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54 Lining or flooring method with canalized furring tiles and respective canalized tiles.

57 Lining method and lining tile provided with ducts, particularly suitable for lining or flooring, comprising a containing shell (1) internally filled with insulating material (i), and provided at the base with a crossed duct (c), wherein the lateral openings of said shell (1') corresponding to the openings of said ducts (c), are smaller than the section of said ducts in order to allow the use of a connecting sheath of two adjacent sides (G) or the closing of the duct by means of a cap (T).

This type of lining or flooring tile is very useful for obtaining floor ducts for electric, telephonic conductors and the like. The floor thus obtained is easily removable.

The method can also be used for lining walls or ceilings.

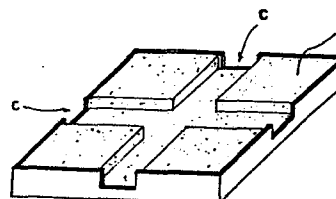


Fig.2

Lining or flooring method with canalized furring tiles and  
respective canalized tiles

The present invention relates to a lining or flooring method with  
5 canalized furring tiles and respective canalized tiles.

The invention is particularly suitable for lining floors or walls,  
as well as ceilings.

10 In the present state of the art a wide variety of tiles are known,  
but no tile provided with ducts is known.

The drawbacks of the currently used solutions and of the above-  
mentioned prior art are mainly that the conventional tiles have  
15 only a lining function.

The invention as claimed is intended to remedy these  
disadvantages, and especially to provide the lining tile also with  
a function of carrying out a duct network which enables the laying  
20 in any direction of conduction lines, e.g. electric, telephonic,  
televisual, and the like, as well as stiff type lines more or less  
flexible and for different conductions, e.g. of fluids (water,  
air, etc.).

25 Another object of the invention is to allow the realization of a  
lining with a high degree of insulation.

A further object of the invention is to allow the assembling of  
said tiles by simple hooking means instead of the conventional  
30 glueing system, anyway not incompatible.

A further object of the invention is to allow the utilization of a metallic lining.

A further object of the invention is to ground electrically the  
5 whole floor and/or lining.

The invention as claimed solves the problem of how to carry out a tile with conduction ducts obtained therein. In a preferred embodiment the tile is shaped like a parallelepipedal half box  
10 provided at the bottom with two conveniently deep grooves crossed in the median position.

The advantages offered by this invention are mainly that it is possible to carry out a desired lining, conveniently insulated,  
15 always removable if not glued and capable of allowing the laying of a duct network within this lining in the most various desired way allowing also grounding in case of metallic flooring.

One way of carrying out the invention is described in detail below  
20 with reference to drawings which illustrate only one preferred embodiment, in which:-

Figure 1 is a perspective view of the overturned empty containing shell meant to constitute the tile; Figure 2 is a view of the  
25 overturned finished tile using the shell of Figure 1; Figure 3 is a plan view of the laying system of some tiles and of the duct network thus obtained (short dashes lines); Figures 4 and 5 are respectively a front partial sectional view and a side transversal sectional view A-A of the final covering cap of a duct with  
30 visualization in the latter of the inserting system; Figures 6 and 7 show in similar view the junction element (hooking connecting

means) of two adjacent tiles, using the free edge of the shell at the end of the respective ducts.

According to the above figures the invention relates to a new type  
5 of tile comprising a shell in the shape of a parallelepipedal box open at one base side, preferably made of externally anodized aluminium plate 1, in whose four lower edge sides, corresponding rectangular grooves 1' are provided in the median position, having such a size as to constitute the section of a duct (c) at the base  
10 of the finished tile (P).

The ducts are carried out at base median cross by filling the inner portion of the shell 1 with foamed polyurethan (i), thus obtaining the two crossed ducts (c) which are formed with the  
15 floor surface on which the tiles (P) are to be laid.

With respect to the ducts (c) width, the grooves 1' of the shell are narrower so as to permit the hooking of one tile adjacent with the other, as shown in Figure 7, by the connecting means (G) of  
20 Figure 6, therefore without requiring glueing to the floor and allowing its removal. Should the lining begin on sight, as for example in stands for exhibitions, the leading end of the ducts (c) can be closed with the closing caps (T) of Figure 4, as shown in Figure 5.

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It will thus be appreciated that such a type of floor enables to have a duct network capable of serving any requirements and is easy to remove in order to get therein.

30 Furthermore, it will be possible to carry out similar special tiles, provided with connecting accesses for connection to the

underlying duct network according to well known art (e.g. floor taps).

The shell shown in the figures is made of anodized aluminium, but  
5 it is obvious that it can be made also of plastic material or other suitable material.

Of course the executional details can be varied without departing from the spirit and scope of the invention as claimed in the  
10 appended claims.

Udine, January 20, 1984.

p. OSSIDAZIONE AVIANESE s.r.l.

The Representative

Dr. Giovanni D'Agostini

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Claims:

1. Lining or flooring method with canalized furring tiles, characterised in that the utilized tiles (P) are provided, under  
5 their surface (1), with ducts (c) placed so that in the lining composition, at least one of said ducts (c) coincides with at least one of another respective duct (c) of the adjacent tile (P) in order to form continuous conduit ducts.
- 10 2. Canalized furring tile for a lining or flooring method as claimed in claim 1, characterised in that at the base adhering to the bearing surface, at least one groove passing through it is obtained, open toward said surface and of such a size so as to constitute with this surface a duct (c) under the tile (P).
- 15 3. A tile as claimed in claim 2, characterised in that it is provided with two underlying ducts which cross and end normally at the edge surface open in median position.
- 20 4. A tile as claimed in the preceding claims, characterised in that it has a parallelepipedal shape.
5. A tile as claimed in the preceding claim, characterised in that it has a square plane shape.
- 25 6. A tile as claimed in the preceding claims, characterised in that it comprises a containing shell (1), internally filled with insulating material (i), and wherein the lateral openings of said shell (1') corresponding to the openings of said ducts (c), are  
30 smaller than the sections of said ducts for allowing the use of a connecting sheath of two adjacent sides (G) or the closing of the

duct by means of a cap (T).

7. A tile as claimed in the preceding claim, characterised in that said shell (1) is made of aluminium.

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8. A tile as claimed in claims 5 and/or 6, characterised in that said insulating filling material (i) is a foamed plastic material.

9. A method as claimed in claims 1, utilizing tiles as claimed in  
10 claims 2 to 8, characterised in that said tiles are connectable between them by means of hooking clips (G).

10. A method as claimed in the preceding claim, characterised in that said hooking clips connect the metallic linings of said tiles  
15 in an electrically conductable way for grounding the whole floor or lining formed by said tiles (P).

Udine, January 20, 1984.

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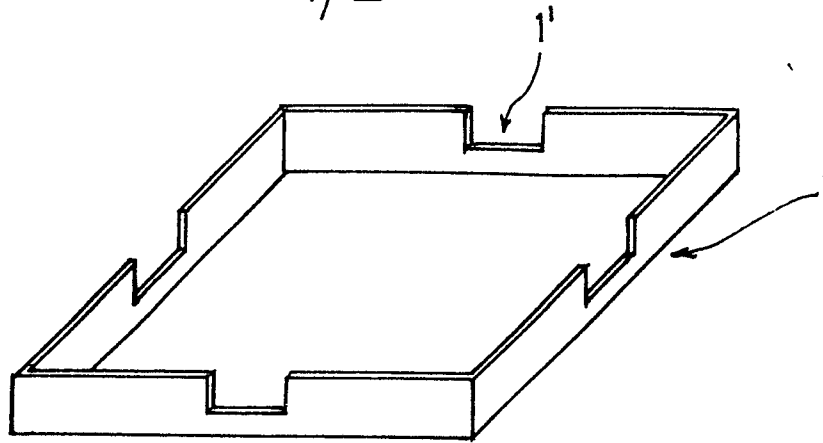


Fig. 1

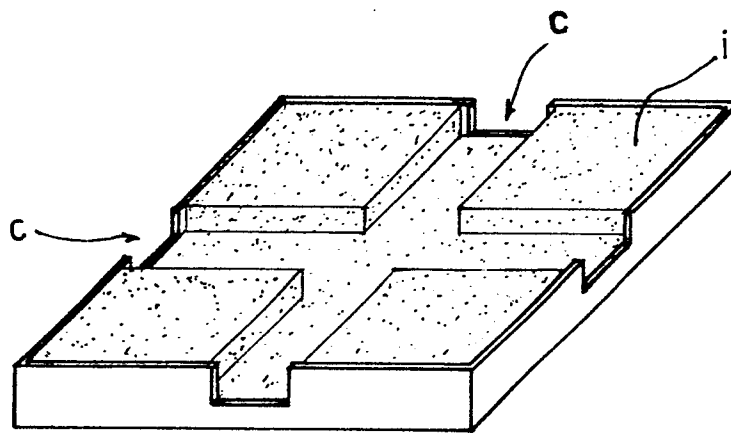


Fig. 2

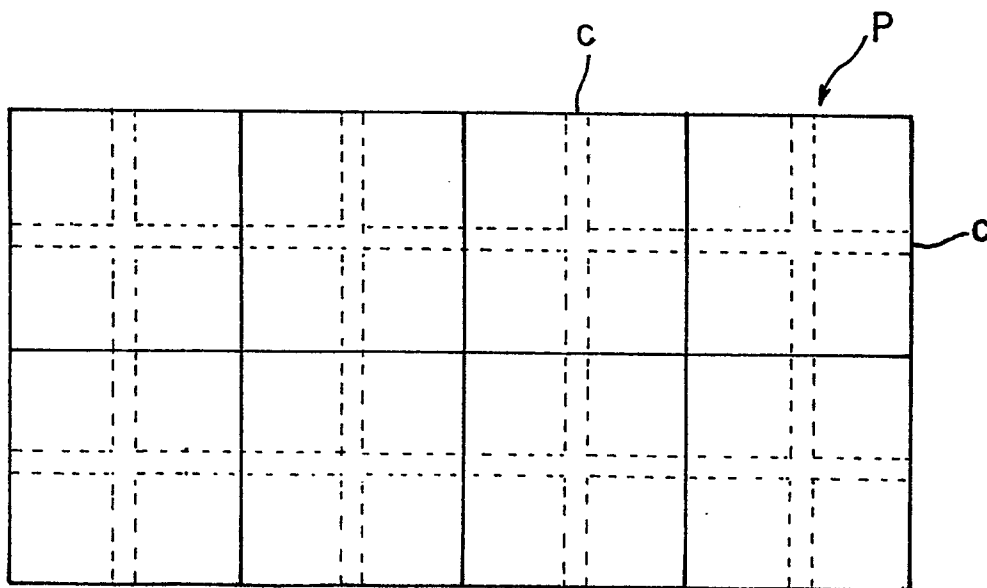


Fig. 3

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The Representative Dr.Giovanni D'Agostini



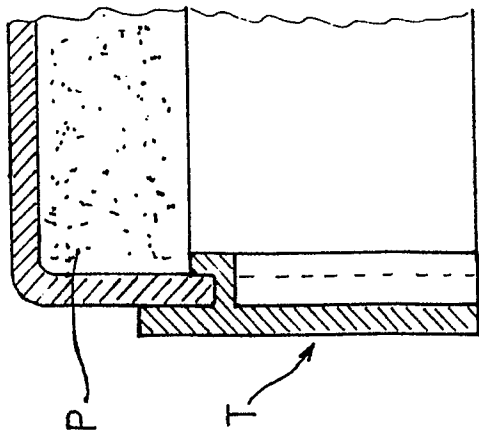


Fig. 5

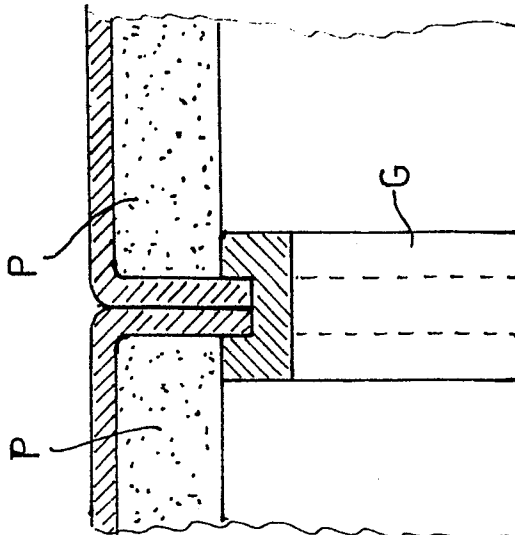


Fig. 7

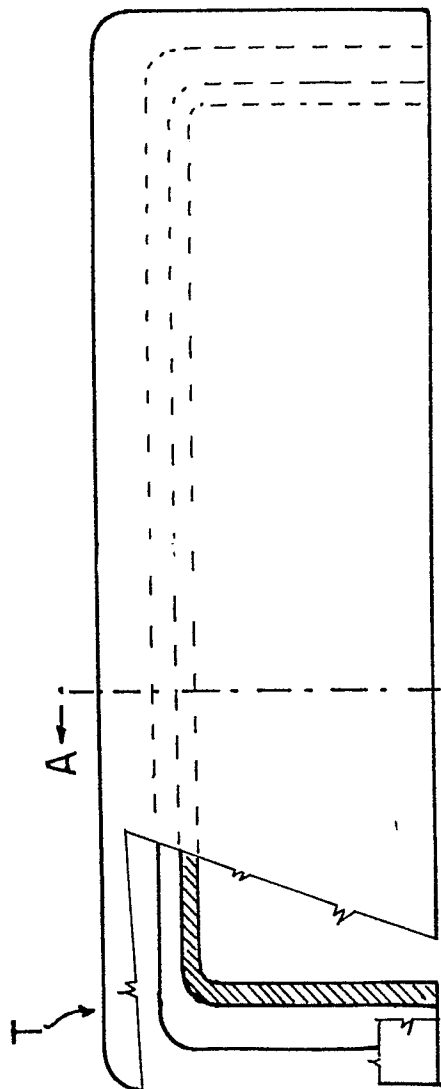


Fig. 4

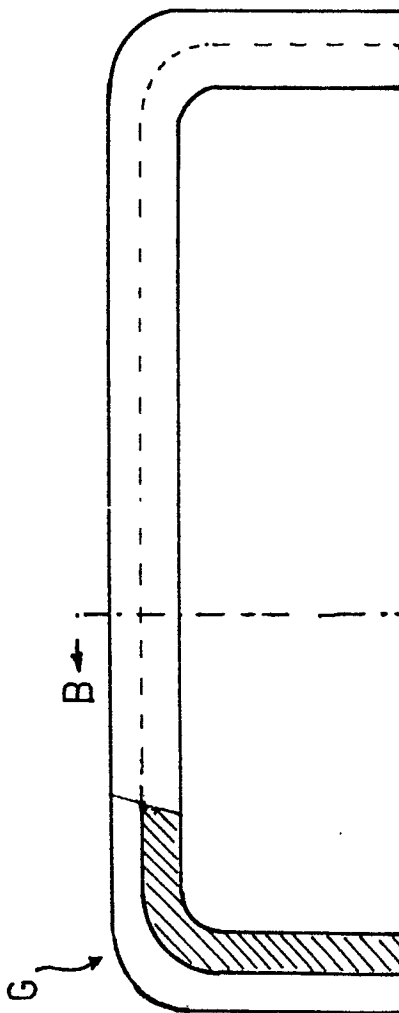


Fig. 6



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. 3)
X	DE-A-3 041 624 (HUSS) * Page 9, last paragraph; page 10, first paragraph; page 11, first paragraph; figures 1,4 *	1	E 04 F 15/06
Y		2,3,4	
Y	FR-A-2 083 716 (CELLIER) * Whole document *	2,3,4	
A		6	
A	DE-A-2 432 273 (B.D.V.H.) * Page 6, last paragraph - page 9; figures 1,2 *	1-6,8	
A	FR-A-2 501 758 (PLAQUETTES INDUSTRIELLES) * Whole document *	6-8	TECHNICAL FIELDS SEARCHED (Int. Cl. 3) E 04 F
A	CH-A- 479 792 (KANTOROWICZ) * Column 2, lines 4-40; column 3, lines 1-17; figures 1,2 *	9	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12-04-1984	Examiner PERROTTA A.
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			