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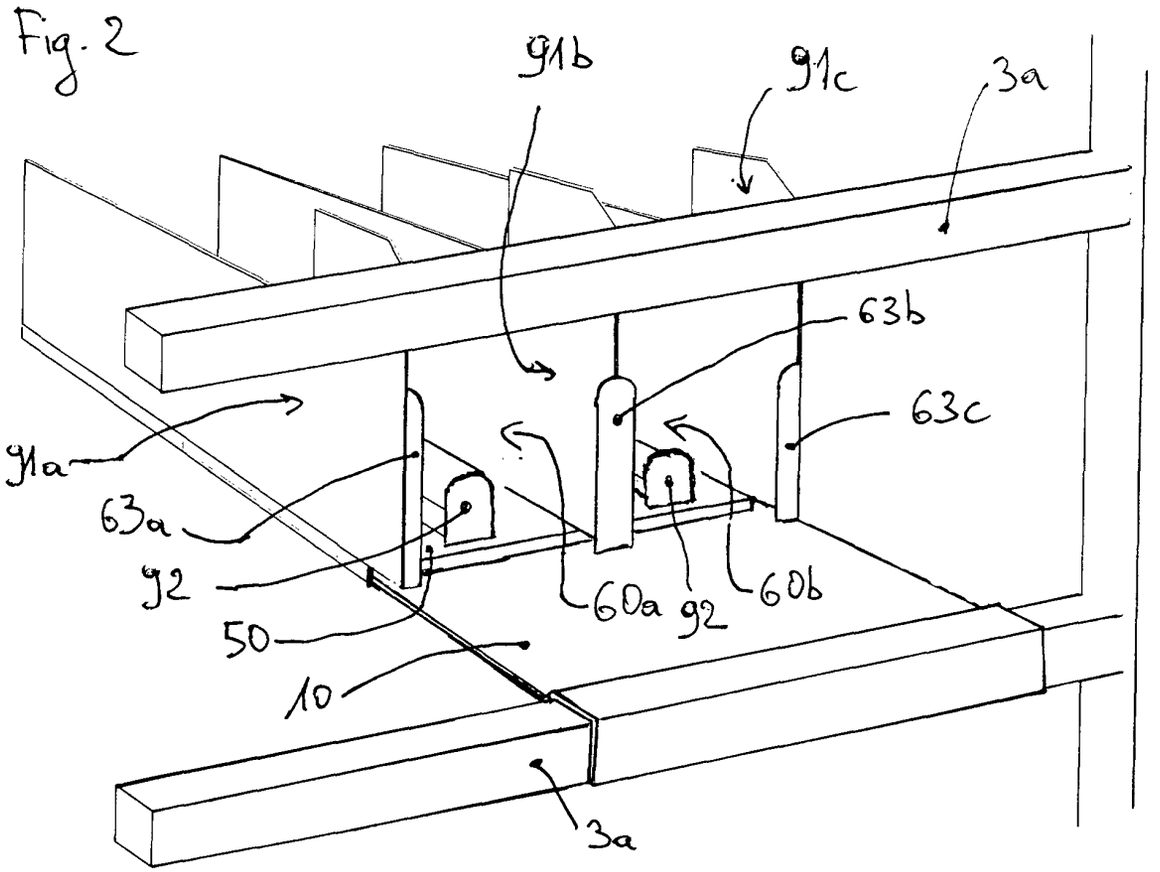
## (54) Product carrier tray with support member

(57) The product carrier system for retail products comprises a product carrier tray (50) slidably mounted on a support member (10). For this purpose, product carrier tray has at least one slideway (51) that is engaged by a plate (11) of the support member (10). Support member (10) has a channel portion (12) for mounting it on a tube member (3a) of a structure. The support member may alternatively or additionally have hook shaped members for hanging it on a vertical plate having an array of holes or an array of identical longitudinal members each in the form of an upwardly-open channel. The product carrier tray may have vertical walls (91a, 91b, 91c) and pusher assemblies (92) for pushing forward retail products on it.

Fig. 2




EP 1 186 266 A1

## Description

### FIELD OF THE INVENTION

**[0001]** The invention relates to a product carrier system comprising a product carrier tray slidably mounted on a support member which may be mounted on a structure for displaying retail products in a retail outlet.

### BACKGROUND OF THE INVENTION

**[0002]** Retailer shops often have vertical perforated plates or plates with an array of longitudinal members in the form of an upwardly-open channel on which horizontal rods are mounted. For this purpose, each rod has a small plate arranged at one end thereof, the plate having generally four hook members oriented downwards that engages the holes or the longitudinal hook members of the rear plate. Retail products are offered for sale to customers by hanging on said rods through a slot arranged in their blister pack.

**[0003]** Such a system has some drawbacks. First, not all retail products have a blister pack adapted for being hung on a rod. Second, the location of the retail products on the rod remains random, i.e. the retail products are not pushed towards the front of the rod when those at the front are taken by customers. Third, the retail products of one or more given rods cannot be advanced with respect to neighboring products on the shelves in view e.g. of a period of special offer, without changing said rods for longer ones.

**[0004]** Retail shops also often have structures of vertical and horizontal square section tube members on which are mounted boxes or trays. Retail products are offered for sale to customers by being disposed in said boxes or on said trays.

**[0005]** However, such systems have also drawbacks. First, the design of the boxes or trays involves quite a lot of space in the vertical direction due to the thickness of their horizontal walls and their mounting features, said space being lost for the retail products to carry. Second, the retail products in such boxes or on such trays cannot be advanced with respect to neighboring products on the shelves in view e.g. of a period of a special offer.

### SUMMARY OF THE INVENTION

**[0006]** The invention provides a solution to this new problem.

**[0007]** This object is achieved with a product carrier system according to claim 1. Preferred embodiments are defined in the depending claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

**[0008]**

Figure 1 schematically shows a structure having a rear plate and vertical and horizontal tube members of a type existing in the prior art.

Figure 2 schematically shows a product carrier tray with its support member according to a preferred embodiment of the invention, the support member being partly engaged into the product carrier tray.

Figure 3 schematically shows the product carrier tray with its support member according to fig. 2, the support member being completely engaged into the product carrier tray.

Figure 4 schematically shows the support member of fig. 2.

Figure 5 schematically shows another embodiment of the support member.

Figure 6a schematically shows a partial side view of the support member of fig. 5 mounted on the rear plate of fig. 1 having an array of holes.

Figure 6b schematically shows a partial side view of the support member of fig. 5 mounted on the rear plate of fig. 1 having an array of longitudinal members in the form of upwardly-open channels.

Figure 7 schematically shows a further embodiment of the support member.

Figure 8 shows schematically a partial perspective view of the product carrier tray of fig. 2 viewed from its front side.

Figure 9 schematically shows a partial perspective view of a product carrier tray according to another embodiment of the invention.

Figure 10 schematically shows a partial perspective view of a product carrier tray according to a further embodiment of the invention.

Figure 11 schematically shows a partial perspective view of a product carrier tray according to still a further embodiment of the invention.

Figure 12 schematically shows a partial vertical section along a vertical wall mounted on a product carrier tray according to an embodiment of the invention.

Figure 13 schematically shows a pusher system for the product carrier tray of fig. 2.

Figure 14 schematically shows a detail of the pusher system of fig. 13.

Figure 15 schematically shows a side view product carrier tray according to another embodiment of the invention that is mounted on the support member of fig. 4.

### DETAILED DESCRIPTION OF THE INVENTION

**[0009]** Figure 1 shows schematically an example of a structure of the type used in retail shops that may receive rods or trays to hold retail products offered for sale to customers. Structure 1 comprises four vertical tube members 2a, 2a', 2b, 2b' located each at the corner of an imaginary horizontal rectangle. Two vertical tube members 2a, 2a' are located at the front - i.e. they are the nearest to customers - while two vertical tube mem-

bers 2b, 2b' are located at the rear - i.e. they appear to customers to be located behind the two tube members 2a, 2a'. Several horizontal tube members 3a extend between the two tube members 2a, 2a'. Several other horizontal tube members 3b extend between the two tube members 2b, 2b'. Further, several horizontal tube members 3c extend between tube member 2a and tube member 2b on one lateral side of the structure and between tube member 2a' and tube member 2b' on the other lateral side of the structure. Tube members 3a and 3b have generally a same square - or rectangular - cross section.

**[0010]** Structure 1 also comprises a vertical perforated rear plate 4 having an array of horizontally and vertically aligned holes 5 over its major surface, said holes having all the same diameter. Rear plate is located behind tube members 2b, 2b'. Alternatively, rear plate 4 has an array of identical longitudinal members each in the form of an upwardly-open channel, i.e. its cross section is e.g. in form of a "U".

**[0011]** Structure 1 further comprises a longitudinal beam member 5 having a rectangular cross section. More particularly, the width of its rectangular cross section is generally equal to the width of the square - or rectangular - section of tube members 3a, 3b while the height of its rectangular cross section and/or its wall thickness is greater than this. Hence, beam member 5 may support more important loads than a tube member 3a or 3b.

**[0012]** In the description, the terms of front, rear, left and right - or lateral - will always refer to the same directions as those previously defined in reference to fig.1.

**[0013]** We will now describe product carrier trays and corresponding support plates according to the invention for use on structure I described in reference to fig.1.

**[0014]** Fig. 2 and 3 show a product carrier tray 50 with its support member 10 according to a preferred embodiment of the invention wherein support member 10 is mounted on a tube member 3a of structure 1. Product carrier tray 50 is slidably mounted on support member 10. Product carrier tray 50 is only partly engaged on support member 10 in fig. 2 while product carrier tray 50 is completely engaged on support member 10 in fig. 3, i. e. product carrier tray 50 is in abutment on support member 10 in the sliding direction. Product carrier tray 1 may advantageously comprise vertical walls 91a, 91b, 91c and pusher systems 92.

**[0015]** Support member 10 is shown in fig. 4. Support member 10 comprises a plate 11 which is preferably flat. Plate 11 has at one edge a channel portion 12. Channel portion 12 defines a means for mounting support member 10 on structure 1 and plate 11 define a means for engaging slidably product carrier tray 50. Plate 11 has two edges 16 substantially parallel to each other and extending preferably perpendicular to channel 13. Channel portion 12 is preferably integral with plate 11. Channel portion 12 has a cross section corresponding substantially to the cross section or to a part of the cross section of tube members 3a of structure 1. Channel portion 12 is open in the downward direction. Hence, support member 10 is mounted on a tube member 3a by inserting channel portion 12 on tube member 3a as can be seen in fig. 2 and 3. When support member 10 is mounted on tube member 3a, plate 11 extends horizontal or somewhat inclined upwards e.g. between 0 and 5 °. Channel portion 12 is preferably defined by a first wall 13, a second wall 14 and a third wall 15 as follows. First wall 13 is arranged on an edge of plate 11 and extends substantially perpendicular to plate 11 in upward direction. A second wall 14 is arranged on the edge of first wall 13 and extends substantially perpendicular to first wall 13 in a direction opposite to plate 11. A third wall 15 is arranged on the edge of second wall 14 and extends substantially parallel to first wall 14 in a downward direction. Thus, channel portion 12 is defined between first wall 13, second wall 14 and third wall 15. Support member 10 is preferably made of metal in which case channel 12 may be formed by folding. Channel portion 12 extends preferably along the whole length of the edge of plate 11 on which it is arranged. However, one will understand that channel portion 12 may be shorter or longer than this edge. Further, the walls of channel portion 12 may be interrupted on one or more parts over the length of channel portion 12, thus defining in fact several channel portions that are aligned.

**[0016]** Fig. 5 shows another embodiment of support member 10 - here identified by reference numeral 10' - wherein the means for securing support member 10' to structure 1 is different to the one of support plate 10. Support member 10' is similar to support member 10, but channel portion 12 is omitted. Instead of channel portion 12, a flat plate 17 is arranged substantially perpendicular to the corresponding edge of plate 11. In particular, support member 10' may form an angle bracket which may be obtained by folding a flat plate of e.g. metal, as shown in fig. 5. Four parallel hook members 18 are arranged on the front surface of plate 17, i.e. on the surface opposite to plate 11. Hook members 18 are oriented downwards. The dimensions and shape of hook members 18 as well as the distance between them are adapted to each engage a respective hole of the array of holes of rear plate 4 of structure 1, whatever the mounting location of support member 10' on rear plate 4 is. Fig. 6a schematically shows a partial side view of support member 10' mounted on rear plate 4 having an array of holes. Similarly, where rear plate 4 is of the type having an array of identical longitudinal members each in the form of an upwardly-open channel, the dimensions and shape of hook members 18 as well as the distance between them are adapted to each engage a longitudinal channel of the array of rear plate 4, whatever the mounting location of support member 10' on rear plate 4 is. Thus, support member 10' may be mounted on structure 1 by engaging hook members 18 into holes or longitudinal members of rear plate 4 whichever is relevant. When mounted on rear plate 4, plate 11 of sup-

port member 10' extends substantially horizontal. Fig. 6b schematically shows a partial side view of support member 10' mounted on rear plate 4 where the latter has an array of identical longitudinal members each in the form of an upwardly-open channel, said longitudinal being identified by reference numeral 4a.

**[0017]** Fig. 7 shows still another embodiment of support member 10 - here identified by reference numeral 10". Support member 10" is identical to support member 10, except that four hook members 18' - similar to hook members 18 of support member 10' - are arranged on third wall 15. Thus, support member 10" may either be mounted on a tube member 3a, 3b with the help of channel portion 12 or on rear board 4 through hook members 18'. Hook members 18' may be directly arranged on wall 13 by e.g. welding. Optionally, hook members 18' may be removable from wall 13 when support member 10" is intended to be mounted on tube members 3a, 3b. For this purpose, hook members 18' may be fixedly arranged on a plate 15a e.g. by welding. Plate 15a is removably secured to wall 15 by means of e.g. two screws 19 - with preferably countersunk heads to be flush with surface of plate 15a - and passing through corresponding holes in plate 15a and wall 15 behind which they engage a respective nut.

**[0018]** One will understand that the kind of means of the support member for securing it to structure 1 is independent of the kind of means of the support member for engaging slidably product carrier tray 50.

**[0019]** Fig. 8 shows product carrier tray 50. Product carrier tray 50 comprises an upper plate 52 the upper surface of which is meant to receive the retail products. A channel forming a slideway 51 is arranged under upper plate 52. Channel 51 is preferably defined between upper plate 52 and a lower plate 53 spaced apart from upper plate 52. The width of lower plate 53 is preferably substantially equal to the width of upper plate 52. The left edge of upper plate 52 is connected to the left edge of lower plate 53 by a wall 54a. Similarly, the right edge of upper plate 52 is connected to the right edge of lower plate 53 by a wall 54b. One will understand that walls 54a, 54b define channel 51 in the lateral direction. Alternatively, plate 53 is replaced by two plates 55 being less wide than plate 53, as shown in fig. 9. Each plate 55 is arranged on a respective one of lateral walls 54a, 54b and extends under plate 52 substantially parallel to plate 52. Hence, lateral walls 54a, 54b and plates 55 define two longitudinal L-shaped members along each lateral edge of plate 52. In this case, slideway 51 is defined between plate 52 and plates 55 and between walls 54a, 54b. Alternatively, longitudinal L-shaped members of fig.9 may be replaced by four or more L-shaped members 56 arranged under plate 52 as shown in fig. 10. Two or more L-shaped members 56 are arranged on the left edge region under plate 52 and similarly two or more L-shaped members 56 are arranged on the right edge region under plate 52. So, slideway 51 is defined between plate 52 and the base of each L-shaped members 56 and between the vertical legs of the L-shaped members 56.

**[0020]** The cross section of slideway 51 substantially corresponds to the cross section of plate 11 of support member 10. As a result, product carrier tray 50 may be mounted slidably on support member 10 by inserting plate 11 into slideway 51 as can be seen in fig. 2 and 3. As can be seen on fig. 3, the upper surface of upper plate 52 is advantageously flush with wall 14 of support member 10 in case it has a channel portion 12 for mounting it to tube members 3a. As a result, the whole height between two consecutive horizontal tube members 3a may substantially be used for placing retail products on product carrier tray 50 - the thickness of wall 14 may be very thin, e.g. less than 2 mm when made in metal.

**[0021]** Support member 10 is generally mounted on a tube member 3a with plate 11 extending towards the rear of structure 1, thus product carrier tray 50 extends from the tube member 3a towards the rear of structure 1, i.e. towards tube members 3b.

**[0022]** Slideway 51 preferably extends through substantially the whole length of product carrier tray 50 and is open at both extremities. In this case, support member 10 may be engaged in channel 51 either by the front side of product carrier tray 50 as shown in fig. 2 and 3, or by the rear side of product carrier tray 50. The latter possibility is of interest when it is wished to mount support member 10 on a tube member 3b. In this case, support member 10 is mounted on a tube member 3b by engaging channel 13 on it, plate 11 extending towards the front of structure 1, i.e. towards tube members 3a. In this case, product carrier tray 50 is engaged by support member 10 by its rear side. Thus, product carrier tray 50 remains oriented with its front side towards the front of structure 1, i.e. towards the customers. Support plate 10 may similarly be mounted on longitudinal beam member 5 of structure 1 provided that the cross section of channel portion 12 corresponds to its width.

**[0023]** In another embodiment, product carrier tray 50 - here identified by reference numeral 50' - has two, or even more, parallel slideways 51a, 51b instead of one sole slideway 51. Slideways 51a, 51b are preferably located under plate 52 and are laterally spaced apart of each other as shown in fig. 11. Slideways 51a and 51b have preferably the same cross section. In fig. 11, each slideway 51a and 51b is defined as a channel similarly to channel 51 previously described. Of course, slideways 51a and 51b may also be defined with help of longitudinal L-shaped members or with help of a plurality of narrow L-shaped members similarly to slideway 51 already described. Product carrier tray 50' is mounted on a tube member 3a or a tube member 3b in a similar way as in the previous embodiment, except that two support members are used instead of one sole support member 10. The two support members are similar to support member 10, except that they are less wide. Indeed, the cross section of plate 11 of these two support members corresponds now substantially to the cross

section of slideways 51a and 51b. Thus, one support member may engage slidably slideway 51a and the other support member may engage slidably slideway 51b. One will understand that these two support members have each a respective means for mounting them on structure 1 that is similar to the one of support member 10.

**[0024]** In a further embodiment, product carrier tray 50 has a wide slideway 51 on its front side as shown in fig. 8 and two narrow slideways 51a and 51b of the type shown in fig. 11 on its rear side. Thus, product carrier tray 50 may be mounted on a tube member 3a with help of wide support member 10 of fig. 4 inserted from its front side. Alternatively, product carrier tray 50 may be mounted on a tube member 3b or rear board 4 with help of two narrow support members having relevant means for securing it either to tube members 3b or to rear board 4 according to the need.

**[0025]** Further, the lower side of product carrier tray 50 is preferably shaped so that the points of support form a plane supporting surface, regardless of the embodiments of the slideway. Hence, product carrier tray 50 may be directly placed on a shelf in which case support member 10 is removed.

**[0026]** Product carrier tray is preferably made of a plastic material, e.g. polypropylene (PP) or polyethylene (PE).

**[0027]** Referring again to figs. 2, 3 and 8, we will now describe with more detail walls 91a, 91b, 91c and pusher systems 92 that may be arranged on product carrier tray 50. One will understand that these features may be arranged on any one of the embodiments of product carrier 50 previously described as these features are independent of the slideway feature for mounting the product carrier tray slidably on given support members.

**[0028]** Walls 91a, 91b and 91c are arranged on plate 52 and extend preferably perpendicular to its upper surface. Walls 91a and 91c define lateral walls for product carrier tray 50 which prevent retail products from falling out of product carrier tray 50. Wall 91b extends also preferably perpendicular to upper surface of product carrier tray 50. Wall 91b is located between wall 91a and 91c and therefore wall 91b defines a separator wall for retail products placed on product carrier tray 50. Hence, product carrier tray 50 has two compartments for respective retail products, i.e. a compartment 60a between wall 91a and 91b and a compartment 60b between wall 91b and wall 91c. Wall 91b is preferably removable so that retail products that are larger than compartment 60a or 60b may nevertheless be placed on product carrier tray 50. Walls 91a and 91b may also be removable. Walls 91a, 91b and 91c are preferably flat. Walls 91a, 91b and 91c may be mounted on product carrier tray 50 by inserting a major part of the length of their lower edge into a respective groove 90a, 90b and 90c arranged in the upper surface of plate 52, the dimensions - length, thickness and depth - of said part of their lower edge being matched to those of the respective groove. Alternatively, or additionally, the lower edge of walls 91a, 91b and 91c may have two or more flat L-shaped members 61 which are inserted each in a respective slot 62 arranged through upper plate 52. This is illustrated by fig. 12 showing a partial vertical section along wall 91a in the region of one of the L-shaped members 61. The width of slots 62 is adjusted to the thickness of the L-shaped members 61. The length of slots 62 is somewhat greater than the length of the base of the L-shaped members 61. Slots 62 further comprise a shoulder 62a under which the base of the L-shaped members 61 may come by sliding the corresponding wall 91a, 91b or 91c once the latter has been inserted in slot 62. Thus, a locking effect for walls 91a, 91b and 91c is provided.

**[0029]** Walls 91a, 91b and 91c have each preferably a respective flange 63a, 63b and 63c arranged on their front edge. Flanges 63a, 63b and 63c are preferably perpendicular to their respective walls 91a, 91b and 91c. Flanges 63a, 63b and 63c define abutments for the retail products placed on product carrier tray 50, more precisely, in compartments 60a and 60b. The front edges of walls 91a, 91b and 91c preferably protrude from the front edge of upper plate 52 so that when product carrier tray 50 is completely engaged on support member 10 as shown in fig. 3, flanges 63a, 63b and 63c are flush with wall 15. Walls 91a, 91b and 91c may also have a respective flange arranged on their rear edge for the same purpose.

**[0030]** One will understand that several separator walls of the type of wall 91b may be arranged on product carrier tray 50 - preferably parallel to each others - in order to define further compartments for retail products.

**[0031]** Product carrier tray 50 may further have one or more pusher systems 92, preferably one for each compartment 60a and 60b. Pusher system 92 pushes retail products placed on product carrier tray 50 towards its front edge where the retail products abuts on flanges 63a and 63b or 63b and 63c according to the considered compartment 60a or 60b. Pusher system 92 is illustrated in fig. 13. Pusher system 92 comprises a longitudinal slide member 64 on which is slidably mounted a pusher 65. In other words, pusher 65 may slide along the longitudinal direction of slide member 64. For this purpose, pusher 65 may have two L-shaped members extending each around the longitudinal edges of member 64. Pusher 65 has a front surface 66 substantially perpendicular to the longitudinal direction of slide member 64. Front surface 66 is the surface of pusher system 92 for acting on the retail products. An extendable coil spring 70 - not visible in fig. 13 - is placed on the rear surface 67 of pusher 65. Coil spring 70 is retained inside a partially opened housing formed on rear surface 67 - see fig. 14. Said housing comprises two lateral walls 68a between which a rounded wall 68b extends. Rounded wall 68 corresponds to the shape of coil spring 70 which abuts against rounded wall 68b. One end 71 of coil spring 70 passes under pusher 65 and is secured on the front edge region of slide member 64. Therefore, end

71 preferably comprises a hole which engages on a hook-shaped member arranged on the front edge region of slide member 64. Thus, pusher 65 is resiliently pulled towards the front edge region of slide member 64 under the action of coil spring 70. Slide member 64 preferably has a longitudinal recess 69 in which the drawn part of spring coil 70 is located, i.e. the part of coil spring 70 from end 71 up to pusher 65. Slide member 64 further has a respective tab 72 at each end thereof.

**[0032]** Pusher system 92 is mounted on product carrier track 50 as follows. Product carrier track 50 has a longitudinal recessed portion 80 for each compartment 60a and 60b. The dimensions of recessed portion 80 corresponds to those of slide member 64 although it is somewhat wider to allow pusher 65 to slide on slide member 64. Recessed portion 80 has a hollow portion 81 at each end thereof. Hollow portions 81 extend under the upper surface of upper plate 52. Pusher system 92 is mounted on product carrier tray 50 by inserting slide member 64 in recessed portion 80 with each tab 72 projecting into a respective hollow portion 81. Insertion of tabs 72 into recess portions 81 is possible due to the resiliency of slide member 64. Of course, pusher system 92 is oriented so that front surface 66 of pusher 65 is oriented towards the front edge of product carrier tray 50. Thus, pusher 65 resiliently pushes retail products towards the front edge of product carrier tray 50 due to coil spring 70. Further, pusher system 92 may easily be removed if it is not of use. Pusher 65 is preferably made in a low friction material, e.g. PTFE while slide member 64 may be made of a usual plastic material e.g. PP or PE.

**[0033]** In another embodiment, slide member 64 is omitted. Pusher 65 with its extendable coil spring 70 is directly slidably mounted on product carrier tray 50. For this purpose, the lower part of pusher 65 is preferably dovetail shaped for engaging recessed portion 80 that has in this case a corresponding cross section. A hook shaped member is arranged on the front edge region of recessed portion 80 for securing end 71 of coil spring 70. Thus, pusher 65 pushes resiliently retail products towards the front edge of product carrier tray 50 due to coil spring 70 as in the previous embodiment. Further, pusher 65 with coil spring 70 may also easily be removed if it is not of use.

**[0034]** In case the slideway of product carrier tray 50 may only be engaged by its front side, it is preferable that the front half and the rear half of each vertical wall 91a, 91b and 91c are symmetrically shaped or that vertical walls 91a, 91b and 91c may be mounted in reversed way on product carrier tray 50, i.e. with their front edge oriented towards the rear edge of product carrier tray 50. Similarly, pusher system 92 may preferably also be mounted in reversed way so that pusher 65 acts towards either the front edge or the rear edge of product carrier tray 50 as desired. So, product carrier tray 50 may be conveniently used by securing it either on a tube member 3a or on a tube member 3b or rear plate 4 with help of support member 10 although support member 10 may only be inserted on one side of product carrier tray 50.

**[0035]** Fig. 15 shows a side view of a product carrier tray according to another embodiment of the invention that is mounted on support member 10 of fig. 4. Product carrier tray is here identified by reference numeral 50". Product carrier tray 50" is similar to those already described. However, the upper surface of upper plate 52 is slightly higher than the upper surface of wall 14 of support member 10. Further, plate 52 comprises a part 52a adapted to extend above channel 12. In other words, when product carrier tray 50" is in abutment against wall 13 of support member 10, part 52a extends above wall 14 and protrudes from wall 15 as shown in fig. 15. Thus, when the product carrier system is mounted on a tube member 3a, it is possible to position product carrier tray 50" so that part 52a projects beyond wall 15 and so part 52a projects towards customers with respect to neighboring products in the shelves. This position is particularly interesting in view of periods of a special offer. Of course, product carrier tray 50" may also be positioned on support member 10 so that the front edge of part 52a is flush with wall 15. The thickness of part 52a is preferably thin, i.e. less than 5 mm, advantageously less than 3 mm. Further, part 52a may advantageously rest on wall 14. One will understand that vertical walls and pusher systems may also be arranged on product carrier tray 50" as in the other embodiments of the product carrier tray of the invention. In this embodiment, the front edges of such vertical walls mounted on product carrier tray 50" are preferably flush with the front edge of part 52a. Further, product carrier tray 50" may be used with support member 10 regardless of the kind of means for mounting it on structure 1. Product carrier tray 50" is preferably also engageable by support member 10 from its rear side for mounting on a tube member 3b or on rear plate 4.

**[0036]** One will understand that structure 1 was described for purpose of illustration. The product carrier tray and its support member according to the invention may be used on structures of a different type than structure 1.

**[0037]** The product carrier system according to the invention is advantageously modular as several of them may be mounted side by side on the tube members or on the rear plate.

**[0038]** The invention has been described with reference to preferred embodiments. However, many variations are possible within the scope of the invention. For instance, the means of support member 10 for engaging slideway 51 may have a different shape than a plate. Instead of a plate, support member 10 may e.g. comprise two parallel rods. Of course, the cross section of slideway 51 is consequently adapted. One will also understand that the means for mounting support member 10 on structure 1 or on another kind of structure are not limited to those described, but may be varied.

## Claims

1. Product carrier system, comprising a product carrier tray (50) slidably mounted on at least one support member (10).

2. System according to claim 1, **characterized in that** product carrier tray (50) comprises at least one slideway (51) wherein the support member (10) engages the slideway.

3. System according to claim 2, **characterized in that** slideway (50) is adapted for being engaged by the support member (10) from one or the other of two opposite ends of product carrier tray (50).

4. System according to claim 2 or 3, **characterized in that** the support member (10) comprises a plate (11) wherein the plate engages the slideway (51).

5. System according to any one of claims 2 to 4, **characterized in that** the product carrier tray (50) comprises two slideways (51a, 51b) extending parallel, each being engaged by a respective support member.

6. System according to any one of claims 2 to 5, **characterized in that** product carrier tray (50) comprises at least another slideway engageable by a further support member from an end of the product carrier tray that is opposite to the end from which the support member engages the first slideway.

7. System according to any one of claims 1 to 6, **characterized in that** product carrier tray (50) comprises at least one wall (91a; 91b; 91c) projecting from its upper surface.

8. System according to claim 7, **characterized in that** said wall is removable from product carrier tray (50).

9. System according to claim 7 or 8, **characterized in that** a first wall (91a) is arranged on a first edge region of product carrier tray (50) and a second wall (91c) is arranged on a second edge region of product carrier tray (50) opposite to the first edge region.

10. System according to claim 9, **characterized in that** at least a third wall (91b) is arranged on a region of the upper surface of the product carrier tray (50) located between the first wall (91a) and the second wall (91c), the third wall being preferably parallel to the first wall and to the second wall.

11. System according to any one of claims 1 to 10, **characterized in that** at least one pusher (65) is slidably mounted on the product carrier tray (50), the pusher being resiliently connected to the product carrier tray (52).

12. System according to claim 11, **characterized in that** the pusher (65) is removable of the product carrier tray (50).

13. System according to any one of claims 1 to 12, **characterized in that** the support member (10) comprises a channel portion (12).

14. System according to claim 13, **characterized in that** the channel portion (12) has an open square cross section.

15. System according to claim 13 or 14, **characterized in that** the upper surface of the product carrier tray (50) is flush with or below the uppermost wall (14) of the channel portion (12).

16. System according to claim 13 or 14, **characterized in that** the upper surface of the product carrier tray projects beyond the front wall (15) of the channel portion (12) when the product carrier tray is in abutment.

17. System according to any one of claims 1 to 16, **characterized in that** support member (10) comprises at least one hook shaped member (18).

18. System according to any one of claims 13 to 16 mounted on a structure (1) having a horizontal tube or beam member (3a; 3b; 5) on which the channel portion (12) of the support member (10) is engaged.

19. System according to claim 17 mounted on a vertical plate (4) having an array of holes or an array of longitudinal members each in the form of an upwardly-open channel wherein the hook shaped members (18) of the support member (10) are engaged in holes or longitudinal members of the array of said plate.

Fig. 1

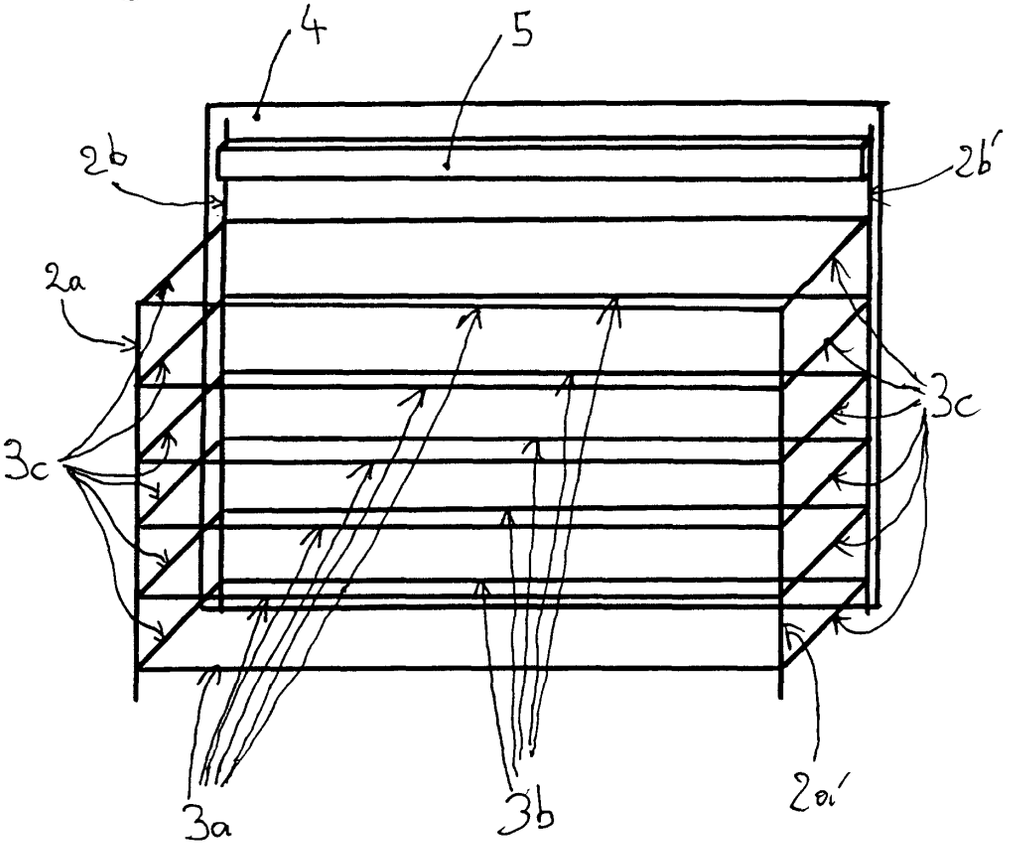

4
5
2b
2b'
2a
3c
3c
3a
3b
2a'

Fig. 2

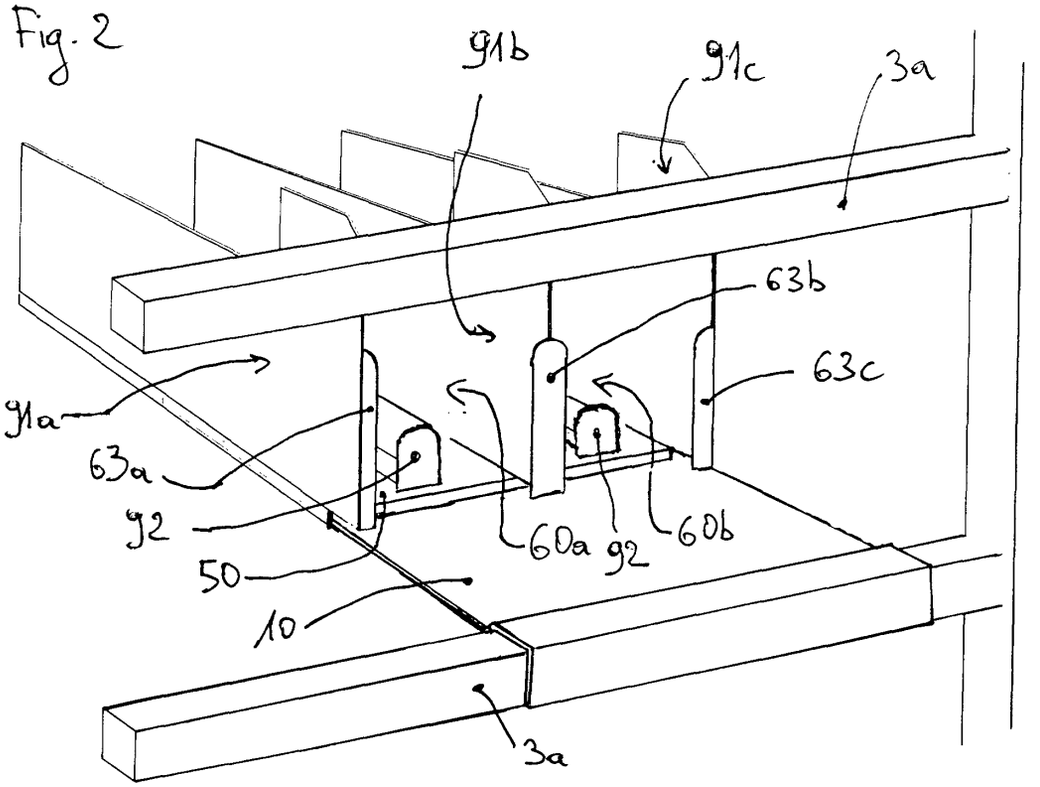

91b
91c
3a
63b
63c
91a
63a
92
50
10
60a
92
60b
3a

Fig 3

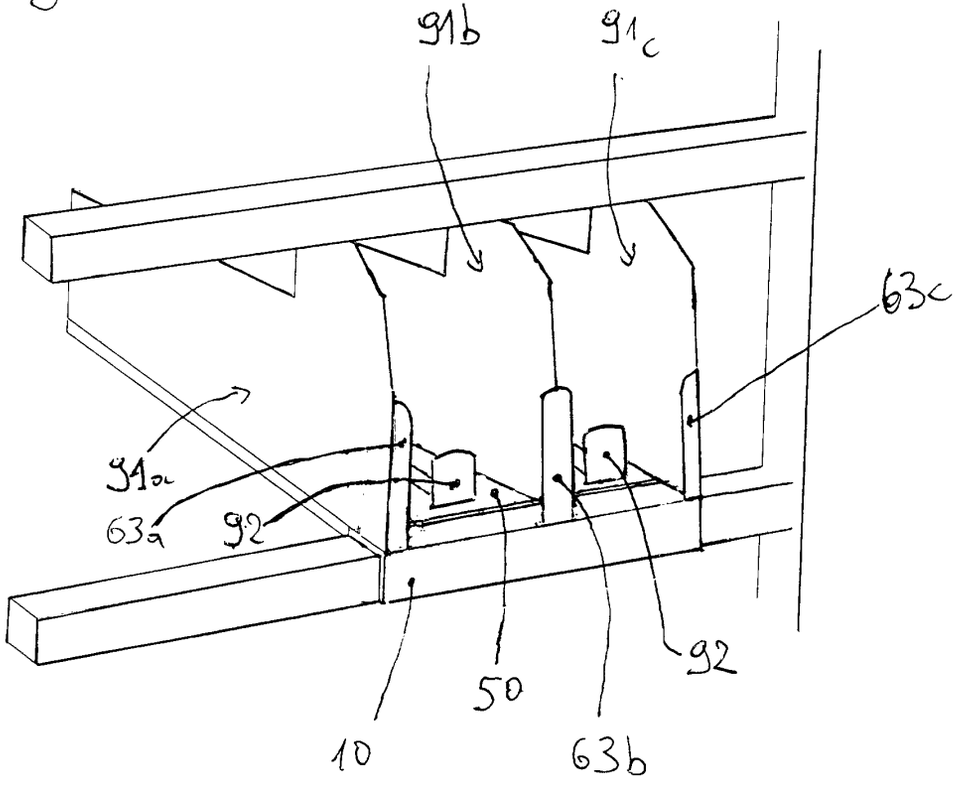



Fig. 4

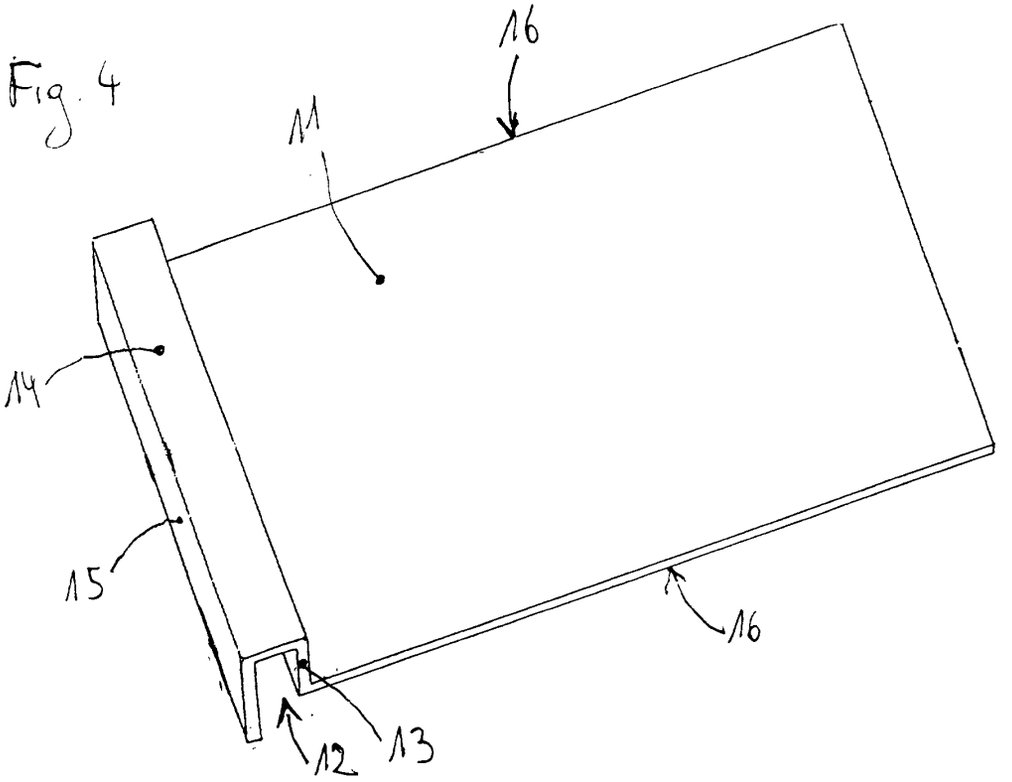


Fig. 5

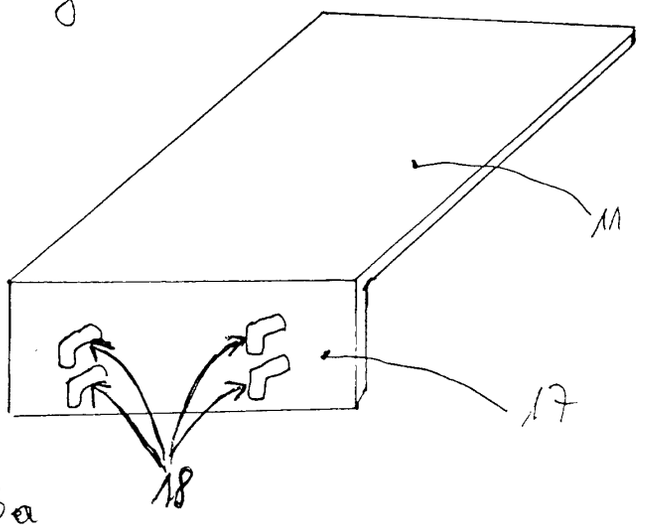



Fig. 6a

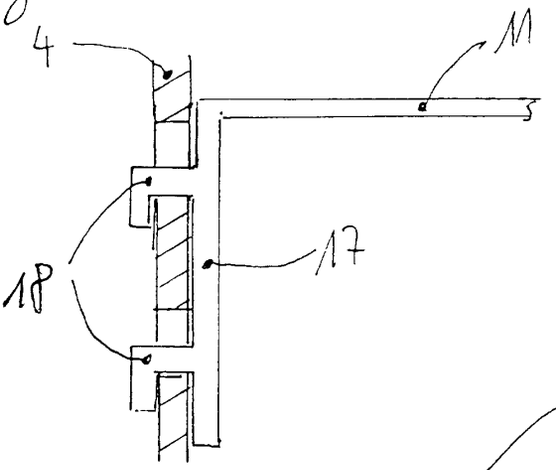



Fig. 6b

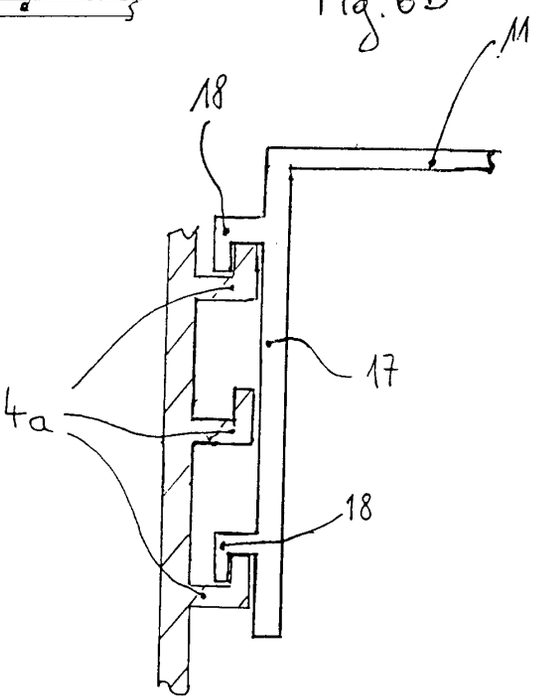



Fig 7

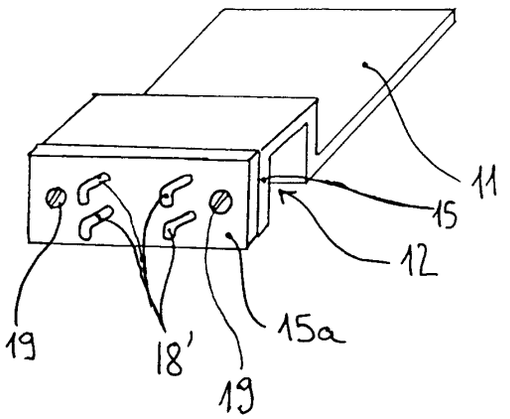


Fig. 8

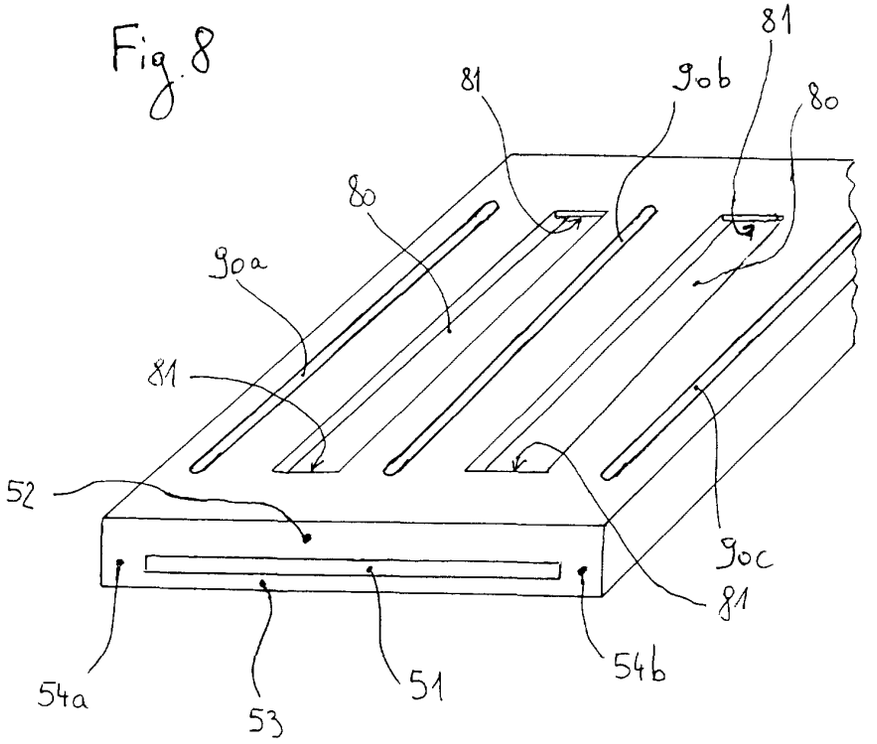



Fig. 9

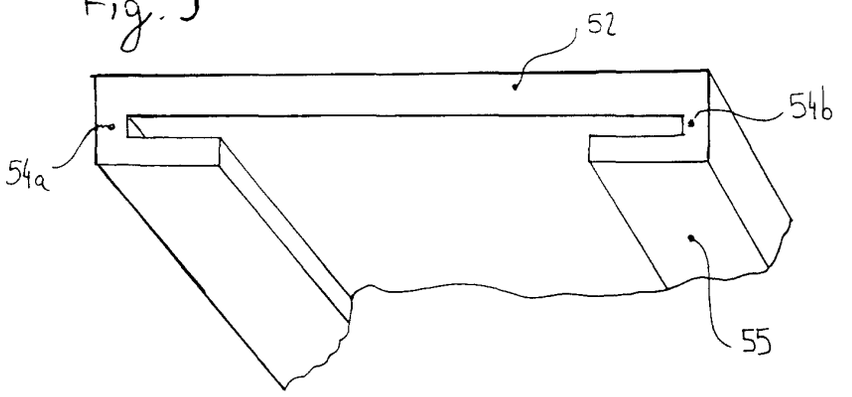



Fig. 10

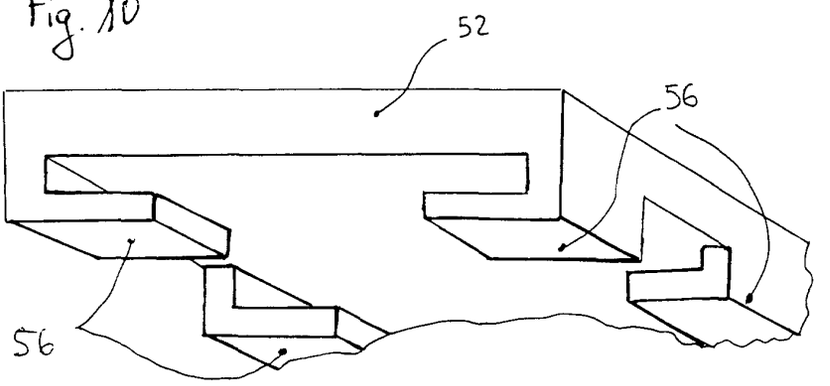


Fig. 11

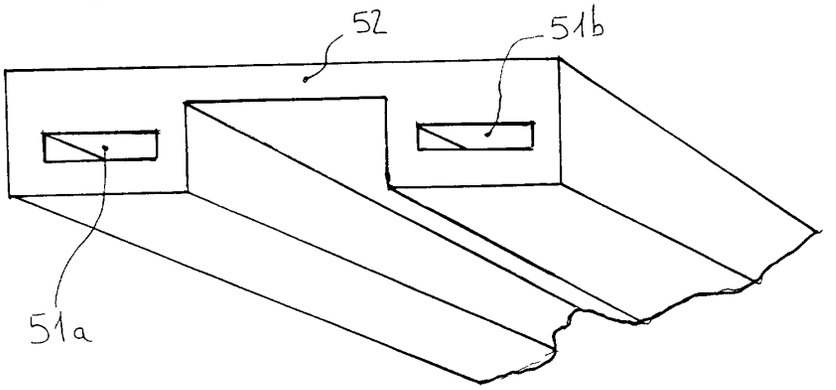



Fig. 12

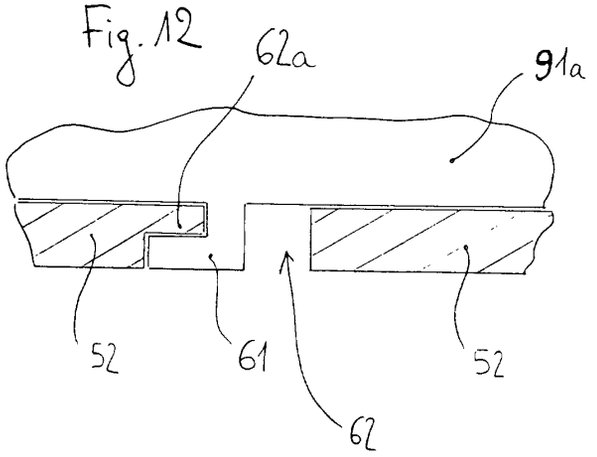



Fig. 14

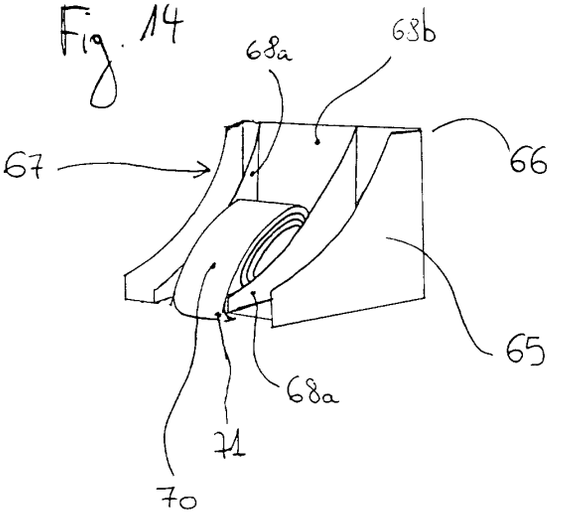



Fig. 13

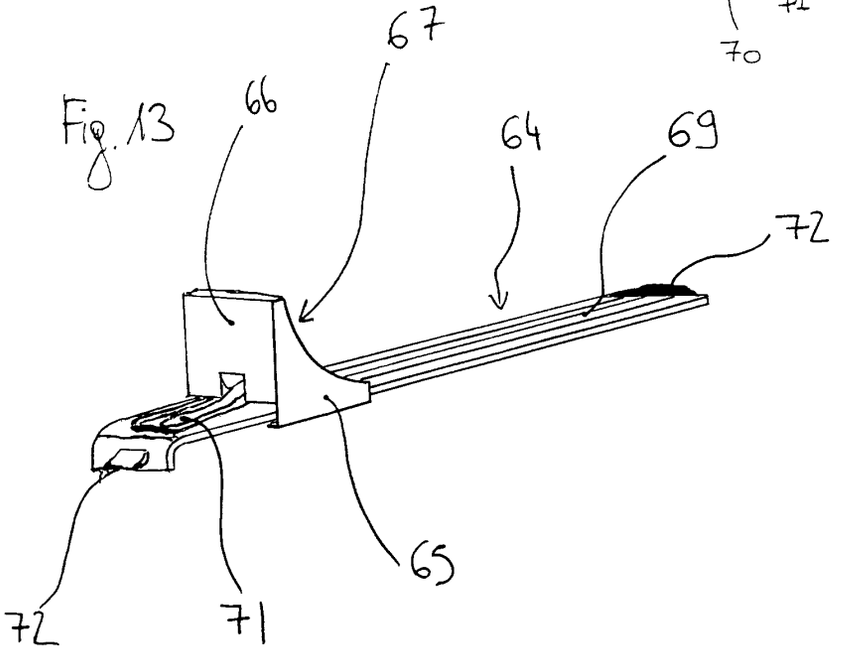
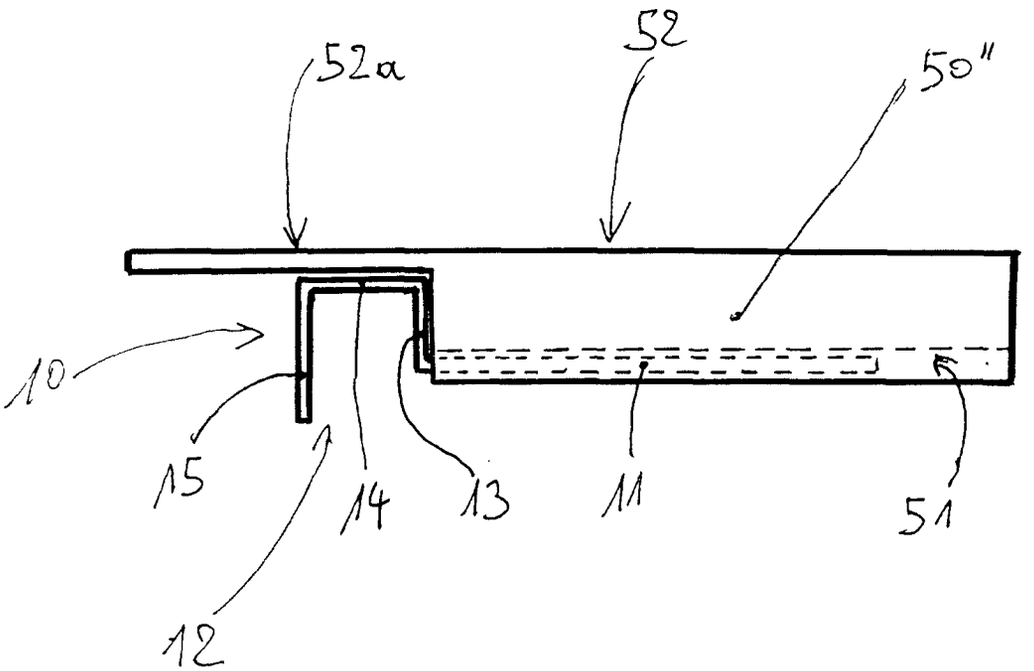


Fig. 15



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Application Number
EP 00 40 2097

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The present search report has been drawn up for all claims

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