July 21, 1936. J. P. LUBY 2,048,274

STOP AND HOLDER FOR CLOSURES

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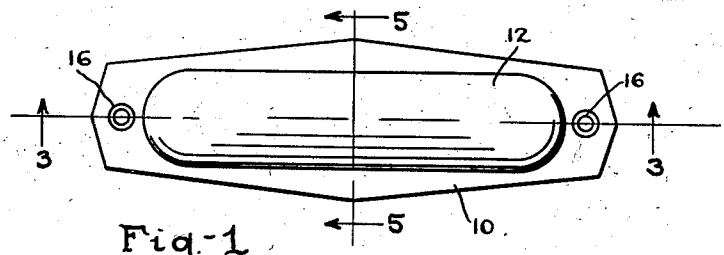

Fig.-1

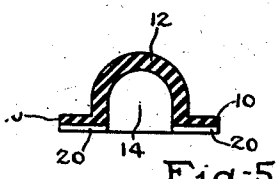

Fig.-5

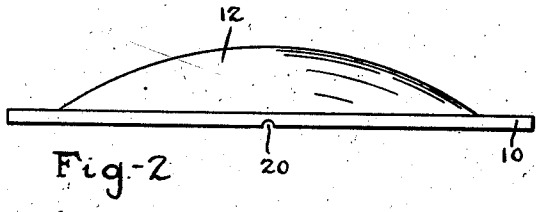

Fig.-2

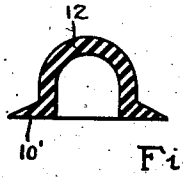

Fig.-6

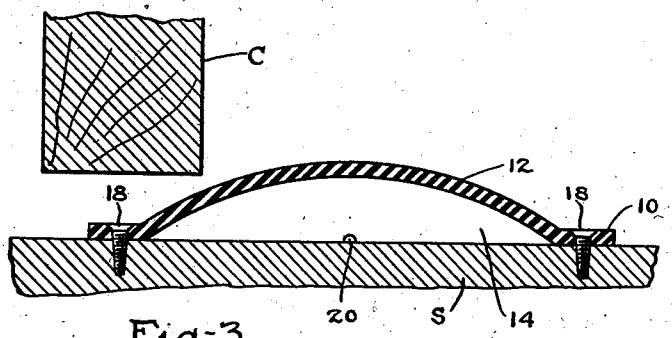

Fig.-3

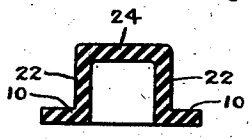

Fig.-7

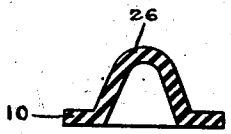

Fig.-8.

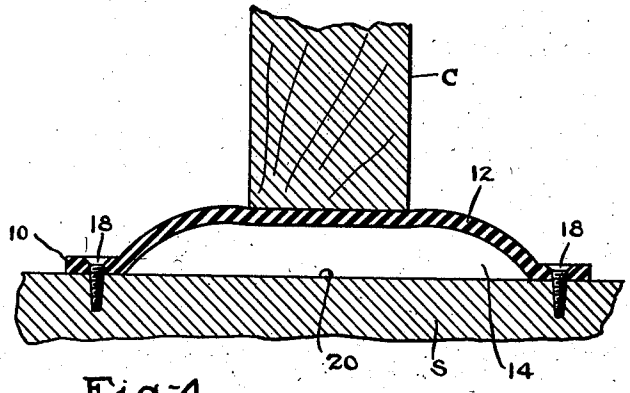

Fig.-4

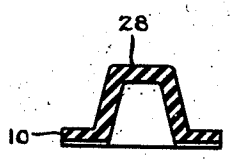

Fig.-9

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STOP AND HOLDER FOR CLOSURES

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Application January 9, 1936, Serial No. 58,283

4 Claims. (Cl. 292—70)

My invention relates to combination stops and holders for closures. An object of the invention is to provide a device of this character adapted to cooperate with doors, gates, and other swinging closures. The term "stop" is intended to cover the effect of the device in decelerating or stopping the motion of a door or other swinging closures. The term "holder" is intended to cover the effect of the device in holding such a closure in a given stationary position.

The device consists essentially of molded rubber or other resilient material, preferably formed in a single piece, elongated in shape and having a flat base suited to firm footing on a floor or other support and having a curved middle portion or rib rising above the flat base, said rib being curved convexly in longitudinal cross section. The base is open along its middle portion, so that a recess is produced extending through the base and up into the curved rib, which recess is substantially concentric with the curved rib. Holes are preferably provided at the ends of the base for use in fastening the device securely to the floor or other support at a suitable and effective position thereon.

The novel features which I believe to be characteristic of my invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organization and method of operation, together with additional objects and advantages thereof will be best understood from the following description of specific embodiments when read in connection with the accompanying drawing in which,—

Fig. 1 is a top plan view of one form of my device.

Fig. 2 is a side elevational view thereof.

Fig. 3 is a view in longitudinal vertical section on the line 3—3 of Fig. 1.

Fig. 4 is a similar view showing a door or other closure pushed upon the middle portion of the device.

Fig. 5 is a view in cross section on the line 5—5 of Fig. 1.

Figs. 6, 7, 8, and 9 are similar views of slightly modified forms of construction.

As shown in the drawing, I provide an elongated flat base 10 which as will be understood from Figs. 3, 4, and 5 is open along its middle portion so that the base is in effect a peripheral member. The base carries a rib 12 which is convexed upwardly and is preferably integral with the base. From Figs. 3, 4, and 5, it will be understood that the rib 12 extends vertically and therefore at right angles to the base, and that a recess 14 is produced which extends through the base up into the curved rib so that the recess is substantially concentric with the rib. It is contemplated to make provision for fastening the device securely to the floor or other support S. A convenient way of accomplishing this result is to provide holes 16 at the ends of the base through which screws 18 may be turned into the support. In order to avoid any liability of a vacuum being formed in the recess 14 when the rib 12 expands after compression, the undersurface of the base may be provided with grooves 20.

Fig. 6 shows a slight modification in which the peripheral base member 10' instead of being rectangular in cross section is triangular or wedge-shaped with the thin edge outward. The rib 12 is shown curved both laterally and longitudinally as in the form previously described. Fig. 7 shows a modification in which the rib has side members 22 extending up vertically and a top member 24 which is horizontal in cross section but curved longitudinally as in the other forms. Fig. 8 shows a modification in which the side members of the rib 26 converge upwardly starting from the base 10 and merge into a top member curved laterally. Fig. 9 shows a modification in which the side members of the rib 28 converge upwardly and at the top are connected to a top member which is horizontal in cross section.

The operation and advantages of my invention will be readily understood in connection with the foregoing description and the accompanying drawing. The essential operating features may well be illustrated by describing a typical operation. The device is intended primarily to be fixed securely to a floor or other support S at a place where a door or other swinging closure C is to be stopped and held. The height of the device from the bottom of the base, to the highest point in the curved rib is slightly greater than the clearance between the floor or support and the bottom of the closure. As the closure swings toward the fixed stop and holder, the edge of the closure nearest the stop finally comes into contact with the curved rib of the latter at a point slightly below the top of the rib as will be understood from Fig. 3. Pressure of the closure on the rib depresses the latter downward and as will be understood from Fig. 4, finally compresses the rib to a point when the closure just slides over the highest point on the rib. However, this compression of the rib results in a resistance to continued motion of the closure so that this motion is decelerated and finally stopped. In its compressed condition, the rib exerts an appreciable

upward pressure on the bottom of the closure thereby causing a relatively large frictional resistance between the rib and the bottom of the closure which not only tends to prevent further motion of the closure, but holds the latter firmly in place to prevent closing movement. The closure may be released from its fixed position by a moderate pull. In order to prevent any tendency for a partial vacuum to form within the recess of the rib and thereby lessen the upward pressure of the rib against the bottom of the closure, vents such as 20 may be provided to permit free communication with the outside atmosphere.

It is to be noted that the action of my device both as to retarding the opening movement of the door and holding the latter in open position involves no adjustment of the device with each individual operation such as involved in the use of wedge type stops which are not fixed to a floor or other support and is also involved in holders fixed to the closure which require a distinct engaging and releasing operation when the closure is to be fixed or released. In the use of my device, the closure is merely swung into position over the curved rib and is automatically engaged, and similarly release of the closure is effected by merely exerting a moderate pull thereon. While the device may be very conveniently made in a single piece, it is to be understood that it is not necessarily so made. It is to be further understood that the use of my device is not limited to doors of buildings, but may be used in connection with other closures such, for instance, as the doors of trucks, cars, or other conveyances.

Although I have shown and described various specific embodiments of my invention, I am fully aware that other embodiments are possible. My invention, therefore, is not to be restricted except insofar as is necessitated by the prior art and by the spirit of the following claims.

I claim:

1. A combination stop and holder for closures comprising an elongated base, a compressible hollow longitudinal rib forming a continuous curve carried by said base, said rib having its highest part intermediate the ends thereof whereby the closure when in open position may rest upon and be stopped by said highest part, and means for securely fastening said base to a floor or other support.

2. A combination stop and holder for closures comprising an elongated base and a hollow longitudinal rib molded integrally from rubber, said rib forming a continuous curve having its highest part intermediate the ends thereof whereby the closure when in open position may rest upon and be stopped by said highest part, and means for securely fastening said base to a floor or other support.

3. A combination stop and holder for closures comprising an elongated open center base and a hollow longitudinal rib molded integrally from rubber providing a recess extending through said base and up into said rib substantially concentric with the latter, said rib forming a continuous curve having its highest part intermediate the ends thereof whereby the closure when in open position may rest upon and be stopped by said highest part, and means for securely fastening said base to a floor or other support.

4. A combination stop and holder for closures comprising an elongated open center base and a hollow longitudinal rib molded integrally from rubber providing a recess extending through said base and up into said rib substantially concentric with the latter, said rib forming a continuous curve having its highest part intermediate the ends thereof whereby the closure when in open position may rest upon and be stopped by said highest part, said recess being provided with an air vent to avoid formation of vacuum therein, and means for securely fastening said base to a floor or other support.

JOHN P. LUBY.