June 22, 1954 J. J. DIXON, SR 2,681,480

FINGER GUARD FOR SWINGING DOORS

Filed June 3, 1953

Fig. 1

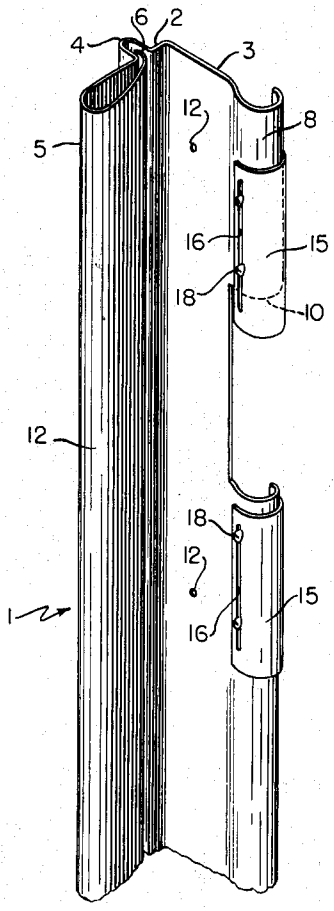
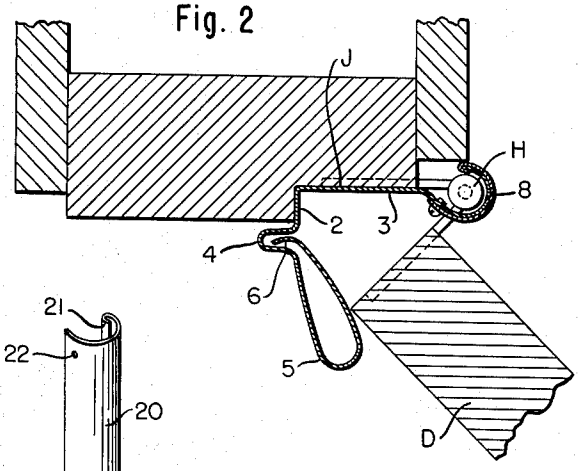


Fig. 2



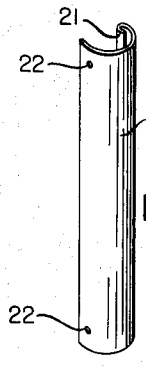


Fig. 4

Fig. 3

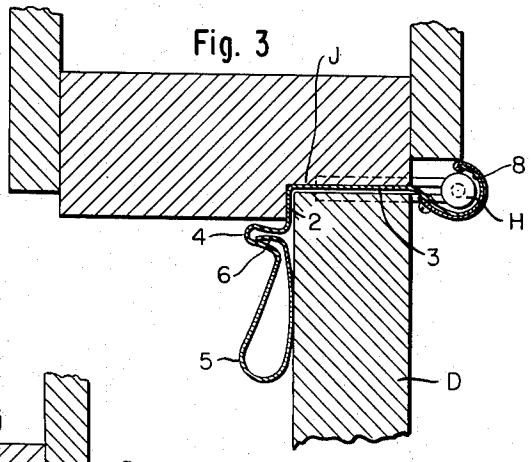
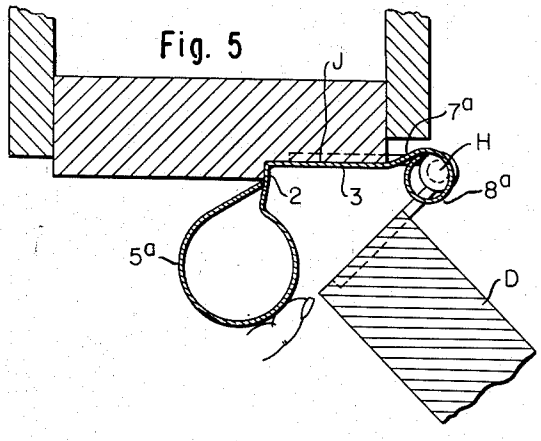


Fig. 5



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FINGER GUARD FOR SWINGING DOORS

John J. Dixon, Sr., Dorchester, Mass.

Application June 3, 1953, Serial No. 359,349

6 Claims. (Cl. 20—16)

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The principal objects of this invention are to provide a device which is reliable in operation, which is of simple design and construction and which may readily be applied to the jamb of a door regardless of whether the door swings inwardly or outwardly, or whether it be hinged at one edge or the other, and to provide a device which does not detract from the appearance of the doorway and which can be economically manufactured.

Further objects relate to features of construction and will be apparent from a consideration of the following description and accompanying drawings, wherein:

Fig. 1 is a perspective view of what is now considered the preferred form of the invention;

Fig. 2 is an enlarged cross-section illustrating the manner in which the device is applied to a door jamb;

Fig. 3 is a view similar to Fig. 2, but showing the door in closed position;

Fig. 4 is a perspective view of a closure strip for the hinge cut-out; and

Fig. 5 is a view similar to Fig. 2 but showing a modification.

The device herein shown for the purpose of illustration comprises an elongate strip 1 of material such as sheet metal, extruded plastic material or the like, preferably of generally L-shaped cross-section to provide a shorter leg 2 and a longer leg 3, the latter being approximately the width of the door jamb (or thickness of the door) to which it is to be applied, whereas the shorter leg 2 approximates the depth of the jamb or recess. The shorter leg 2 is integral with a resilient U-shaped section 4, one leg of which is juxtaposed to a doorway, as shown in Figs. 2 and 3, and this section is integral with a relatively resilient scroll or tubular member 5 of elongate cross-section the size and shape which is such as to obstruct ready access to the door jamb. The inner edge 6 of the tubular member is bent so that it projects into the hinge section 4, thus cooperating with the latter to enhance the resiliency of the parts.

As shown more clearly in Fig. 2, the inner face of the tubular member 5 is inwardly off-set relative to the leg 2 so that it is preferably approximately tangential to the arc defined by the swing of the door, it being understood that the inner curved surface may intersect said arc so long as it does not interfere with the closing of the door, or it may be slightly spaced from said arc provided it does not present a gap of a width which would impair its function as hereinafter explained. The edge of the longer leg 3 is also integral with a semi-cylindrical extension section 8 which has a size and shape sufficient to block the gap at the hinged edge of the door, as shown in Fig. 2.

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The strip 1, whether fabricated from sheet metal or formed from extruded plastic material may be produced in lengths corresponding to the height of the doors with which they are to be used, e. g., 6'-6'', 6'-8'', 7'-0'', etc.; but a shorter length may be used where it is desired to afford protection against injury to a child. Prior to application to a door, the smaller scroll 8 may be cut away as indicated at 10 to accommodate the hinges H of the door D and when thus prepared the device may be readily applied to the jamb of the door as shown in Fig. 2, without removing the door from the hinges H. Nails, screws or other fastening elements may be employed to anchor the strip 1 in the jamb J of the door, and to this end the leg 3 may be formed with spaced perforations 12 to receive such fastening elements.

As herein shown the door D is hinged on the left hand edge (Fig. 2) and opens outwardly, but should the door be hinged on the right hand side to swing outwardly, then the strip 1 would simply be inverted; if the door were hinged on the right hand side to swing inwardly then the strip would be reversed or rotated 180°; and if hinged on the left hand side to swing inwardly, the strip would be reversed or rotated 180° in the opposite direction. Hence, it does not matter how the door is hinged.

Where the strips 1 are prefabricated to fit conventional doors, the cut-away portions 10 may be formed at specified distances from the ends, and in such cases the gap is sufficiently large to accommodate different size hinges. In order to close the gap between the upper and lower edges of the hinge and the corresponding edges of the cut-away 10, I provide semi-cylindrical scrolls 15 formed with longitudinally extending slots 16 (Fig. 1) which receive self-tapping screws 18 to clamp the scrolls 15 in adjusted position against the main scroll or section 8.

Where the device is to be applied only to the lower part of a door jamb for the protection of a child, a three to four foot length will usually suffice; and where such a strip must be reversed in order to fit the jamb properly, then the cut-away 10 should be replaced. To this end I provide a scroll 20 one longitudinal edge of which is folded over as shown at 21 (Fig. 4) so as to snugly embrace the section 8 to bridge the gap, the op-

posite edge portion having spaced perforation 22 to receive self-tapping screws to hold the parts in position.

When, as shown in Fig. 2, the door D is open the scroll 5 normally prevents the fingers from being inserted far enough into the jamb J to be caught if the door were suddenly closed. Indeed, when the door D is being closed its edge first contacts the fingers and the time element is such as to permit the fingers to be withdrawn due to the natural reflex action which could not be depended upon without the scroll. Even if the fingers were not immediately withdrawn upon contact with the door, the resiliency of the hinge section 4 and/or the scroll 5 would prevent the application of injurious squeezing or crushing force. The same is likewise true of the smaller scroll 8 which substantially blocks the gap between the hinged edge of the door and the jamb surface.

The embodiment shown in Fig. 5 is, in principle, the same as that shown in Figs. 1 to 3, and the same or similar reference characters are applied to corresponding parts. In this embodiment the U-shaped hinge member is eliminated and the opposite portions of the scroll 5*a* are both offset relative to the leg 2. The extension 7*a* is bent rearwardly and is integral with the scroll 8*a* as in the previously described embodiment, but in all other material particulars are substantially the same.

While I have shown and described one desirable embodiment of the invention, it is to be understood that this disclosure is for the purpose of illustration and that various changes and modifications may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

The present invention is a continuation-in-part of my copending application, Serial No. 309,863, filed September 16, 1952.

I claim:

1. A device for preventing the fingers from being accidentally caught in the jamb of a door comprising an elongate strip of material having a width approximately equal to that of the jamb of the door to which it is to be applied, one longitudinal edge of said strip being integral with one leg of a U-shaped resilient section, the other leg of said resilient section being integral with a scroll of relatively large size, the free longitudinal edge of said scroll being bent inwardly into the space between the legs of said U-shaped resilient section, and the opposite edge of said strip being integral with a scroll of relatively small size.

2. A device for preventing the fingers from being accidentally caught in the jamb of a door comprising an elongate strip of material having an L-shaped cross-section, the width of the longer leg being approximately equal to that of the jamb of a door to which it is to be applied, the edge of the shorter leg of said strip being integral with one leg of a U-shaped resilient section, the other leg of said resilient section being integral with a scroll of relatively large size, the free longitudinal edge of said scroll being bent inwardly into the space between the legs of said U-shaped resilient section.

3. A device for preventing the fingers from being accidentally caught in the jamb of a door comprising an elongate strip of material having an L-shaped cross-section, the width of the longer leg being approximately equal to that of the jamb of a door to which it is to be applied and the width of the shorter leg being approximately equal to the depth of said jamb, the edge of the shorter leg of said strip being integral with one leg of U-shaped resilient section, the other leg of said resilient section being integral with a scroll of relatively large size, the free longitudinal edge of said scroll being bent inwardly into the space between the legs of said U-shaped resilient section, and the edge of the longer leg of said strip being integral with a scroll of relatively small size.

4. A device as set forth in claim 1, wherein said opposite edge of said elongate strip is formed with a cut-away to accommodate the hinge of a door and carries at least one adjustable scroll section of the same cross-section to bridge a gap between the hinge of a door and the adjacent edge of said cut-away.

5. A device as set forth in claim 1, wherein said opposite edge of said elongate strip is formed with a cut-away to accommodate the hinge of a door and carries a closure scroll of substantially the same cross-section to cover said cut-away if not used.

6. A device as set forth in claim 1, wherein said scroll of relatively large size has an approximately ovoid cross-section, the inner face of which is approximately tangential to the swing of the door.

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