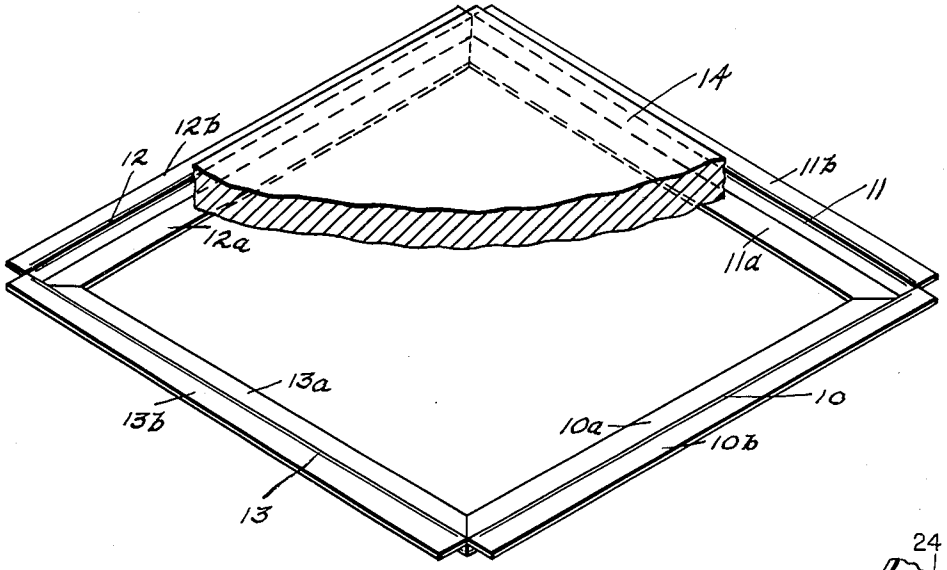
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ACCESS PANEL FOR TILE CEILINGS

Filed May 15, 1958

Fig. 1.



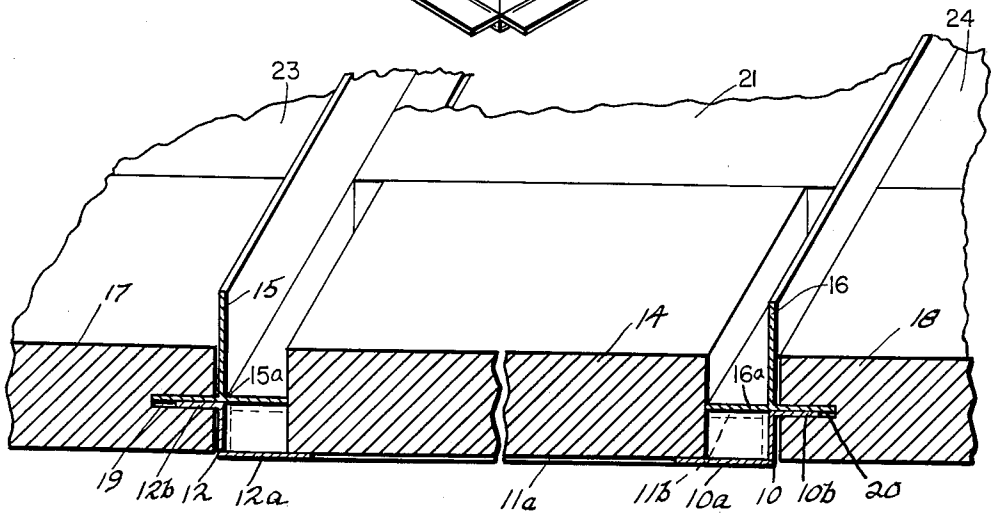


Fig. 2.

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ACCESS PANEL FOR TILE CEILINGS

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This invention relates to ceilings made of tile, such as acoustic tile, and more particularly to access panel assemblies for such ceilings.

According to present practice, when it is necessary to provide for access to wiring or piping above a tile ceiling, a prefabricated panel assembly is installed. These assemblies are rather costly and require special framing. The panels differ in appearance from the tile and often do not correspond in size. Furthermore, the framing for the access panel must be installed before the ceiling is laid, and consequently, the tile must be cut and fitted around this framework.

The general object of this invention is to provide an access panel which can be installed as the ceiling is laid, without special framing, which produces a ceiling of smooth, unbroken appearance, and which is considerably less expensive than the access panel assemblies previously used. Other advantages and novel features of the invention will be apparent from the following description.

The panel consists, in general, of a frame of the same size as one or more of the tiles, having flanges which fit into the edge grooves of the surrounding tiles. A tile similar to those used in the rest of the ceiling is laid loosely on, and supported by, the frame.

In the drawings illustrating the invention:

FIG. 1 is a perspective view of an access panel constructed according to the invention, the tile portion of the panel being shown partly broken away; and

FIG. 2 is a fragmentary perspective view, partly in cross-section, showing the panel assembled in a ceiling.

The frame of the panel is square or rectangular and consists of four side pieces **10**, **11**, **12** and **13**, joined together at the corners. These pieces are preferably made of Z-shaped sheet metal sections having inwardly projecting flanges **10***a*, **11***a*, **12***a*, **13***a*, and outwardly projecting flanges **10***b*, **11***b*, **12***b*, and **13***b*, respectively. A tile **14** rests on flanges **10***a*, **11***a*, **12***a* and **13***a*.

The tiles used to form the ceiling are of a conventional type having edge grooves along all four edges, and are mounted on T-bars which are suspended in the usual way between each row of tiles to form the frame-work for the ceiling. In FIG. 2, for example, bars **15** and **16** are two of these T-bars and have cross-pieces **15***a* and **16***a*, respectively. These bars run across the entire ceiling and are supported, for example, by conventional hangers (not shown). Tile **17** is one of the row of tiles mounted on the left side of bar **15**, and tile **18** is one of the row of tiles mounted on the right side of bar **16**. Tile **17** has a groove **19** in which the left side of cross-piece **15***a* is received, and tile **18** has a groove **20** in which the right side of cross-piece **16***a* is received.

The flanges **10***b* and **12***b* are also received in grooves **20** and **19**, respectively, along with the cross-pieces of the T-bars. At the rear of the frame is another tile **21**, which is in line with similar tiles **23** and **24** immediately behind tiles **17** and **18** respectively. Tile **21**, like the other tiles, has grooves on all four edges, cross-pieces **15***a* and **16***a* being received in the side grooves. Flange **11***b* of the frame is received in the groove along the front edge of tile **21**. In a similar manner, another tile (not shown) is mounted on cross-pieces **15***a* and **16***a* in front of the frame, and flange **13***b* is received in the groove

along the rear edge of this tile. The frame is thus supported on all four sides by the four adjacent tiles.

Tile **14**, which rests loosely on flanges **10***a*, **11***a*, **12***a*, and **13***a* is a standard tile, initially of the same size as the surrounding tiles, with two of its edges cut off to the depth of the side grooves so that it will fit between T-bars **15** and **16**. To open the panel after the ceiling is installed, tile **14** is lifted and moved to one side.

During the installation of the ceiling, an access panel of this type can be inserted, wherever desired, in place of a regular tile. The panel is of the same size as the permanent tiles and can be fitted in exactly, without any cutting or fitting of the surrounding tiles. The exposed frame flanges **10***a*, **11***a*, **12***a*, and **13***a* are relatively narrow, for example, about ¾ inches for a 12 inch x 12 inch panel, and the frame can be painted, either before or after installation, to match the tile. The tile **14** matches the surrounding tiles and the panel is practically indistinguishable from the permanent tiles.

The frame can be made in various proportions to fit in with tiles of various sizes. If it is necessary to provide an access opening larger than that afforded by a single tile, the frame can be elongated to accommodate two tiles similar to tile **14**.

The elimination of special framing around the construction opening not only eliminates discrepancies in alignment of the panel with the ceiling tiles, but also substantially reduces the cost of the installation. The only expense involved in installing the panel is the cost of the frame itself, which is a comparatively inexpensive item. The tile which is to go in the frame can be readily cut on the job from one of the ceiling tiles, and it is thus possible to provide a matching access panel for tiles of any pattern or color.

What is claimed is:

1. In a ceiling assembly composed of tiles having edge grooves and portions below said grooves; an access panel comprising a quadrilateral frame having outwardly projecting flanges received in the edge grooves of the adjacent tiles supported on the portions below the grooves, said outwardly projecting flanges supporting said frame, and said frame also having inwardly projecting flanges defining an opening, and a panel tile larger than said opening loosely supported on said inwardly projecting flanges.

2. An access panel as described in claim 1, said ceiling tiles and said frame being of a size based on a common module equal to one of the ceiling tiles.

3. In a ceiling assembly composed of quadrilateral tiles having edge grooves and portions below said grooves and arranged in rows, and supporting bars disposed one between adjacent rows, each bar having tile supporting members received in the edge grooves of the adjacent tiles: an access panel comprising a quadrilateral frame disposed between two of said bars and having oppositely disposed outwardly projecting flanges received in the edge grooves of two adjacent tiles along with the supporting members of said two bars, said outwardly extending flanges being supported by said portions of the two adjacent tiles and supporting said frame, said frame also having inwardly projecting flanges defining an opening, and a panel tile larger than said opening supported loosely on said inwardly projecting flanges.

4. In a ceiling assembly composed of quadrilateral tiles having edge grooves and portions below said grooves on all four sides and arranged in rows, and supporting bars disposed one between adjacent rows, each bar having tile supporting members received in the edge grooves of the adjacent tiles: an access panel comprising a quadrilateral frame disposed in one of said rows, said frame being composed of four Z-shaped sections each having an outwardly extending flange and an inwardly extending flange,

two opposite outwardly extending flanges being received in the edge grooves of two adjacent tiles in the rows to either side of said frame and the two other outwardly extending flanges being received in edge grooves of two adjacent tiles in the same row as said frame, said outwardly extending flanges being supported by the portions below the grooves of the respective adjacent tiles and supporting said frame, said inwardly projecting flanges defining an opening, and a panel tile larger than said opening loosely supported on said inwardly projecting flanges.

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