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(54) **Shelving to hold pizza cartons**

(57) Shelving to hold pizza cartons which is made up of various element (A), for holding of the cartons (S), set alongside each other, or of a single element (B), containing a multiple stacking zone, where these elements present on all sides, apart from the frontal zone, on the

bottom and on the cover, protection walls (1,2,3,4) and carton (S) containment, whose profiles show cuts (7) in the lower part such as to create an extraction space for the cartons from below, while the upper cartons move down at each removal, remaining neatly stacked.

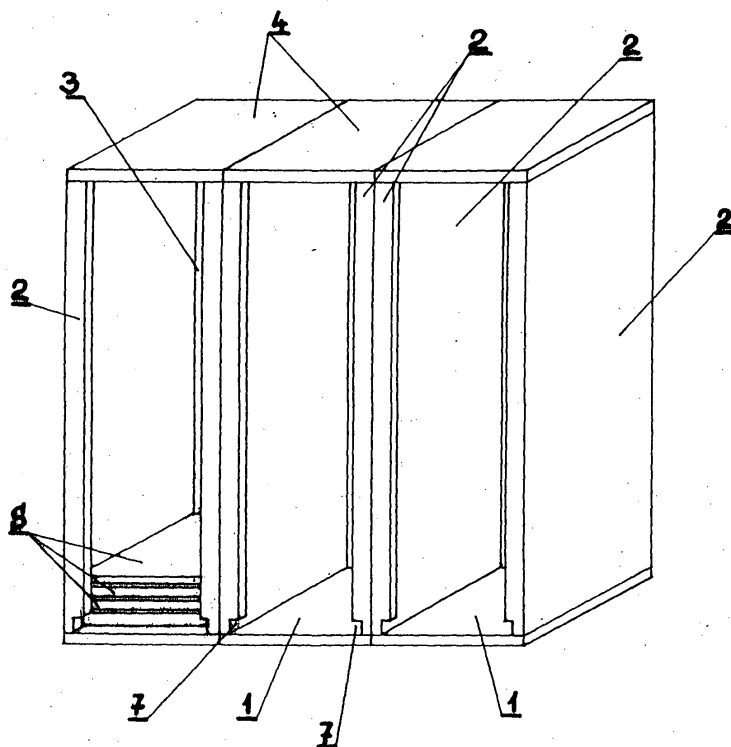


Fig. 5

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Description

[0001] As is well known, the production of takeaway pizza i.e. pizza to hand over to customers or to deliver to the door, has really spread. For this service packaging is necessary, which in practice is a carton to contain and protect the pizza during transport.

[0002] There is, however, a problem at the pizzeria where it is not possible to conveniently stack such cartons that are usually piled up in any available spot with the inconvenience that removal of a carton generally causes the pile to topple causing considerable problems to everyone.

[0003] This invention aims to avoid this inconvenience and envisages shelving aimed at containing the cartons, in orderly piles and that allows the ensuing removal of the various cartons to be filled with ease and without disturbing the piles.

[0004] This aim is satisfied, according to this invention, by means of suitable shelving aimed at containing the various cartons stacked and ready for removal.

[0005] The invention in word is illustrated, in the preferable way, in the attached drawings, where:

Fig. 1 shows the front view of the shelving subject of the invention, made up of the various elements placed together,

Fig. 2 shows the cross-section of the shelving across X-X of Fig. 1,

Fig. 3 shows the front view of the shelving as a single body,

Fig. 4 shows the cross-section across Y-Y of the shelving in Fig. 3,

Fig. 5 shows the prospective view of example shelving as per Fig. 2,

Fig. 6 shows the side view of one L-shaped leg of a shelf,

Fig. 7 shows the top view of the leg as per Fig. 1,

Fig. 8 shows the central and vertical cross-section of the bottom and cover with the resting edge lateral to the legs,

Fig. 9 shows the view from below of the bottom of Fig. 3,

Fig. 10 shows the assemblage of the cover fitted with the edging with L-shaped legs,

Fig. 11 shows the assemblage of the flat cover with the L-shaped legs,

Fig. 12 shows a prospective view of example shelving obtained by assembling of the legs with the cover and flat bottom,

Fig. 13 shows a prospective view of a shelf of double height,

Fig. 14 shows a shelf with lower cupboard suitable to house the flat, punched cartons.

[0006] With reference to the aforesaid Figs. 1 and 2, the shelving is made up of various stand alone elements A, of such dimensions as to contain the cartons S piled

up on one another and beside one another according to the storage requirements for the cartons.

[0007] Each element A is fitted with a bottom 1, lateral walls 2, back wall 3 and cover 4, while the frontal zone 5 stays open and where suitable L-shaped profiles 6 are envisaged to hold the cartons stacked inside the shelf element. The lower zone of these L-shaped profiles has a recess 7, in such way as to create a slightly larger opening than the dimensions of the carton S, so as to allow ensuing extraction from below of the successive cartons S, while the other cartons S conveniently move down, held by the L-shaped profile 6.

[0008] According to Figs. 3 and 4, the shelving is made up of a single shelf B including for example three stacking zones. This shelving B envisages lateral walls 8, rear wall 9, bottom 10 and cover 11.

[0009] On the front of the shelving, there appear L-shaped lateral elements 6, similar to those of Figs. 1 and 2, as well as T-shaped elements 12, suited to hold the cartons in a transversal and longitudinal sense.

[0010] Thus arranged, it is clear that the cartons S placed in a pile inside this shelving A or B, are well placed and protected; they also allow easy removal at the, moment of boxing and transport of the pizza.

[0011] With reference to the aforesaid Figs. 6 to 13 an L-shaped leg is indicated to hold the corners of the cartons S receiving the take away pizzas, useful for the creating of a shelf together with the bottom 14 and the cover 15. The front L-shaped legs 13 have cuts 16 in the lower part useful for the extraction of the cartons S as per Fig. 12 or the legs 13 present also cuts 17 useful further extraction of the cartons S from the central zone of the shelf of double height, fitted with a fixed central dividing shelf 18 as per Fig. 13.

[0012] The bottom 14 and the cover 15 may have a rim 19 of lateral rest either outside or inside the legs 13 and the reciprocal fixing may be carried out by bonding means 20, such as screws, bolts, rivets etc. inserted laterally as per Fig. 10.

[0013] In Fig. 12 the flat cover 21 and the flat bottom 22 are shown resting on the extremities of the legs 13 and with fixing by way of bonding means such as screws, bolts, rivets etc. inserted vertically as per Figs. 11 and 12.

[0014] Fig. 12 shows in a prospective view a shelf 24 of limited height with removal of the cartons from below, while Fig. 13 shows a shelf 25 with double height that envisages removal of the cartons from below and from the middle. This shelving may be used alone and the multiple shelving can be obtained by placing numerous single shelf units alongside each other.

[0015] It is also possible to arrange rectangular shelving containing more piles of cartons and in that case, besides the L-shaped legs as in Figs. 6 and 7, T-shaped central legs 12 are also envisaged. The wings of the T serve to contain the corners of the cartons of two adjacent piles. The front T-shaped legs are fitted with cuts 16 or 17 useful for the extraction of the cartons. These

T-shaped legs are already clarified in Figs. 3 and 4.

[0016] Fig. 14 shows shelving 26 fitted in the lower part with a cupboard 27 suitable to house the packs of the flat punched cartons useful to prepare the cartons by the user.

[0017] The shelves described may have feet 28 of any nature and conformation of resting on the ground or on counters or they may be fitted with revolving casters 29 which make moving of the shelves easier.

[0018] All the shelving described can have lateral and back walls and possibly front ones for protection from dust and these may be in any material such as wood, metal, plastic, possibly transparent such as Plexiglas, or any other convenient material.

[0019] Naturally the device according to this invention, may undergo variations and adaptations on the basis of the various possible needs, bearing in mind that the shelving can take on various dimensions according to the dimensions and shapes of the pizzas and the relative cartons to be delivered.

[0020] The shelving described may receive the piles of square-bottom cartons as described but also of circular shape to take round pizzas.

Claims

1. Shelving to hold pizza cartons, **characterised by** what is made up of various elements (A) set alongside each other, where these elements present on all sides, apart from the frontal zone, on the bottom and on the cover, protection walls (1,2,3,4) and carton (S) containment, while the frontal zone presents L-shaped frontal profiling (6) for carton (S) containment, whose profiles show cuts (7) in the lower part such as to create an extraction space for the cartons from below, while the upper cartons move down at each removal, remaining neatly stacked.

2. Shelving as per claim 1, **characterised by** that which is made up of a single body (B) containing a multiplicity of carton (S) stacking zones, where this shelving presents side and rear walls (8,9), a bottom and a cover (10,11) as well as presenting in the frontal zone profiling (6 and 12) of carton containment, where these profiles present cuts (7) in the lower part for passage of the cartons.

3. Shelving as per claim 1, **characterised by** that where each shelf presents L-shaped or T-shaped legs (13), presents a cover (15,21) and presents a bottom (14,22), prefabricated and assembled by way of bonding means (20,23), where said legs present cuts in the lower part (16) in the wings of the L or T for the extraction of the cartons (S) for shelves of limited height, or present in the lower or central zone recesses (16,17) useful for the extraction of the cartons (S) from below and from the cen-

tre of the shelf, for shelving of considerable height.

4. Shelving as per claim 1, **characterised by** that where the bottom (14) and the cover (15) envisage a resting rim (19) internal or external to the legs (13).

5. Shelving as per claim 1, **characterised by** that where the bottom (22) and the cover (21) are flat and rest on the extremities of the legs (13).

6. Shelving as per claim 1, which may be single formed by four L-shaped legs (13), a cover (21) and a bottom (22), while the multiple shelving is made up of the placing of two or more single shelves side by side.

7. Shelving as per claim 1, **characterised by** that which may be a multiple pile made up of L-shaped and T-shaped legs (13) while the cover (21) and the bottom (22) are rectangular in shape with or without a rim (19).

8. Shelving as per claim 1, **characterised by** that which also presents a cupboard (27) for the containment of packs of flat punched cartons, useful for the preparation of the cartons by the user.

9. Shelving as per claim 1, **characterised by** that which envisages feet (28) for resting on the ground or on counters, or envisages revolving casters (29) to make moving the shelving easier.

10. Shelving as per claim 1 and following, **characterised by** that which the prefabricated elements may be made in metal, wood, plastic, etc..

11. Shelving as per claim 1, **characterised by** that which presents lateral, rear and possibly front protection walls, where these walls may be of any material whatsoever even transparent.

Amended claims in accordance with Rule 86(2) EPC.

1. Shelving to hold pizza cartons, which is made up of one element (A) or various elements (A) set alongside each other, where each element present on all sides, apart from the frontal zone, on the bottom and on the cover, protection walls (1,2,3,4) and carton (S) containment, while the frontal zone presents L-shaped frontal profiling (6) for carton (S) containment, whose profiles show cuts (7) in the lower part such as to create an extraction space for the cartons from below, while the upper cartons move down at each removal, remaining neatly stacked, **characterised in that** the shelving is made up of a single body (B) containing a multiplicity of adjacent carton (S) stacking zones, where this

shelving presents side and rear walls (8,9), a bottom and a cover (10,11) as well as presenting in the frontal zone L- shaped (6) and T-haped (12) profilings of carton containment, where these profiles (6, 12) present cuts (7) in the lower part for passage of the cartons. 5

2. Shelving as per claim 1, characterised in that the shelving is made up of various single or multiple stacking zone (A or B) placed near and/or superposed one on the other. 10

3. Shelving as per claim 1, characterised in that the shelving is an ensemble formed by various single and multiple stacking zone (A and B) placed near and/or superposed one on the other. 15

4. Shelving as per claim 1, characterised in that the frontal L-shaped profiles (6, 13) for containing the cartons (S) present, besides the cuts (16) in the lower part, recesses (17) in the central zone useful for the extraction of the cartons (S) from the centre of the shelf (25) of considerable height. 20

5. Shelving as per claim 1, characterised in that the frontal T-shaped profiles (12) containing the cartons (S) present, besides the cuts (7) in the lower part, recesses (17) in the central zone, useful for the extraction from the centre of the multiple shelf (B). 25 30

6. Shelving as per claim 5, characterised in that a fixed or extractable partition (18) is placed lower to the central recesses (17). 35

7. Shelving as per claims 1 to 6, characterised in that the shelf presents a cupboard (27) for the containment of packs of flat punched cartons, useful for the preparation of the cartons by the user. 40

8. Shelving as per claim 1, characterised in that the shelf envisages feet (28) for resting on the ground or on counters, or envisages revolving casters (29) to make moving the shelving easier. 45

9. Shelving as per claim 1 and following, characterised in that the prefabricated elements of the shelves may be made in metal, wood, plastic, etc..

10. Shelving as per claim 1, characterised in that the shelves present lateral, rear and possibly front protection walls, where these walls may be of any material whatsoever even transparent. 50

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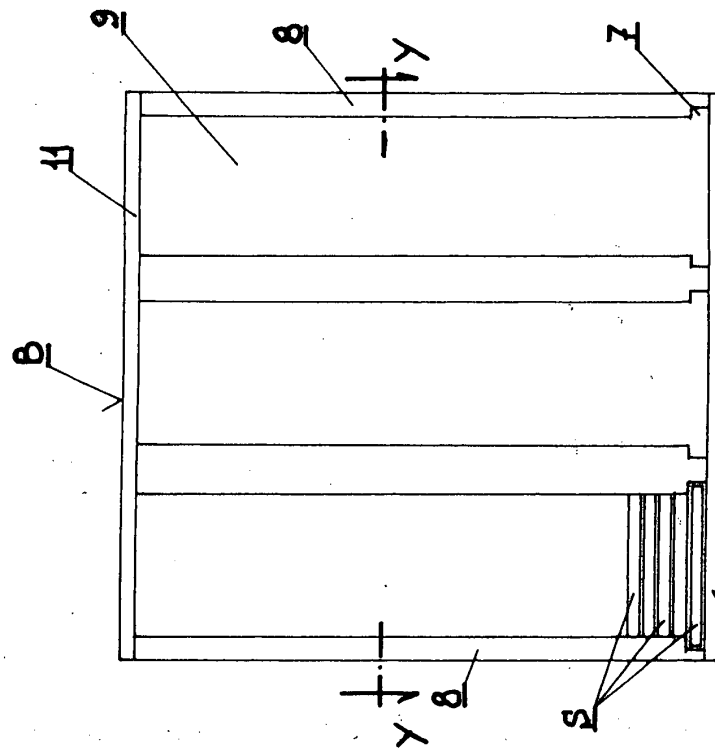


Fig. 3

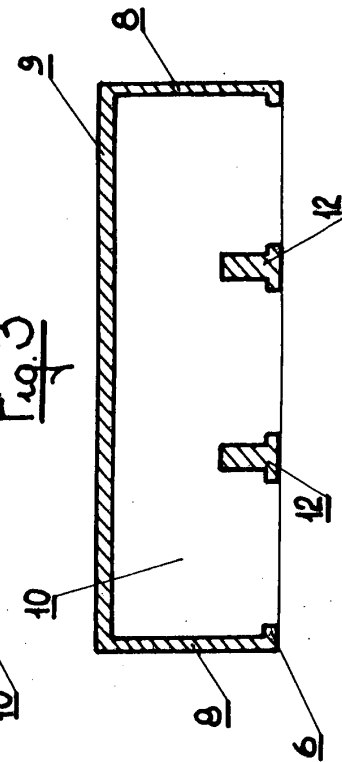


Fig. 4

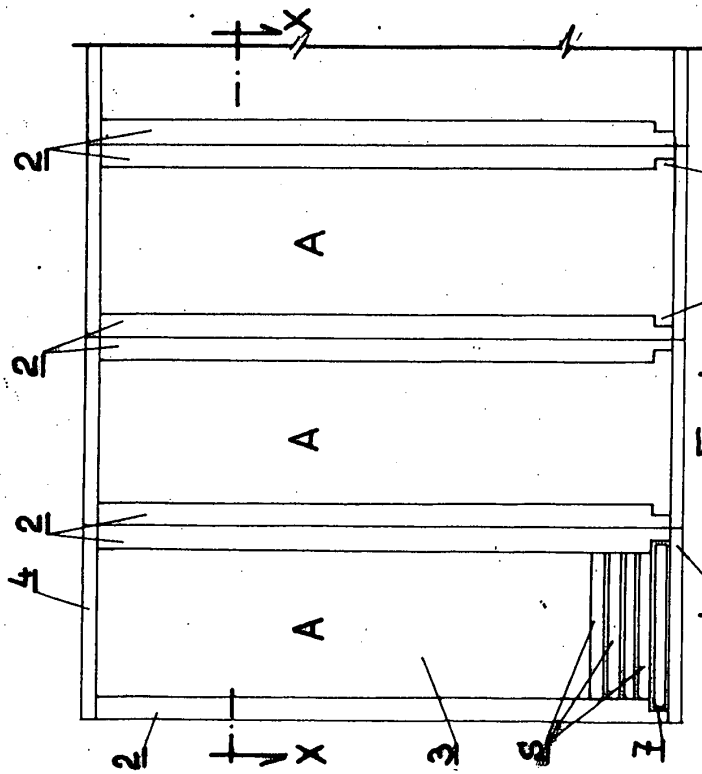


Fig. 1

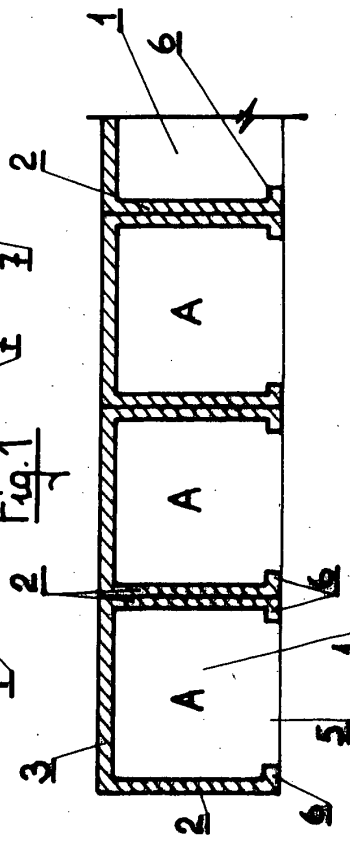


Fig. 2

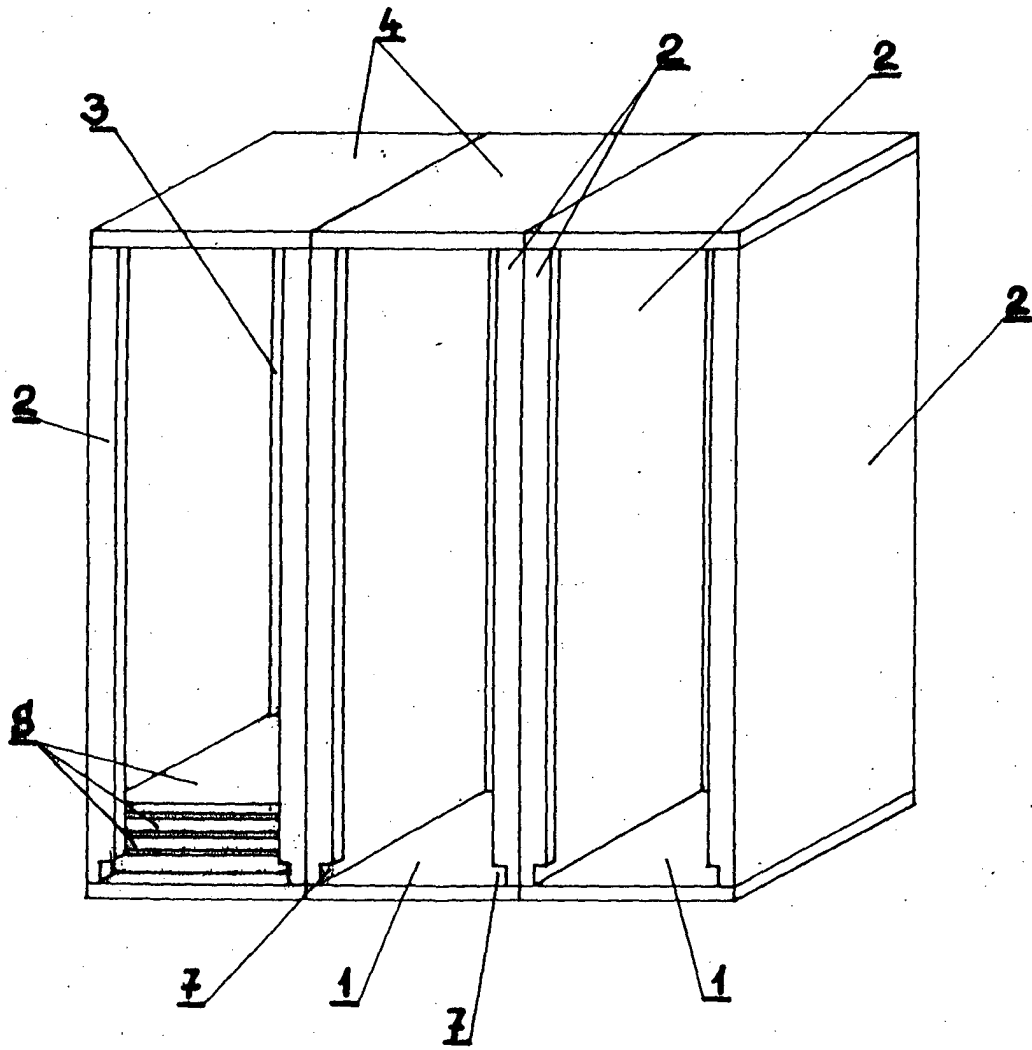


Fig. 5

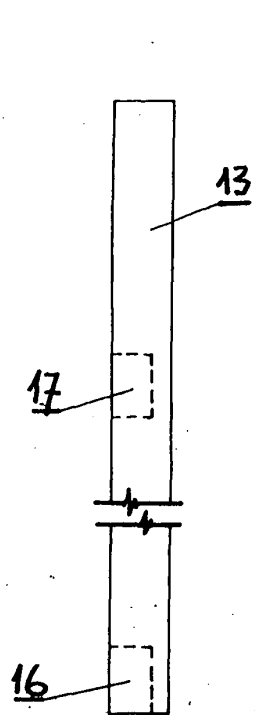


Fig. 6

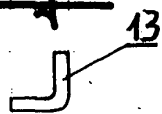


Fig. 7

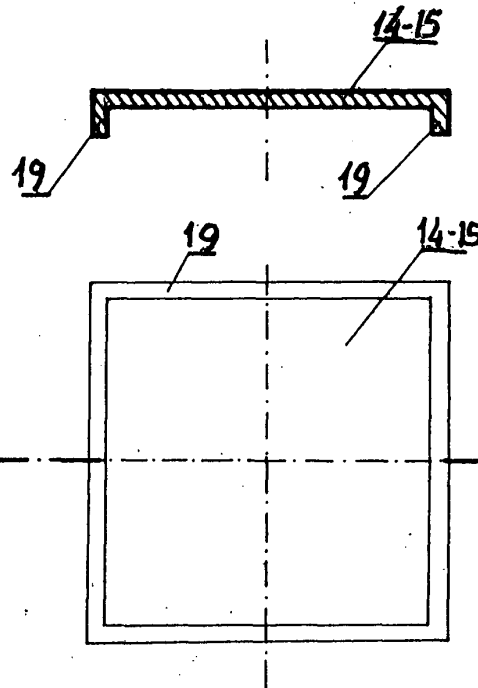


Fig. 8

Fig. 9

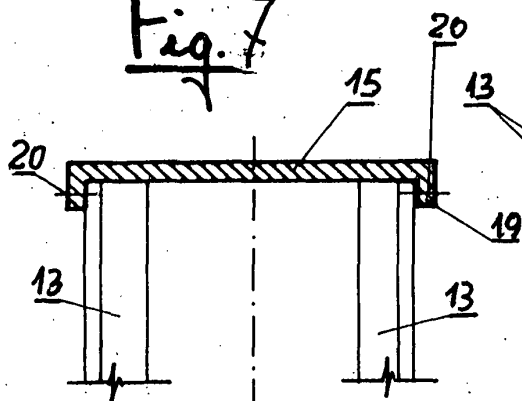


Fig. 10

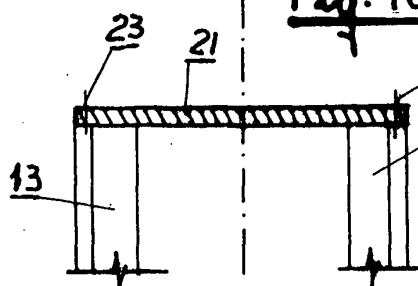


Fig. 11

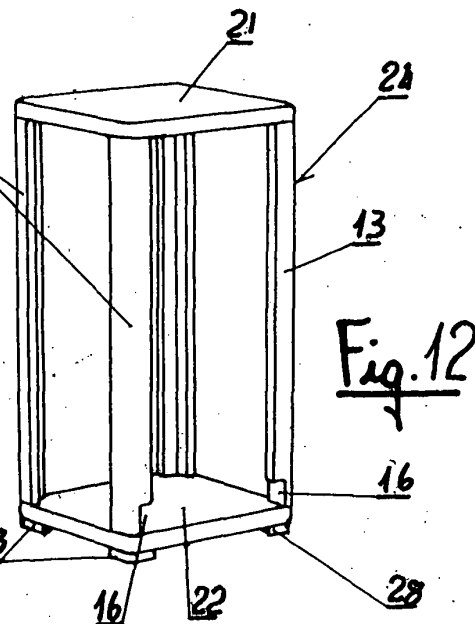


Fig. 12

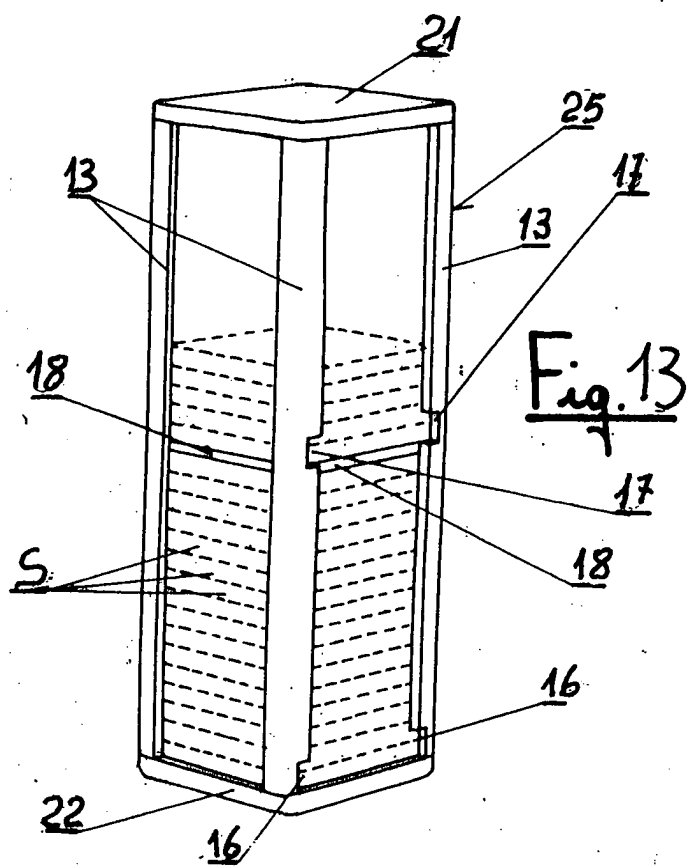
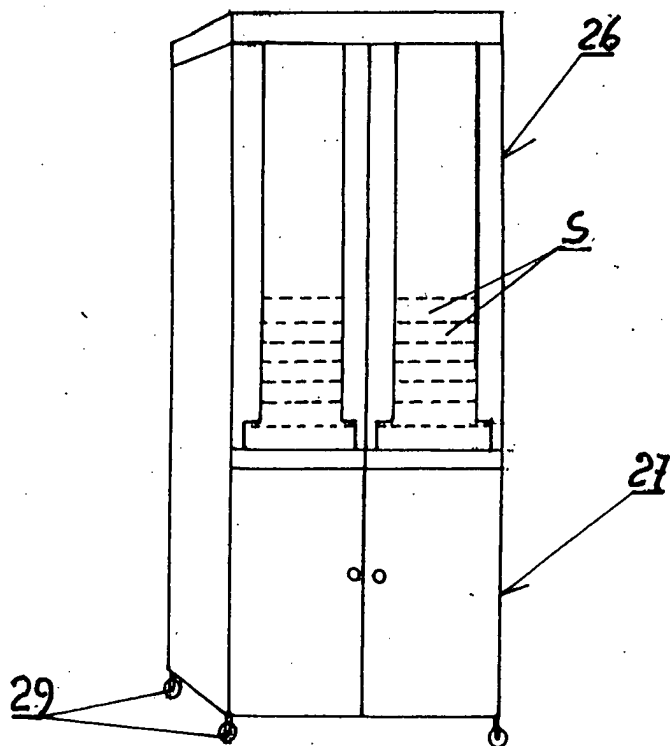


Fig. 14





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EUROPEAN SEARCH REPORT

Application Number
EP 03 02 1588

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.7)
X	US 5 328 258 A (SCALISE GUY G) 12 July 1994 (1994-07-12) * the whole document *	1,3,6,10	A47F1/08
Y		2,4,7,9,11	
A		5,8	
Y	US 3 744 866 A (COOK R) 10 July 1973 (1973-07-10) * the whole document *	2,7,9	
Y	GB 294 803 A (BARNETT CLAUDE JOSEPH; NORMAN CECIL JOSEPH) 2 August 1928 (1928-08-02) * page 2, column 2, line 78 - line 114 * * figures *	4	
Y	DE 12 26 484 B (DOW CHEMICAL CO) 6 October 1966 (1966-10-06) * column 2, line 44 - line 50 * * column 4, line 11 - line 22 * * column 6, line 31 - line 54 *	11	
A		5	TECHNICAL FIELDS SEARCHED (Int.Cl.7) A47F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 January 2004	Examiner Ottesen, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 03 02 1588

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26-01-2004

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82