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## (54) Improvements in and relating to access flooring systems.

(57) Pedestals for supporting floor panels (10) at corners thereof have panel corner locators (12) thereon. The panel corner locators have a base (50) and upstanding projections (52) that provide contact surfaces (60, 62) for panel corner sides as well as for underneath the panel corners.

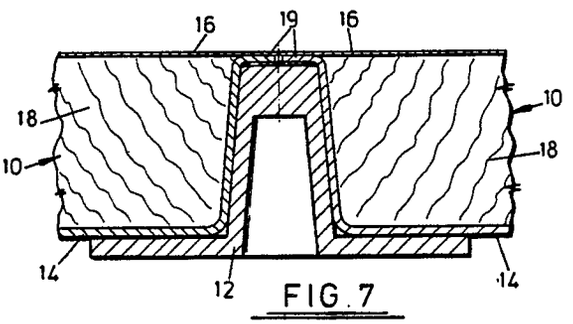


FIG. 7

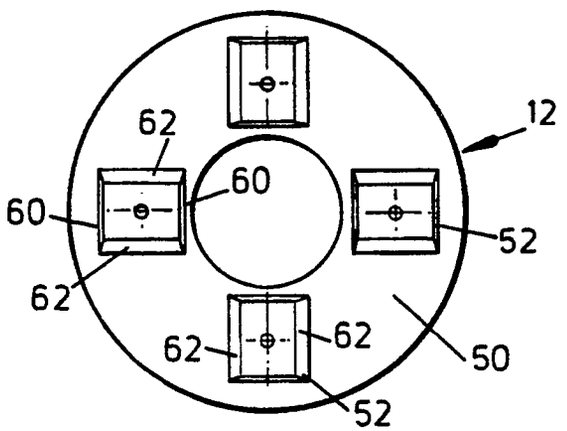


FIG. 1

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# Improvements in and relating to access flooring systems

This invention concerns access flooring systems in which panels, usually rectangular, are supported on pedestals from a base or sub-floor usually at corners of the panels.

Such panels usually comprise a metal tray, a metal lid and an infill of a wooden composite material. The edges of the lid and tray may be turned over to provide a seal therebetween or those edges may be spaced for attachment to the infill of edging strips as proposed in our copending patent application no. 8907415 .

The pedestals used in such access flooring systems usually have a flat support surface on a length adjustable column. The support surface is usually of metal so that if there is any play between floor panels and pedestals considerable metal to metal contact noises can be generated by pressure on the panels.

Furthermore, contact between panels and pedestal support surfaces only being at corners of panels means that tipping of panels is possible when pressure thereon is concentrated at edges thereof, especially if there is any play in the system which can occur after a period of time. To counteract that it has been proposed that stringers be provided between pedestals to support panel edges. That, however increases costs and times of fitment.

An object of this invention is to provide means for access flooring systems whereby the above mentioned disadvantages may be avoided or at least reduced in effect.

According to the present invention it is proposed that pedestals for supporting flooring panels have panel corner locators that contact panel corner sides as well as underneath the panels.

Preferred panel corner locators have, preferably equally spaced, upstanding projections, usually four thereof, that provide contact surfaces for panel corner sides. Each projection preferably has a pair of opposed faces each of which is at right angles to a face of the next projection. Thus, sides of a panel at or near corners thereof will each contact adjacent projections.

The panel corner locators of the invention may be formed separately from the pedestal support surfaces, say from plastics material. The locators will preferably have means for locating them on the pedestal such as corresponding male and female cooperating parts, such as studs or ribs and holes or slots.

Alternatively, the pedestal support surfaces and locators may be formed integrally say as a single casting.

The invention will now be further described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a plan view from above of a panel corner locator;

Figure 2 is a plan view from below of the locator Figure 1;

Figure 3 is a section on line A-A of Figure 2;

Figure 4 is a plan view from above of an another panel corner locator;

Figure 5 is a plan view from below of the locator of Figure 4;

Figure 6 is a section on line B-B of Figure 5;

Figure 7 is a section through a flooring system;

Figure 8 is a section through a flooring system covered with carpet tiles;

Figure 9 is a section through a flooring system covered with vinyl tiles; and

Figure 10 is a section through a panel edging strip.

Referring to the accompanying drawings generally, a flooring system comprises pedestals (not shown) on a base or subfloor which support corners of panels 10. The pedestals have mounted thereon panel corner locators 12 of plastics material. The panels themselves comprise a metal tray 14, a metal lid 16 and a composite wooden material infill 18. The metal tray 14 and lid 16 are adhered to the infill 18 by means of contact adhesive. In some embodiments (Figure 7) the lid and tray edges are folded over together to provide a seal at 19 but in other embodiments (Figure 8 and 9) an upper part 20 of the edge of the infill 18 is left exposed between the tray and the lid of the panel and has formed therein a groove 22 for receiving panel edging strips 24 which are the subject of our copending application no. 8907415 .

The panels edging strips 24 (Figure 10) have a first face 26 and second face 28 which are generally parallel except where the strip thins at around its mid-height 30. Just above the mid-height of the strip and extending from the first face 26 is a continuous strip 32 of fir tree section which is retained in the panel edge groove 22 to retain the panel edge strip in position.

The upper parts 33 of panel edging strips around a panel provide a surround for each panel or flooring material on the panel as is mentioned below. The panel edge strip thins to form a resiliently deformable depending part 34 that is curved at its end to provide a protrusion 36 relative to the second face 28 thereof, so that when second faces of adjacent strips abut their lower parts are deformed but due to their resilience press against each other to provide a seal therebetween.

As can be seen from Figures 8 and 9 of the accompanying drawings the panel tray edge extends beyond the edge of the panel lid to take account of the thinning of the panel edge strip from its upper part to its lower part in order to provide metal to conductive plastics contact for a conductive path between the metal lid of the panel through the conductive plastics edging strip and the metal tray of the panel. In Figure 8 that is not necessarily important since the flooring panels are covered with carpet tiles 40 and the edge strip does not extend beyond the floor panel lids. But in Figure 9 which shows a flooring system suitable for computer room applications, the edging strips extend above the floor panel lids to provie conductive material surrounds 42 for vinyl flooring tiles 44 or other vinyl flooring material laid within those surrounds.

Now referring specifically to Figures 1, 2 and 3 of the accompanying drawings which show a panel corner locator for the flooring system of Figure 7, panel corner locators 12 are of conductive plastics material. The locators 12 comprise a circular base 50 in the form of a ring that is intended to fit onto a pedestal and have four upstanding projections 52 located at equal spacings around the base. The base has depending studs 56 which are for location in corresponding holes of a pedestal and beneath each projection 52 is a slot 58 into which locates a corresponding rib of a pedestal.

In Figures 4, 5 and 6, locators 12′ are similar to those of Figure 1, 2 and 3 except that opposite upstanding projections 52 have aligned grooves 54 to accomodate the edging strips of the panels of Figures 8 and 9.

Each projection 52 is generally rectangular in section providing two pairs of opposed faces 60, 62. One pair of faces 60 are parallel but the other pair 62 slope inwards towards each other. It is these faces 62 that actually contact panel sides at or near corners thereof as shown in Figures 7, 8 and 9.

The corner locators 12 and 12′ provide additional security for the panels against tipping as well as damping any contact noise between panels and pedestals.

## Claims

1. A flooring system comprising floor panels supported on pedestals at corners thereof, wherein the pedestals have panel corner locators that contact panel corner sides as well as underneath the panels.

2. A flooring system as claimed in claim 1, wherein the panel corner locators comprise a base and spaced upstanding projections that provide contact surfaces for panel corner sides.

3. A flooring system as claimed in claim 2, wherein each projection has a pair of opposed faces each of which is at right angles to a face of the next projection, whereby sides of a panel at or near corners thereof will each contact adjacent projections.

4. A flooring system as claimed in claim 1, 2 or 3, wherein the panel corner locators are formed separately from the pedestal support surfaces.

5. A flooring system as claimed in claim 4, wherein the locators are made from plastics material.

6. A flooring system as claimed in claim 5, wherein the plastics material is conductive.

7. A flooring system as claimed in any one of claims 1 to 6, whereby the locators have means for locating them on the pedestals.

8. A flooring system as claimed in claim 7, wherein the locators and pedestals have corresponding male and female cooperating parts.

9. A flooring system as claimed in claim 1, 2 or 3, wherein the pedestal support surfaces and locators are formed integrally.

10. A flooring system as claimed in any one of claims 2 to 9, wherein said projections are slotted to accommodate depending parts of panel edging strips.

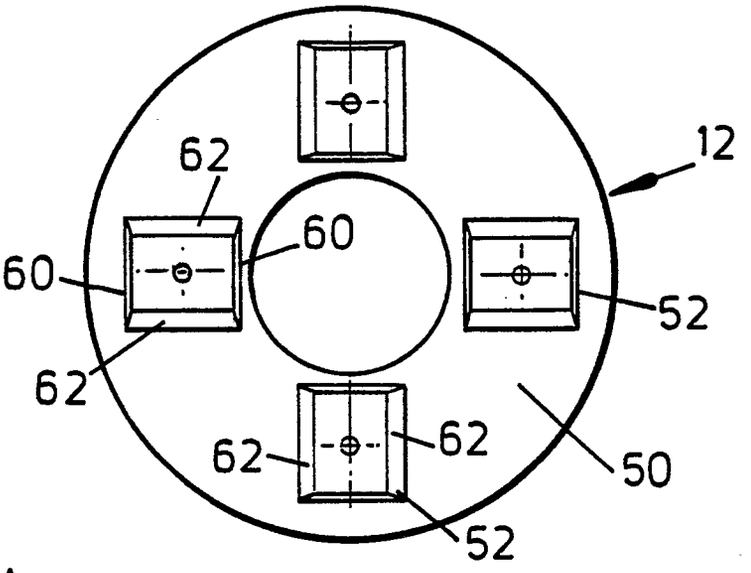


FIG. 1

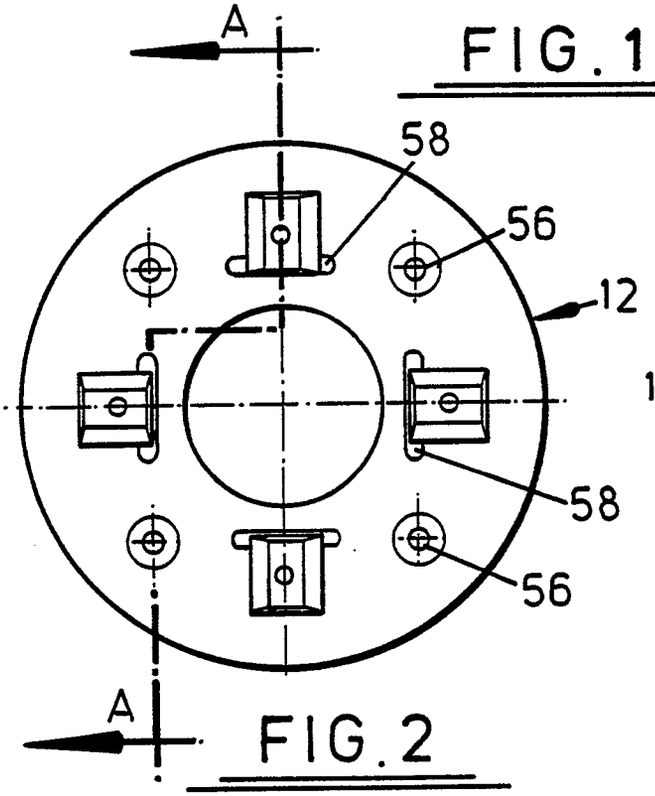


FIG. 2

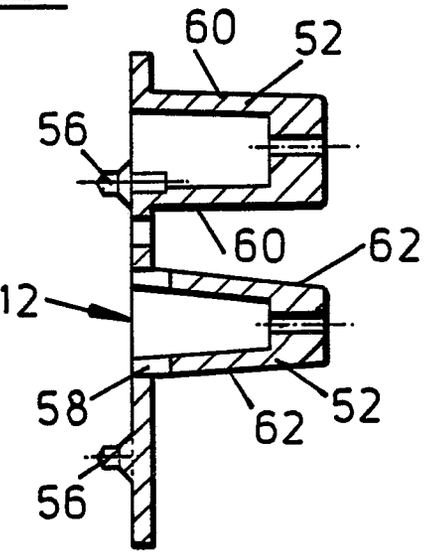


FIG. 3

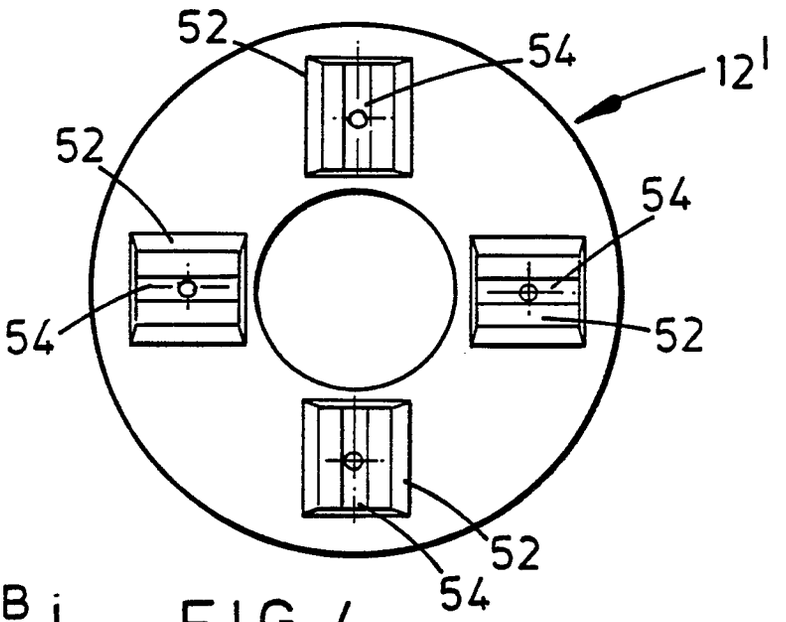


FIG.4

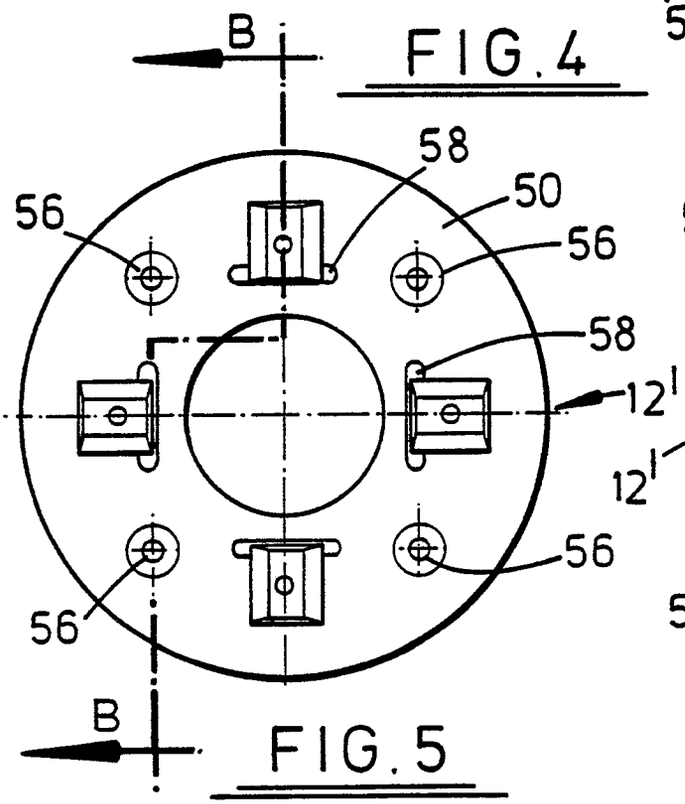


FIG.5

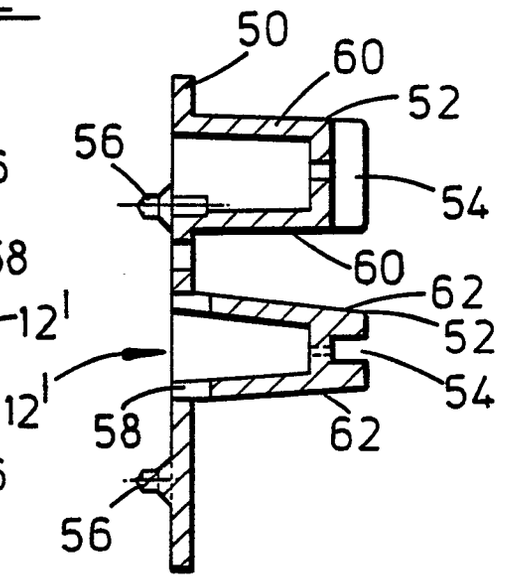


FIG.6

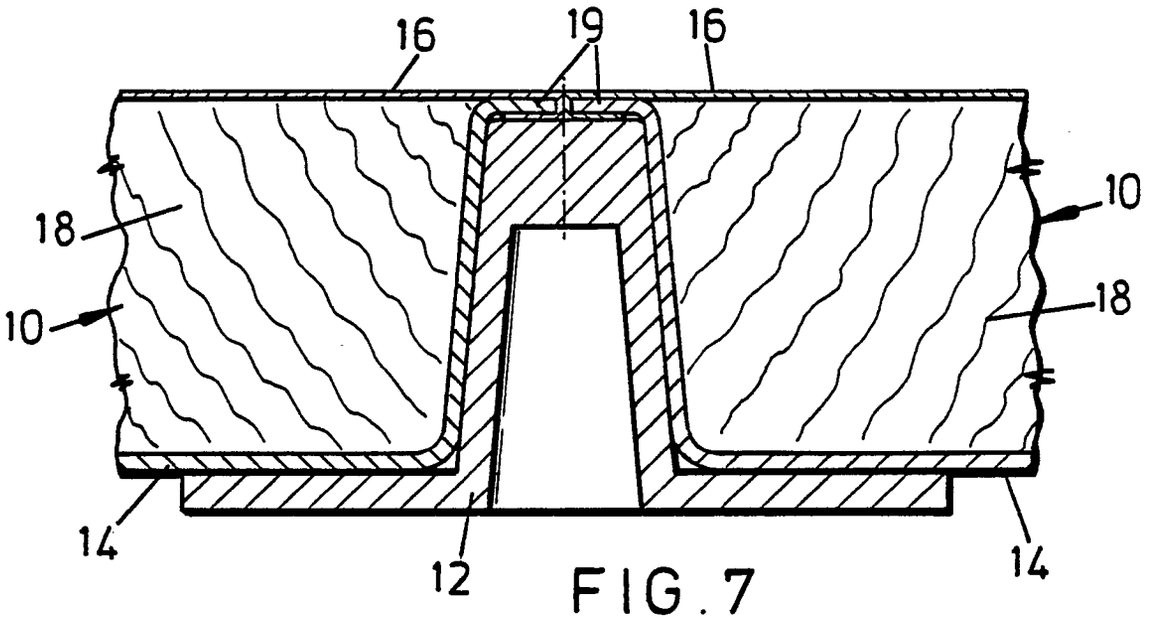


FIG. 7

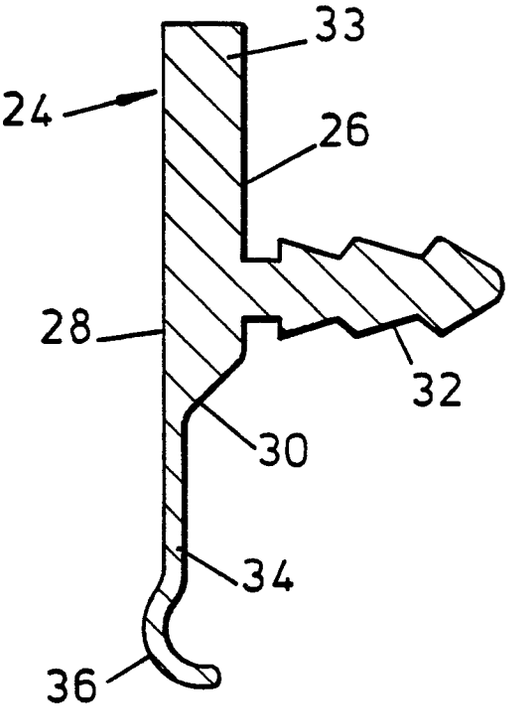


FIG. 10

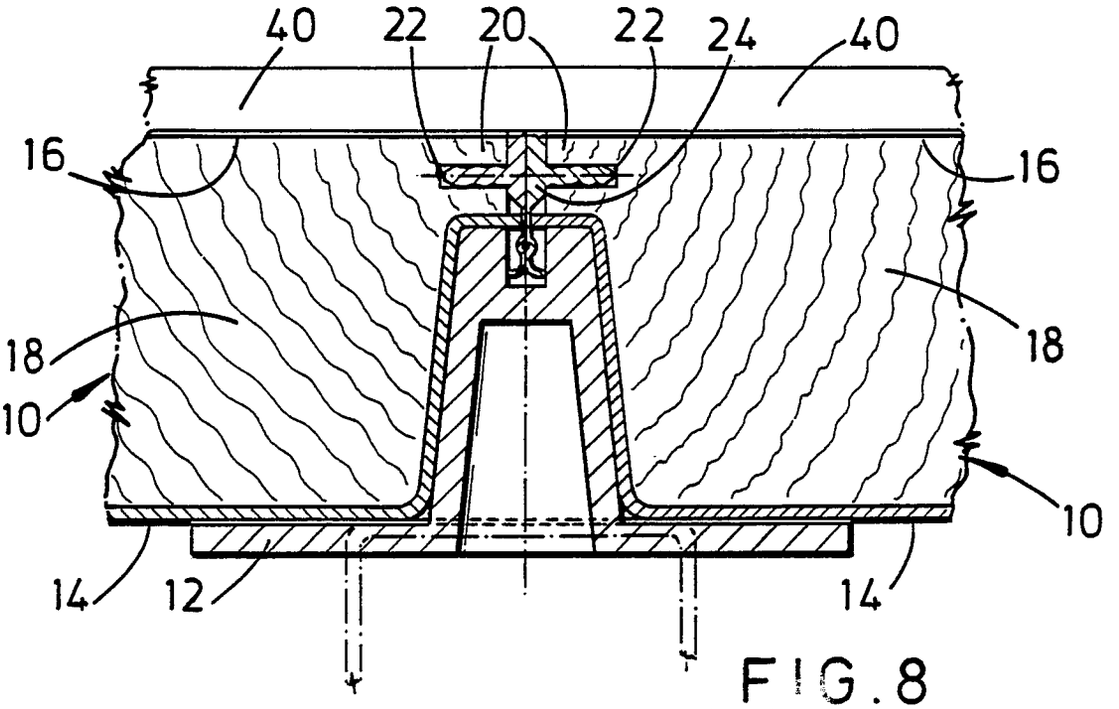
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FIG.8

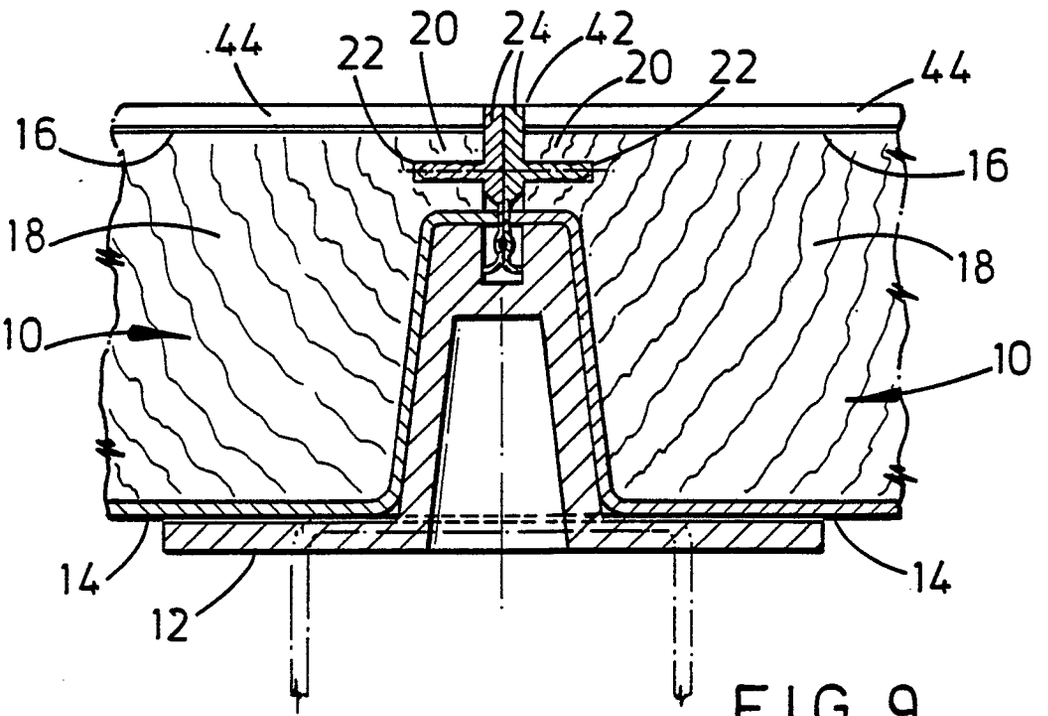
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FIG.9

European Patent Office

# EUROPEAN SEARCH REPORT

Application Number

EP 90 30 3420

## DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int. Cl.5 ) |
|---|---|---|---|
| X | EP-A-0123875 (ROBERTSON BAUELEMENTE GMBH)<br>* page 7, line 1 - page 12, line 30; figures 1-15 * | 1, 2, 3, 4, 7, 9 | E04F15/024 |
| A | DE-U-8701635 (MERO-WERKE DR.-ING.MAX MENGERINGHAUSEN,GMBH & CO)<br>* page 4, line 20 - page 7, line 24; figures 1-5 * | 1, 2, 3, 4, 5, 7, 9 | |
| A | WO-A-8504685 (BECO PRODUKTUTVECKLING)<br>* page 3, line 23 - page 5, line 23; figures 1-5 * | 1, 2, 3, 4, 6, 7, 9 | |
| A | GB-A-1536424 (GODFREY ET AL.)<br>* page 1, line 52 - page 2, line 91; figures 1-4 * | 1, 2, 3, 4, 6, 7, 9 | TECHNICAL FIELDS SEARCHED (Int. Cl.5 ) |
| A | GB-A-2111556 (GODFREY)<br>* page 1, line 35 - page 2, line 37; figures 1-10 * | 1, 2, 3, 4, 7, 8, 9 | E04F |
| P,X | EP-A-0325051 (HARVEY)<br>* column 3, line 33 - column 7, line 25; figures 1-5 * | 1, 2, 3 | |
| P,X | US-A-4835924 (BLACKLIN ET AL.)<br>* column 4, line 12 - column 15, line 17; figures 1-22 * | 1, 2, 4, 5 | |

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| THE HAGUE | 04 JULY 1990 | AYITER J. |

CATEGORY OF CITED DOCUMENTS

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