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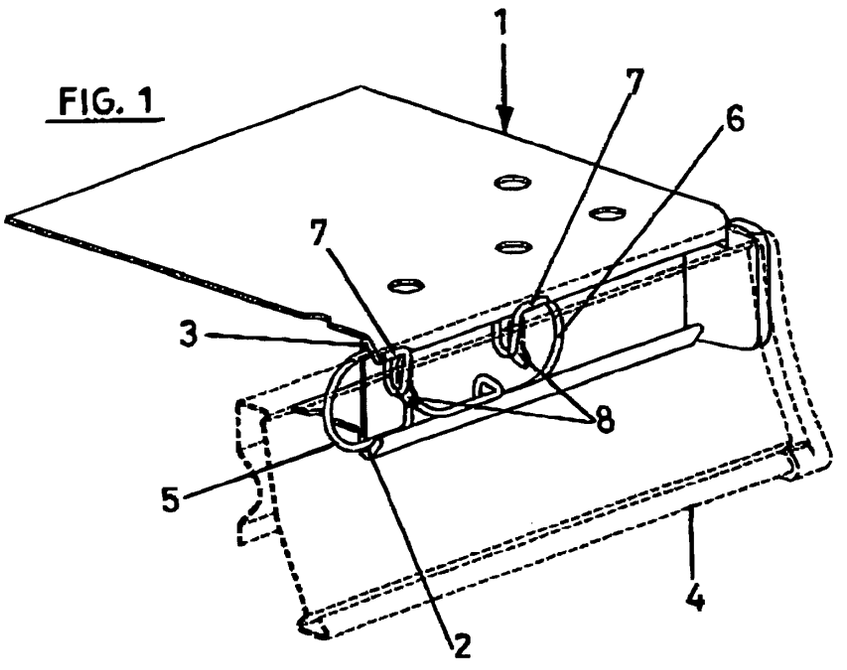
(54) System for attaching label holders to shelves and assembly method therof

(57) Assembly for attaching label holder to shelves of the type placed on the front of a shelf (1) having a lower horizontal groove (2) opposite an upper horizontal groove (3), comprising:

- an attachment element (5) with a rear part (6) configured such that it can be placed elastically between the lower groove (2) and the upper groove (3) of the front of the shelf, with at least two aligned horizontal shaft segments (7)
- a label holder comprising at least two plates, a rear plate and a front plate, the front plate being capable of holding a label, and the rear plate having retaining elements (8) in which are inserted the shaft segments (7) of the attachment element (5), retaining in place the attachment element and the label holder plate, the label holder being able to revolve about the shaft segments between a position in which the label holder is approximately vertical and another position in which the label holder is not in the way when placing an element on the shelf or removing it, or when cleaning. The attachment element can also have a protruding horizontal segment to aid the assembly or disassembly, and to act as a stop for the label holder.

Assembly method thereof.

FIG. 1



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Description

FIELD OF THE INVENTION

[0001] The invention lies within the field of assemblies for attaching shelf label holders, of the type used to attach labels to a shelf, such as to display the characteristics of the products placed in the shelves of warehouses or shops. Specifically, it is included in the field of label holders having means to move the label holder from a position showing the label to one in which the label holder is not in the way when removing or adding products.

BACKGROUND OF THE INVENTION

[0002] In shops, warehouses, etc. where products are placed or stacked on shelves, labels must be placed on the shelves to display information on these products such as price, weight, etc. The information on these labels may vary, so that it is convenient to separate an easily replaceable label from the label holder that includes the means for attachment on the shelf.

[0003] Many types of label holders are known, such as that described in Spanish Utility Model ES 1 043 456. In general, two types of label holder can be considered:

[0004] Label holders made of plastic flexible materials. These are glued to the shelves, or their elastic properties are used to force them into a clip, a cavity or a rail, such as one having a "U" or dovetail shape conformed in the front edge of the shelf. The label holder itself may also have a shape that allows clipping it on the shelf. Using their elasticity, they are given a form that allows them to bend at one point if a product collides against them when it is removed from a shelf, as well as pivoting to allow handling the products even when they are placed near the shelf where the label holder has been attached.

[0005] Label holders made of rigid materials. These are placed on the shelves by screws, slots and anchoring pivots, but it is not easy to provide the possibility of swivelling when having to handle a product that collides against the label holder due to its height.

[0006] However, both types of label holders have serious drawbacks. Label holders made of flexible materials tend to break easily when hit by shopping carts, etc., the union that allows them to pivot tends to rip, the number of colours is limited, they tend to curve or warp due to faulty manufacturing or assembly and in general they are difficult to maintain and age quickly.

[0007] On the other hand, the main drawback of label holders made of rigid materials is that they do not allow the visor with the label to swivel to prevent interfering with the handling of the product, which is particularly problematic when the label and label holder are wider than the shelf. This reduces the useful capacity of the shelf to place products at a height, may harm persons handling them who graze against the label holder and dificults cleaning, depositing dirt in the union of the label holder with the shelf.

DESCRIPTION OF THE INVENTION

[0008] One of the objects of the invention is to provide a label holder and attachment element assembly that solves the aforementioned drawbacks. For this purpose, the label holder can be made of any material, even the most rigid ones, as the swivelling effect is obtained by a union to the shelf attachment element that allows it to pivot. This manages to combine the advantages of rigid and flexible label holders: the label holder of the invention can be painted any colour and matched to the shelf shade without the number of units to be treated being a problem, allows other types of textures, serigraphy, etc. that cannot be obtained in extruded plastic, maintenance is good, as it can be easily cleaned by moving the label holder from the first to the second position. An added advantage is that the protective film of the label can be easily replaced at a low cost if it is damaged.

[0009] This coupling element is an attachment element that allows adapting the assembly to various types of shelf, and which together with the label holder provides an assembly that can withstand frontal impacts without being detached from the shelf.

[0010] Another object of the invention is to allow the label holder and attachment element assembly to replace label holders used hitherto, without having to make changes in the shelves.

[0011] Another object of the invention is that the assembly allows a simple and quick installing and removal.

[0012] For this purpose, a first aspect of the invention comprises an attachment assembly for shelf label holders of the type place in the front part of a shelf. For this, the grooves typically present in the front of shelves used in warehouses or shops to place labels or label holders are used. These consist of a horizontal groove in the bottom end of the front of the shelf opposite an upper horizontal groove in the upper end of the front of the shelf. Together, these grooves define a dovetail shape in which complementary profiles; tabs or other formations were inserted in the label holders of the state of the art in order to attach the label holder to the shelf. These grooves allow securing the attachment element of the invention without having to make any further changes in the shelf.

[0013] In general, the term "rear" shall refer herein to the part of an element that is nearest the shelf and "front" shall refer to the part nearest the user.

[0014] The assembly of the invention mainly comprises two elements, although other accessories may be easily added. These elements are an attachment element and the label holder.

[0015] The attachment element consists of a spring of steel or another material combining good strength properties with elastic properties that allow it to be deformed and then recover its shape.

[0016] This attachment element comprises a rear part configured such that it can be placed by deforming it between the lower and upper grooves of the shelf front. When the force applied with the hand or an assembly tool is removed, it recovers its shape and is left retained between the grooves. It also comprises a front part that configures the coupling to the label holder. This front part comprises two horizontal shaft segments, both aligned, with each segment having at least one free end. These horizontal shaft segments can be configured from L-bars having one wing aligned with the other shaft segment and its end free, and the other wing being joined to the attachment element.

[0017] Albeit complicating the simplicity of the attachment element, it could also be configured by moulding or welding T-shaped or otherwise-shaped shaft segments.

[0018] The label holder comprises at least two plates, a rear plate and a front plate. These plates are preferably joined only at their upper horizontal edges.

[0019] The front plate is configured so that a label can be held in it. It may consist of a flat plate forming a single moulded part with the rear plate, or it can be a separate part made of a different material and joined by various means to the rear plate. This part can be conformed from a flat plate or have a hollow or solid body, as the only conditions are that it can hold a label and that it is joined to the rear plate so that it does not prevent attaching said rear plate to the attachment element.

[0020] The rear plate has retaining elements in which the free ends of the shaft segment of the attachment element are inserted with deformation. When the shaft segments recover their shape, on the one hand they are retained in the attachment elements of the rear plate and on the other hand they allow the label holder to revolve around these shaft segments.

[0021] These retaining elements in the simplest case may be notches made in the rear plate in which the shaft segments are inserted. The label holder revolves with the shaft segments resting on the front part of the rear plate, in the space between the rear plate and front plate of the label holder. These notches are made near the upper edge of the rear plate. Another more complicated possibility would be moulding guides in the rear plate, or any other system that on one hand prevents the attachment element from detaching after it is placed in the label holder (unless a specific force is exerted to deform adequately the shaft segments) and on another hand allows the label holder to revolve about these shaft segments.

[0022] The arrangement of the shaft segments of the attachment elements and the retaining elements of the rear plate of the label holder allows the label holder to revolve between a first position, in which the rear plate is approximately vertical, and a second position, in which the lower edges of the front and rear plates are above the plane defined by the lowest element of the shelf. In the first position the label holder shows the label to the user, and remains in said position by gravity and because the label holder (the rear plate or the front plate) rest against the shelf or the attachment element. The label holder moves to the second position when it is pushed there by the user or when a product is handled. When the label holder is in the second position, the entire useful height of a shelf (as far as the lowest element of the upper shelf) is left free.

[0023] The attachment element can have several configurations. A particularly advantageous one is a configuration based on a single line of an elastic material, such as spring wire, but it could also be a thin strip or a wire of a different material. This single line begins at the free end of one of the horizontal shaft segments that can be configured with an "L" shape, one of whose wings is the shaft segment and the other wing being joined to a "U" segment. This U segment is placed perpendicular to the rear part of the attachment element, and has two wings, one in a front position and one in a rear position. One of the two wings of this U segment, the front one, is joined to the shaft segment, and the other, posterior, wing is joined to the rear part of the attachment element (which is inserted between the grooves of the shelf front).

[0024] The width and length of the rear wing of the U shape is such that when the rear part of the attachment element is inserted in the grooves of the shelf front, the shaft segments are out of the upper groove so that they can act as rotation shafts for the label holder.

[0025] In this way, there are two aligned segments of the horizontal shaft joined to two U segments perpendicular to the rear part of the attachment element. This rear part continues the single line beginning at the free end of a shaft segment and ending at the free end of the other shaft segment. It comprises two aligned upper horizontal segments joined to the rear wings of the U segments and a lower horizontal segment. The ends of the upper horizontal segments opposite those joined to the U segment are joined to the ends of the lower horizontal segment by vertical segments that allow a certain deformation, such as by approximately semicircular lines.

[0026] An important characteristic of the rear part is that the aligned upper horizontal segments and the lower horizontal segment are separated by a first distance. This first distance must be approximately equal or slightly greater than the distance between the horizontal grooves of the shelf front. If these distances are equal, the rear part is fitted between the grooves without deformation. If the first distance is slightly greater than the distance between the grooves, when the rear part of the attachment element is inserted between the grooves the elasticity of the material of the attachment element and its conformation will hold it more strongly; on the other hand, if the first distance between the upper horizontal aligned segments and the lower horizontal segment of the attachment element is somewhat greater than the distance expected between the grooves, they allow a degree of adaptation in case of small variations in the

actual distance or shape of these grooves.

[0027] Another advantageous embodiment of the invention, particularly if it is made of a single line, is achieved by adding to the attachment element a protruding horizontal segment with two functions: acting as a stop for the label holder when it is in the first position and facilitating the assembly and disassembly of the attachment element in the grooves of the shelf front.

[0028] For this purpose, the attachment element has its lower horizontal segment configured in two areas, a first area having two aligned horizontal lower segments and a second area having a central horizontal protruding segment. The two aligned horizontal lower segments are at the first distance of the upper aligned horizontal segments to insert in the grooves of the shelf front. The central segment is configured as an approximately horizontal protruding segment, with segments joining it to the corresponding end of the lower aligned horizontal segments. These union segments are such that when the rear part of the attachment element is placed inserted between the grooves of the shelf front, the horizontal protruding segment projects out of the shelf front. This is, the protruding horizontal segment consists of a horizontal line segment, for example straight, having union segments such as L-shaped, with the L having dimensions that allow the horizontal line segment to protrude from the lower groove. In this way a stop for the label holder is conformed that can also be used to facilitate the assembly or disassembly by applying pressure on it with the hand or with an assembly tool.

[0029] The label holder may have a conformed area to rest on the horizontal line segment of the attachment element. For example, the rear plate can have a curved conformed area so that it rests softly on this segment of the horizontal line of the attachment element.

[0030] Another aspect of the invention comprises an assembly method for the attachment element and label holder.

[0031] In general terms, this method involves the following steps:

- the free ends of the horizontal shaft segments of the attachment element are inserted in the retaining elements of the rear plate of the label holder
- the rear part of the attachment element is inserted in the grooves of the shelf front

[0032] In the specific case in which the attachment element has a protruding horizontal segment conformed in it to act as a stop for the label holder, the process would be as follows:

- the free ends of the horizontal shaft of the attachment element are inserted in the retaining elements of the rear plate of the label holder
- the upper horizontal segments are inserted in the upper groove
- the label holder is bent by exerting an upward force in the protruding horizontal segment
- the lower aligned horizontal segments are inserted in the lower groove, pushing from the front

[0033] If the protruding horizontal segment has not been conformed in the attachment element, but instead there is a single lower horizontal segment, the process is as follows:

- the free ends of the horizontal shaft segment of the attachment element are inserted in the retaining elements of the rear plate of the label holder
- the lower horizontal segment of the attachment element is inserted in the lower groove of the shelf
- the attachment element is flexed reducing its height by applying a downward force pushing with the label holder against the lower groove
- the aligned upper horizontal segments of the attachment element are inserted in the upper groove of the shelf, pushing forwards.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] A very brief description follows of a set of drawings meant to aid a better understanding of the characteristics of the invention, specifically related to a preferred example of embodiment, which is provided for purposes of illustration and in a non-limiting sense of the invention.

Figure 1 shows a shelf with the attachment and the label holder of the invention.

Figure 2 shows the attachment element of the invention.

Figure 3 shows a cross section of the shelf, the attachment element and the label holder.

Figure 4 shows an exploded view of the shelf and its supports, the attachment element, the label holder, the label and other accessories.

Figure 5 shows cross sections of various assemblies with different label holders.

DESCRIPTION OF A PREFERRED EMBODIMENT

[0035] Figure 1 shows a shelf with the attachment and label holder of the invention. It reveals a shelf (1) in the front of which are conformed a lower horizontal groove (2) and an upper horizontal groove (3). These grooves are identical to those used for other types of label holders, so that they can be easily replaced by the attachment assemblies for label holders (4) of the invention.

[0036] It also shows the attachment element (5) inserted by its rear part (6) between the grooves, with aligned horizontal shaft segments (7) on which the label holder (4) depicted by a discontinuous line is placed on attachment elements. It can be seen that in this embodiment the attachment elements consist of notches (8) made in the rear plate of the label holder in which the

shaft segments (7) are inserted.

[0037] Figure 2 shows the attachment element (5) in an embodiment obtained from a single line of an elastic material, such as a single spring wire. The attachment element (5) begins at one of the horizontal shaft segments (7) and continues with a U-segment (9) perpendicular to the rear part (6) of the attachment element (5). Said U-shaped segment has its front wing (9a) joined to the shaft segment (7) and its rear wing (9b) to the rear part of the attachment element. The width of the U segment in the union (9c) between the two wings and the length of the rear wing (9b) must be enough to allow the shaft segment (7) to protrude out of the space between the grooves (2, 3) of the shelf front. The length of the front wing (9a) of the U segment is such that the top edge of the label holder is at the same height or somewhat lower than the shelf in which it is placed.

[0038] The rear part (6) of the attachment element comprises, in first place, two upper aligned horizontal segments (10) joined on one end to the rear wings (9b) of the U segment. These upper horizontal segments (10) are joined to a lower horizontal segment (11) by two approximately vertical lines that in this case are semicircular (12). The lower horizontal segment (11) and the two upper aligned horizontal segments (10) are separated by a first distance (13) that is equal or somewhat greater than the distance (13) between the horizontal grooves of the shelf front. In this way, in view of the elasticity of the material and its conformation in semicircular ends (12) the rear part of the attachment element (8) is deformed to be inserted in the grooves (2, 3) of the shelf front. When it recovers its shape, it is left inserted between said grooves. If the distance is equal or somewhat greater, the attachment element (5) will be more strongly retained between the grooves (2, 3). In addition, if the distance is somewhat greater the same type of attachment element may be used even if the distance between the two grooves varies slightly between shelves, due to the elastic adaptation of this attachment element.

[0039] A preferred embodiment that can be seen in Figure 4 is the addition to the attachment element of a protruding horizontal segment (14) with two functions: being a stop for the label holder and facilitating the assembly and disassembly of the attachment element in the grooves (2, 3) of the shelf front.

[0040] For this purpose, the attachment element has its lower horizontal segment (11) configured in two areas, a first area consisting of two aligned horizontal lower segments (11 a, 11 b) that have the same function as if they were a single segment (11), and a second central area (14). Thus, the two aligned lower horizontal segments (11 a, 11 b) are at the first distance (13) of the upper aligned horizontal segments (10) so that they can fit in the grooves (2, 3) of the shelf front.

[0041] The second, central area (14) is configured as a protruding approximately horizontal segment which, when the attachment element (4) is placed in the grooves (2, 3) projects out of the rear part (8) of the attachment element enough to fulfil its functions, the first of which is acting as a stop for the label holder and the second of which is actins as an element on which to push with the hand or a tool for assembly and disassembly. In this embodiment, its shape is rectangular, but it can have any other shape, such as semicircular, semielliptical, or wavy, as long as its shape allows fulfilling the two aforementioned functions.

[0042] This protruding horizontal segment (14) has vertical lines (15) for union to the lower horizontal segments (11 a, 11b). These vertical union lines (15) have a shape such that when the rear part (6) of the attachment element is placed inserted in the grooves (2, 3) of the shelf front, the protruding horizontal segment (14) projects from the front of the shelf enough to act as a stop for the label holder and to allow holding it with the hand or a tool. This is, the protruding horizontal segment (14) consists of a horizontal line segment, for example straight, with vertical union lines (15) for example L-shaped, with the "L" having dimensions that allow the protruding horizontal segment (14) to project out of the bottom groove (2). In this way, a stop is conformed in the label holder that can also be used to facilitate assembly and disassembly, pressing on it with the hand or with an assembly tool.

[0043] Figure 3 shows a section of a shelf (1) with the label holder and attachment element, that allows seeing the operation of the label holder attachment assembly.

[0044] In this case the shelf (1) is made of folded plate, but this could be any shelf having horizontal grooves on the bottom end of the shelf front (2) and the upper end (3) made with profiles, machining or conformations by any other method. Between these grooves (2, 3) is inserted the rear end (6) of the attachment element, and as described before, because of the conformation of this attachment element with U-shaped segments (9) the horizontal shaft segments (7) are placed on the outside of the upper groove (3).

[0045] The label holder is retained in these segments of the horizontal shaft (7) of the attachment element, by the attachment elements, which in this embodiment are the notches (8).

[0046] The label holder consists of two plates, in this case conformed from a single surface that is bent to constitute a front plate (16), a rear plate (17) and a union (18) between the label holder plates. As can be seen, the front plate (16) has upper (19a) and lower (19b) flanges between which a label is placed.

[0047] As can be seen, the label holder can revolve about the horizontal shaft segments (7) of the attachment element by an angle comprised between a first position (20a) and a second position (20b). In the first position (20a) the label holder is in a position showing the label, in an approximately vertical position, falling under gravity. In the second position (20b) the lower edges of the front plate (16) and rear plate (17) are above the plane parallel to the shelf and defined by the lowest element (21) of the shelf. In this case the element is a

flange of the lower groove (2), but it could also be the bottom face of the shelf itself, screws, a lighting element, etc. What matters is that the useful shelf height is not limited by the dimensions of the label or the label holder. If there is a product (22) on the shelf that due to its height or position collides with the label holder when the latter is in the first position (20a), when it is handled the label holder is pushed and made to revolve about the horizontal shaft segment (7), moving it to a position in which the product can be removed freely. This position does not have to correspond to a greater angle than the second position (20b) in which the lower edges of the h are above the lowest elements of the shelf, which define the plane (21) determining the useful height of the shelf. Likewise, if a product must be placed, or the shelf must be cleaned under the label holder, the label holder may be revolved manually to the second position (20b).

[0048] The figure also shows how the protruding horizontal segment (14) of the attachment element projects out of the space between the grooves (2,3) of the shelf front, defining a stop for the label holder. This stop corresponds to a conformed area (23) of the label holder, in this specific case a gently concave area in the rear plate (17) by which it rests on this protruding horizontal segment (14). In this way, if the label holder suffers a frontal impact, such as by a shopping cart, it can rest by the conformed area (23) on the stop determined by the protruding horizontal segment (14) and withstand the impact without breaking. Said conformed area, as the protruding horizontal segment (14), can adopt diverse configurations and be conformed in the front plate of the label holder (16) or on the rear plate (17), or may even not be present so that the protruding horizontal segment (14) will rest directly against the label holder without a specially conformed area existing.

[0049] Figure 4 shows an exploded view of an example of application of the label holder of the invention. In this case each shelf (1) is supported by two brackets (24). Two attachment elements (5) such as those described are placed on the front of the shelf. This number may vary, so that it is possible to use any number between one (not very practical) and as many as can fit in the shelf front. Preferably, they shall be two or three as in Figure 4. The label holder shall be supported by them, so that it can revolve between the first position (20a) and the second position (20b) as explained before. The figure shows how a single label holder (5) may occupy the entire length of the shelf front, but a smaller label holder or several of them can also be used. The labels are introduced in the label holder, possibly with a transparent protection (25) and end pieces (26) to prevent the labels or the protector (25) from sliding out and as a protection against lateral impacts.

[0050] Figure 5 shows two examples of different embodiments. In the first one, (A), the rear plate of the label holder (16) is not a plate with flanges on which to place the label but instead is a rounded shape. In the second one (B) it is a solid body screwed onto a plate that curves and forms the rear plate (17) of the label holder. Also absent in this second case (B) is a specially conformed area in the label holder that corresponds to the protruding horizontal segment (14).

[0051] Another aspect of the invention is a simple assembly of the element for attaching the label holder to the shelf.

[0052] In a first case in which a protruding horizontal segment (14) has been conformed in the attachment element to act as a stop for the label holder, the procedure would be as follows:

- the free ends of the horizontal shaft segments (7) of the attachment element (5) are inserted in the retaining elements (8), in the example of embodiment notches made in the rear plate (17) of the label holder
- the upper horizontal segments (10) are inserted in the upper groove (3)
- the label holders (11) is bent by exerting an upward force in the protruding part of the protruding horizontal segment (14)
- the lower aligned horizontal segments (11) are inserted in the lower groove (2), pushing from the front

[0053] If a protruding horizontal segment has not been conformed in the attachment element, but instead there is a single lower horizontal segment, the process is as follows:

- the free ends of the horizontal shaft segment (7) of the attachment element (5) are inserted in the retaining elements (8), in the example of embodiment notches in the rear plate (17) of the label holder (5)
- the lower horizontal segment (11) of the attachment element is inserted in the lower groove (2) of the shelf
- the attachment element is flexed reducing its height by applying a downward force pushing with the label holder (5) against the lower groove (2)
- the aligned upper horizontal segments (10) of the attachment element are inserted in the upper groove (3) of the shelf, pushing forwards.

[0054] The materials, shape, size and arrangement of the component elements may vary as long as the essence of the invention is not affected.

[0055] Throughout the present description and claims the term "comprises" and its derivations, such as "comprising", is not meant to exclude other steps or components.

MEANING OF THE REFERENCES INDICATED IN THE FIGURES

[0056] In order to aid the comprehension of the invention, the meaning of the references marked in the figures

are given below.

1. shelf
2. lower groove
3. upper groove
4. label holder
5. attachment element
6. rear part of the attachment element
7. horizontal shaft segment
8. attachment elements to the rear plate (notches)
9. (a, b, c) U-shaped segment of the attachment element
10. upper horizontal segments of the attachment element
11. (a, b) lower horizontal segment of the attachment element
12. vertical segments
13. first distance
14. protruding horizontal segment
15. protruding horizontal segment vertical union lines
16. label holder front plate
17.label holder rear plate
18.label holder plates union
19. (a, b) rear plate flanges
20. (a, b) label holder positions
21. bottom plane of the shelf
22. object protruding from the shelf
23. conformed area in the label holder
24. shelf brackets
25. label protection film
26. label holder end piece

Claims

1. Assembly for attaching shelf label holders of the type placed on the front of a shelf (1), this front having a lower horizontal groove (2) on its lower end opposite another upper horizontal groove (3) on its upper end, **characterised in that** it comprises:

- an attachment element (5) with a rear part (6) configured such that it can be placed with deformation between the lower (2) and upper (3) grooves of the front of the shelf, and so that when it recovers its shape the rear part (6) is retained between the lower (2) and upper (3) grooves, this attachment element (5) having a front part configured with at least two horizontal shaft segments (7), both segments being aligned and each segment having at least one free end.
- a label holder comprising at least two plates, a rear plate (17) and a front plate (16), joined only by an upper horizontal edge (18), the front plate (16) being configured such that a label can be retained in it and the rear plate (17) having retaining elements (8) in which are inserted with deformation the free ends of the shaft segments (7) of the attachment element (5), the retaining elements (8) being configured so that when the shaft segments (7) recover their shape on one hand they are retained in the retaining elements (8) and on the other they allow the label holder to revolve about the shaft segments between a first position (20a) in which the rear plate (17) is approximately vertical and a second position (20b) in which the lower edges of the front and rear plate are above the lowest element (21) of the shelf.

2. Assembly for attaching label holders according to claim 1, **characterised in that** the attachment element (5) is configured from a single line of elastic material that begins at the free end of one of the horizontal shaft segments (7) and ends at the free end of the other horizontal shaft segment, each horizontal shaft segment continuing at its end that is not free with a U-shaped segment (9), this U-shaped segment having two wings, a front wing (9a) to which the horizontal shaft segment is joined and a rear wing (9b), the U-shaped segment having a width (9c) and a length of the rear wing (9b) such that when the rear part (6) of the attachment element is placed inserted between the grooves (2, 3) of the shelf front, the shaft segments (7) are out of the upper groove (3), the rear wing (9b) of each U-shaped segment being joined to the rear part (6) of the attachment element, this rear part of the attachment element being configured with two upper aligned horizontal segments (10) joined to the rear wings (9b) of the U-segment, and a lower horizontal segment (11) joined to the two upper horizontal segments (10) by two approximately vertical lines (12), the two upper aligned horizontal segments (10) and the lower horizontal segment (11) being separated by a first distance (13), this first distance (13) being approximately equal or slightly greater than the distance between the two horizontal grooves (2, 3) of the shelf front.

3. Assembly for attaching label holders according to any of the above claims, **characterised in that** the retaining elements of the rear plate (17) of the label holder consist of notches (8) made near the top edge of the rear plate (17) in which are inserted the free ends of the horizontal shaft segments (7) of the attachment element, and **in that** the rear plate (17) and the front plate (16) of the label holder have their upper edges and the union between the plates configured such that they leave a space around the horizontal shaft segments (7) around which the label holder plate can revolve freely between a first position (20a) and a second position (20b).

4. Assembly for attaching label holders according to any of claims 2 or 3, depending on claim 2, **characterised in that** the attachment element (5) has its lower horizontal segment (11) configured in two areas, a first area with two lower aligned horizontal segments (11 a, 11 b) and a second central area, the two lower aligned horizontal segments (11 a, 11 b) being at the first distance (13) of the upper aligned horizontal segments (10) and the second central area configured as an approximately horizontal protruding segment (14) with its unions (15) to the corresponding end of the lower aligned horizontal segments (11 a, 11 b) such that when the rear part (6) of the attachment element is inserted between the grooves (2, 3) of the shelf front, the protruding horizontal segment (14) of the attachment element projects out of the space between the two grooves (2, 3) of the shelf front.

5. Assembly for attaching label holders according to claim 4, **characterised in that** the rear plate (17) of the label holder has a conformed area (23) such that when the label holder plate is in the first position (20a) said conformed area (23) rests on the protruding horizontal segment (14) of the attachment element.

6. Assembly for attaching label holders according to claim 3, **characterised in that** when the label holder is in the first position (20a), the label holder (5) rests on the protruding horizontal segment (14) of the attachment element.

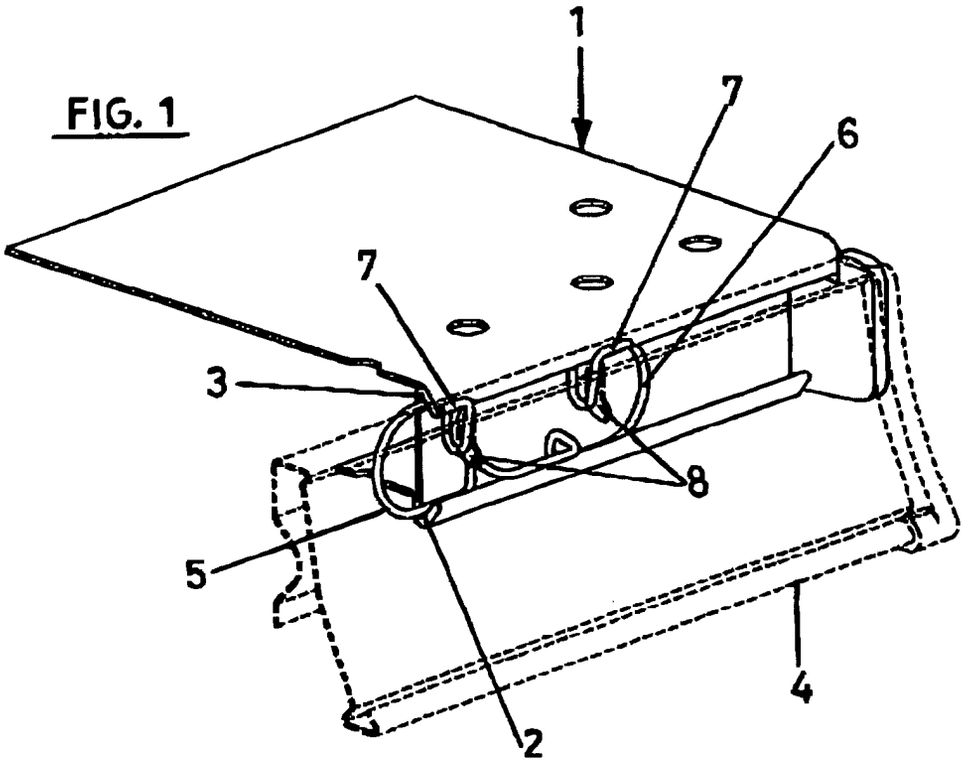
7. Method for inserting an assembly for attaching label holders in the front of a shelf according to any of claims 1 to 3 above, **characterised in that** it comprises the following steps:

- the free ends of the horizontal shaft segments (7) of the attachment element (5) are inserted in the retaining elements (8)
- the upper horizontal segments (10) are inserted in the upper groove (3)
- the label holders (11) is bent by exerting an upward force in the protruding part of the protruding horizontal segment (14)
- the lower aligned horizontal segments (11) are inserted in the lower groove (2), pushing from the front.

8. Method for inserting an assembly for attaching label holders in the front of a shelf according to claims 4 or 5 above, **characterised in that** it comprises the following steps:

- the free ends of the horizontal shaft segment (7) of the attachment element (5) are inserted in the retaining elements (8)
- the lower horizontal segment (11) of the attachment element is inserted in the lower groove (2) of the shelf
- the attachment element is flexed, reducing its height, by applying a downward force pushing with the label holder (5) against the lower groove (2)
- the aligned upper horizontal segments (10) of the attachment element are inserted in the upper groove (3) of the shelf, pushing forwards.

FIG. 1



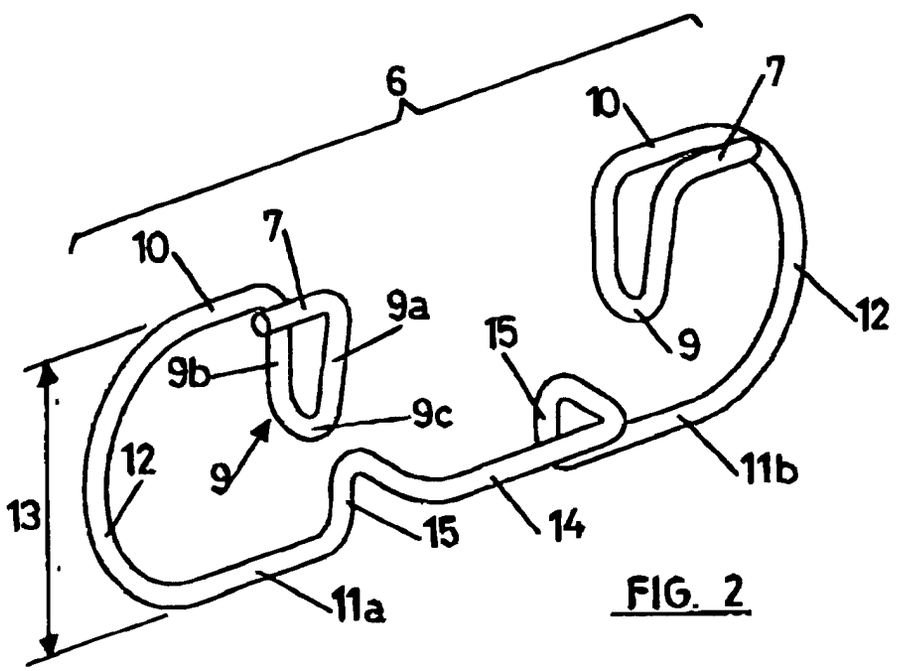


FIG. 2

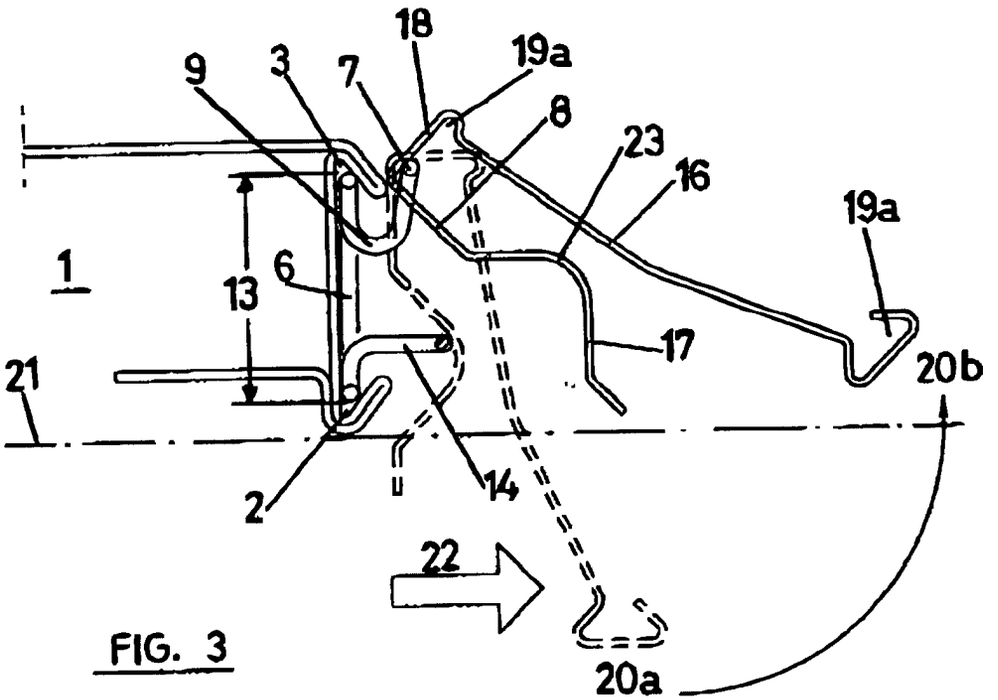


FIG. 3

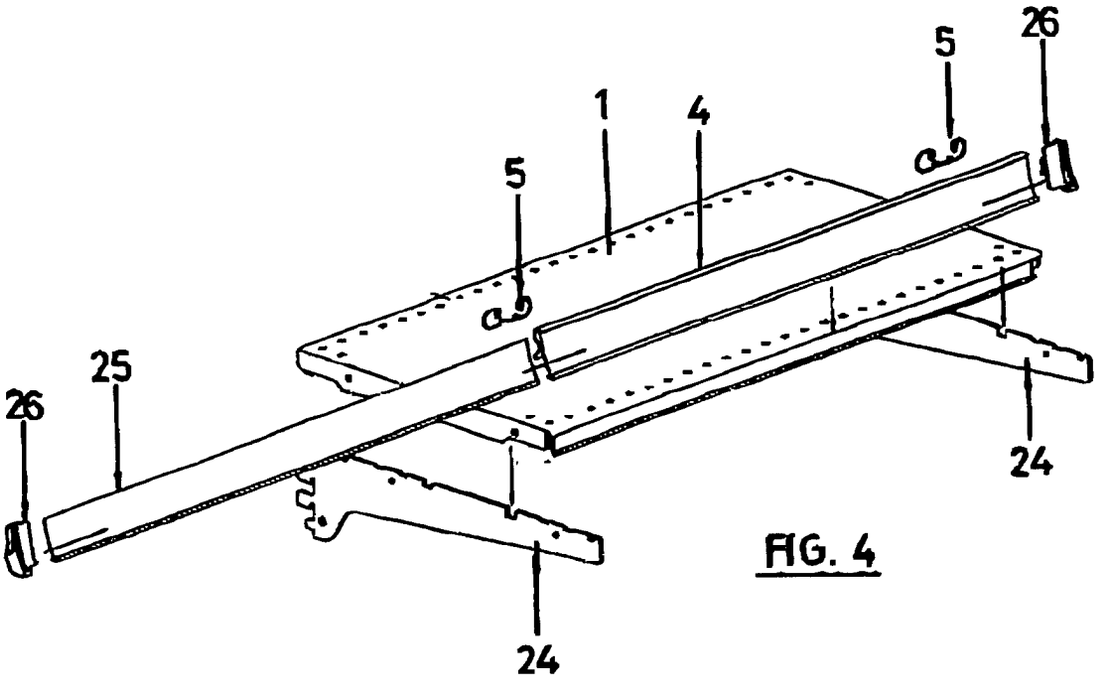


FIG. 4

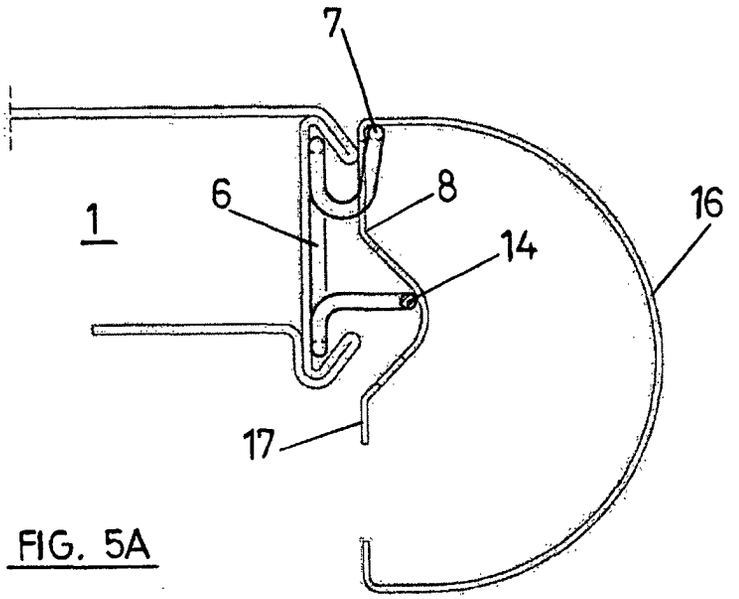


FIG. 5A

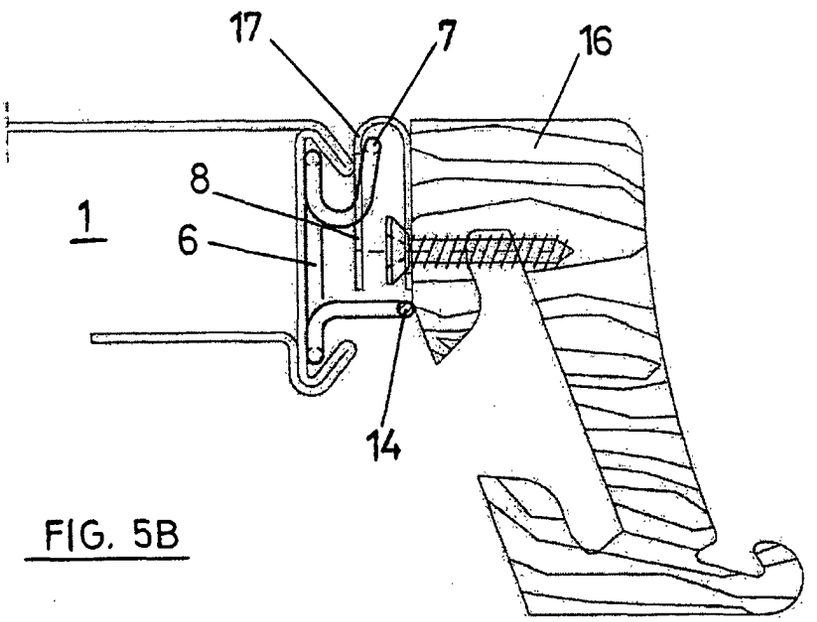


FIG. 5B

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EUROPEAN SEARCH REPORT

Application Number
EP 03 38 0139

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	30 October 2003	Pantoja Conde, A

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