Jan. 4, 1955 W. J. DUVALL 2,698,456

COMBINATION SLIDING DOOR PULL

Filed Sept. 30, 1952

Fig. 1.

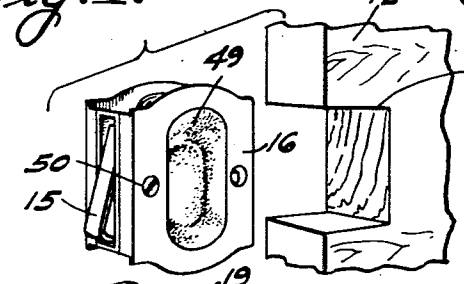
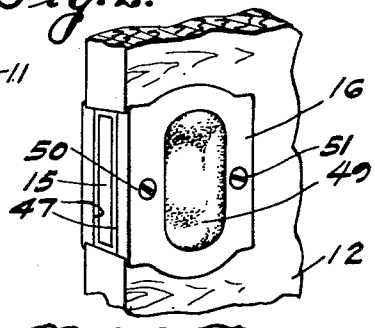


Fig. 2.



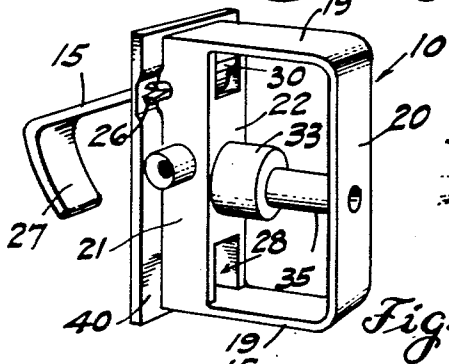


Fig. 3.

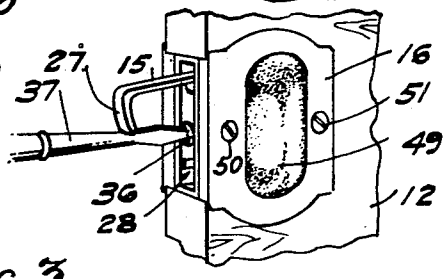


Fig. 4.

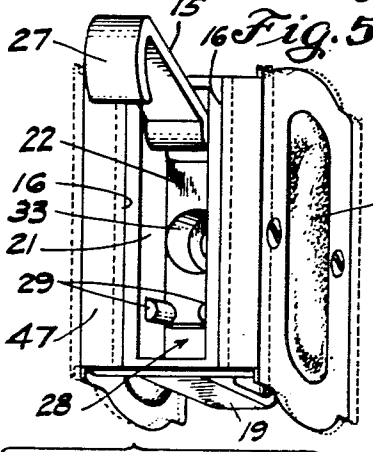


Fig. 5.

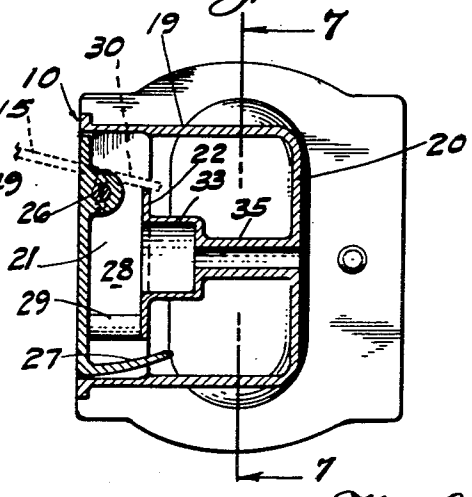


Fig. 6.

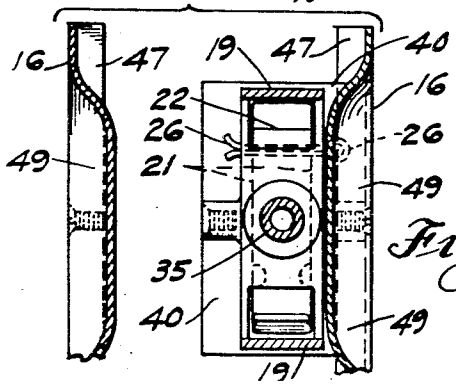


Fig. 7.

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United States Patent Office 2,698,456 Patented Jan. 4, 1955

2,698,456

COMBINATION SLIDING DOOR PULL

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Application September 30, 1952, Serial No. 312,340

3 Claims. (Cl. 16—115)

This invention relates to a door pull for sliding doors.

An object of the invention is to provide for slidable doors, a door pull having a housing provided with a pair of laterally adjustable side plates, thus adapting a single size of door pull housing to be smoothly fitted to the notched front edge portions of slidable doors varying considerably in thickness.

The door pull structure provided by this invention is constructed in such a manner that it is convenient, when installing the device on a door, to apply to a door between two rooms side plates which will match with the fixtures of each room, for example, a chrome plate on one side and a brass plate on the opposite side.

The invention further relates to a new and advantageous assembly of parts which can be easily installed upon a slidable door in a more accurate, rapid and satisfactory manner.

Other objects, advantages and features of invention will hereinafter appear.

Referring to the accompanying drawing, which illustrates a preferred, reduced to practice embodiment of the invention,

Fig. 1 is an extended, perspective view illustrating the application of the device to a slidable door, the latter being fragmentarily shown provided with a notch in its outer end dimensioned to have the device fitted thereinto. The pull arm of the device is shown slightly outswung.

Fig. 2 is a perspective view showing the device in its mounted position in a fragmentarily shown door.

Fig. 3 is a perspective view of the frame portion of the door pull, per se.

Fig. 4 is a perspective view reproducing Fig. 2 except that the pull arm is shown outswung and a screwdriver is fragmentarily shown applied to the internal fastening screw in readiness to screw it into the notched portion of the door.

Fig. 5 is a front perspective view showing the pull arm out swung to its most elevated position. In this view the adjustable side plates are shown in full lines positioned for application to a relatively narrow door and in dotted lines as they would appear when applied to a thicker door.

Fig. 6 is a vertical, longitudinal section, the plane of section extending along the midwidth part of the device.

Fig. 7 is a fragmentary, vertical section of the device, one of the side plates being shown detached, but positioned adjacent to its mounted position. The plane of section is indicated by line 7—7 on Fig. 6.

Referring in detail to the drawing, the embodiment of the device therein shown comprises, as to main parts, a rectangular, open frame **10** dimensioned to fit into the rectangular notch **11** in the slidable door **12**, except that the thickness of said frame is less than the thickness of the notched portion of said door; a swingably mounted pull arm **15**; and the twin, reversible side plates **16**, which are attached to said frame and door to conceal the parts contained within said notch **11**.

Said frame **10** is of a skeletal character and comprises a rectangularly U-shaped metal strip having arms **19**, the basal or midlength run **20** of the U extending vertically and forming the inner portion of the mounted frame. At its front side said U-shaped strip carries, preferably integrally, a channel shaped structure which comprises the vertically extending side strips **21** and incomplete web portion **22**, the open side of this channel shaped structure being directed outwardly. The aforesaid pull arm **15** is shown swingably mounted upon a cotter pin

26 which bridges the space between the upper end portions of said strips **21**, said pull arm carrying at its free end a deflected fingerhold end portion **27**. Said pull arm swings vertically in the alcove **28** provided by the channel shaped structure which has been described, this channel structure carrying stop lugs **29** to limit the inswing of said arm.

Said incomplete web **22** occupies only the midlength portion of said aforesaid channel shaped structure so that a space is left above said web allowing the inner end portion **30** of the fully outswung pull arm to abut the upper end of said web, and there is also a space below the lower end of said web which accommodates the outer end of the fingerhold **27** of the pull arm, allowing said arm to fully inswing. Said arm portion **30** is manually depressible partly to outswing the arm.

Integral with the midlength portion of the web **22** is a cup shaped member **33** the mouth of which is directed forwardly. This cup is concentric with an integral part of a tubular member **35** which spans the space between the bottom of the cup and the rear portion of the frame body **10**. The tube **35** is dimensioned to receive the shank of an interior fastening screw **36** while the head of said screw occupies the cup **33** to be engaged by a screwdriver **37** when the screw is inserted. This screw is located at the midwidth of the frame **10**.

Each of the aforesaid side strips **21** carries along its front edge an outwardly directed flange **40**, these flanges widening the horizontal dimension of the front portion of the device so that the space between their outer edges is sufficiently wide to take care of the thickness of the notched portion of the narrowest door to which the device is to be applied.

The housing structure afforded by the device is completed by the provision of the aforesaid pair of structurally twin side plates **16** each of which carries along its front edge an inwardly directed flange **47** which overlies the adjacent front surface of the frame structure which has been described to a greater or less extent in accordance with the thickness of the notched part of the door to which the device is applied. Each of said plates **16** has, throughout its central portion, a conventional fingerhold depression **49** usable to slide the partly open door farther out. A forward screw **50** co-operates with a rearward screw **51** to attach each of said side plates. Said screws **50** screw into the front portion of the frame **10** and the screws **51** screw into the intact portion of the door rearwardly of its notch **11**, the plates **16** having through them suitable screw holes for these screws.

After a suitably dimensioned notch **11** has been cut into the door the pull is slipped into said notch, bringing the pull arm **15** flush with the outer surface of the notched part of the door as shown in Fig. 2. Then the front screws **50** will be tightened adjusting the frame to center at the same time. Next screw in the two wood screws **51**. Lastly insert the wood screw **36**.

Owing to the skeletal character of the frame **10** its side portions afford a clearance for the aforesaid fingerhold depressions **49** of the side plates **16**.

I claim:

1. A structure of the kind described comprising a substantially rectangular frame fitting within a notch in the front edge portion of a slidable door with the front portion of said frame substantially flush with the front edge surface of said door, there being an alcove in said front portion of said frame and a web portion at the back of the alcove, a pull arm swingably mounted in said alcove and normally held by gravity in a downswung position wherein it closes the front side of said alcove, a part of said arm contacting said web portion to form a stop for the motion of said arm in one direction, said frame carrying a vertically extending lateral flange along each side of said alcove, said flanges being sufficiently wide to afford between their outer edges a space equal to the thickness of the narrowest door to which the device is to be applied, and a pair of side plates mounted in positions wherein they conceal the sides of the aforesaid frame when the latter is within said notch, each of said side plates viewed in its applied position extending above and below said notch and each having an inwardly directed vertical flange along its front edge, each said plate flange overlying the

aforesaid frame flange at its side of the door to a greater or less extent in accordance with the thickness of the notched part of the door to which the device is applied, and a lug in said alcove contacted by said arm to form a stop for the motion of said arm in the direction opposite to the first mentioned direction.

2. The subject matter of claim 1 and each of said side plates being held in its said mounted position by a front screw and a rear screw, said front screw being screwed into said frame and said rear screw being screwed into an intact part of the door rearwardly of the aforesaid notch therein.

3. A structure of the kind described for slidable doors of varying thicknesses comprising a frame adapted to fit within a notch in the front edge portion of the door, said frame having a front portion with a centrally disposed opening therein, the front portion of said frame having a pair of outwardly directed lateral flanges, one of said flanges being disposed on each side of said opening, said flanges being sufficiently wide to afford between their outer edges a space substantially equal to the thickness of the narrowest door to which the device is to be applied, and a pair of side plates mounted adjacent the sides of said frame, each of said side plates having an inwardly directed flange along its front edge, each of said side plates having a portion extending beyond and overlapping the top, bottom and rear edges of said notch to

conceal all of said frame except the front portion thereof when said frame is within said notch, said side plates being held in mounted position by at least one front screw extending through the front portion of each of said plates into said frame and at least one rear screw extending through the rear portion of each of said plates into the intact part of the door rearwardly of said notch, said screws holding said plates substantially flat against the side surfaces of said door so that the front flanges of said side plates extend parallel to and overlap the lateral flanges of said frame to a greater or less extent, depending upon the positioning of said screws and the thickness of the notched portion of the door to which said device is applied, each of the front flanges of said side plates being substantially flush with the surface portion of the front edge of the door adjacent to said flange.

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