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(54) **Method of transporting packagings, in particular bottles, and displaying the same for sale, as well as roll container and apparatus used therein**

(57) With a method of transporting packagings (A), in particular bottles, and displaying the same for sale, the packagings are transferred to a transport container at the end of a filling line and the transport container is transported to a sales outlet. A roll container (5) is used as the transport container, to which the packagings are

directly transferred, whilst the roll container functions as a display unit at the sales outlet.

The roll container comprises at least one extendible platform (4) for receiving a number of packagings, wherein the platform is movable between an extended loading position and a retracted, locked transport position.

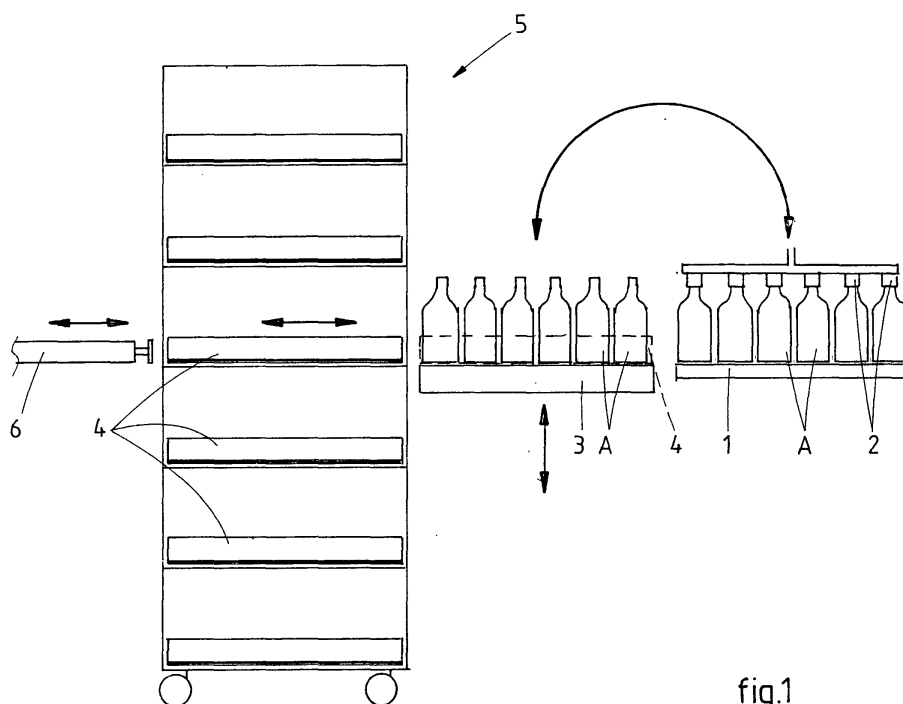


fig.1

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Description

[0001] The invention relates to a method of transporting packagings, in particular bottles, and offering the same for sale, wherein the packagings are transferred to a transport container at the end of a filling line and the transport container is transported to a sales outlet.

[0002] With a known method for use with wine bottles, said wine bottles are packed in boxes, which function as transport containers, at the end of the bottling line. At the sales outlet, the bottles are stored in the boxes or removed therefrom and placed on the shelves.

[0003] The object of the invention is to further improve this method which is known from practice.

[0004] In order to accomplish that objective, the method according to the invention is characterized in that a roll container is used as the transport container, to which roll container the packagings are directly transferred, whilst the roll container functions as a display unit at the sales outlet.

[0005] In this way a considerable saving is achieved, because boxes are not needed when using this manner of transporting, which is very advantageous both from an environmental viewpoint and from an economic viewpoint. Furthermore, a number of operations with regard to packaging and transport no longer need to be carried out, whilst economies are possible at the sales outlet in that the roll container can be used as a display unit.

[0006] It is advantageous if the packagings are transferred from the filling line to an extended platform of the roll container, which platform is moved to a retracted transport position as soon as it is filled with packagings, whilst preferably several platforms of a roll container are filled in succession in that the platforms are extended one after another to a position on a filling table by means of an operating element, whereby the filling table and the roll container are adjusted for height with respect to each other and the filling table is preferably moved in vertical direction between the level of the bottling line, where the packagings are placed onto the platform, and the level at which the respective packaging-filled platform is placed in the roll container.

[0007] In this way the roll container can be filled with packagings in a simple manner, wherein it is even possible to continue to use the usual means for packing packagings, such as wine bottles, into boxes at the end of a bottling line, whereby the packagings are loaded onto a platform instead of in boxes, however. In this way, existing filling lines can quite easily be adapted for use of the method according to the present invention.

[0008] The invention furthermore relates to the aforesaid roll container for transporting packagings, in particular bottles, and displaying the same for sale, which roll container according to the invention comprises at least one extendible platform for receiving a number of packagings, wherein the platform is movable between an extended loading position and a retracted, locked transport position.

[0009] In connection with the movements of the platform, the roll container is preferably fitted with guides for movably supporting the platform, whilst the platform is fitted with a number of wheels, by means of which the platform can be moved over said guides. It is advantageous thereby if the wheels function as locking elements for the platform and to that end engage in associated locking recesses in the guides in the locked transport position.

[0010] In this embodiment the wheels have a dual function, therefore, viz. facilitating the movement of the associated platform between the filling position and the transport position, and locking the platform in the transport position. The wheels are thereby aided by the weight of the filled packagings in that the wheels will have moved down into the locking recesses in the transport position, so that the platform can only be moved out of the transport position if the wheels roll out of the locking recesses while the platform is being lifted. This is hardly possible, if at all, when the platform carrying the packagings weighs a few dozen kilograms. When the platform is empty and weighs only a few kilograms, the wheels can move up out of the locking recesses much more easily when a pushing force is exerted on the platform in the direction of the extended filling position.

[0011] The invention furthermore relates to an apparatus for transferring packagings from a filling line to a transport container.

[0012] The invention will now be explained in more detail with reference to the drawing, which shows a very schematic representation of an exemplary embodiment of the invention.

[0013] Fig. 1 schematically illustrates the method of transferring bottles from a bottling line to a roll container.

[0014] Fig. 2 is a schematic side elevation of the roll container comprising a platform of bottles.

[0015] Fig. 3 is a front view of the subject matter of Fig. 2.

[0016] Fig. 4 is a sectional view along line IV-IV in Fig. 3, wherein the platform is not shown.

[0017] Fig. 5 is a view corresponding to Fig. 4, with the platform in the transport position.

[0018] The drawings show an exemplary embodiment of the method, which is in particular geared to the transport of wine bottles from a bottling line and the subsequent offering for sale thereof; it should be considered, however, that the invention can also be used for bottles having different contents, and even for other types of packagings. Think in this connection of squeeze-bottles for cleansing agents, cardboard packagings for (washing) powders or beverages and the like.

[0019] Fig. 1 shows, on the right-hand side thereof, a positioning belt 1 at the end of a bottling line. Empty bottles are supplied in this bottling line, which bottles are subsequently washed, filled, corked up, capsulated and labelled, after which they are supplied to the positioning belt 1. On said positioning belt, a number of bottles A (six, for example) are lifted by the neck by means of suc-

tion cups or grippers 2, and subsequently said bottles are boxed, twelve per box, in bottling lines according to the prior art.

[0020] According to the invention, on the other hand, the bottles A are transferred to a filling table 3, on which a platform 4 from a roll container 5 is present. Said roll container 5 comprises a number of platforms 4 to be arranged one above another, which are movable between a transport position in the roll container and a filling position on filling table 3. To this end the apparatus according to the invention is provided with an operating element 6, which is adjustable for height and which can thus be brought into alignment with one of the platforms 4 and which is capable of subsequently pushing against a platform so as to extend said platform to a position on a filling table. On the other hand, the operating element 6 is capable of engaging a platform 4 which is present on filling table 3 and retracting said platform 4 to its transport position in the roll container 5 again. For this purpose, also filling table 3 is adjustable for height between the (fixed) level of the positioning belt 1 at the end of the bottling line and the level at which the platform 4 is to be moved into the roll container 5.

[0021] The filling table 3 and the operating element 6 can be added to an existing bottling line so as to adapt said bottling line for use of the method according to the present invention, whilst the bottling line itself requires hardly any modifications, if at all.

[0022] Figs. 2 - 6 schematically show parts of the roll container 5 indicated in Fig. 1. Uprights 7 can be distinguished in Figs. 2 - 5, which uprights are positioned in the corners of the roll container and which may form part of walls or which may only be interconnected in a few places. Present on said uprights 7, on opposite sides of the roll container 5, are guides 8, in this embodiment in the form of horizontal U-sections or L-sections, which are open on their sides facing towards each other. Each pair of guides 8 functions to support a platform 4, in such a manner that said platform 4 is movable between a locked transport position within the roll container 5 and an extended filling position entirely or partially outside the roll container 5.

[0023] In order to make it possible to move the platforms 4, each platform 4 is fitted with four wheels 9, 10. As Fig. 5 shows, the wheels 9 at the rear end of the guides 8 are offset with respect to the wheels 10 in a direction transversely to the direction of movement of said platform 4, which wheels 10 are spaced less far apart than wheels 9 in this embodiment. As is also shown in Fig. 4, guides 8 are provided with locking recesses 11, 12 in a corresponding manner, wherein the spacing between the locking recesses 11 at least substantially corresponds to the spacing between wheels 9, whilst the spacing between the locking recesses 12 corresponds to that of the wheels 10. In this way, the wheels 9 will not move into the locking recesses 12 for the wheels 10 when the platform 4 is being extended from the roll container 5, but past said locking recesses,

so that the wheels 9 and 10 can only move into the locking recesses 11, 12 that are associated with the wheels in question.

[0024] In the down position of platform 4, wherein wheels 9, 10 have moved into their associated locking recesses 11, 12, the platform will be adequately locked in position, because the weight of platform 4 with the full bottles A present thereon will prevent upward movement of platform 4. The joint weight will amount to 50 - 60 kg in the illustrated embodiment. If a platform 4 is empty and is to be refilled in a bottling plant, the low weight (for example 3 - 4 kg) of a platform 4 will allow wheels 9, 10 to move out of their locking recesses 11, 12 without any difficulty when the operating element 6 pushes against the platform 4 in question. It stands to reason that the wheels 9, 10 must move down into the locking recesses 11, 12 far enough to make this possible. In any case, the wheels 9, 10 must not move any into the locking recesses 11, 12 beyond their axial line as long as no aids are provided which can help the wheels 9, 10 move out of the recesses 11, 12.

[0025] The roll container 5 furthermore includes, at a level some distance above each platform 4 or the guides 8 therefor, a holding element 13 (transport lock), in this embodiment consisting of a wire frame which can extend around all the bottles present on a platform 4, thus preventing bottles A from falling off. During the time that the roll container 5 is present at the sales outlet, such as a supermarket or the like, and during the filling of the platforms 4, the holding element 13, or all holding elements 13, will be pivoted to an inactive position, so as to enable easy placement and removal of bottles A.

[0026] Platform 4 may furthermore include dividing means 14, in this embodiment in the form of a dividing platform, which is fixedly connected to platform 4 and which is provided with a number of walls extending in the direction of movement of platform 4, thus separating rows of bottles A in transverse direction from each other.

[0027] From the foregoing it will be apparent that the invention provides a method for transporting packagings, in particular bottles, such as wine bottles, and offering the same for sale which is remarkable for its efficiency and great saving on packaging material.

[0028] The invention is not restricted to the embodiment as shown in the drawings, which can be varied in several ways without departing from the scope of the claims. Thus, platforms 4 may also be guided in such a manner that they remain connected to the associated guides during filling. In that case the filling of the platforms will have to take place at several levels, of course. On the other hand it is possible to dispose the filling table and the operating element at a fixed height and to place the roll container on a lift so as to move said roll container upwards and downwards for extending and retracting the various platforms.

Claims

1. A method of transporting packagings (A), in particular bottles, and displaying the same for sale, wherein the packagings are transferred to a transport container at the end of a filling line and the transport container is transported to a sales outlet, **characterized in that** a roll container (5) is used as the transport container, to which roll container the packagings (A) are directly transferred, whilst the roll container functions as a display unit at the sales outlet. 5
2. A method according to claim 1, wherein the packagings (A) are transferred from the filling line to an extended platform (4) of the roll container (5), which platform is moved to a retracted transport position as soon as it is filled with packagings. 10
3. A method according to claim 2, wherein several platform (4) s of a roll container (5) are filled in succession in that the platforms are extended one after another to a position on a filling table by means of an operating element (6), whereby the filling table and the roll container are adjusted for height with respect to each other and the filling table is preferably moved in vertical direction between the level of the bottle line, where the packagings are placed onto the platform, and the level at which the respective packaging-filled platform is placed in the roll container. 15 20 25 30
4. A roll container (5) for transporting packagings (A), in particular bottles, and displaying the same for sale preferably in accordance with the method according to any one of the preceding claims, which roll container comprises at least one extendible platform (4) for receiving a number of packagings, wherein the platform is movable between an extended loading position and a retracted, locked transport position. 35 40
5. A roll container according to claim 4, wherein said roll container (5) is fitted with guides (8) for movably supporting the platform (4), whilst the platform is fitted with a number of wheels (9, 10), by means of which the platform can be moved over said guides. 45
6. A roll container according to claim 5, wherein the wheels (9, 10) function as locking elements for the platform (4) and to that end engage in associated locking recesses (11, 12) in the guides in the locked transport position. 50
7. A roll container according to claim 6, wherein the platform (4) is fitted with two wheels (9, 10) for each guide (8), which wheels are spaced some distance apart, seen in the direction of movement of the platform, and which are furthermore offset with respect to each other in a direction transversely to the direction of movement, whilst the associated locking recesses are offset to the same extent. 55
8. A roll container according to any one of the claims 4 - 7, wherein said guides (8) are in the form of opposing flanges on side walls of the roll container, wherein said flanges are preferably of a horizontal U-shape.
9. A roll container according to any one of the claims 4 - 8, comprising a hinged holding element (13) above each platform (4), which holding element is movable between a downwardly pivoted holding position, in which it surrounds the packagings (A) on the platform in question at least partially, in such a manner that said packagings (A) are protected against falling over, and an upwardly pivoted inactive position.
10. An apparatus for transferring packagings from a filling line to a transport container, using the method according to any one of the claims 1 - 4, comprising a vertically adjustable filling table (3), which is arranged for supporting an extendible platform (4) of a roll container (5) functioning as a transport container, and which can be positioned to connect to a positioning belt (1) at the end of the filling line for the purpose of transferring packagings from the filling line to the platform.
11. An apparatus according to claim 10, furthermore comprising an operating element (6) for moving the platform (4) of the roll container (5) between an extended filling position on the filling table and a retracted transport position.

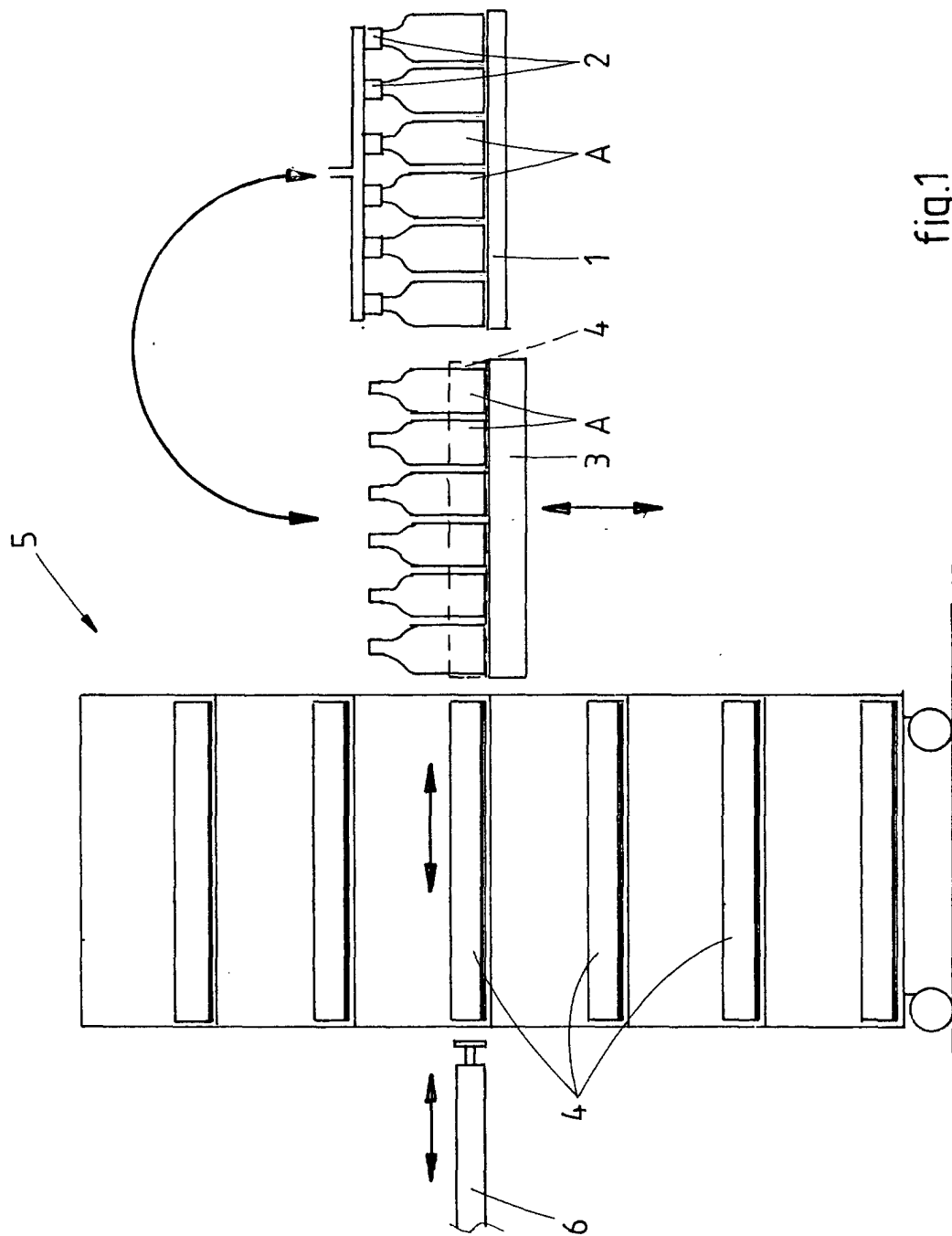
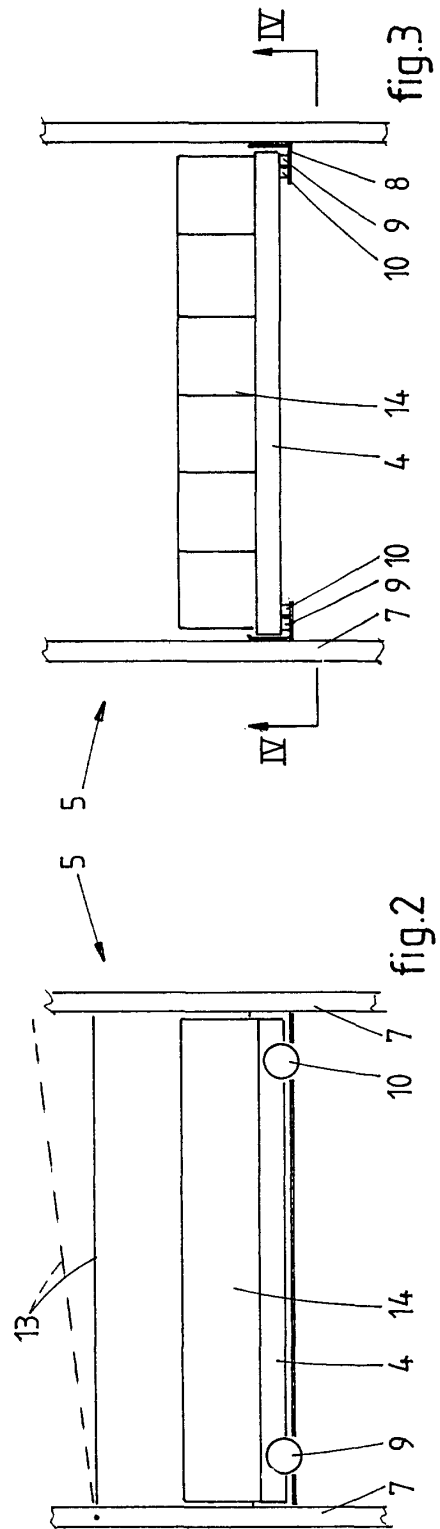
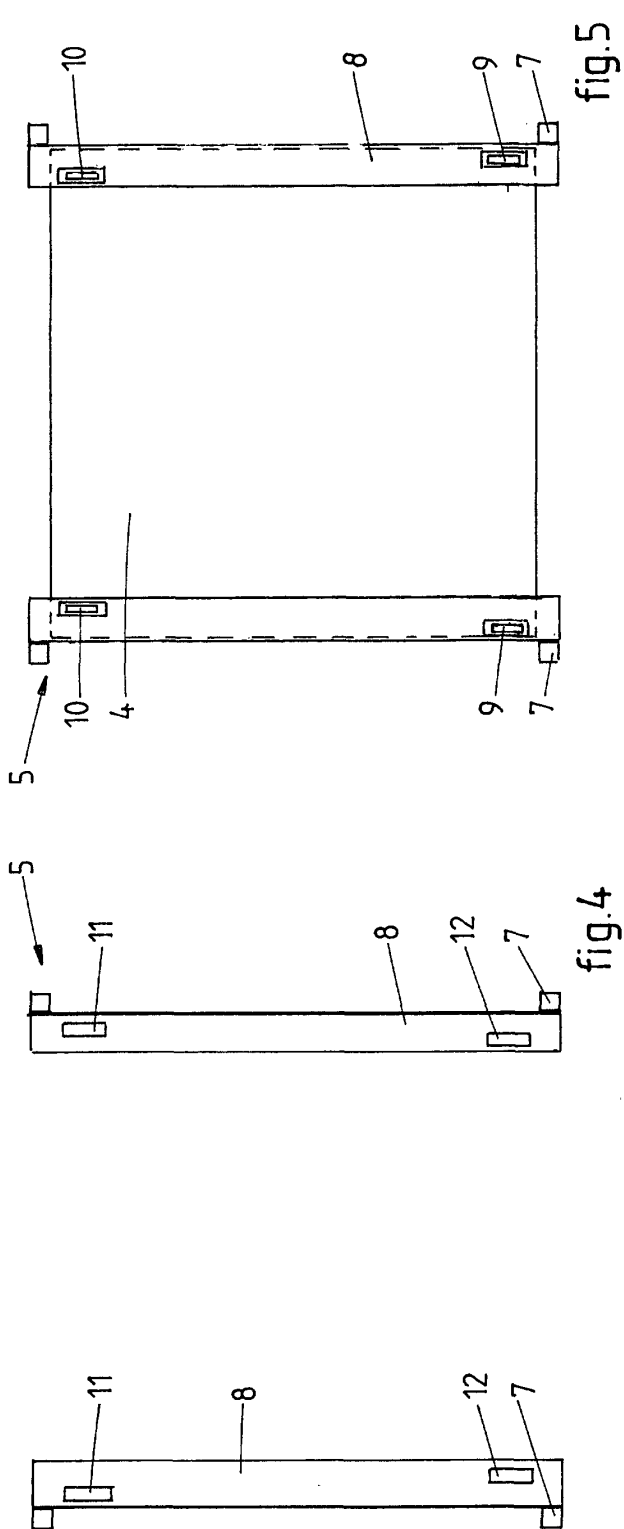


fig.1





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EUROPEAN SEARCH REPORT

Application Number
EP 01 20 3242

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
X	US 2 540 664 A (GLUCKMAN) 6 February 1951 (1951-02-06) * column 2, line 11 - line 18 * * column 3, line 34 - line 45 *	1,2,4,8, 9	A47F5/10 A47F5/00
A	* figures 1-3 * -----	3,5,10	
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			A47F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15 October 2001	Examiner Lupo, A
CATEGORY OF CITED DOCUMENTS 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 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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 01 20 3242

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