Feb. 27, 1940. G. PARIOT 2,191,900

MOUNTING FOR SWINGING CLOSURES

Filed Nov. 26, 1938

Fig. 1.

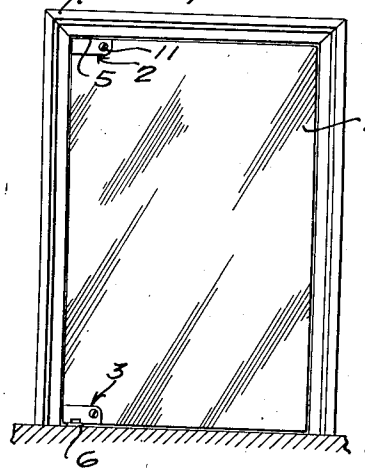


Fig. 2.

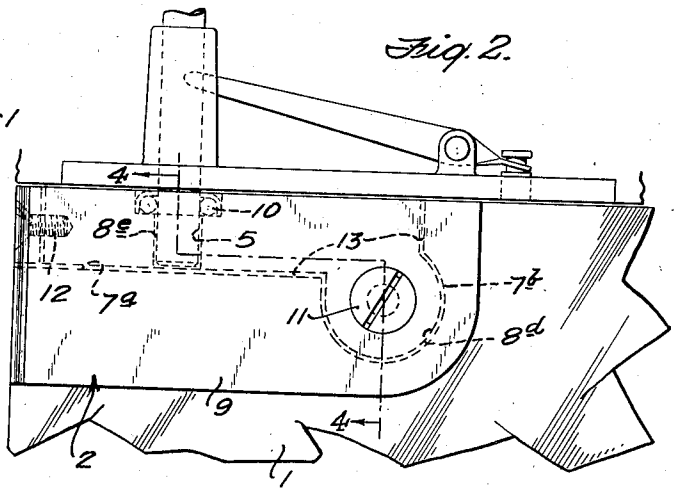


Fig. 3.

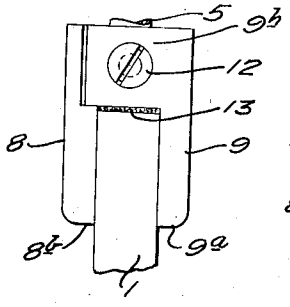


Fig. 4.

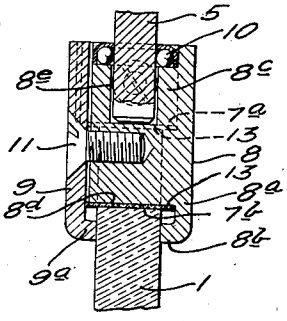


Fig. 6.

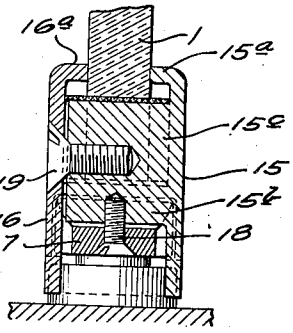
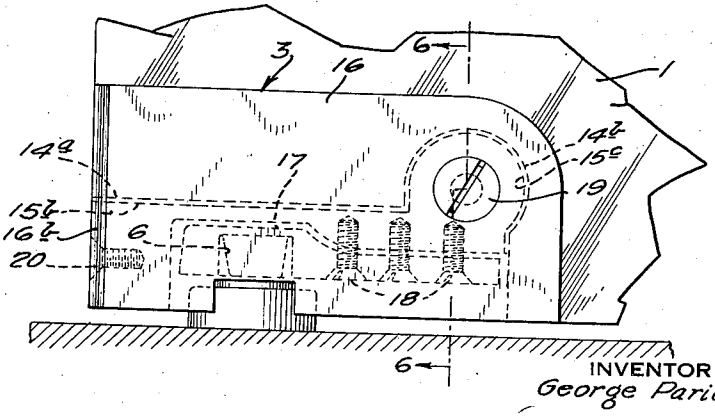


Fig. 5.



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MOUNTING FOR SWINGING CLOSURES

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3 Claims. (Cl. 16—158)

The invention herein disclosed relates to a door mounting and more particularly to a mounting for a solid door such, for example, as a solid glass door.

The more desirable door mounting is that in which the door is mounted on pivots that extend from the floor and the rail of the door frame. With such mountings a door closure and check mechanism embedded in the floor may be used. Commonly, fixtures are used for mounting doors on pivots. In the ordinary wood or metal doors the fixtures may be secured to the door by means of screws or bolts. With certain solid doors, particularly doors that are molded completely from glass, for example, bolts and screws are impractical for securing the mounting fixtures on the door.

It is an object of this invention to provide a mounting for doors of this type and fixtures that are suitable for such doors. These objects are attained by providing a door with a cut-out portion at each of the two corners at which the door is pivotally mounted, and fixtures which have sections that are received in the cut-out portions of the door. The cut-outs in the door and the fixtures are so constructed and arranged that the door is effectively secured to the fixtures which receive the pivots without the use of bolts or screws entering the glass.

Such a door with the fixtures is illustrated in the accompanying drawing in which:

Fig. 1 is an elevation of a door mounted in a door frame;

Fig. 2 is an enlarged elevation of the upper door fixture;

Fig. 3 is an end view of the same;

Fig. 4 is a section of the same taken on the line 4—4 of Fig. 2;

Fig. 5 is an elevation of the lower door fixture; and

Fig. 6 is a transverse section of the same taken in the line 6—6 of Fig. 5.

The door and mounting illustrated in the drawing essentially consists of a solid door 1 molded in one piece from glass, and upper and lower door mounting fixtures 2 and 3. The door is mounted in the frame 4 to swing about the axes of aligned pivots 5 and 6, extending from and perpendicular to the rail of the door frame and the floor respectively.

At the upper corner of the door there is provided a cut-out portion which in reality is not cut out but which is formed in the molding of the door. The cut-out portion includes a rectangular section 7*a* that extends inwardly from the edge of the door. At the inner corner of the rectangular section, there is a circular section 7*b* that is greater than a semicircle but less than a full circle. This cut-out extends transversely across the door. From the following description it will become evident that the circular section 7*b* of the cut-out portion might well have the configuration of many geometric figures, particularly polygons. In each instance, however, it will be less than the full geometric figure but greater than half of the figure. A section of circular configuration has been illustrated and is used because it is readily and easily formed in molding.

Secured to the upper corner of the door, there is the door mounting fixture 2. This fixture includes two members 8 and 9, one on each side of the door. The member 8 includes a plate 8*a* having a lateral flange 8*b* at the edge thereof that abuts against the surface of the door, a solid portion 8*c* extending from the inner surface of the plate, and a circular lug 8*d* extending from the surface of the plate. The solid portion 8*c* extends across the door and forms a continuation of the upper edge of the door. In this portion there is provided a recess 8*e* to receive the pivot 5 and a ball bearing 10 in which the pivot is journaled. The circular lug 8*d* extends through the circular section 7*b* of the cut-out portion of the door.

The member 9 is a plate having a lateral flange 9*a* at the edge thereof and a lateral flange 9*b* at the end thereof. The flange 9*a* abuts against the side of the door and the flange 9*b* overlaps the end of the solid portion 8*c* of the member 8. The member 9 is secured to the member 8 and the door clamped between these members by machine screws, such as the screw 11, extending through openings in the member 9 and screwed into tapped recesses in the member 8. A screw 12 extends through an opening in the flange 9*b* and is screwed into a threaded recess in the solid portion 8*c* of the member 8.

When the fixture is mounted on the door, a cushion material, indicated at 13, is preferably placed between the fixture and the edge of the cut-out in the glass. By virtue of the fact that the section 7*b* of the cut-out portion is greater than a semicircle, a portion of the solid glass extends over the upper half of the lug 8*d* as shown. This with the remainder of the glass bearing against the lug holds the door from dropping out of the fixture either by the force of its own weight or the force of a person leaning against the edge of the door.

At the lower corner of the door, there is provided a cut-out portion having a rectangular section 14a and a circular section 14b similar in all respects to the corresponding sections of the cut-out portion 7. The fixture 3 is provided for this corner of the door. This fixture includes two members 15 and 16, one on each side of the door. The member 15 includes a plate having a lateral flange 15a at the edge thereof, a rectangular solid portion 15b and a circular lug 15c. The rectangular portion 15b is received in the rectangular section 14a of the cut-out portion of the door and the circular lug is received in the circular section 14b of the cut-out portion. The solid rectangular portion 15b is recessed as indicated to receive a pivot fitting 17 that is secured to the member 15 by machine screws 18. This fitting has a polygonal shaped recess to receive the complementary end of the pivot 6 through which a door check and closure mechanism (not shown) operates to close and check the door.

The member 16 has a lateral edge flange 16a and a lateral end flange 16b. The flange 16a abuts against the side of the door and the flange 16b overlaps the end of the portion 15b of the member 15. Machine screws, such as the screw 19 extend through openings in the member 16 and are threaded into tapped recesses in the member 15. These screws serve to secure the members together and clamp the door therebetween. A screw 20 extends through the flange 16b and into the end of the member 15.

The fixture 3 is mounted on and secured in the door in the same manner as the fixture 2. The two fixtures cooperate to maintain the door on the pivots without sagging. The pivots are of course aligned and as previously stated, the door closure and check mechanism acts on the door through the pivot 6.

From the foregoing detail description of the door mounting illustrated in the drawing, it will be seen that by this invention there is provided a mounting for a solid glass door that is practical and sturdy in construction. It will also be apparent that the fixtures are simple in construction and comparatively inexpensive to manufacture and install.

It will be obvious that various changes may be made by those skilled in the art in the details of the structure illustrated in the drawing and described in detail above within the principle and scope of the invention as expressed in the appended claims.

I claim:

1. A door fixture for securing a door on the pivots comprising in combination a metal member having an inturned flange to engage the side of a door, a solid portion having an opening therein to receive a door pivot and a circular lug extending from the inner surface thereof and positioned to be received in a complementary transverse opening in a door, another member having an inturned flange to engage the side of a door, and securing means for securing the two members together to clamp a door therebetween.

2. The combination comprising a glass door having a cut-out portion in one corner thereof including a rectangular section extending from the edge of the door and a transverse section at the inner corner of the rectangular section, the transverse section constituting an opening through the door having a geometrical configuration and being greater than one-half the geometric figure and less than the whole, and a fixture for securing the door on the pivots including a member arranged on one side of the door, the member comprising a solid portion received in the rectangular section of the cut-out portion of the door and having an opening to receive a pivot and a lug extending from the member and into the section of geometrical configuration, the lug being complementary thereto, another member on the other side of the door, and means securing the two members together to clamp the door therebetween.

3. The combination comprising a glass door having a cut-out portion in one corner thereof including a rectangular section extending from the edge of the door and a circular section at the inner corner of the rectangular section, the circular section being greater than a semicircle and less than a full circle, and a fixture for mounting the door on pivots including a member on one side of the door and comprising a solid portion received in the rectangular section of the cut-out portion of the door and having an opening to receive a pivot, and a circular lug extending from the inner surface of the member and received in the circular section of the cut-out portion of the door, another member on the other side of the door, and means securing the two members together to clamp the door therebetween.

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