

Knowledge domain: Mechanical
Unit: Attachment
Skill: Wall Anchors

Tools and Parts Required:

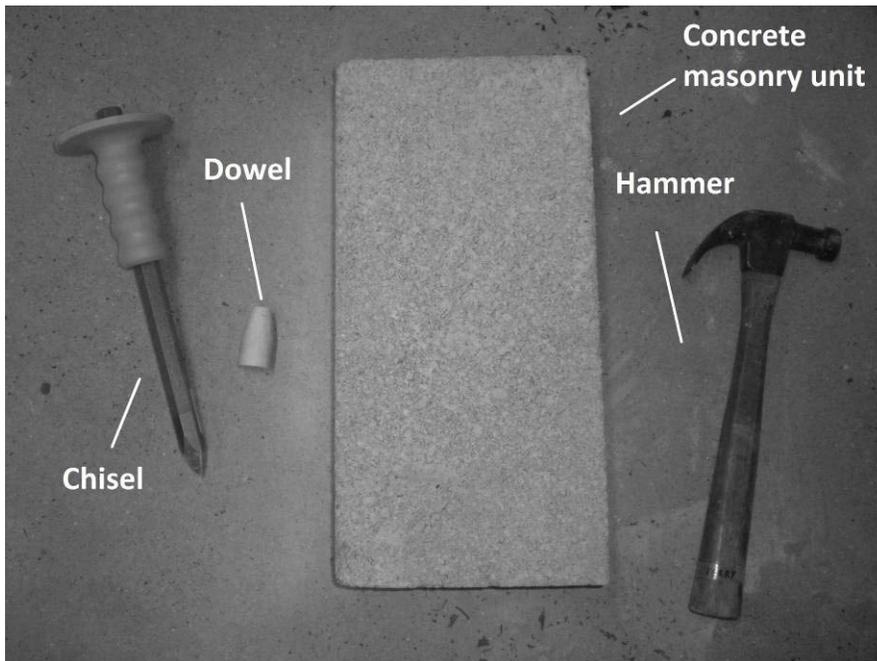
- 1) Dowel
- 2) Screw
- 3) Concrete masonry unit (CMU)
- 4) Chisel
- 5) Screwdriver
- 6) Safety goggles
- 7) Work gloves

Introduction

A wall anchor is a fastener that attaches an object to a wall. Wall anchors can be used to attach objects to plaster, masonry or other solid material. Wall anchors do not work well with hollow wall applications. Wall anchors are used when installing fixtures like shelves or lighting on a solid wall. We will be using wooden dowels as wall anchors. Wooden dowels are solid, cylindrical rods made of wood.

Example

Below is also a picture of the materials.

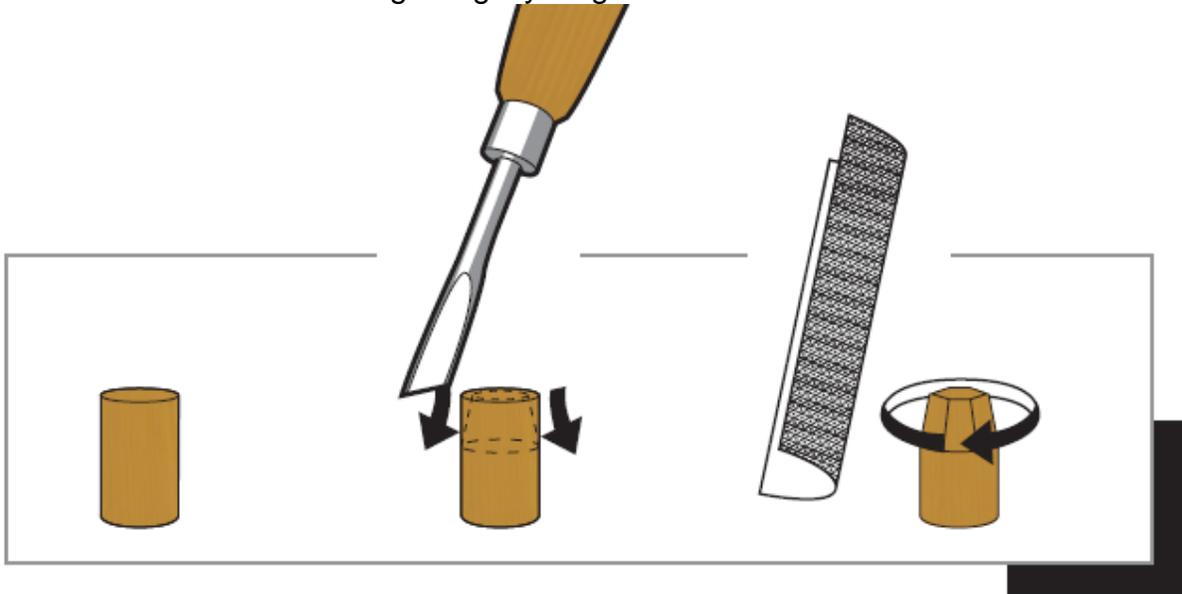


Identification and Diagnosis

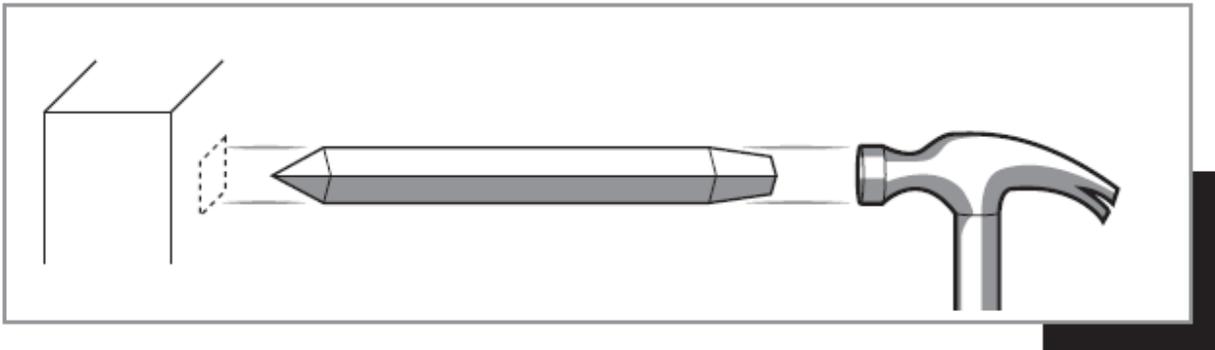
Use wall anchors if you are attaching an object to a solid wall. Use a wall anchor if the piece cannot be attached using a nail, screw, welding, epoxy, or super glue.

Procedure

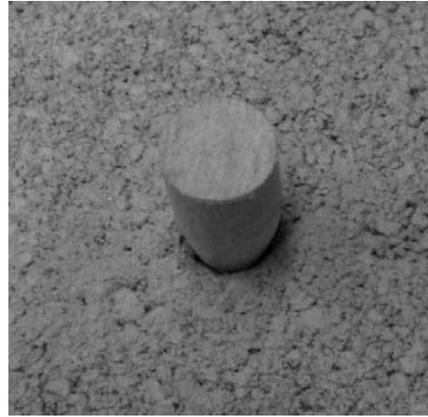
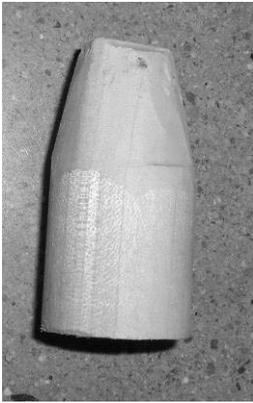
Cut the wooden dowel to a length slightly longer than the screw.



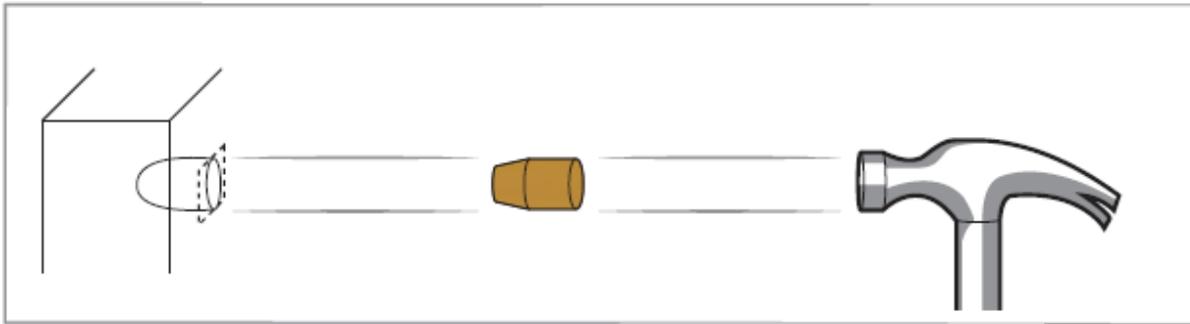
Mark the location you on the wall where you want the attachment. With a drill or chisel, form a hole slightly smaller than the diameter of the wooden dowel.



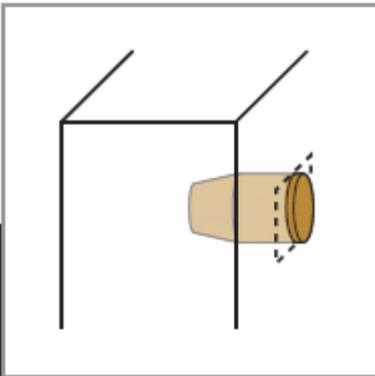
Position the dowel with one of the ends in the hole.



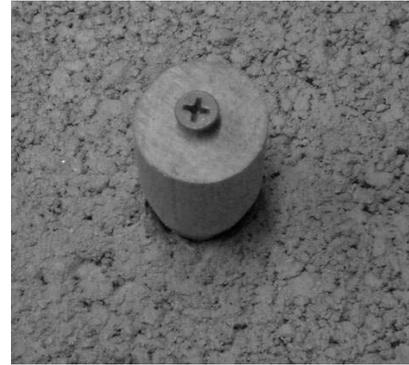
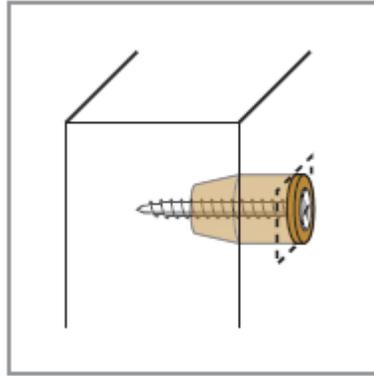
Use a hammer to gently tap the dowel into the hole. Do not pound the dowel completely down.



The dowel should be slightly higher than the surface when finished. Place the object being fastened over the open end of the anchor. Insert the screw through the item being fastened.



Tighten the screw into the dowel with a screwdriver. Turn the screwdriver clockwise until the screw does not move. Do not over tighten the screw. If the screw is tightened too much, the wall anchor will become unstable.



Exercise

Your instructor will give you a piece of concrete masonry unit. Use a chisel to form a hole slightly smaller than the diameter of the dowel. Using a hammer, gently tap the wall anchor into the hole. Insert the screw into the wall anchor. Use a screwdriver to turn the screw until it is tight. Try to loosen the screw with your hands. Notice how securely the anchor holds the screw in place. Your instructor must verify your work before you continue.

You can also make the hole with a drill and a masonry bit, if you have them.

Preventative Maintenance and Calibration

Use wall anchors if attaching an object to a solid wall.

Always calibrate every medical device before returning it to use.