Aug. 15, 1961 E. J. HALLENBECK 2,995,785

DOOR GUARD

Filed Feb. 28, 1958

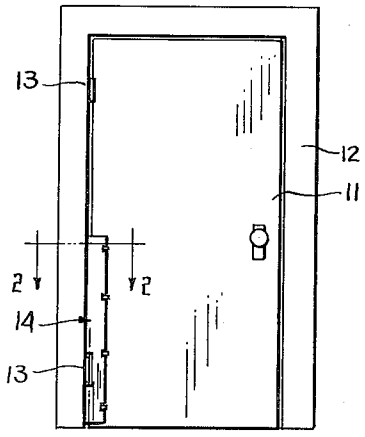


FIG. 1.

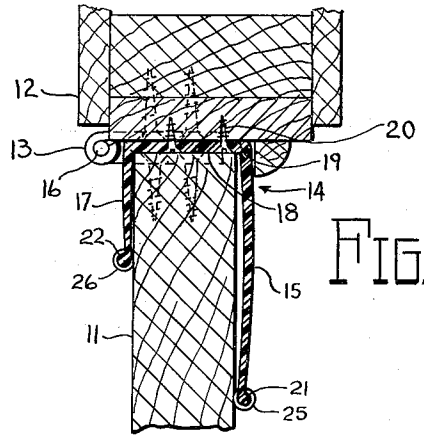


FIG. 2.

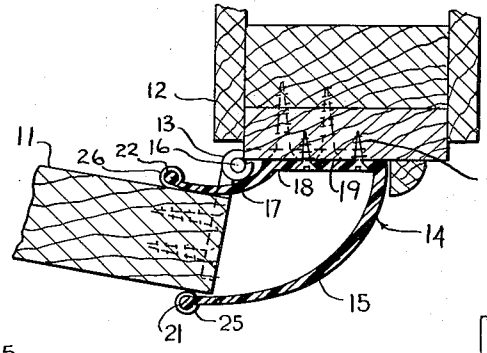


FIG. 3.

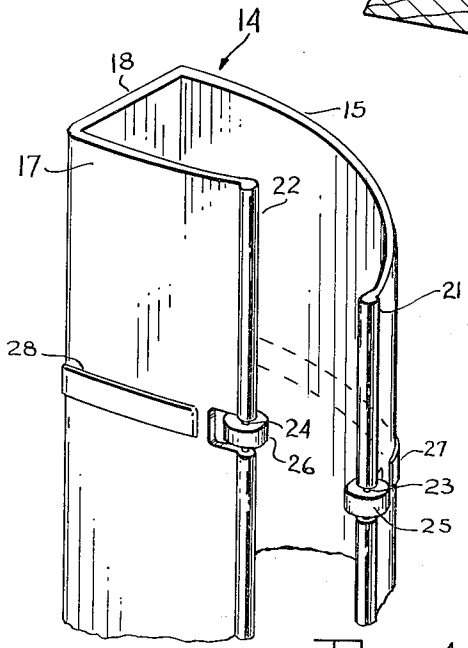


FIG. 4.

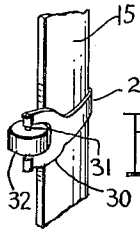


FIG. 5.

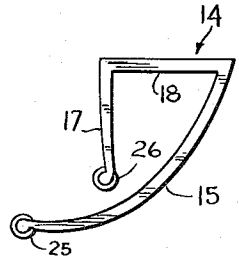


FIG. 6.

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DOOR GUARD

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7 Claims. (Cl. 20—16)

This invention relates to guards for the inner or hinged edges of swinging doors and is primarily for the purpose of preventing small children from inserting their fingers into the spaces between such edges of the doors and the door jambs and thereby being painfully injured upon opening or closing of the doors.

The object of the invention is the provision of such a door that is simple and inexpensive in construction, easy to install and efficient in operation, whereby to enhance the practicability and commercial value of devices of this character.

Other objects and advantages of the invention will be apparent from the following detailed description of a preferred embodiment thereof, reference being made to the accompanying drawing, in which:

FIG. 1 is a view in elevation of a door with a guard according to the invention cooperating therewith;

FIG. 2 is a view in cross section taken along the line 2—2 of FIG. 1;

FIG. 3 is a view in cross section similar to FIG. 2 but with the door open;

FIG. 4 is a view in perspective of a portion of the door guard with the side flanges in normal positions;

FIG. 5 is a modified form of a portion of the guard shown in FIG. 4; and

FIG. 6 is a normal reduced end view of the guard shown in FIG. 4.

Referring to the drawings, 11 designates a door mounted in a casing 12 by hinges 13 and provided with a guard 14 embodying the invention. This guard extends from a point near the lower edge of the door upwardly beyond the reach of a child who might accidentially or intentionally place his fingers in the gap between the door jamb 12 and the door 11.

The door guard 14 is generally of U-form and includes a wide gap-closing member or strip 15 on the side of the door 11 opposite a door hinge pin 16, and a narrow gap-closing member or strip 17 on the same side of the door as the door hinge pin 16. These strips are integrally connected by a butt plate 18 which is attached to the jamb 19 of the door casing 12 by nails or screws 20. The entire guard 14 may be made of sheet-like metal or of plastic or other suitable yielding or flexible material with each of the strips 15 and 17, and particularly 17 normally curved inwardly. The wide strip 15 must have a sufficient width and have a normally small enough radius of curvature to assure that it will be in contact with the door even when fully opened, as shown in FIG. 3. The narrow strip 17 need only have a sufficient width and be curved a sufficient amount to maintain contact with the door 11 when it is opened far enough to form a gap between the hinge edge of the door 11 and the jamb butt 19 in which a finger might be inserted.

The outer extremities of the strips 15 and 17 can be rolled to form rounded portions 21 and 22 respectively that carry axles 23 and 24 on which rollers 25 and 26 rotate. The rollers, rather than the edge, contact the door surfaces and prevent any squeaking or similar frictional noises from occurring between the strips 15 and 17 and the door, when being opened or closed.

Two thin leaf springs 27 and 28 can be molded into, or affixed to the surfaces of, the strips 15 and 17, respectively, to establish proper resiliency in these strips. The springs are preferably located in line with the rollers so

that force produced in the springs will be transmitted directly through the rollers 25 and 26 to the door 11.

FIG. 5 shows an alternate construction for springs and rollers and is particularly adapted where thinner plastic is used for the strips 15 and 17. In this case, a leaf spring 29 extends beyond the edge of either of the strips 15 and 17 and forms a Y-shaped portion 30. The ends of this portion are rolled to accommodate an axle 31 of a wheel 32.

When the guard 14 is installed, those portions of the strip 15 that interfere with the door hinges 13 can simply be cut away so that the guard can be inserted around the hinge. If the hinge plates extend beyond the butt 19 or the inner edge of the door 11, that portion of the butt plate 18 can also be cut away, if there is insufficient clearance between the hinge plates to accommodate the butt plate.

The invention basically comprises a pair of strips connected by a butt plate that is adapted to be affixed to a butt of a door jamb whereby each strip extends outwardly on opposite sides of the door. The strips are urged inwardly toward the door to maintain contact therewith.

I wish it understood that my invention is capable of various modifications which can be made without departing from the scope of the invention as defined in the depending claims.

I claim:

1. In combination with a door jamb and a door having a hinge edge, a butt plate affixed to the door jamb, a pair of gap-closing members comprising single arcuate strips connected to said butt plate extending parallelly to the longitudinal extent of the door jamb and outwardly therefrom, said members being made of resilient material and being urged toward the door, and at least the member disposed on the side of the door opposite to the direction in which it opens being of sufficient width to bridge the gap between the jamb and the hinge edge of the door, when open, with the outer edge of said member being in slidable contact with the door.

2. In combination with a door jamb and a door having a hinge edge, a butt plate affixed to the door jamb adjacent the hinge edge of the door, a pair of gap-closing resilient members comprising single arcuate strips integrally attached to opposed vertical edges of the butt plate and adapted to extend outwardly on either side of the door, said members being urged toward said door and toward each other and the width of the two strips being sufficient for each to bridge a gap resulting between the door jamb and the hinge edge of the door, when open, with the outer edges of said strips being in slidable contact with the door.

3. In combination with a door jamb and a door having a hinge edge, a generally U-shaped door guard including a butt plate affixed to the door jamb adjacent the hinge edge of the door and two strips of resilient material integrally connected to said butt plate and extending outwardly on either side of the door, one at least of said strips being urged toward said door and toward the other strip, and the width of said strips being sufficient to bridge each side of a gap resulting between the door jamb butt and the hinge edge of the door when open, with the outer edges of said strip being in slidable contact with the door.

4. In combination with a door jamb and a door having a hinge edge, a generally U-shaped door guard including a butt plate affixed to the door jamb adjacent the hinge edge of the door and two strips integrally connected to said butt plate and extending on either side of said door, the width of said strips being sufficient to bridge a gap between the door jamb and the hinge edge of the door, when open, and means for urging said strips toward said door and toward each other, with the outer edges of said strips being in slidable contact with the door.

5. In combination with a door jamb and a door having a hinge edge, a generally U-shaped door guard including a butt plate affixed to the door jamb adjacent the hinge edge of the door and two strips integrally connected to said butt plate and extending outwardly on either side of said door, the width of the two strips being sufficient for each to bridge a gap between the door jamb and the adjacent hinge edge of the door, when open, and springs laterally located with respect to said strips to urge said strips toward said door and toward each other.

6. In combination with a door jamb and a door having a hinge edge, a generally U-shaped door guard including a butt plate affixed to the door jamb adjacent the hinge edge of the door and two resilient strips integrally connected to said butt plate and extending outwardly on either side of the door, said strips being urged toward said door and toward each other, the width of said strips being sufficient for each to bridge a gap resulting between the door jamb and the adjacent hinge edge of the door, when open, and a plurality of rollers located along the outer edges of said strips for engaging the respective door sides.

7. In combination with a door jamb and a door having a hinge edge, a pair of strips fixed at their inner edges to the jamb and extending outwardly on either side of the door, a plurality of springs laterally located with respect to said strips and urging said strips toward said door and toward each other, the width of the strips being sufficient for each to bridge a gap between the door jamb and the adjacent hinge edge of the door, when open, a plurality of rollers, and means for rotatably supporting and spacing said rollers along the outer edges of said strips.

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