion, and side ribs on the said securing plate engaging with the edges of the said base portion, and a screw passing through the said plate at the middle portion and through the said slot.

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