

METAL CEILINGS

MAIN STREET IOWA TECHNOTES

The metal, or tin ceiling, although originally introduced in Australia and South America in the mid 19th century, became a building material almost uniquely American by the 20th century.

Before metal ceilings, intricate plasterwork ornamented ceilings of the wealthiest houses in Europe. Tin ceilings were originally introduced as an inexpensive way to cover cracked plaster ceilings and were later marketed as a more practical and affordable substitute that could be easily shipped and when installed, could be just as ornate and glamorous as a plasterwork ceiling.

The use of metal ceilings developed in the mid 19th century when mass produced sheets of rolled tinplate became readily available in America and reached its highest popularity right around the turn of the century.

Metal ceilings are made from thin sheets of metal, predominantly tin but copper and aluminum are also used. They are pressed with a design and cut into panels of different shapes and sizes to fit different ceiling elements.

These beautiful ceilings remained the most common type of ornate ceiling in America until the late 1950s and 1960s. When energy conservation became a big concern.

Tin ceilings in many Main Street commercial buildings throughout America began to be covered up by drop ceilings that would lower the ceiling level and conceal all evidence of the pressed tin ceiling above.

As a result of these drop ceilings, many of the old buildings in America still retain their original tin ceilings hidden and preserved behind the protection of drop ceilings.

Although the patterns and styles of metal ceiling vary greatly, they are made of similar basic components. There are four major parts to a metal ceiling, the field, the filler, the cornice, and the moldings.

The field covers the majority of the ceiling and usually consists of 2'x2' panels, but can be many other shapes and sizes, that make up the flat portion of the ceiling.

Moldings are located around the field and consist of a 3"- 4" trim piece that frames the field area and acts as a transition between the field and filler. The filler acts as a border around the field area, and creates a transition between the field and the cornice. Filler panels are usually 48" long and have some sort of repeated design that borders the field.

The cornice acts as a transition between the wall and ceiling. Cornice pieces are pressed in a curved form

and are cut at 48".

Other elements that are commonly found on metal ceilings are a medallion and Friezes.

Friezes are located below the cornice and add a decorative band around the room on the upper portion of the wall.

A medallion is a large design that would be made up of many panels to create one design and would be located in the center of the ceiling design to add a focal point to the design of the entire ceiling.

Along with all of these ceiling elements suppliers also produced wall panels and wainscoting panels made from the same pressed tin sheets.

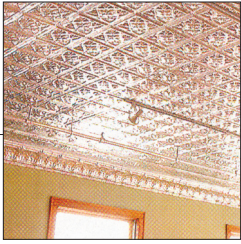
The installation process of metal ceilings is a fairly simple process, but can vary from company to company and the best way to get detailed installation instructions is by contacting the manufacturing company of your tin ceiling.

The basic procedure starts by preparing the ceiling with either furring strips or 3/8" plywood. Support brackets will also need to be installed if a cornice is being used.

If a cornice is being used, it should be installed first followed by the filler pieces. This provides a frame for the field and will ensure that all panels will be square. Each panel overlaps the adjoining panel giving the appearance of one formed ceiling. Moldings and other trim elements are the last pieces to be installed.

The last step is to tap panel seams





with a small hammer, or swedge, to close any feathered seams.

After installation, the ceiling is then finished to ensure that the ceiling will not rust. Panels can be painted to look like plasterwork, clear lacquered to preserve their natural polished look, plated, and made of different metals to achieve different effects.

If a natural metal appearance is desired, the ceiling should be coated with an oil-based polyurethane varnish that dries clear to guarantee that the ceiling will not rust due to moisture in the air. A satin finish is often recommended, but semi- or high gloss can be chosen.

Metal ceilings can also be painted in many different color schemes to enhance the appearance of the ceiling. While it is not mandatory to prime the ceiling before painting, it is recommended to use a rust inhibitor primer, especially when the ceiling is in a room with high humidity, like a bathroom or kitchen. The paint should be an oil-based paint and can be a satin, semi-, or high gloss finish.

In recent years, the removal of drop ceilings has triggered a revival of antique metal ceilings that have been covered for so many years. The restoration of metal panels and nostalgia they have generated has led to a revival of their use in the U.S. Besides being used in restoration projects, tin ceilings are back in style with new uses and wider selections of creative designs.

Restoring a pressed tin ceiling is a very messy, time consuming project that, when done right, can have magnificent results.

There are many different ways to restore a metal ceiling and everyone seems to have the right way to complete the job.

One way that is often done is removal of the panels. Metal ceilings are very thin and were never intended to be removed. This process will make removing old paint easier but will more often than not bend and maybe even damage the panels.

A more widely used method to remove paint from tin ceilings is by using compressed air or water (never sand) to remove loose paint. Next a stripper, either commercial or a strip-away product, can be used to remove stubborn paint. A water-soluble stripper tends to be a better choice. A solution of vinegar and warm water can be used to stop water from rusting tin surfaces.

From this point, steel wool and wire brushes are used to finish the stripping process. Once the surface is cleaned and dried thoroughly the wall should be ready for finishing.

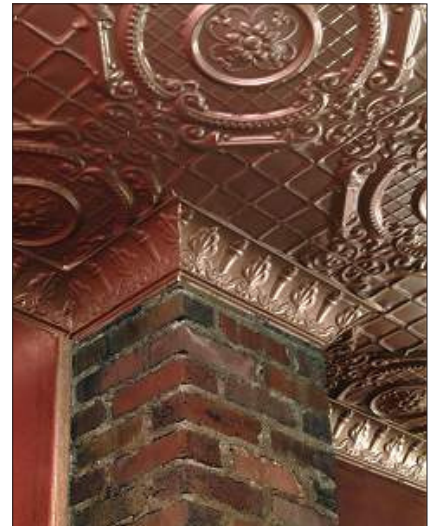
When working with strippers and other hazardous materials, especially when working overhead, it is always important to wear safety gear like rubber gloves, safety goggles, long sleeves, and an old hat.

A third option that is available for restoration projects is to simply replace the tin panels. Panels, trims, brackets and ornamentation are still

available from specialty suppliers. A quick internet search will reveal the ever growing number of metal ceiling suppliers. They have a broad inventory of components or they can custom manufacture pieces if needed.

This can also be an option for replacement panels. Sometimes it is just a couple of panels that have been rusted through or might have had a light fixture or air conditioner cut through them. Custom pieces can be produced to match designs of existing ceilings.

Tin ceilings are a durable, low maintenance, and beautiful way to top off any room. And with regular care, upkeep and occasional repairs as needed, a tin ceiling can continue to decorate the ceiling for all to enjoy once again.



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