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APPARATUS FOR SUSPENDING TILE CEILINGS

Filed Feb. 23, 1962

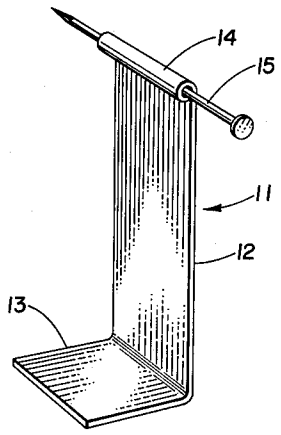


FIG. 1

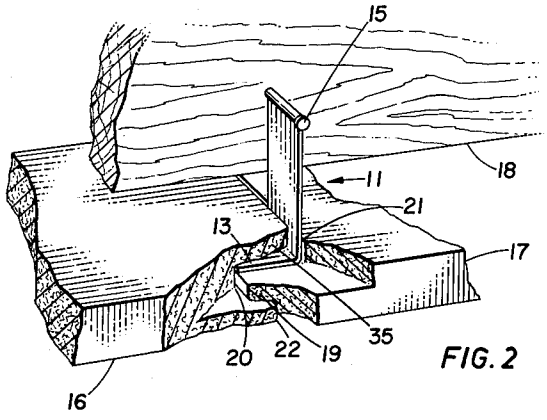


FIG. 2

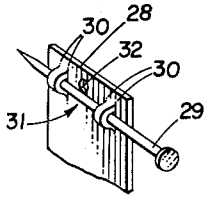


FIG. 3

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APPARATUS FOR SUSPENDING TILE CEILINGS

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This invention relates to a device for suspending ceiling tiles from overhead floor joists and the like.

A common method of hanging ceiling tiles envisages the use of various types of laterally spaced supports with special means of fastening such supports to overhead floor joists. The main purpose of such methods is to provide a uniform horizontal frame to which ceiling tiles may be secured.

Since in most cases the under side of floor joists and beams presents an irregular surface, some means must be provided between the tile and such a surface in order to ensure an even ceiling.

The conventional means employed rely upon the method of first providing a level surface by using strips of metal or wood nailed to the wooden joists, packing being provided between these to ensure a level surface. It will be appreciated that the process of leveling the supporting surface prior to tiling is time consuming and in most instances requires a considerable amount of skill.

It is accordingly the main object of the present invention to provide an inexpensive ceiling tile hanger which will permit quick installation of a tile ceiling with a minimum of skill.

It is another object of the invention to provide a ceiling tile hanger which may be adjusted for vertical position during installation of the tile.

It is a further object of this invention to provide a ceiling tile hanger which will resist lateral deflection.

It is a still further object of this invention to provide a ceiling tile hanger which may be secured within the interlocking edges of the tile and fastened to the supporting joists to form an integral structure.

It is another object of the present invention to provide a ceiling tile hanger adapted to be manufactured in a single operation from a strip of material.

These and other objects and features will be apparent from the following discussion and accompanying drawings in which like numerals refer to like parts.

In the drawings:

FIGURE 1 is a perspective view of one preferred embodiment of the present invention;

FIGURE 2 is a perspective view of the embodiment as illustrated in FIGURE 1 shown in the installed position supporting ceiling tiles; and

FIGURE 3 is a perspective view of a second preferred embodiment of this invention.

With reference to FIGURE 1, the hanger indicated generally as **11** comprises an upright body portion **12** and a bracket portion **13** formed thereon at the lower end. The upper end of body portion **12** is rolled to form a tubular shaped nail holder **14** which secures nail **15** therein in frictional engagement.

As shown in the drawing, it is preferable to form bracket **13** at right angles to body **12** and to form nail holder **14** square with body **12** so that nail **15** will be secured substantially parallel with the plane of bracket **13**. It will be further understood that although a simple finishing nail is shown as a presently preferred type, other types of nails or screws may also be used.

The manner of utilizing this invention is depicted in FIGURE 2 wherein a hanger **11** is shown supporting ceiling tiles **16, 17** some distance below a floor joist **18**. As will be seen from the drawing, tiles **16, 17** are of the conventional locking type wherein tongue **19** is provided on tile **17** and groove **20** is provided on tile **16**.

It is of interest to note that upper seam **21** is offset from lower or exterior seam **22**, whereby a joint which is resistant to flexure is obtained. While this is conventional practice the present invention takes advantage of this fact by providing bracket **13** inserted in groove **20** above tongue **19** to ensure an anchorage of hanger **11** which will resist lateral deflection relative to the tiles.

The vertical position of hanger **11** may be established by selecting a position on joist **18** which will preserve the level of the ceiling, and driving in nail **15**. This position may be found by sighting along the tile to be hung in line with a reference surface, such as previously installed tiles, or a spirit level may also be used. Obviously, the first tile and hanger would be positioned at a vertical height calculated to clear any unevenness or obstruction presented by the joists, which height may be found by direct measurement.

In addition to the variation in vertical position relative to the floor joist which may be had, the longitudinal position of hanger **11** in seam **21** may also be varied. In this way, the spacing of the hangers, which is determined by the spacing of the joists, is adapted to a variety of tile sizes and positions relative to the joists.

With reference to FIGURE 3 a second embodiment of this invention is shown.

A hanger (not shown) may be formed with the upper end **28** thereof provided with means of holding a nail **29**, comprising slits **30** formed some distance apart, the material therebetween being upset to form passageways **31** through which nail **29** may be inserted. As before, it is preferable that passageways **31** be made sufficiently small as to hold nail **29** in frictional engagement.

From the above, it will be seen that the invention comprises: a tile support member having end portions for suspendably supporting ceiling tiles in spaced relation to floor joists or the like; joist engagement means on said support for attachment to said joists; and a bracket formed on an end portion of said member and in a plane substantially normal thereto for engagement with said tiles.

While there has been described what is at present considered a preferred embodiment of the present invention, it will be appreciated by those skilled in the art that various changes and modifications can be made therein without departing from the essence of the invention and it is intended to cover herein all such changes and modifications as come within the true spirit and scope of the appended claims.

What I claim is:

1. In combination a ceiling tile suspended from a joist by at least one hanger along at least one edge thereof, said ceiling tile having at least one tongue and at least one groove on the edges thereof, said hanger comprising an elongate generally rectangular planar sheet metal shank member formed of a single flat web of sheet metal having transverse and longitudinal axes normal to one another and having upper and lower end portions lying in a single common plane, nail holding means defining a nail passageway formed integrally with said shank member extending along said upper end portion thereof along an axis parallel to the plane of said web of said shank member and to said transverse axis thereof; a bracket of generally rectangular planar sheet metal engaging said edge of said tile and formed into a single flat web lying in a single plane and having a transverse axis parallel to said transverse axis of said shank member formed integrally with said lower end portion of said shank member by deflecting an endwise extension of said shank member through substantially a right angle along

a fold line parallel to said transverse axes, the plane of said bracket being normal to the plane of said shank member and defining therewith substantially an L-shape in longitudinal section and a nail in said passageway swingably fastening said hanger to said joist for swinging movement of said bracket toward and away from said edge.

2. The structure as defined in claim 1 wherein said nail holding means comprises a nail holder on said shank member formed by rolling the upper end portion thereof to define a nail receiving channel.

3. The structure as defined in claim 1 wherein said nail holding means comprises a nail holder formed on the upper end portion of said shank member by deforming portions thereof between parallel spaced apart longitudinal slits therein.

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