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PANEL AND SUPPORTING MEANS THEREFOR

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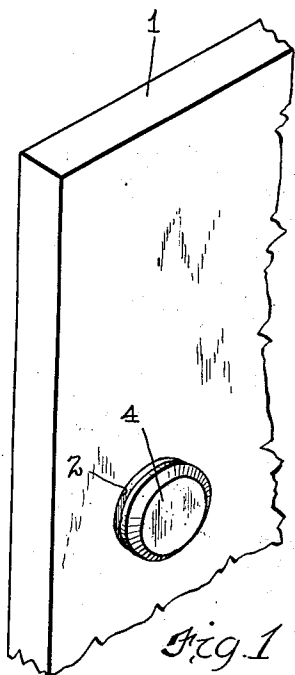


Fig. 1

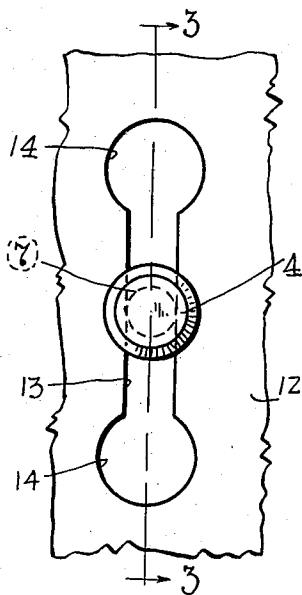


Fig. 2

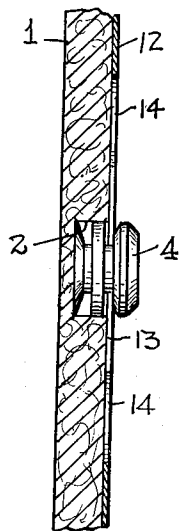


Fig. 3

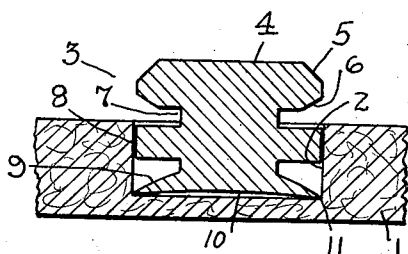


Fig. 4

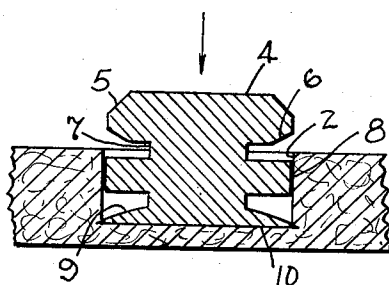


Fig. 5

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PANEL AND SUPPORTING MEANS
THEREFOR

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8 Claims. (Cl. 72-118)

This invention relates, as indicated, to panels and supporting means therefor, but has reference more particularly to a novel button or stud which may be permanently secured to a panel of asbestos, marble, slate, stone, composition or fibre board for the purpose of providing means whereby such panel may be supported on studding or the like, for the formation of walls, partitions, etc., and to a method of securing such buttons or studs to such panels.

A primary object of the invention is to provide a button or stud of the character described, which is adapted to be permanently secured or locked to the panel by exerting pressure thereon axially of the button.

A further object of the invention is to provide a panel having such buttons permanently secured thereto in suitably spaced relation.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail one method and one product exemplifying my invention, such disclosed procedure and product constituting, however, but one of various applications of the principle of my invention.

In said annexed drawing:

Fig. 1 is a view of a fragment of a panel provided with buttons of the character stated;

Fig. 2 is a fragmentary elevational view, showing the manner in which the buttons are used to support the panels on studding or the like;

Fig. 3 is a vertical cross-sectional view, taken on the line 3-3 of Fig. 2;

Fig. 4 is a fragmentary cross-sectional view, showing one of the buttons in position to be locked to the panel; and

Fig. 5 is a view similar to Fig. 4, but showing the button permanently secured or locked to the panel.

Referring more particularly to the drawing, the panel 1 may be of any suitable dimensions, and is formed from asbestos, marble, slate, stone, composition, fibre board, or like material. Such panel is provided at suitably spaced points with circular recesses 2, which are preferably of a depth greater than half the thickness of the panel, and of a diameter sufficient to receive the buttons which are to be secured to the panel.

Each button is formed from a single piece of steel, which is preferably low in carbon, so as to be easily deformed. It comprises a head 4 of substantially the same diameter as the recess

2, and provided with beveled peripheral surfaces 5 and 6, which facilitate attachment of the panels to the studding, a shank 7, a flange 8 extending from the shank intermediate the ends thereof, and also of substantially the same diameter as the recess 2, and a base 9, having a concave lower surface 10, said base tapering in thickness to a relatively sharp edge 11. The base 9 is of substantially the same diameter as the recess 2.

With the button placed in the recess, as shown in Fig. 4, pressure is applied to the button axially thereof as indicated by the arrow in Fig. 5, as a result of which, the base 9 is deformed sufficiently to cause the edge 11 thereof to enter the side wall of the recess 2, as clearly shown in Fig. 5, the button being thus securely locked to the panel. At the same time, the surface 10 will be flattened, so that the button will be solidly supported by the panel. Since the button is made of soft steel, it is easily deformed in the manner stated, and will retain its plastic deformation. It will be understood that the pressure required to thus lock the button to the panel is insufficient to deform the panel in any way.

The flange or collar 8, since it is of substantially the same diameter as the recess, will act to centralize the button in the recess and will prevent axial displacement of the button, either in the course of locking the button to the panel, or during handling or attachment of the panel to studding.

The manner in which the panel is secured to studding by means of the buttons is clearly shown in Figs. 2 and 3, wherein the studding 12, formed in this case of sheet metal, has a slot 13 therein terminating at both ends in circular openings 14, which are somewhat larger in diameter than the heads 4 of the button. The panel is secured to the studding by entering the head 4 of the button in either of the openings 14, and then moving the panel downwardly or upwardly, depending on the space available above and below the panel, to a position wherein the button lies in the slot 13, and the head 4 thereof engages the rear surface of the studding. The shank 7, it may be noted, is of the same width as the slot 13, so that lateral movement of the panel is inhibited. Vertical movement of the panel is inhibited by suitable means (not shown), which engage the upper and lower edges of the panel.

The beveled surfaces 5 and 6 assist in thus securing the panel to the studding, the surface 5 acting to cam the button into the opening 14, and the surface 6 acting to cam the button into the slot 13.

It is thus seen that means have been provided for effectively securing panels to studding, such means being virtually an integral part of the panel.

Other forms may be employed embodying the features of my invention instead of the one here explained, change being made in the form or construction herein disclosed, provided the elements stated by any of the following claims or the equivalent of such stated elements be employed, whether produced by my preferred method or by others embodying steps equivalent to those stated in the following claims.

I therefore particularly point out and distinctly claim as my invention:

1. A panel securing button formed from a single piece of metal and having a studding-engaging head and a transversely concave base deformably engageable in a panel.

2. A panel securing button formed from a single piece of metal, and having a head, a shank of reduced diameter, and a concave base deformably engageable in a recess in a panel.

3. A panel securing button having a head, and a base formed integrally therewith, said base being deformably engageable with a panel by

axial pressure on the button, whereby the diameter of the base is increased.

4. A panel securing button having a head, a shank of reduced diameter and an arched base, said base being deformable to enlarge the diameter thereof.

5. A panel securing button having a head, a shank of reduced diameter, a base deformably engageable in a recess in a panel, and a centering flange extending from the shank.

6. A panel securing button having a panel-engaging base, and an external head beveled peripherally on the front and rear.

7. A panel having buttons with projecting heads to secure the panel to another member, and means to uniformize the height of the heads from the panel and immovably fasten the buttons in the panel, including base portions intergal with the heads and deformed into the material of said panel.

8. A panel-securing button having a base deformably engageable in a recess in a panel, a reduced shank integrally extending from said base, and centering means for the shank.

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