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ADAPTER FOR LOCKS

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Fig. 1.

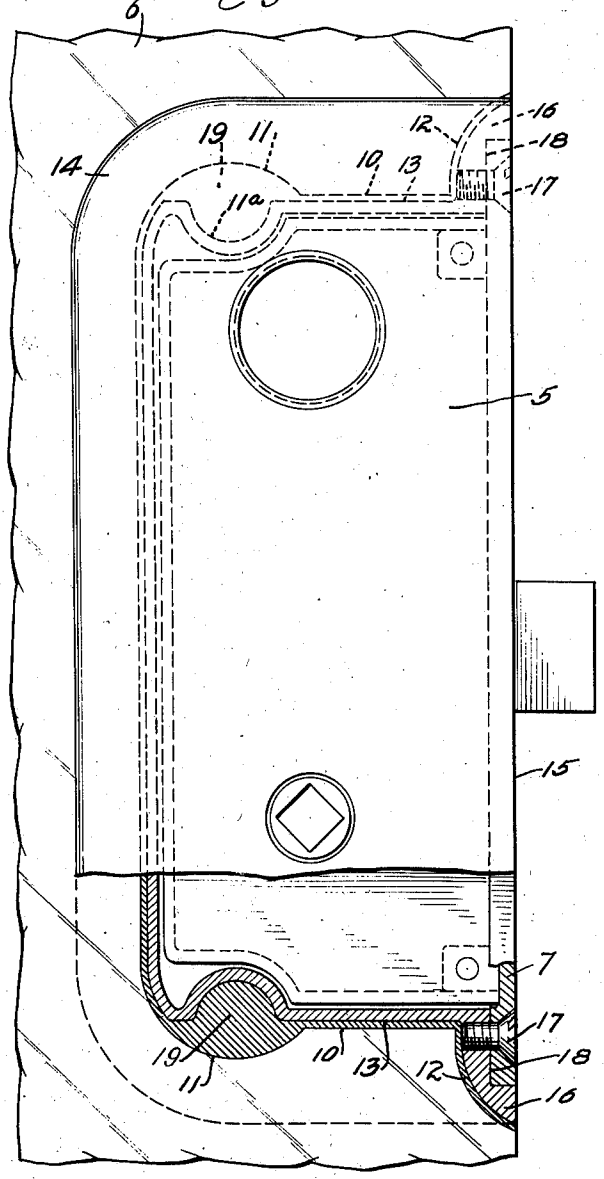


Fig. 2.

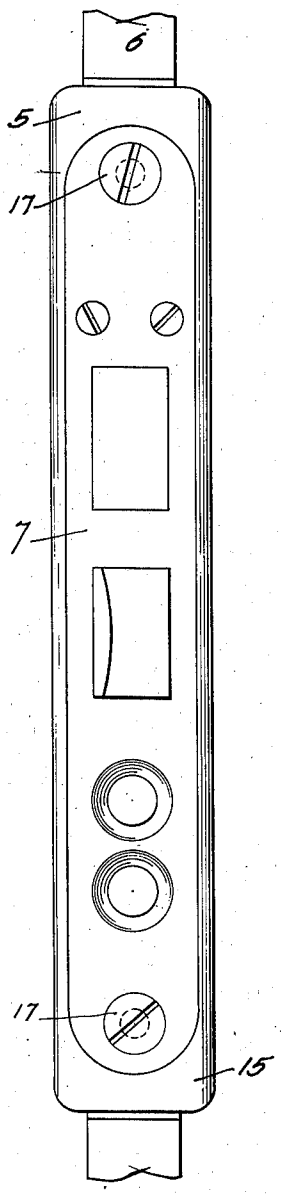
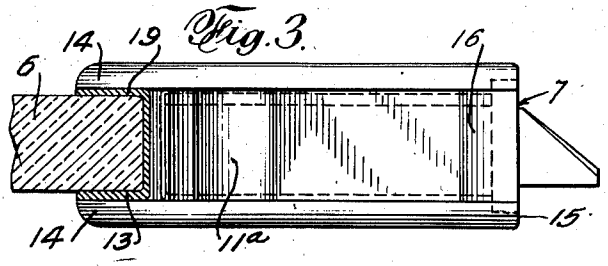


Fig. 3.



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ADAPTER FOR LOCKS

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Application October 10, 1940, Serial No. 360,586

2 Claims. (Cl. 70—451)

Our invention relates to a new and useful means for securing locking and similar devices to glass doors.

With recent improvements in methods of tempering glass, and resultant improved characteristics of the product, glass has been generally accepted as a building material and is now being increasingly applied to the construction of all glass doors to give a modern and artistic appearance. Since tempered glass does not lend itself readily to cutting, drilling, or other working, it has become the practice, in the case of tempered glass panels for doors and the like, to form any recesses or holes which may be required for fixtures, prior to tempering. It can be seen that with such a procedure the glass panels must be either custom-built to specifications as to holes and recesses so as to accommodate particular locks or fixtures, or else such varied stocks must be maintained as to make the cost unreasonably high.

It is an object of our invention to provide an improved adapter for glass doors and the like that will permit the ready application and removal of lock fixtures and particularly locks and latches of the conventional mortise type which are insertable and removable at the edge of the door.

Another object is to provide means for making more economical and more feasible the production and distribution of glass-door panels.

Our invention further contemplates means for rendering a glass-door panel, which has been formed in a standard manner preferably prior to tempering, adaptable to receive any of a plurality of sizes of standard door fittings such as mortise locks and latches.

Other objects and various features of the invention will be hereinafter pointed out or will become apparent to those skilled in the art.

In the drawing which shows, for illustrative purposes only, a preferred embodiment of the invention—

Fig. 1 is a side elevation of an adapter applied to a glass door, a portion of the adapter being broken away to show certain constructional details sectionally;

Fig. 2 is an edge view in elevation of the complete lock mounting showing the face plate of a mortise lock in place;

Fig. 3 is a plan view partly in section of the arrangement of Fig. 1.

Broadly speaking, our adapter 5 may be applied to an all glass door panel 6 ready to receive any standard mortise lock arrangement, such as that designated generally 7, including the usual cylinder lock, knob, etc.

Preferably prior to tempering, the front edge of the glass panel 6 is provided with a recess 10 of some more or less standardized shape. In a preferred form, the recess 10 preferably includes in its upper and lower edge undercuts or keying recesses 11 to form shoulders to anchor the adapter 5 in position, as will later be described. The recess 10 at the front may be enlarged or chamfered as shown at 12, to accommodate lugs or stub portions 16 of the adapter 5 to which the ends of the face plate of a conventional mortise lock 7 may be secured as by screws 17—17.

The adapter 5 is preferably formed or cast in one piece and is hollowed or cored out to receive appropriate fixtures, in this case the standard mortise lock mechanism 7. The front edge 15 of the adapter 5 may be faced-off flat; so that when anchored in place it may be flush with the edge of the door. The sides of the adapter 5 extend outwardly from the intermediate web portion as flanges 14 to receive and embrace the opposite sides of panel 6. The web portion of the adapter 5 is provided, in the opposite upper and lower portions with holding shoulders formed, for example, by recesses 11a, located substantially opposite to the recesses 11 in the adjacent edges of the panel 6. The lugs 16 of the adapter serve to brace the outer ends of the flanges 14 in addition to holding the ends of the lock face plate in operative position. By recessing or routing out the front face of the adapter as at 18 in accordance with the shape of the lock face plate, the latter may also lie flush with both the adapter 5 and the door 6 and thus present a very neat appearance.

The adapter 5 is preferably anchored within the recess 10 by means of a key of metal, plastic or the like 19. While various materials may be used to secure the adapter in place, we have found that molten rose metal poured in will, when solidified, securely hold the adapter in place. Furthermore, as shown in Fig. 3, a thin film of this material may extend between the outer surfaces of the glass panel and the inner surfaces of the flanges 14 to act as a cushion. It will be seen that, after the metal or plastic has hardened, the adapter is firmly held in place by keying or dowel-like portions 19 defined by recesses 11 and 11a, and the outside appearance is as smooth and finished as if the adapter had been originally cast with the glass.

It will be seen that our improved adapter may be formed in one integral piece so that the en-

tire unit, including the two side plates may be inserted from the edge of the glass panel and then anchored in place to form a permanent part of the panel. When cast as a unit no screws or other exposed holding devices are required and the outside of the unit is therefore sightly in appearance. Mortise locks of various types and sizes may be inserted in the adapter so long as the lock face plate is of a length to bear on and be fastened to the lugs 16—16. When it becomes necessary or desirable to change a lock or to remove a lock for repair or inspection, it is only necessary to remove the screws 17 and withdraw the entire lock mechanism whereupon a new one may be inserted, all without disturbing any part of the adapter itself which will remain as a permanent part of the door panel.

A highly important feature of the adapter is that the side plates being integrally connected are held in fixed spaced relation to each other and require no clamping means to secure them in place. These adapter sides also perform the function of finishing plates which have an unbroken connection with that part of the adapter at the front edge. By eliminating the necessity for screws or other clamping means for the sides of the adapter, all danger of breaking the glass by over-tensioning is avoided. By anchoring the adapter in place in the manner described it will be held by uniform tension and the danger of glass fracture will be reduced to a minimum. Again, by this construction locks may be applied, removed, or substituted without removing either side plate or any other part of the adapter.

It will be seen that we have provided an extremely simple, easily installed and effective fixture adapter for all glass doors, designed to receive and hold a variety of door locks of the mortise type without regard to the size or shape of the lock case. It is to be understood that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

We claim:

1. A one-piece lock mounting for glass doors, said mounting comprising a face-plate for overstanding a cut-back recess in the edge of such a door, two side plates integral with said face-plate for covering the opposite sides of said recess, a web portion spanning said recess and integral with said side plates and forming therewith a space to receive a lock case, a recess in the upper and lower parts of said web for receiving keying means for locking said mounting in said door recess, said face-plate being recessed to form a sunken seat for the face-plate of a lock, with holes in the upper and lower ends of said seat to receive screws to hold the ends of said lock face-plate against said seat.

2. A one-piece lock mounting for glass doors, said mounting comprising two side plates to overstand the edges of a cut back recess in the edge of such a door, web means spanning the recess and being integral with and between said side plates and forming therewith a space open at the front to receive a lock case, said web means and said side plates forming a channel to receive the edges of the glass door defining said cut back recess, said lock mounting and said door adjacent said recess having keying means between said side plates and in said channel to mutually interlock with a cementing material to permanently anchor said lock mounting in and about said recess, and means for removably securing a lock case in said space open at the front and between said side plates and web means.

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