Feb. 11, 1969 P. H. LAMBERT 3,426,489

FALSE CEILING

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FIG. 1

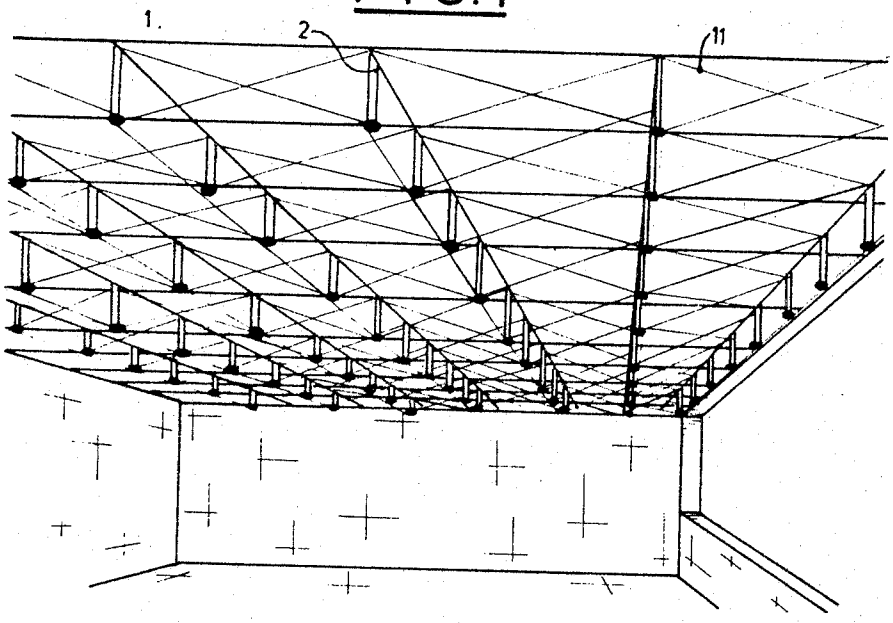


FIG. 5

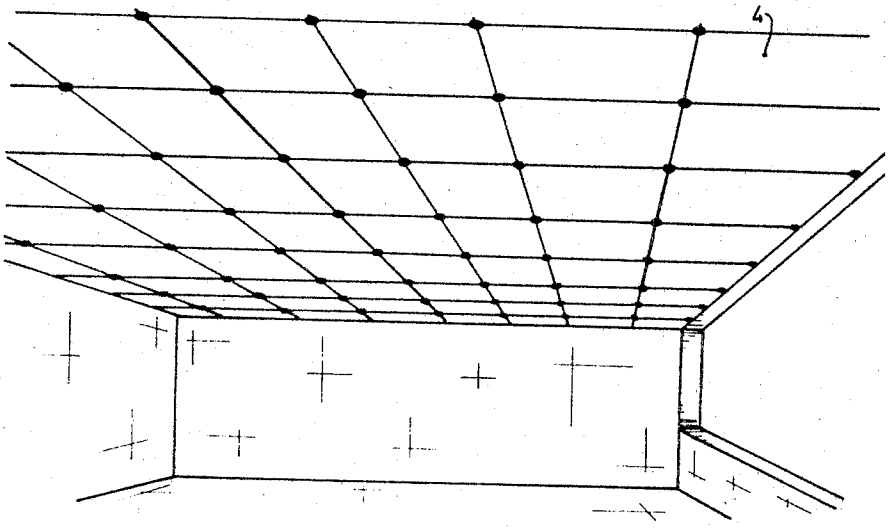


FIG. 2

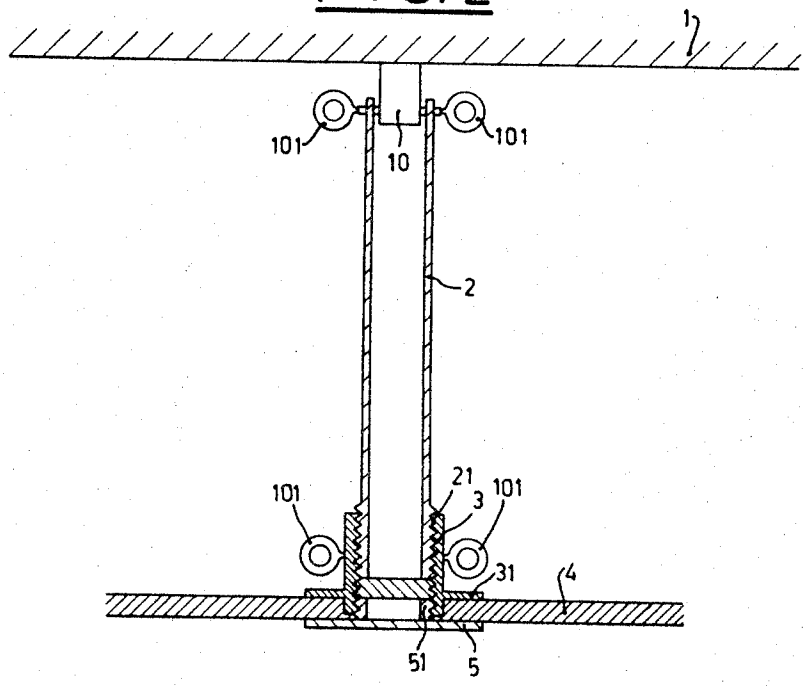
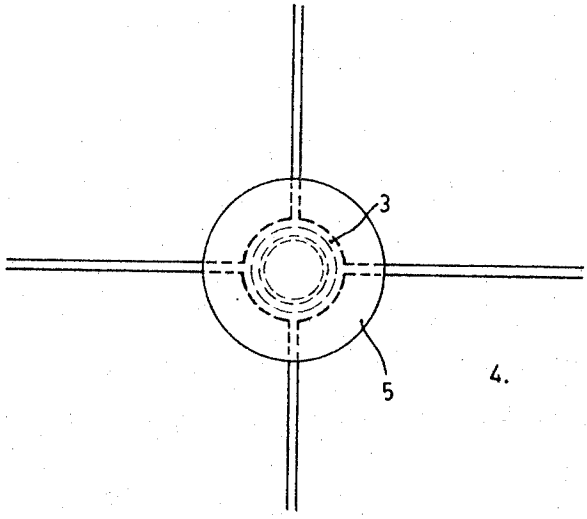


FIG. 2a



4.

FIG. 3

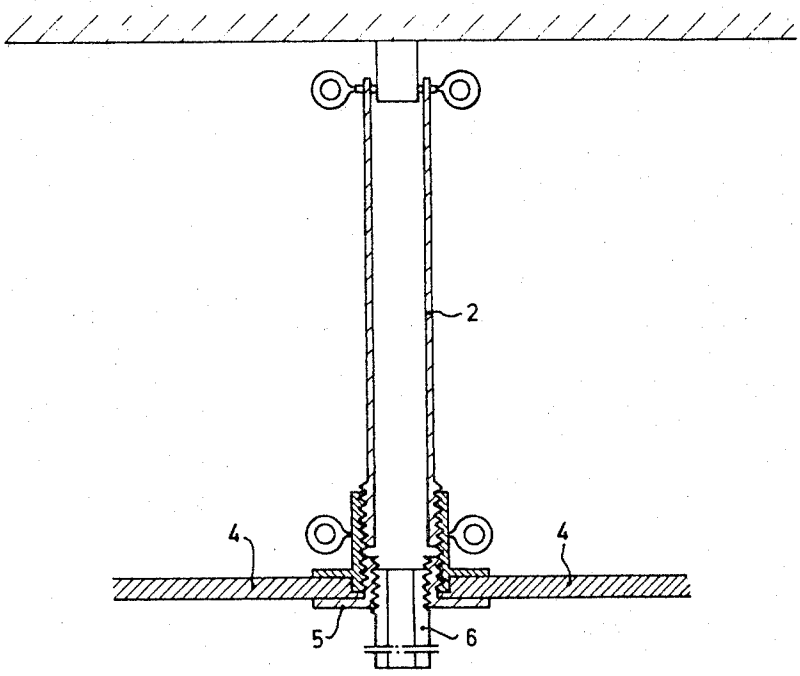
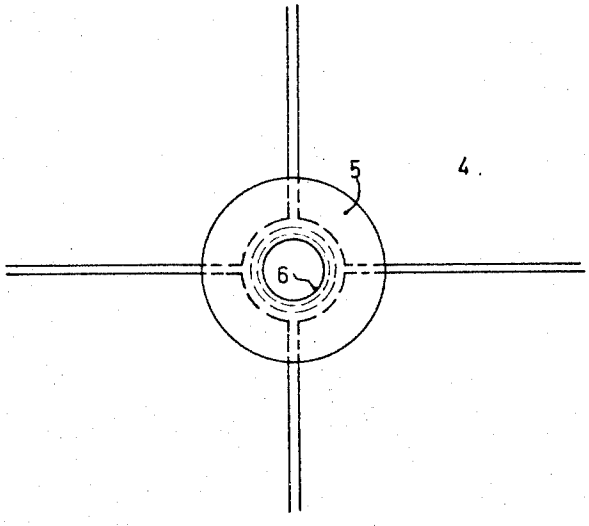


FIG. 3a



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FIG. 4

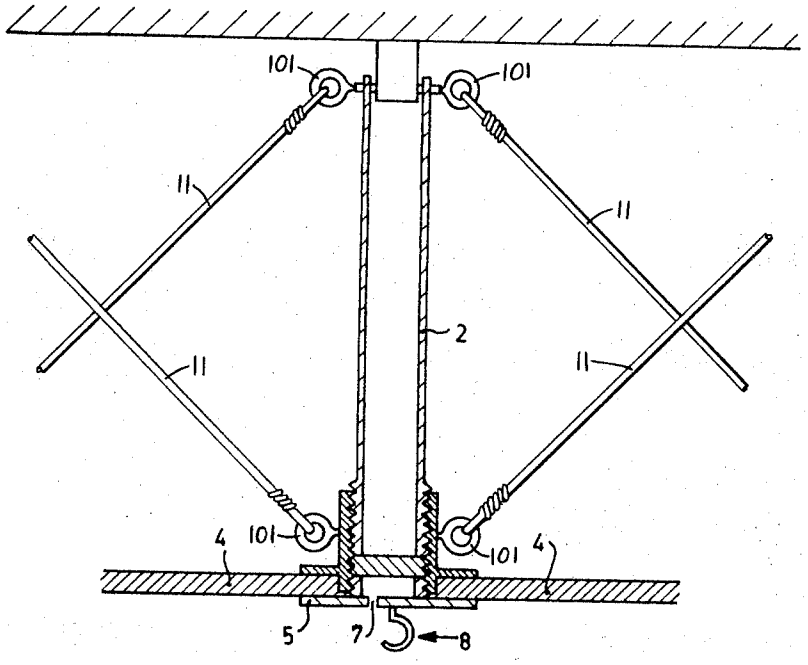
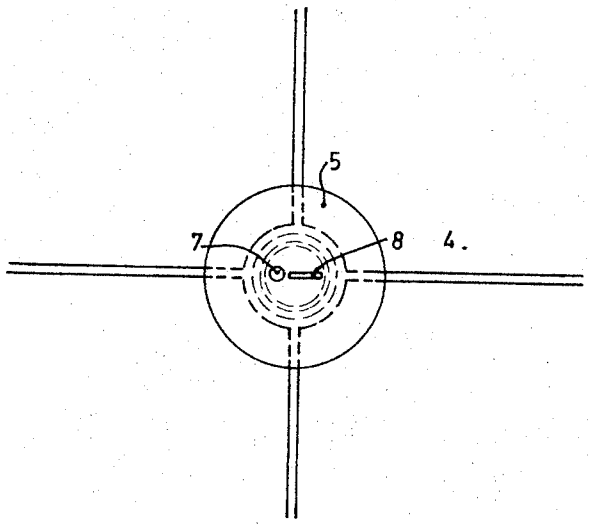


FIG. 4a



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3,426,489

FALSE CEILING

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Claims priority, application France, Oct. 7, 1965, 13,826
U.S. Cl. 52—39 5 Claims
Int. Cl. E04b 5/57, 5/58

ABSTRACT OF THE DISCLOSURE

This disclosure concerns a false ceiling construction including juxtaposed polygonal modular panels with corners; means suspending the panels from the ceiling and including elongated tubes suspended at the upper end to the ceiling; bracing means diagonally extending between the ends of neighboring tubes to form an assembly rigid enough so that movable partitions of a construction may be secured thereto; means for height-adjustably securing the panels to the lower extremity of the tubes including external threads on the lower extremities of each of the tubes, an inwardly threaded sleeve threadably engaged with the threads of the tubes, a supporting flange integral with the sleeve but spaced apart from the lower extremity thereof so as to form a space receiving the corners of the panels together with a retaining cap threadably engaged in the sleeve and locking these corners to the flange.

It is common, in the construction of modern buildings, to cover the slab of raw concrete or masonry forming the ceiling of a room with a false ceiling disposed at a certain distance from the ceiling proper.

These false ceilings are "suspended" in a single piece, or are on the contrary formed by joined elements.

If such suspended false ceilings do not pose a problem when they are disposed in a building with fixed partitions, it is quite the contrary when it is desired to install them in a building with dismantleable partitions. In such a case, the suspended false ceiling does not offer a sufficient support for the anchoring of these partitions.

The present invention, which has precisely for its purpose to obviate this disadvantage, has for its subject a false ceiling, characterised by the fact that it comprises rods suspended vertically according to a modular distribution from the ceiling to be covered, the lower end of these rods having means for securing polygonal panels intended to constitute the said false ceiling, the polygonal modulation of the panels corresponding to that of the distribution of rods, other means connecting the rods among themselves in such a way to form a rigid assembly.

In such a device, the said rods offer resistant points of support, strong enough to secure thereto the movable partitions of a structure.

These rods, hollow, also permit electrical conductors to be brought in at various points of the ceiling without having to form holes in any of the elements forming the ceiling.

The invention also relates to a process of mounting the false ceiling, characterised by the fact that the rods are fixed to the ceiling and the panels to the rods, and then the length of these rods is adjusted so that the panels form a smooth and horizontal surface.

The accompanying drawings show, by way of example, one embodiment of the present invention.

FIGURE 1 is a perspective view of the supporting framework of the false ceiling according to the invention.

FIGURE 2 is a vertical section of one of the rods used in the securing device.

FIGURE 2*a* is a view from below corresponding to the installed ceiling.

FIGURE 3 is a section of one of the rods of the securing device according to a first modification of the cap for closing off the rod.

FIGURE 3*a* is a view from below.

FIGURE 4 is a section of one of the rods of the securing device according to a second modification of the cap for closing off the rod.

FIGURE 4*a* is a view from below.

FIGURE 5 is a perspective view of a building, equipped with a false ceiling according to the invention.

The drawing shows (FIGURE 1) the supporting framework for a false ceiling **4** (FIGURE 2) which comprises vertical rods **2**, fixed by any suitable means to the ceiling **1** of a building and braced by cables **11** under tension diagonally between the ends of neighbouring rods to which they are fixed by hooks **101** (FIGURE 2).

Such a framework is rigid so that the rods **2** can offer a stable vertical support.

In FIGURE 2, the rod **2** is formed by a tube and has at its upper part a foot **10** for securing it to the ceiling **1**, and at its lower part a thread **21** on which is screwed and thus adjusted to the desired height a cylindrical sleeve **3** having a supporting collar **31** on which square panels **4** are supported, these panels forming the false ceiling proper.

A cap **5** having a cylindrical beginning **51**, threaded on the outside, is screwed into the sleeve **3**, and grips the panels **4**, which are to be supported by the corresponding rod, against the cover **51**.

In a modification, the cover of the cap can form an embellishment.

The rod **2** can also be used as a casing for bringing in electric conductors, for example, for securing in its lower part a standard lamp, a chandelier, or any electrical installation.

To this end, the cap **5** has (FIGURES 3 and 3*a*) an opening threaded on the inside adapted to receive a tubular rod descending from the ceiling **6** and ending for example in a luminous globe or any other suspended object.

In another modification, the cover of the cap has in its centre a hook **18** for securing a lamp. A second opening **7**, off centered, forms an outlet for the electric conductors (FIGURES 4 and 4*a*).

In FIGURE 5, the panels **4** forming the false ceiling are disposed side by side and are held at their corners by the device which has just been described.

Although the distribution of rods shown in FIGURE 1 as well as the panels shown in FIGURE 5 are square, it is evident that they can be of any shape whatsoever, triangular, rectangular, pentagonal, hexagonal, etc., it being understood that the polygonal distribution of rods corresponds to the shape and to the dimensions of the panels forming the ceiling, if it is desired that the rods remain vertical.

In a modification, not shown, the rigid joining of the rods can be obtained by horizontal braces stretched between each pair of rods.

It would of course be possible to combine these two modifications.

Moreover, it is evident that the panels intended to form the false ceiling can be made of any material and of any thickness, the choice of these materials being above all fixed by considerations of weight and price.

The securing of the panels to the suspension rods can be effected by making use of devices slightly different from those shown in the accompanying drawings. It would be possible, according to a modification, to provide the thread **21** (FIGURE 2) not on the external surface of the tubular element **2**, but on its internal face, the sleeve **3**

engaging and screwing into this threaded opening. This manner of proceeding is particularly advantageous since it permits the adjustment of the axial position of the sleeve even once the panels **4** are in place, and since it is thus possible to mount an entire false ceiling for a room without being concerned at first whether the panels **4** are horizontal or not, which positioning will be obtained later on if needed by axially displacing the sleeves **3** from panel to panel.

In a modified embodiment, the rods **2** can be suspended from the ceiling of rooms to be covered by a false ceiling by the feet fixed to this ceiling and to which the rods are connected by an adjustable device permitting the position of each rod to be modified transversely on its foot. This supplementary adjustment permits the rod to be secured more rapidly on a ceiling because it is then not indispensable to carry out such securing with great precision.

What is claimed is:

1. A false ceiling having in combination horizontally juxtaposed, polygonal modular panels with corners; means suspending the said panels from the ceiling in coplanar relation comprising elongated tubes suspended at their upper end from a support surface and depending vertically therefrom; crossed bracing means extending diagonally between the ends of adjacent tubes to form a rigid assembly; means securing said panels to the lower extremities of said tubes for vertical adjustment therealong, said means including external threads on the lower extremities of each of said tubes, internally threaded sleves threadably engaged with said external threads on said tubes, a concentric supporting flange integral with each sleeve disposed intermediate the ends thereof, and flanged retaining caps threadably engaged in said sleeves, the corners of the said panels being clamped between the flanges on said sleeves and said caps.

2. False ceiling according to claim **1**, wherein selected caps include an inwardly threaded opening therethrough for receiving a suspended object threadably engaged therein.

3. False ceiling according to claim **2**, wherein said caps include suspending means secured within said opening and depending therefrom and an eccentrically positioned opening therethrough, the latter opening forming an outlet for electrical conductors.

4. False ceiling according to claim **1**, wherein said panels are rectangular.

5. False ceiling according to claim **1**, wherein said bracing means consist of cables.

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U.S. Cl. X.R.

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