

Wall anchors (for May 06)



A wall anchor is a fastener that can be used to attach things to walls where screws, nails, adhesives or other simple fasteners are either impractical or ineffective. The most common surfaces where anchors are useful are on hollow surfaces such as doors, walls and ceilings, especially where there is no convenient wood stud or beam behind the surface. If at all possible, try for a stud though, as it is much stronger. Sometimes as with a heavy picture or mirror it is better to screw a piece of wood across two studs or on one stud at right angles and overlapping. Then attach the hangers anywhere on the wood to center it and the picture or mirror will hide the strip of wood behind it, especially if you paint the wood strip the same color as the wall. More next month.

There are many styles of anchors, each one having different strengths and weaknesses. Remember, the fastener can be no stronger than the material it is screwed into (wall).



For example, you might successfully hang a 25 lb wired mirror onto a couple of screws in plastic expansion anchors in drywall where the force is downward. The same anchors and screws might not be able to support a 25 pound cabinet if the cabinet tends to pull the anchor outward.

Anchors can be divided into two basic types, i.e., expansion anchors and hollow wall anchors.

When a screw is installed into a plastic anchor it expands, exerting force against the material it is installed in. Installing a plastic anchor is a matter of first making a hole for the anchor in the surface. This is best done with an awl in drywall. There is less dust produced and it doesn't push out the back of the drywall. Oscillate the end as you push it in (the awl end, not yours). However, you can use a drill if you choose. Make sure it is a little smaller than the diameter of the anchor and push the drill slowly. Then tap the anchor into the wall with a hammer until it is flush.

Never use a plastic expansion anchor in a ceiling under any circumstances unless you are hanging something extremely light, such as a smoke alarm. You will be sorry!

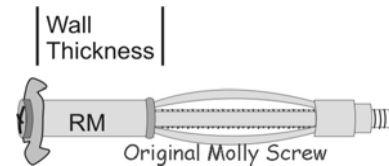
Hollow-wall anchors are designed to be used in thin materials or on hollow walls. They each have a unique way of spreading within the hollow of the wall. Once spread, the anchor cannot be pulled back out through the smaller installation hole. The strength of a spreading anchor is proportionate to the size of the "spread"!



Molly bolts are a mechanically interesting anchor. They combine the ease of installation of a plastic expansion anchor with much greater strength. The largest Mollys can hold up to 50 lbs.

A Molly bolt adds permanent screw threads to any material it is attached to. Thus, anything installed with a Molly can be installed and taken down a number of times with no loss of strength. This style is also used to add support to hollow doors for hanging towel bars and robe hooks.

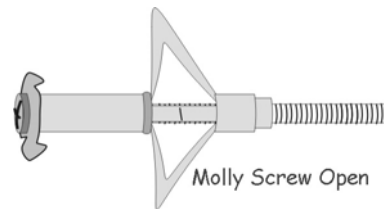
Molly's come in sizes from 1/8" to 1/4" (that's the screw size). Just as important is the thickness size the Molly is designed for. As Bob



Levine found out, it is hard to get a Molly designed for a 3/4" thick wall to tighten up on a 5/8" wall.

Fairways homes are constructed of 5/8" wall board. To install a Molly, first drill a hole the diameter of the Molly in the desired location. Predrilling is important even with "drive Mollys" since they can be bent or distorted if the wall is too hard. For smaller Mollys, an awl can be used to form the hole as described for installing plastic expansion anchors (above). Tap the molly into the hole until the head is flush with the drywall. Molly's have metal "teeth" that grip the drywall and it is

important these teeth are firmly embedded. Then turn the Molly's screw clockwise. This pulls the base of the molly towards the inside of the wall while expanding the metal legs. Stop screwing



when you feel strong resistance and the top of the Molly has pulled tightly against the wall. Remove the screw and put on the hook or bracket and re-attach the screw.

Toggle bolts are the strongest of hollow-wall anchors. They consist of two parts, the toggle itself (which looks like a pair of spring-loaded metal wings) and the machine screw. Toggle bolts are sized in two



ways... by the diameter of the machine screw and by the length of the machine screw. The larger the screw diameter the larger and stronger the toggle. The longer the screw, the thicker the material that can be hung *or* the thicker the wall it can be used in.

Toggles are massively strong. A "puny" 1/8" toggle can safely hold 50 lbs on 1/2" drywall. A 3/8" toggle over 100 lbs! Two or three 3/8" toggles can easily hold up most kitchen cabinets on solid 1/2" drywall.

Toggles are the toggle of choice for hanging most anything from ceilings, too, such as hanging plants, mobiles, etc. NOT fans, they must be attached to ceiling studs or special brackets. To install a toggle, first

drill a hole in the desired location. Now it's time to assemble the toggle. Push the machine screw through the object to be fastened and attach the toggle to the screw. Thread the toggle far enough that the threads of the screw keep the toggle from turning sideways. Raise the object into position and push the toggle(s) through the predrilled hole(s) until you hear or feel the toggle snap open. Then pull back on the object or the screw to keep the wings from spinning while you tighten the screw. One problem with toggles is that they do not give you a precise location as do all the other anchors discussed here. So once the toggle is almost tight, check the position of the object and then fully tighten the toggle. Don't over tighten the toggle in drywall or you might either break the toggle or break the wall.

There are two other anchors I will describe next month, the nylon wall driller and the nylon toggle.

Next month... hanging pictures and mirrors. Bob Mattsson – www.umc-1.com/bobsplace.htm