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ANCHORING DEVICE AND METHOD

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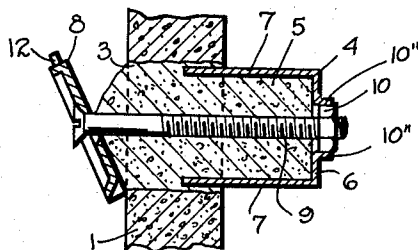


FIG 1

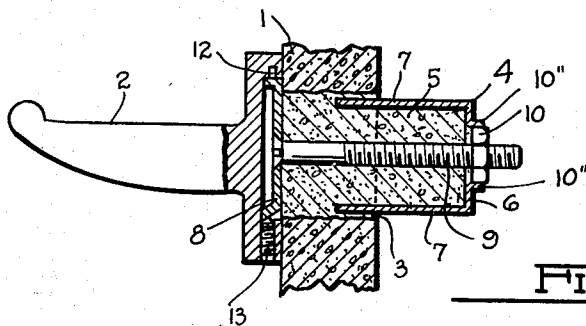


FIG 2

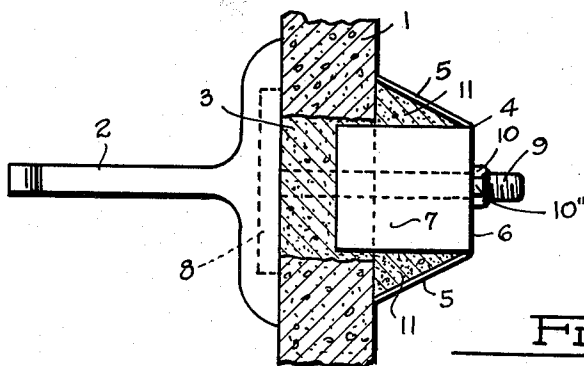


FIG 3

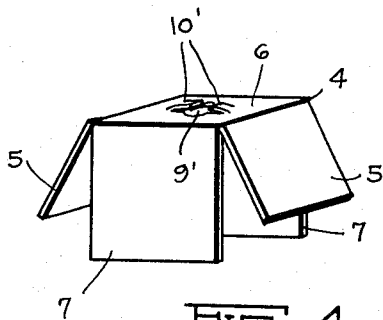


FIG 4

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1

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ANCHORING DEVICE AND METHOD

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This invention relates in general to anchoring devices and particularly to a screw-held, self-expanding, resilient form insertable in an aperture to form a mold for reception of a cement to create a permanent anchoring means.

Insofar as I am aware, in present day practice, various types of toggle bolts and other means are used to fasten items such as towel bars, soap dishes, tissue holders and the like to plaster, plasterboard, and other composition walls. Such devices are relatively expensive and are not always effective. A more permanent type of anchoring means is necessary for a neat and efficient installation.

It is therefore the first object of my invention to provide an anchoring device formed of a resilient material, insertable through a small aperture and expandable to form a cement receiving housing.

Second; to provide an anchoring device threadedly engaged by a fastening member, the latter passing through a mounting face plate.

Third; to provide an anchoring device having oppositely disposed resilient angular flanges and oppositely disposed transverse flanges, a fastening means passing through a mounting face plate and threadedly engaging the anchoring device whereby drawing up the fastening means will urge the angular flanges into sliding relationship with the interior surface of the wall on which the device is being mounted and the transverse flanges are in desired position in the aperture in which the device is placed.

Fourth; to provide an anchoring means and method which comprises the insertion of a hardening compound receiving housing or mold through a prepared aperture in a wall, the mold being secured to a face plate by an adjustable fastening means, maintaining said fastening means in a backed off position whereby access is had to the aperture while manually holding the mold in position in the aperture, forcing a suitable self-hardening compound through the aperture to the housing and adjusting the fastening means to move the face plate securely in its position against the wall with the anchoring mold surrounding the compound which permanently locks the fastening means in position.

Other objects and advantages as well as the construction and use of my invention will be apparent by reference to the following specification in connection with the accompanying drawing in which:

Fig. 1 is a vertical cross sectional view of my invention in place in a wall with the face plate spaced from the wall to permit entry of the hardening compound.

Fig. 2 is a similar view with the fastening means drawn up and the face plate abutting the wall.

Fig. 3 is a top plan view of the same with parts being shown in section.

Fig. 4 is an isometric view of the housing or mold showing an alternate method of forming fastening member engaging means on the housing.

Referring now to the drawing by numerals of reference, 1 designates a wall surfacing which may be plaster,

2

plasterboard or any other material to which it is desired to mount a fixture 2 of any nature such as a hook, towel rod, toothbrush holder, soap dish, etc.

An aperture 3 of proper size and shape is made in the desired location in the wall 1. The anchoring means comprises a housing or mold 4 having a pair of oppositely disposed flanges 5 which extend angularly from the back 6 of the housing. The other two opposite sides 7 of the housing extend at right angles from the back 6 and are adapted to slide into the aperture 3 as shown in Figs. 2 and 3. The housing is preferably made of a resilient material and can be metal, plastic or the like.

A face plate 8 of larger dimensions than the aperture 3 receives an elongated fastening member 9 adjustably engaging the back 6 at 10 which may be a threaded member as shown or a modified form shown in Fig. 4 where resilient fingers 10', punched from the back 6, engage the fastening member 9. The threaded member or nut 10 may be welded to the back 6 or may be retained against turning by ears 10''.

As an alternate and less expensive construction the diameter of opening 9' can be approximately that of the root of the thread on the fastening member which could form its own threads in the back 6, eliminating the nut 10.

In applying my device to the aperture, the fastening member 9 is inserted in the face plate 8 and engaged with housing 4 with maximum separation between the face plate and the housing or mold. The housing 4 is forced into the aperture until ends of flanges 5 are clear of the aperture and spread outwardly so that the housing or mold cannot be retracted. The ends of flanges 7 remain in the aperture forming two closed sides for the housing. With the face plate 8 held out from the wall, a suitable compound capable of setting until hardened, is injected through the aperture until the housing is packed with the compound. The face plate is moved into contact with the wall 1 and the fastening member drawn up until snug. After the compound has hardened a permanent securing of the fastening member and face plate is achieved with no danger of loosening from any cause. The consistency of the compound will be such that it will not flow out of any great extent through gaps 11 formed by the flanges 5 and 7.

In tightening up the fastening member 9 a great deal of force will not be necessary, it only being necessary that it be snug and that the face plate be parallel with the wall and squared away.

After the compound sets the fixture may be hung on the face plate in any conventional manner such as by pins 12 and set screw 13.

My invention may be used for many other purposes where anchoring is necessary in hollow walls, etc. The fastening member may pass through molding, wood or metal panels and numerous other devices, the heart of the invention lying in the anchor housing and method of using same in connection with a hardening compound.

From the foregoing it will be seen that I have provided a new and useful anchoring device, which, when used in conjunction with a hardening compound will securely and permanently anchor a face plate or any other member.

It is obvious that changes in form, proportion and details of construction may be resorted to without departing from the spirit of my invention and I reserve all rights to such changes as come within the scope of these specifications and the claims which follow.

What I claim as new and desire to secure by Letters Patent is:

1. In an anchoring device for an apertured structure accessible from only one side thereof, the combination of a housing receivable in the aperture means preventing removal of the housing once received in said apertured structure, a face plate, a fastening means between the

3

face plate and the housing, a self-hardening compound receivable between the face plate and the housing, said fastening means forcing the face plate against the hardening compound to pack said hardening compound to fill the aperture between the face plate and the housing when the face plate is drawn up flush with the apertured structure, said housing having two opposing resilient members of one length and two opposing members of a greater length than and related approximately 90° to the first mentioned members, a portion of said second mentioned opposing members extending into the aperture when in assembled position, said first mentioned two opposing resilient members being included in the aforementioned means for preventing removal of the housing.

2. In an anchoring device for an apertured structure accessible from only one side thereof, the combination of a housing receivable in the aperture means preventing removal of the housing once received in said apertured structure, a face plate, a fastening means between the face plate and the housing, a self-hardening compound receivable between the face plate and the housing, said fastening means forcing the face plate against the hardening compound to pack said hardening compound to

4

fill the aperture between the face plate and the housing when the face plate is drawn up flush with the apertured structure, said housing having a rear portion, a plurality of flanges extending from the rear portion, certain of said flanges being angularly disposed from the rear portion, the remaining flanges being disposed approximately transversely to said rear portion and of greater length than the angularly disposed flanges, said angularly disposed flanges being included in the aforementioned means for preventing removal of the housing.

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