Aug. 17, 1948. E. M. BORCHERS 2,447,389

PULL FOR SLIDING GLASS PANELS

Filed June 7, 1947

Fig. 1

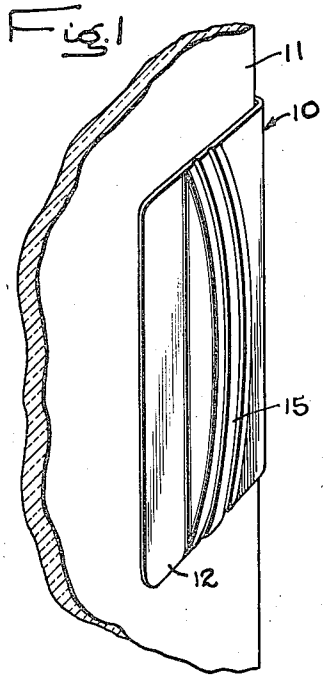


Fig. 2

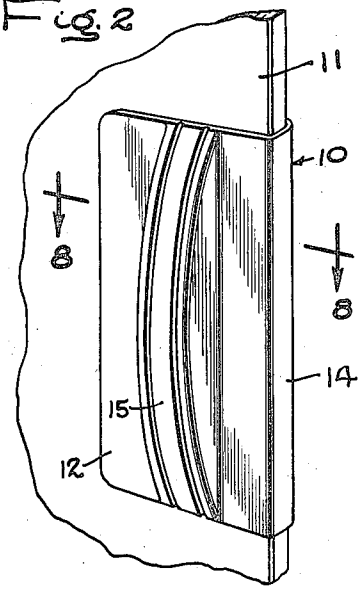


Fig. 3

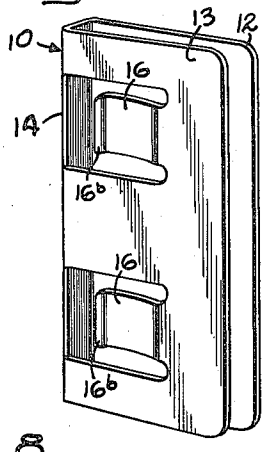


Fig. 4

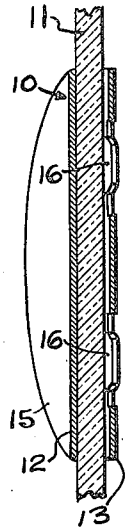


Fig. 5

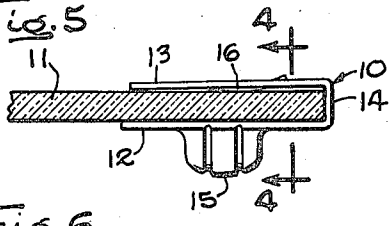


Fig. 6

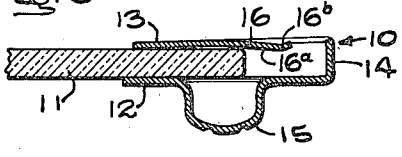


Fig. 7

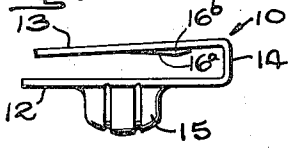
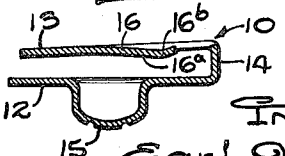


Fig. 8



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PULL FOR SLIDING GLASS PANELS

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7 Claims. (Cl. 16—114)

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The present invention pertains to door pulls and more particularly to pulls for sliding glass door panels.

In the construction of sliding glass door panels the common practice has been to form a recess adjacent the edge of the glass panel to provide a shoulder for engagement by the fingers of the operator. The formation of such a recess requires an additional costly operation upon the glass, and moreover, since such panels are comparatively thin, the shoulder surface provided is too small for an adequate finger hold.

Generally stated it is an object of the present invention to overcome the aforementioned disadvantages in the provision of a pull for a sliding glass panel which is simple in construction and inexpensive to manufacture.

Another object is to provide a pull of resilient material for installation on a sliding glass panel adjacent one edge thereof and having portions disposed on opposite surfaces of the panel forming clamping elements for effectually gripping the panel therebetween notwithstanding the hard, smooth surface of the panel.

The objects of the invention thus generally set forth, together with other and ancillary advantages, are attained by the construction and arrangement shown by way of illustration in the accompanying drawings, in which:

Figures 1 and 2 are perspective views of a door pull constructed in accordance with the present invention.

Fig. 3 is a rear view of the pull.

Fig. 4 is a sectional view taken substantially on the line 4—4 in Fig. 5.

Fig. 5 is an end view showing the pull in fully installed position.

Fig. 6 is a sectional view showing the pull in partially installed condition.

Fig. 7 is an end view of the pull.

Fig. 8 is a sectional view taken substantially on the line 8—8 of Fig. 2.

While the invention is susceptible of various modifications and alternative constructions, there is shown in the drawings and will herein be described in detail the preferred embodiment, but it is to be understood that it is not thereby intended to limit the invention to the form disclosed, but it is intended to cover all modifications and alternative constructions falling within the spirit and scope of the invention as expressed in the appended claims.

In carrying out my invention, I provide a door pull comprising a substantially U-shaped member

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10 of resilient material adapted to be slipped over an edge of a glass panel 11 and so constructed as to provide a firm, frictional grip upon the panel notwithstanding the smooth, hard character of the surface thereof. In the present instance, the member 10 is made of resilient material such as spring steel and comprises front and rear legs 12 and 13 and a connecting or bight portion 14. A fingerpiece 15 is provided on the front leg 12 and comprises, in the present instance, an elongated rib pressed outwardly therefrom.

To provide a firm, frictional grip on the hard, smooth surface of the glass, the rear leg 13 of the member 10 is constructed to provide spring gripping means or clamping elements for coaction with the front leg 12 in gripping the panel 11. As shown, the pull is made of substantial width in a direction longitudinally of the edge of the panel to which it is applied and the spring gripping means preferably comprises two spring fingers 16 struck from the rear leg 13 and spaced apart to provide contact with the glass at relatively spaced points.

To permit installation of the pull on a glass panel and to avoid chipping of its edges, the spring fingers 16 are made relatively long and each is provided with a cam surface. In the present instance, the fingers are extended in trailing relation to the direction of movement of the pull in its installation on the panel and each is depressed slightly toward the front leg 12, thus providing a long gently sloping cam surface 16a for contact with the rear edge of the panel as the pull is pressed into its installed position thereon, and a tip portion 16b bearing on the flat surface of the panel in the installed position of the pull. Glass panels are normally provided with beveled edges for purposes of safety and advantage is taken of this feature to assist in the installation of the pull on such a panel, the cam surface 16a provided on the spring finger 16 coacting with the beveled edge to cam the fingers thereover.

So that the outer edge of the rear leg 13 of the pull will contact the glass, the bight portion 14 of the pull is made slightly larger than the thickness of the panel 11, and the rear leg 13 is bent slightly toward the front leg 12. In order to prevent marring of the rear surface of the glass by movement of the tips of the spring fingers 16 thereover, the tip portions 16b thereof are turned slightly outward.

To facilitate application of the pull to the edge of the panel, the front leg 12 is made of slightly greater length than that of the rear leg 13. Thus, the space between the front and back legs 12 and

13 of the pull can be readily positioned opposite the edge of the panel.

To install the pull on the glass panel, the extended portion of the front leg is placed against the front surface of the door thereby properly positioning the pull so that it can be pressed over the panel edge. As the movement toward installed position progresses, the bases of the spring fingers 16 contact the bevel edge of the glass the spring fingers are cammed thereover. When the pull reaches its final position, the tips 16b of the fingers press against the rear surface of the glass panel, the bight portion lies against the edge of the panel and the front leg lies flat against the front surface of the door.

From the foregoing therefore, it can be seen that a pull for a sliding glass panel constructed in accordance with the present invention provides a firm, frictional grip upon the panel notwithstanding the smooth, hard character of the surfaces thereof. The provision of gently sloping cam surfaces on the fingers of the pull permits its ready installation upon the panel without danger of chipping the edges thereof. The provision of two spring clamping fingers has been found desirable because it insures a more uniform frictional gripping force at opposite ends of the pull and thus tends to prevent twisting of the pull relative to the panel. The fingerpiece is sufficiently large to permit firm grasping by the fingers of the operator and eliminates the danger of injury thereto if the operators' fingers had to contact the glass. Finally, a pull so constructed can be positioned at any point on the edge of the panel and its location can be readily changed as desired.

I claim as my invention:

1. A pull for a sliding glass panel comprising, in combination, a U-shaped member of resilient material having front and back legs and a bight portion connecting said legs in spaced relation for the reception of a panel therebetween, said front leg having an integrally formed fingerpiece thereon, and a spring clamping finger struck from said back leg and providing a cam surface for engagement with the rear surface of the panel upon installation of the pull, said front leg and said spring finger coacting to hold the pull in firm, frictional engagement with the panel.

2. A pull for a sliding glass panel comprising, in combination, a U-shaped member of resilient material having front and back legs and a bight portion connecting said legs in spaced relation for the reception of a panel therebetween, said front leg having an integrally formed fingerpiece thereon, and two spring clamping fingers struck from said back leg in spaced apart relation and providing cam surfaces for engagement with the rear surface of the panel upon installation of the pull, said front leg and said spring fingers coacting to hold the pull in firm, frictional engagement with the panel.

3. A pull for a sliding glass panel comprising, in combination, a substantially U-shaped member having front and back legs and a bight portion, said front leg having an integrally formed fingerpiece thereon and said back leg having a spring finger struck therefrom and extending toward said bight portion, said front leg and said finger constituting clamping elements for frictional engagement with said panel.

4. A pull for a sliding glass panel comprising, in combination, a substantially U-shaped member having front and back legs and a bight portion, said front leg having an integrally formed fingerpiece thereon and said back leg having a spring finger struck therefrom and extending toward said bight portion, said front leg and said finger constituting clamping elements for frictional engagement with said panel, and said front leg being of slightly greater length than said rear leg thereby providing a locating means for positioning said pull for installation upon the panel.

5. A pull for a sliding glass panel comprising, in combination, a long U-shaped member of resilient material having front and back legs and a bight portion, said front leg having a fingerpiece thereon and being adapted to lie flat against the front surface of the panel and said rear leg having spaced spring clamping fingers struck therefrom, said fingers being slightly depressed toward said front leg and providing cam surfaces of gentle slope for engagement with the edge of the panel to direct the fingers thereover upon installation of the pull.

6. A pull for a sliding glass panel comprising, in combination, a substantially U-shaped member of resilient material having front and back legs and a bight portion, said front leg having a fingerpiece thereon and being adapted to lie flat against the front surface of the panel and said rear leg having a plurality of spring clamping fingers struck therefrom in spaced relation to each other and extending toward said bight portion and terminating in spaced relation thereto, said fingers being slightly depressed toward said front leg and providing cam surfaces of gentle slope for engagement with the edge of the panel to direct the fingers thereover upon installation of the pull.

7. A pull for a sliding glass panel comprising, in combination, a U-shaped member of high carbon spring steel having front and back legs and a bight portion, one of said legs being adapted to lie flat against one surface of the panel and the other of said legs having a spring finger struck therefrom and extending in trailing relation to the direction of movement of the pull upon its installation on the panel, said spring finger providing a cam surface of gentle slope for engagement with the edge of the panel to direct the spring finger thereover upon installation of the pull and bearing on the surface of the panel adjacent its edge when the pull is in installed position.

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