



HOW-TO BOOKLET #3054

CEILING TILE



TOOL & MATERIAL CHECKLIST

- | | | |
|--|---|---|
| <input type="checkbox"/> Ceiling Tile | <input type="checkbox"/> Hammer | <input type="checkbox"/> Chalkline/Chalk |
| <input type="checkbox"/> Joint Taping Knife | <input type="checkbox"/> 1x4 Furring Strips | <input type="checkbox"/> Nails |
| <input type="checkbox"/> Tape Measure | <input type="checkbox"/> Utility Knife | <input type="checkbox"/> Spackling Compound |
| <input type="checkbox"/> Electric Staple Gun | <input type="checkbox"/> Staples | |
| <input type="checkbox"/> Stepladder | <input type="checkbox"/> Tile Cement | |

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in The Basics Listed Above.

Ceiling tile you apply directly to the ceiling or to furring strips attached to the ceiling is available in 12-inch squares or 12x24-inch rectangles either with tongue-and-grooved edges or flush edges. You can buy tiles that provide an acoustical, soundproofing feature and/or decorative patterns with or without the acoustical properties. In the store, make sure that you read the tile labels carefully: not all tile is sound-absorbing although it may appear to be at first glance.

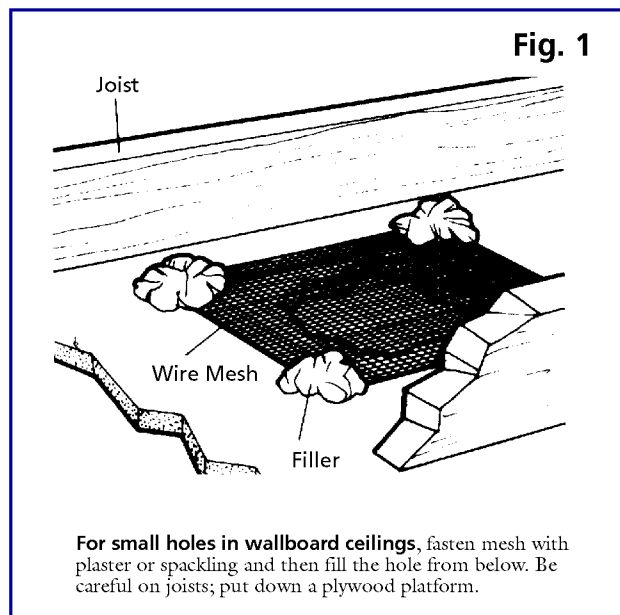
As mentioned, ceiling tile can be installed with tile adhesive directly to a clean, smooth, and uniform ceiling. If the ceiling is rough, not uniformly level, or is unfinished, you must patch the ceiling or install furring strips before the tile may be installed. Furring a ceiling is much like furring a wall, although the placement of the furring strips is different. The tile is stapled to the furring. We recommend 1x4s for furring; they are usually straighter and easier to space for the tiles.

REPAIRING THE DAMAGE

Ceiling repairs are similar to wall repairs. If you will use furring strips, you may not have to repair the ceiling, if the strips span the damaged area and lay flat and level. If you must make repairs, the repairs are easier if you have access to the ceiling through a crawl space or an unfinished attic.

Small holes in wallboard. From above, place a piece of wire mesh or lath overlapping the hole and fix the corners to the wallboard with the same compound you will use to fill the hole—if you have to fill the hole to accommodate the furring strips or ceiling tile. With the mesh fastened, fill the hole from below with plaster or spackling compound, building up the layers. Then smooth the surface with a joint taping knife (**Fig. 1**).

Large holes in wallboard. If you have access from above, cut the damaged wall board back to the edge of the joists on either side of the damage and frame the opening with 1x2 or 1x4, as shown. Secure the wallboard patch and tape the joints (**Fig. 2**).



Small Holes in Plaster

- 1 From below, either tack metal lath to the existing lath or stuff the hole with newspaper soaked in a thin, soupy mixture of spackling compound or plaster (Fig. 3).
- 2 Fill the hole with plaster or spackling compound to within about 1/4 inch from the surrounding surface. Let the patching material dry (Fig. 4).
- 3 When the patch is dry, wet the patch with water and apply a final coat of finish plaster or spackling compound. Pack it tight into the hole with a trowel or wide joint taping knife. Then level the patch with a short length of straightedge (Fig. 5).

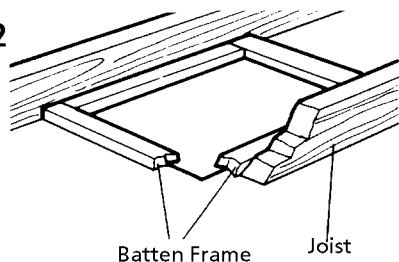
Fixing Bulging Plaster

If you have access from above, prop up the ceiling material as shown, carefully pulling and scraping out the plaster protruding between the laths, forming new ridges over them, with quick-setting plaster. If the bulge is small, you may be able to remove the bulge and then fur over it for the tile. If the tile will be installed directly on the ceiling, you will have to make the patch (Fig. 6).

TWO OTHER WAYS

If the ceiling surface is damaged beyond the quick repairs detailed above, you have two options:

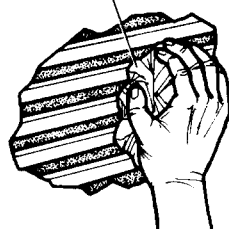
Fig. 2



For large holes in wallboard ceilings, build a frame around the damaged area and then insert a wallboard patch. Patch doesn't have to be perfect to tile over it.

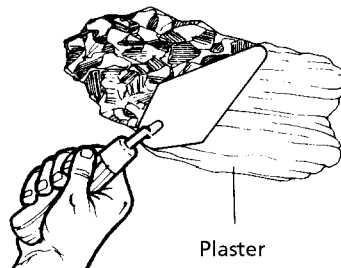
Plaster soaked paper

Fig. 3



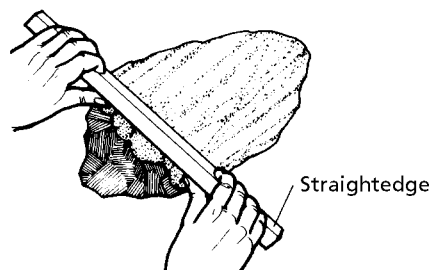
1. **Provide a backing.** Soak newspaper in thinned plaster or spackling mixture, crumble the paper, and then stuff it between lath, as shown.

Fig. 4



2. **Fill the hole.** With spackling or plaster mixture, fill the space to just below surface of ceiling. Let it set, fill the space completely.

Fig. 5



3. **Smooth the patch.** After final coat of filler, smooth filler level and feather edges with a joint taping knife. Let patch dry before tiling.

- You can remove the ceiling material down to the bare joists and fasten the furring strips to the joists.
- You can install a suspended ceiling (dropped ceiling), if there will be enough headroom between the bottom of the ceiling and the floor below it. For how to install a suspended ceiling, see How-To-Booklet #3055.

To remove the old ceiling, use a crowbar or prybar and start toward the center of the ceiling or at a hole or break in the ceiling. Simply pry and pull off the old gypsumboard—the larger the pieces the better. But be careful. Gypsumboard is heavy and it can be dusty. Have plenty of ventilation in the room and take fresh air breaks frequently. Also, be sure to remove all furnishings from the room before you start and cover anything you don't want dusty with dropcloths.

If the ceiling is plaster, you can remove it with a crowbar/prybar, but in small chunks. You will have to remove the lath above the plaster with a claw hammer.

INSTALLING THE CEILING TILE

Once the ceiling has been put in fairly good repair, you are ready to install the tile over it. If you will install the tile directly to the ceiling, here are the steps to follow:

- 1 Find the center of one wall. Then find the center of the adjoining wall.
- 2 Stretch a chalkline at the center points and snap the chalkline on the ceiling. The lines should divide the ceiling into quarters of equal spacing. Check this spacing with a tape measure. If the spacing is not even, re-snap the lines.
- 3 Put a square where the lines cross in the center of the ceiling. The lines must be perfectly square at this point. If not, measure and re-snap the chalkline until this center point is absolutely square.

- 4 With a tile, go down the chalklines, marking the width of each down each line on the ceiling. This will show you the spacing of the tile. If, at the edges of the ceiling where the wall meets the ceiling, there is less than 1/2 tile width, move the chalkline over a tad and re-snap it. What you're trying to do here is to avoid cutting small pieces of tile to fit the perimeter of the room. Half-size tile is easier to cut and work lines.
- 5 Set the first tile in the center where the lines cross. Make sure this tile is square to the lines. If the tile is not square, all other tiles you set will be out-of-square and the error will compound itself by many inches—sometimes feet—around the perimeter of the room. This is the key tile. Get it on square.
- 6 Apply walnut-sized daubs of tile adhesive to the corners of each tile, and then slip the tiles into position against each other. If the tiles are tongue-and-grooved, the tongues go into grooves. Make sure that this joint is tight and fits properly.
- 7 Do one quarter of the room at a time. When you're finished, measure and cut the tiles to fit around the perimeter. You can leave a small gap where the ceiling meets the wall; this gap will be covered with trim.

Furring a Ceiling

- 1 Inspect the edges of the ceiling along the walls that run parallel to the joists; it is often necessary to add a nailing surface here. This surface must be continuous along the length of the wall and can most easily be added by running a 2x8 along the top of the wall, with its bottom edge flush with the bottom of the joists (or other width depending on how far the joist above the wall is offset from the edge of the wall). Fasten it in place with blocking as shown (Fig. 7).
- 2 Make a sketch of the ceiling and position the furring according to the kind of surface you are

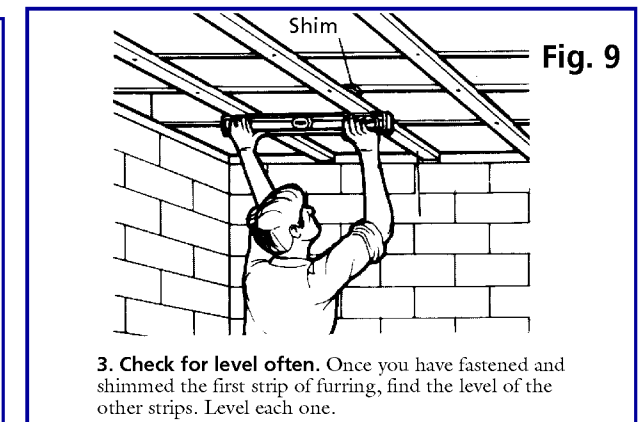
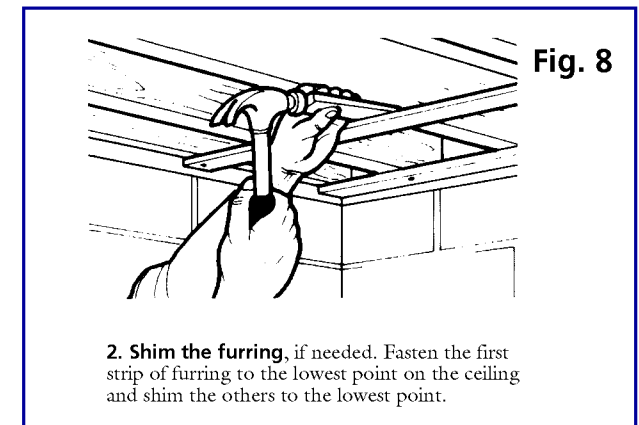
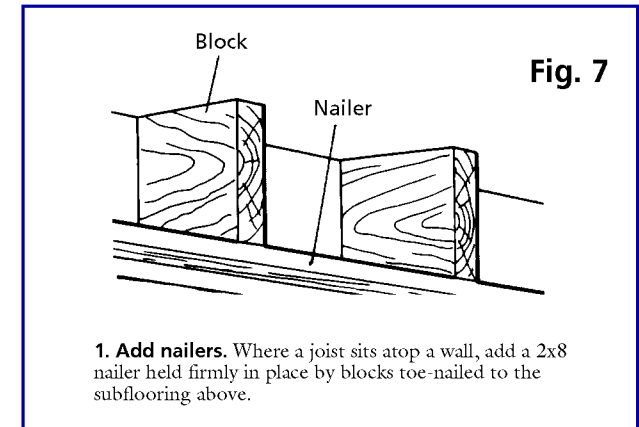
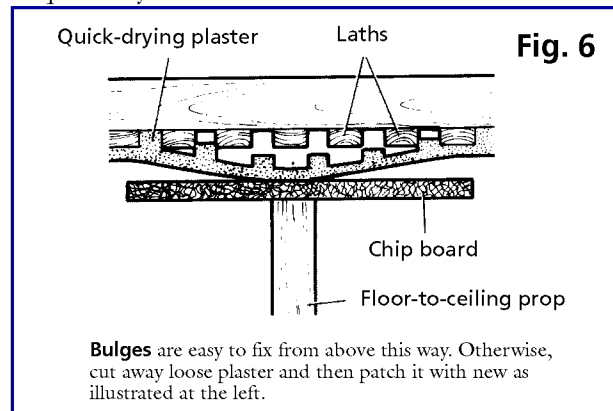
applying: for ceiling tile the strips should be 12 inches, for wallboard they can be 24 inches, on center. For tiling, measure the distance from the midpoint of the walls to the corners in 1 foot intervals. If the distance from the last whole foot to the wall is greater than 3 inches, put furring strips 6 inches on center on either side of the midpoint.

Snap chalklines across the ceiling or the bottoms of the joists, perpendicular to the joists, as guidelines for attaching the furring. If the ceiling is not level, as usually is the case, find the lowest point and attach a furring strip to the nearest intersection of a joist and a guideline. Use a level to shim this strip along the ceiling to the walls on either side. Shingles make good shims; you can buy them in small quantities (Fig. 8).

- 3 Use a long level or a level taped to a straight piece of board to check that subsequent strips are level (Fig. 9).

Double Furring

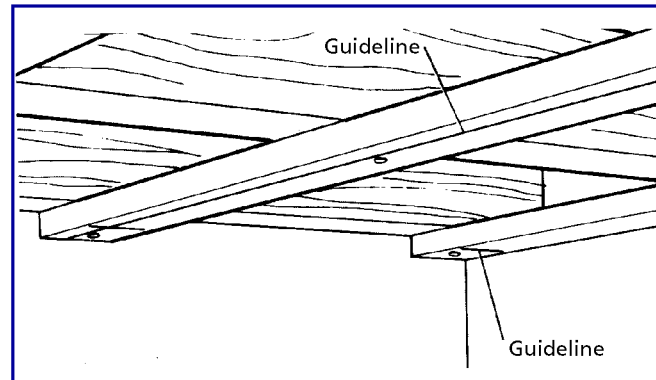
Where pipes, wiring, or other obstructions hang 1/2-inch below the joists, furring will cover them. If they hang up to 1-1/2 inches below the joists, double the furring by installing a first layer across the joists at 24-inch intervals, then install a second layer perpendicular to the first with the spacing required by the tiles.



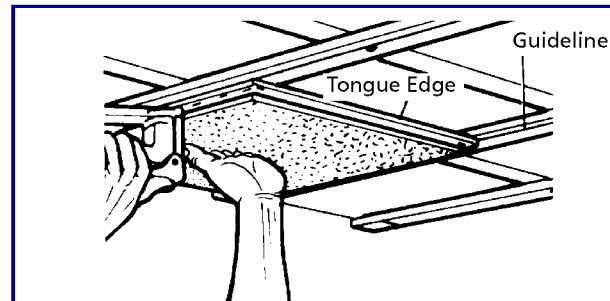
The Ceiling Tile Goes Up With Staples

To fasten the ceiling tile to the furring strips, you will need a staple gun and staples recommended for ceiling tile. The staples will be so marked on the box. We recommend that you buy an electric staple gun for this project, although you can use a hand-operated staple gun. The electric stapler costs little more than the hand gun; you will save plenty of time and muscle with the power outfit.

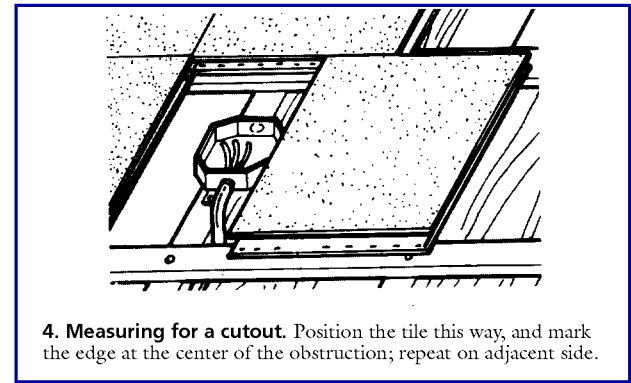
- 1 Mark the distances from adjacent walls that equal the trim sizes of the tiles that will go around the margin of the ceiling. The line that runs parallel with the furring will fall on the center of the furring strip nearest the wall.
- 2 Position the first tile inside the crossed point of the guidelines with the grooved edges facing the adjacent walls. Staple the tile in place along the tongues. Continue fitting the tongues and grooves together until the ceiling of full tiles is complete.
- 3 Measure the distance between the edge of the full tiles and the wall and transfer this to a tile, measuring from the edge of the surface toward the grooved edge. Cut off the excess on the grooved edge and put the tile in place with the cut edge toward the wall.
- 4 To measure for cutouts in a tile, put the tile in place as shown, with tongue in groove. At the center of the obstruction, mark the edge lightly (if you mark the face if will show). Reposition the tile and do the same on the adjacent face. Use a square to mark the intersection of these lines on the face of the tiles. This is the center of the area to be cut out. Outline the shape with measurements taken from the obstruction and cut accordingly.
- 5 Finish the ceiling with cove molding along the edge to conceal the cut edges of the tile where they butt against the walls. You can miter the molding at the corners and lap join it along the run of the wall so the joints won't show when the molding is finished.



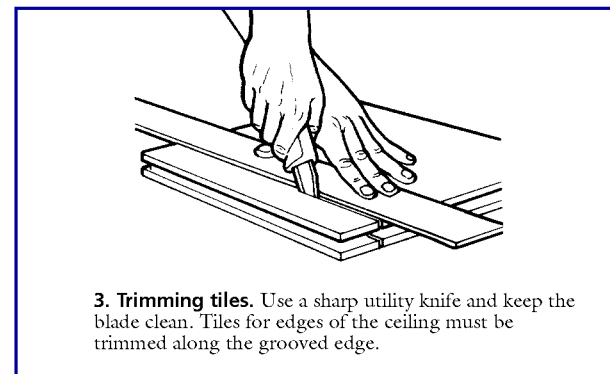
1. Marking guidelines. Mark a guideline that runs in the direction of the furring strips along the center of the first strip away from the wall. The guideline running perpendicular to the strips should be marked between the points indicating the last full width. Be sure you measure twice and mark once. These guidelines are critical when the ceiling tile is installed on the ceiling. If the lines are off even a tad, the tile will be “out-of-straight” and look simply terrible.



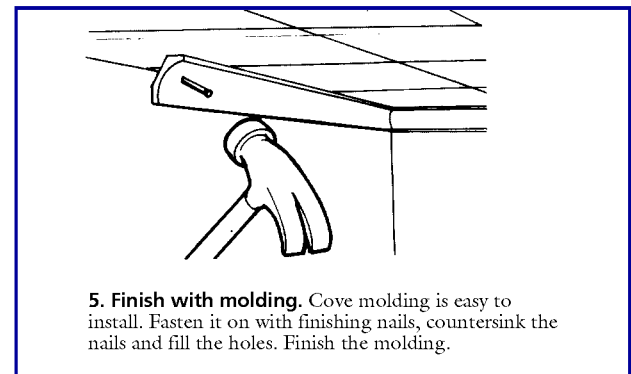
2. Install the first tile. Position a tile at the first intersection of the guidelines with its tongue edges facing away from the walls.



4. Measuring for a cutout. Position the tile this way, and mark the edge at the center of the obstruction; repeat on adjacent side.



3. Trimming tiles. Use a sharp utility knife and keep the blade clean. Tiles for edges of the ceiling must be trimmed along the grooved edge.



5. Finish with molding. Cove molding is easy to install. Fasten it on with finishing nails, countersink the nails and fill the holes. Finish the molding.

WORK CLEAN. The face of ceiling tile is subject to smudges from your hands as you install it. We recommend that you either wash your hands frequently when installing the tiles, or wear throw-away gloves during the installation process. Either one, you'll find, is easier than cleaning the tiles after they are in place.

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