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(54) Fixation device and system for fixation of different shelf accessoires

(57) Fixation device (1) for releasable fixation of shelf accessories (60, 70, 600) to a shelf and comprising an elongated profile element adapted to be mounted along the front edge of a shelf. The profile element comprises a mounting portion (20) provided with mounting means (21,22, 23) adapted to engage the front edge of a shelf; and a first fixation portion (40) provided with first fixation means (45, 46) adapted to engage with a plurality of first accessories (60) for releasable fixation of the first accessories to the fixation device. The profile element further comprises a second fixation portion (27) having second fixations means (25, 32, 33) adapted to engage with a plurality of second accessories (70) for releasable fixation of the second accessories to the fixation device (1). The second fixation means (25, 32, 33) is adapted to allow fixation of the second accessory (70) in at least two different positions relative to the shelf, when the profile element is mounted to a shelf.

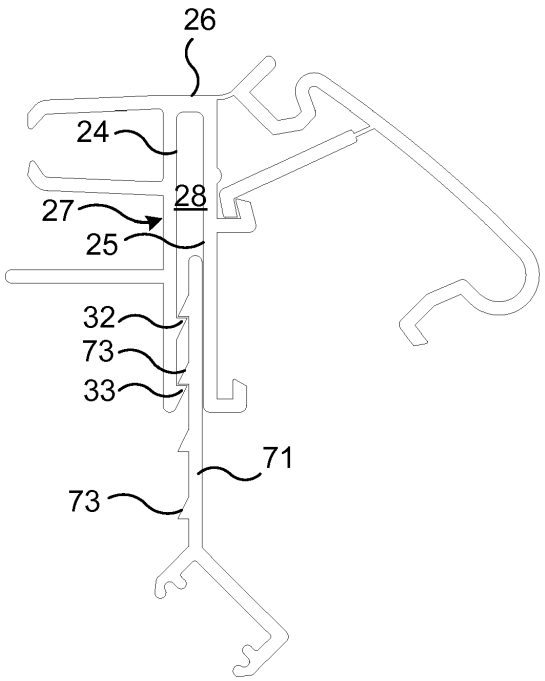

Fig. 5b

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Description

Technical Field

[0001] The invention relates to a fixation device for releasable fixation of shelf accessories to a shelf. The fixation device is particularly usable for fixation of different types of accessories to or in the proximity to the front edge of one and the same shelf. The accessories to be fixed may include e.g. printed and/or electronic labels, sign holders, flags, holders for product samples and coupons as well as light sources for illuminating products and product information, etc. The invention also relates to a system comprising such a fixation device.

Background

[0002] In shops, department stores, supermarkets and the like, goods and products are normally stored, displayed and made accessible to the customers on shelves. An important aspect at such storage and display of the products is that product information, such as price and content and also other information, e.g. promotional information and eye catching signs and flags are made easily accessible and visible to the customers. Traditionally, price and content information has been displayed on printed paper labels which have been attached to the front edge of the shelves in proximity to the products in question. More recently, it has become increasingly common to display such product information at electronic displays, often referred to as electronic labels, which are attached to the front edge of the shelf.

[0003] For allowing easy fixation, removal, exchange and repositioning of such printed and electronic labels to the shelves' front edge, it is well known to utilize elongate label holder strips which may be permanently fixed to the front edge of the shelves. These strips are normally formed as profile elements which are manufactured by extrusion of a polymer material. Typically, the length of the strips is adapted such that one strip, when mounted, extends over the entire length of a shelf or a shelf section. The strips may be provided with transparent label pockets for allowing insertion of printed labels and/or with a fixation portion, the geometry of which allows for releasable fixation of holders for electronic labels, signs flags and the like. The strips thus provides for that several printed labels and/or electronic labels and other accessories may readily be attached, one next to the other, at any desirable position along the front edge of the shelf. Each label and other accessory may also readily be removed and repositioned to any desirable position.

[0004] In order not obstruct or hinder the visibility of or access to products placed on the shelf in question or on a shelf arranged directly below that shelf, the height of the strip may be limited such that the strip does not essentially project above or beneath the upper or lower edge of the shelf in question.

[0005] A further important aspect of such strips is that they allow good visibility and readability of the information fixed hereto, irrespective of at which height the shelf in question is positioned. This aspect is particularly important at fixation of electronic labels, since such labels normally have a limited viewing angle.

[0006] It is also advantageous if the arrangements used for fixing shelf accessories to the shelves are flexible in use, such that varying accessories may readily be fixed to the shelves without the need of an excessive number of mounting utensils.

Prior Art

[0007] WO 01/78043 discloses a mounting system for arranging label holders in optional positions along the front edge of a shelf. It comprises a supporting profiled strip with a mounting part intended to be mounted to a front edge of a shelf and an attachment part which is fixed in relation to the mounting part and adapted for detachable fixation of label holders. The label holders have a height which is greater that the height of the profiled strip and a hinge such that they may be temporarily pivoted up in front of the profiled strip for allowing access to product placed on the shelf below.

[0008] EP 1405 651 B1 discloses a similar profiled strip having a mounting part intended to be mounted to the front edge of a shelf provided with a row of mounting openings and a second part which is formed as a label holder pocket or for supporting separate label holder pockets. Also at this arrangement the second part is fixed in relation to the mounting part.

[0009] WO 2007/073294 A1 discloses a device for simultaneous fixation and release of a plurality of shelf accessories to a shelf. The device comprises an elongate channel element which is adapted to be fastened to the front edge of a shelf. The channel element comprises a channel adapted to receive mounting feet of a plurality of accessories and a fixing element which is pivotally connected to the channel element. The fixing element can be pivoted between a fixing mode, at which mounting feet received in the channel are locked in position and a release mode at which the mounting feet are released. At one embodiment, the fixing element is provided with a front profile section allowing the fixation of e.g. label holders to the fixing element.

Summary

[0010] It is an object of the present invention to provide an enhanced fixation device for releasable fixation of shelf accessories to a shelf.

[0011] Another object is to provide such a fixation device, which provides great flexibility in use.

[0012] Yet another object is to provide such a fixation device which allows for that greatly varying accessories may be fixed to the shelf by means of one and the same fixation device.

[0013] Another object is to provide such a fixation de-

vice which allows for that the accessories may be fixed to the shelf at varying positions relative to the shelf, such as at varying distances from the shelf.

[0014] A further object is to provide such a fixation device which is easy to use.

[0015] A still further object is to provide such a fixation device which is reliable and has a comparatively long service life.

[0016] Yet another object is to provide such a fixation device which may be efficiently manufactured and installed at a low cost.

[0017] These and other objects are achieved by a fixation device according to claim 1. The fixation device is used for releasable fixation of shelf accessories to a shelf and comprises an elongated profile element adapted to be mounted along the front edge of a shelf. The profile element comprises a mounting portion provided with mounting means adapted to engage the front edge of a shelf; and a first fixation portion provided with first fixation means adapted to engage with a plurality of first accessories for releasable fixation of the first accessories to the fixation device. The profile element comprises a second fixation portion having second fixations means adapted to engage with a plurality of second accessories for releasable fixation of the second accessories to the fixation device. The second fixation means is adapted to allow fixation of the second accessory in at least two different positions relative to the shelf, when the profile element is mounted to a shelf.

[0018] By this means, there is provided a fixation device which, in its entirety, may readily be manufactured as a single piece, e.g. by extrusion of a polymer material. The single piece construction facilitates and reduces cots for manufacturing, storing and transportation as well as for installation and daily use at site of the fixation device.

[0019] The first and second fixation portions allow for that two different types of accessories may readily be fixed to a shelf by means of one and the same fixation device. The second fixation means further allow for that each of the second accessories may individually be fixed in different positions relative to the fixation device and thereby relative to the shelf. This entails for a great advantage since it increases the flexibility in use of the fixation device and the system comprising the fixation device and various first and second accessories. Particularly, it facilitates the use different second accessories which may require to be positioned at different positions relative to the fixation device and the shelf, in order to function in the desired manner. Additionally it facilitates the adaption of the system for providing different visual appearances, which may be required in different environments or at different applications. The arrangement of the second fixation portion and the second fixation means thus allows for that various mutually differing accessories may readily be fixed to a shelf by means of one and the same fixation device. Hence, the number of different components needed for setting up a fully equipped shelf may be kept at a minimum. This in turn facilitates and reduces the costs for manufacturing, distribution and mounting of the shelf accessory systems.

[0020] The second fixation means may be adapted to allow fixation of the second accessory at different distances from the shelf, when the profile element is mounted to a shelf. This may be particularly advantageous when the second accessory is a holder for a light source, which may require to be positioned at a certain distance from the objects which are to be illuminated in order to give a satisfactory light distribution.

[0021] The second fixation portion may extend over essentially the entire length of the profile element.

[0022] The second fixation portion may be arranged at the mounting portion.

[0023] The second fixation portion may comprise a second accessory channel portion defining an elongated longitudinally open channel.

[0024] The second fixation means may comprises at least one ridge.

[0025] The at least one ridge may project into a channel.

[0026] The cross section of the first fixation portion may exhibit an upper edge portion and a lower edge portion, which edge portions form part of the first fixation portion's fixation means and may be adapted to allow a plurality of fist accessories to be engaged by snap-fitting onto the first fixation portion.

[0027] At least one of the upper and lower edge portions may be convexly curved.

[0028] The first fixation portion may be pivotally connected to the mounting portion and movable relative to the mounting portion, between a first angular position and a second angular position.

[0029] The fixation device may comprise first angle retention means for retaining the first fixation portion in one of the first and the second angular position.

[0030] The fixation device may also comprise second angular retention means for releasable retention of the first fixation portion in the other of the first and second angular position.

[0031] The invention also concerns a system for releasable fixation of shelf accessories to a shelf, comprising a fixation device as described above, at least one first accessory which comprises first accessory engagement means, adapted to cooperate with the first fixation means for releasable fixation of the first accessory to the first fixation portion and at least one second accessory comprising second accessory fixation means adapted to cooperate with the second fixation means for releasable fixation of the second accessory to the second fixation portion.

[0032] One of the second fixation means and the second accessory fixation means may then comprise at least one ridge and the other comprises at least two ridges, the ridges being arranged to allow fixation of the second accessory at two or more different distances from the shelf, when the fixation device (1) is mounted to the shelf.

[0033] The first accessory may be a label holder and

the second accessory may be a holder for a light source

[0034] Generally, all terms used in the claims are to be interpreted according to their ordinary meaning in the technical field, unless explicitly defined otherwise herein. All references to "a/an/the element, apparatus, component, means, step, etc." are to be interpreted openly as referring to at least one instance of the element, apparatus, component, means, step, etc., unless explicitly stated otherwise. The steps of any method disclosed herein do not have to be performed in the exact order disclosed, unless explicitly stated. Any indication of positions such as upper, lower, rear and front and to directions such as upward and downward refer, when not stated differently, to positions and directions in relation to a normal horizontally arranged shelf or a fixation device attached to the front edge thereof.

Brief description of the drawings

[0035] The invention is now described, by way of example, with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of a fixation device according to an embodiment of the invention.

Fig. 2 is a perspective view of a system comprising the fixation device shown fig.1 as well as a first and a second accessory.

Fig. 3a and 3b are side views of the fixation device shown in fig, 1 and illustrates a first fixation portion thereof in a first and a second angular position respectively.

Figs. 4a and 4b are side views corresponding to figs. 3a and 3b of the fixation device with a first accessory attached thereto.

Figs. 5a and 5b are side views corresponding to figs. 3a and 3b and shows in addition a second accessory being fixed to the fixation device at a respective relative position.

Figs 6a and 6b are a perspective view and a side view respectively of a first accessory.

Figs 7a and 7b are a perspective view and a side view respectively of a second accessory.

Fig. 8 is a perspective view of the fixation device shown in fig. 2 and illustrates a different first accessory being fixed thereto.

Detailed description of embodiments

[0036] The invention will now be described more fully hereinafter with reference to the accompanying drawings, in which certain embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided by way of example so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like elements throughout the description.

[0037] Fig. 1 illustrates an embodiment of the fixation device according to the invention. The fixation device 1 is entirely formed as an elongate profile element having essentially a constant cross section over its entire length. The shown fixation device may be preferably be manufactured by extrusion of a polymer material such as PVC. As will be explained further below the fixation device may also be manufactured by co-extrusion of two different polymer materials.

[0038] The fixation device 1, comprises a mounting portion 20 and a first fixation portion 40. The mounting portion 20 comprises mounting means 21, 22, 23 adapted to engage the front edge of a shelf (not shown) for the mounting of the fixation device to the shelf. In the shown example, the mounting means comprises three rearwardly projecting flanges 21, 22, 23. These flanges 21, 22, 23 are arranged engage a particular type of shelves, frequently used in supermarkets and the like. However, the mounting portion 20 may be provided with many different types and forms of mounting means adapted to engage different types of shelves. In a simple form (not shown), the mounting means comprises only a single rearwardly projecting horizontal flange which is arranged to rest on top of a horizontal shelf and to be attached thereto, e.g. by means of double sided adhesive tape.

[0039] The mounting portion further comprises a rear vertical wall 24 and a front vertical wall 25. The rear 24 and front 25 vertical walls extend in parallel with each other and are mutually connected means of an upper horizontal wall 26. The vertical walls 24, 25 and the upper horizontal wall 26 thus form a channel portion 27 which defines a downwardly open channel 28 which exhibits a lower longitudinal opening 29.

[0040] The first fixation portion 40 is pivotally connected to the mounting portion 20 by means of a hinge 41 which connects the junction between the upper wall 26 and the vertical front wall 25 with a horizontal first edge 42 of the fixation portion 40. In the shown example the hinge is formed of the same material as the rest of the fixation device 1. It is however also possible, and it may be advantageous that the hinge 41 is formed of another polymer material being co-coextruded with the polymer material forming the other parts of the fixation device. At such embodiments the hinge 41 extends over essentially the entire length of the fixation device. It is also possible to manufacture the mounting portion and the first fixation portion separately and to thereafter join these two portions by an adhesive, such as an melt adhesive which when hardened or cured is flexible such as to provide

the desired hinging properties. At the latter mentioned embodiments, the hinge may either extend over the entire length of the fixation device or it may be divided in to discrete hinge sections being distributed along the length of the fixation device.

[0041] The first fixation portion 40 further comprises a horizontal second edge 43, which in the exemplifying embodiment forms a free edge being arranged distal to the horizontal first edge 42 as seen in the cross section of the fixation device. The horizontal first 42 and second 43 edges extend mutually in parallel with each other, over essentially the entire length of the fixation device 1.

[0042] The first fixation portion 40 also comprises first fixation means 44, 45, 46 which are adapted to engage with a first accessory 60, 60' (see e.g. fig 2) for fixation of the first accessory to the fixation device 1. In the shown embodiment the first fixation means comprises a slightly forwardly convex front panel 44, a convexly curved upper edge portion 45 and a convexly curved lower edge portion 46. The convex front panel 44 exhibits a substantially larger radius of curvature than the upper and lower curved upper 45 and lower 46 edges. The lower curved edge 46 further exhibits a larger radius of curvature than the upper curved edge 45.

[0043] As best seen in figs 3a and 3b the first fixation portion 40 is, by means of the hinge 41, pivotal between a first angular position shown in fig. 3a and a second angular position shown in fig, 3b. In the first angular position, the horizontal second edge 43 is positioned in proximity to the front wall 25 of the mounting portion 20 and the front panel 44 is arranged generally in parallel with said vertical front wall 25. At the second angular position, the first fixation portion 40 has been rotated or pivoted counter clockwise (as seen in the drawings) approximately 45° such that the horizontal second edge 43 has assumed positon being distal to the front wall 25 of the mounting portion 20. At this second angular position, the front panel 44 of the first fixation portion 40 thus exhibits an angle of approx. 45 to said vertical front wall 25.

[0044] The fixation device 1 also comprises first angle retention means 50, which are arranged to retain the first fixation portion in said second angular position. In the exemplifying embodiment shown in the drawings, these angle retention means comprise a distance member 51 in the form of a tongue, which is pivotally connected to the rear side of the front panel 44 by means of a angle retention hinge 52. The angle retention hinge 52 may be formed in correspondence with any of the methods described above with reference to the hinge 41, connecting the first fixation portion 40 with the mounting portion 20. The angle retention means 50 further comprises an angle retention channel portion 53 being arranged at the mounting portion 20. In the example shown in the figures the angle retention channel portion 53 is arranged at the front side of the vertical front wall 25 of the mounting portion 20. The angle retention channel portion 53 extends essentially over the entire length of the fixation device and is adapted to receive a free end 54 of the distance member 51. This free end 54 is arranged distal to the angle retention hinge 52 and is configured as a hook for engagement in the angle retention channel portion 53. A forwardly projecting locking bead 55 is arranged at the front side of the vertical front wall 25 and extends over essentially the entire length of the fixation device 1. Either, some or all of the angle retention channel portion 53, the free end 54 of the distance member 51 and the locking bead 55 are somewhat resilient and their dimensions and mutual distances are adapted such the free end 54 may be snap-fitted into engagement with the angle retention channel portion 53. In this way, the free edge 54, the angle retention channel portion 53 and the locking bead 55 form first cooperating engagement means for retaining the free edge 54 of the distance member 51 in bearing contact with the mounting portion 20.

[0045] When the first fixation portion 40 has assumed the second angular position, illustrated in fig. 3b, the free end 53 of the distance member 51 may thus be snap-fitted into engagement with the angle retention channel portion 53. The distance member 51 then reliably maintains the first fixation portion 40 in said angular position for any desirable time. At this second angular position the fixation device may advantageously be positioned at shelves being arranged substantially below eye level and used for the fixation of electronic labels (not shown) by means of an electronic label holder 60 of the type illustrated in figs. 4a, 4b, 6a and 6b.

[0046] If it would be desired to arrange the first fixation portion 40 in the first angular position (as illustrated in figs. 3a and 4a) the free end 54 of the distance member 51 may readily by hand be snapped out of engagement with the angle retention channel portion and the distance member may be pivoted to lie generally in parallel with the front panel 44. Thereafter, the first fixation portion 40 may be pivoted clockwise (as seen in the figures) until it reaches the first angular position as shown in fig, 3a.

[0047] As best seen in figs 3a and 3b, the fixation device 1 also comprises second angle retention means which are arranged for maintaining the first fixation portion 40 in the first angular position. In the shown examples these second angel retention means are comprises a hook portion 47 formed at the horizontal second edge 43 of the first fixation portion 40 and a front wall channel portion 30 arranged at mounting portion 20, in proximity to the lower portion of the vertical front wall 25. The front wall channel portion 30 projects forwardly from the vertical front wall 25 and defines an upwardly open channel 31 which extends over essentially the entire length of the fixation device. The hook portion 47, the lower curved edge portion 46 and/or the front panel 44 of the first fixation portion 40 is somewhat resilient, such to allow the hook portion 47 and the free edge 43 to be snapped into engagement with the front wall channel portion 30. This resiliency further accomplishes that the hook portion 47 and the free edge 43 are pretensioned in the engagement directions such that the first fixation portion is securely retained in the first angular position by this engagement.

When the first fixation portion is to be again pivoted into the second angular position, the engagement between these second cooperating engagement means may readily be released manually by slightly lifting the hook portion 47 and the freed edge out of engagement with the front wall channel portion 30 and slightly pivoting the first fixation portion in the anti clock wise direction, as seen in the figures.

[0048] Figs. 2, 4a, 4b, 6a and 6b illustrate a first accessory, which is arranged to be fixed onto the first fixation portion 40 described above. The first accessory may form part of a system comprising a fixation device 1 as described above and any number of first accessories of the type shown in figs. 6a and 6b. Naturally, such a system may also comprise any number of other types of first accessories adapted to be fixed onto the first fixation portion 40. The system may further comprise any number of second accessories 70, which will be explained more in detail below.

[0049] An exemplifying of a first accessory is best seen in figs. 6a and 6b. Here the first accessory 60 constitutes a holder for an electronic label (not shown). The first accessory 60 is formed of a profile element having essentially a constant cross section over its entire length. The profile element may be manufactured by extrusion of a polymer material or by co-extrusion of two or more materials as described above. The first accessory 60 comprises a fixation section 60 and a label holder section 62. The label holder section is pivotally connected to the fixation section 61 by means of a hinge 62', which may be formed of a bridge with reduced material thickness of the same material as the rest of the second accessory or by a bridge made of another flexible material.

[0050] The cross section of the fixation section 61 generally corresponds to the cross section of the fixing device's first fixing portion 40 and has a slightly arced panel 63, an upper curved edge 64 and a lower curved edge 65. The curvatures of these portions essentially correspond to the curvatures of the front panel 44 the upper edge 45 and the lower edge 56 of the first fixation portion40. In addition the fixation section 61 has a grip portion 66, which is formed as a radially, outwardly projecting extension of the lower curved edge 65.

[0051] The label holder portion 62 comprises a rear wall 67, a top wall 68 which project forwardly from an upper edge of the rear wall and a bottom wall 69 projecting forwardly from a lower edge of the rear wall 67. An engagement flange 69' is arranged at the free end of the bottom wall and projects upwardly, towards the top wall 68. By this means a standardized electronic label (not shown) having a generally rectangular cross section with a lower engagement groove may be snap-fitted into engagement with the label holder section 62, in a manner which is known per se.

[0052] The first accessory 60 may readily be fixed onto the first fixation portion 40 of the fixation device 1, by first positioning the upper curved edge 64 around the edge 45 of the first fixation portion 40 and then pressing the lower curved edge 65 towards the first fixation portion 40, such that lower curved edge 65 snaps around edge 46 into engagement. This results in a secure fixation of the first accessory onto the first fixation portion 40 of the fixing device 1. For releasing the first accessory 60 it is sufficient to pull the grip portion 66 forwardly by using a finger, whereby the resiliency of the lower curved edge 65 will allow this edge to snap free from its engagement.

[0053] The arrangement of co-operating upper curved edges 45, 64 arranged on the first fixation portion 40 and on the fixation section 61 respectively, entails for certain advantages. When setting up a new shelf and also when re-arranging a shelf which has already been set up, it is often desirable to first temporarily position the shelf accessories at approximate positions along the shelf. Thereafter the accessories are repositioned to their final positions in regard of e.g. the overall space efficiency and the overall visual appearance of the shelf. This repositioning is normally carried out in an iterative manner such that each accessory is repositioned several times. In cases where the shelf accessories need to be securely fixed to the fixation device at each temporary position and removed at each repositioning, this process may be very cumbersome and time consuming since each fixation and each removal requires a certain manual operation. However, with the arrangement of co-operating upper curved edges 45, 64 this process is greatly facilitated. The co-operating upper curved edges 45, 64 allows for that the accessories may be temporarily hung on the fixation device 1 without pushing the lower curved edge 65 of the accessory into secure engagement with the lower curved edge 46 of the fixation portion 40. When the accessories are hung in such a manner, they may very easily be repositioned along the fixation device 1, simply by using a finger or the like to push each accessory for displacing it along the fixation device 1, to any desired temporary or final position. Once all accessories have been displaced to their final positions, they may readily be securely fixed to the fixation device 1, simply by pushing the lower curved edge 65 of the accessory into engagement with the lower curved edge of the fixation portion 40 of the fixation device. When the accessories have been finally fixed to the fixation device in such a manner, the pretensional friction between the fixation portion 40 of the fixation device and the fixation section 61 of the accessory efficiently prevents any unintentional or undesired displacement of the accessories along the fixation device and the shelf. At the same time the engagement accomplished by the co-operating upper 45, 64 and lower 46, 65 curved edges securely holds the accessories to the fixation device 1 and prevents any unintentional or undesired removal or falling off.

[0054] As best seen in fig. 4a the label holder portion 62 of the first accessory 60 has a greater height than the fixation device 1, such that the label holder portion may impede visibility of or access to products being placed on a shelf arranged directly below the shelf carrying the fixation device. However the hinge 62' allows the label

holder portion 62 to be pivoted up in front of the fixation device 1, such as to readily resolve any such problems.

[0055] Fig. 8 illustrates another type of first accessory 600. At this embodiment the first accessory 600 constitutes a sign holder which has been manufactured by injection moulding of a polymer material. This first accessory 600 comprises a fixation section 610 and a sign holder section 620, which is arranged for holding a printed paper or plastic sheet formed sign or flag. The fixation section 610 comprises an upper curved edge 640, the curvature of which corresponds to the curvature of the upper edge 45 of the fixation device's 1 fixations portion 40 and a lower curved edge 650. The fixation section 610 also comprises a front panel 630 and an intermediate curved portion 651 which is arranged between the front panel 610 and the lower curved edge 650. The curvature of both the lower curved edge 650 and the intermediate curved portion 651 corresponds to the curvature of the first fixation portion's lower edge 46. By this means the first accessory 600 may be fixed to the first fixation portion 40 by means of the upper curved edge 640 engaging upper edge 45 and lower curved edge 650 or intermediate curved portion engaging lower edge 46. It is thus possible to fix the first accessory 600 to the fixation device 1 at two different angular positions. Preferably the distance between the lower curved portion 650 and the intermediate curved portion 651 corresponds to the angle between the first and second angular positions that the first fixation portion may assume relative to the mounting portion 20. This allows for that a sign, a flag or the like which is held by the second accessory 600 may be kept in e.g. a horizontal or vertical orientation irrespective of whether the first fixation portion 40 is positioned in its first or second angular position relative to the mounting portion and the shelf.

[0056] The profile element forming the fixation device 1 further comprises a second fixation portion which, in the illustrated exemplifying embodiments, is formed by the channel portion 27 being defined by the vertical walls 24, 25 and the upper horizontal wall 26. This second fixation portion 27 may be used for releasable fixation of second accessories 70 (see fig. 2, 5a, 5b, 7a and 7b). The second fixation portion 27 comprises second fixation means which, in the exemplifying embodiments, comprise the vertical front wall 25, an upper fixation ridge 32 and a lower fixation ridge 33. The fixation rides 32, 33 extend in parallel with each other and with the longitudinal direction of the profile element 1, along the front side of vertical rear wall 24. The ridges 32, 33 exhibits a saw tooth shaped or triangular cross section which projects into the channel 28 and tapers downwardly, towards the channel opening 29.

[0057] The second accessory 70 which is arranged to be fixed to the fixation device 1, by means of the second fixation portion is best seen in figs 7a and 7b. The second accessory 70 is formed as a profile element with essentially constant cross section along its entire length. The second accessory may preferably be manufactured by extrusion of a polymer material. The second accessory comprises a fixation flange 71 and a functional portion 72. In the shown example the functional portion 72 forms a holder for an elongated light source in the form an LED-strip (not shown). Such LED-strips may be used for illuminating the goods and information labels arranged at a shelf being positioned directly below the shelf to which the fixation device is fixed.

[0058] The fixation flange 71 extends over essentially the entire length of the second accessory. In the shown example, the second accessory has a length which corresponds to the length pf the fixation device. This may be advantageous when the second accessory is used for fixing elongated flexible components, such as an LED-strip along the shelf. However, the second accessory may also be formed as a short component, e.g. for holding only a section of an elongate component or for holding other items, such as coupons, product samples or fragrance testers. It is thus readily understood that the second accessory may have any length depending on its purpose and especially the operational portion thereof may take any suitable form also depending on what it is to be used for.

[0059] The fixation flange 71 has a vertical height which essentially corresponds to the vertical height or depth of the channel 28. The fixation flange 71 is provided with a number of longitudinal second accessory ridges 73 which to form and size correspond to the fixation ridges 32, 33. However, in contrast to the fixation ridges 32, 33, the second accessory ridges 72 tappers upwardly. The total thickness of the fixation flange 71, at the second accessory ridges 73 is essentially equal to the width of the channel 28, i.e. to the distance between the insides of vertical rear wall 24 and vertical front wall 25.

[0060] The arrangement of the second fixation portion of the fixing device 1 and the fixation flange 71 of the second accessory 70, thus allows for that the flange 71 may be introduced from below into the channel 28. The resiliency of the vertical rear 24 and front 25 walls will, in combination of the opposed tapering directions of fixing ridges 32, 33 and second accessory ridges 73, allow the second accessory ridges 73 to snap over the fixation ridges 32, 33. When the fixation flange 71 has been inserted into the channel 28, contact between the horizontal surfaces of the fixation ridges 32, 33 and corresponding second accessory ridges 73 prevents the flange 71 from being withdrawn from the channel 28. The second accessory 70 is thus securely fixed to the fixation device 1. However, if it would be desirable to remove the second accessory, it is possible to manually separate the vertical rear 24 and front 25 walls from each other, thereby disengaging the second accessory ridges 73 from the fixation ridges 32, 33 in order to release the second accessory 70.

[0061] Grace to the combination of at least one ridge being arranged on one of the second fixation portion and the fixation flange and at least two ridges being arranged on the other, this arrangement allows for that the second

accessory may be fixed in any one of at least two possible different positions relative to the fixation device and the shelf. By increasing the number of ridges arranged at either the second fixation portion or the fixation flange the number of possible positions increases correspondingly. This entails for a great advantage since it is frequently desirable to fix different second accessories at different positions, e.g. at different distances relative to the shelf, depending on the type of second accessories and the application.

[0062] In the shown example, the arrangement of two fixation ridges 32,33 being arranged at the second fixation portion of the fixation device, does per se not contribute to the number of possible positions for the second accessory 70. However the dual arrangement of fixation ridges enhances the engagement and prevents the fixation flange 71 and the second accessory from pivoting relative to the fixation device 70, about an axis which is parallel to the ridges.

[0063] Naturally, the arrangement, number and form of the ridges on the second fixation portion and on the fixation flange may be varied, as long as there is at least one ridge arranged on one of the two members and at least two ridges on the other.

[0064] Above, the invention has been described with reference to a few embodiments. However, as is readily appreciated by a person skilled in the art, other embodiments than the ones described above are equally possible within the scope of the invention, as defined by the appended patent claims. For example, the geometry of the first and second fixation portions may be varied freely as long as they allow fixation of a first and second accessory respectively. Both the first and the second accessories may have any desirable form and function. Especially, their functional portion may vary greatly depending on the purpose for which they are used. Additionally, the first angular retention means may comprise movable members which are fixed to the mounting portion of the fixation device and which may be brought into supporting contact with the first fixation portion.

Claims

1. Fixation device (1) for releasable fixation of shelf accessories (60, 70, 600) to a shelf and comprising an elongated profile element adapted to be mounted along the front edge of a shelf, the profile element comprising;

- a mounting portion (20) provided with mounting means (21,22, 23) adapted to engage the front edge of a shelf; and
- a first fixation portion (40) provided with first fixation means (45, 46) adapted to engage with a plurality of first accessories (60) for releasable fixation of the first accessories to the fixation device, **characterized in that**
- the profile element comprises a second fixation portion (27) having second fixations means (25, 32, 33) adapted to engage with a plurality of second accessories (70) for releasable fixation of the second accessories to the fixation device (1), **and in that** the second fixation means (25, 32, 33) is adapted to allow fixation of the second accessory (70) in at least two different positions relative to the shelf, when the profile element is mounted to a shelf.

2. Fixation device according to claim 1, wherein the second fixation means (25, 32, 33) is adapted to allow fixation of the second accessory (70) at different distances from the shelf, when the profile element is mounted to a shelf.

3. Fixation device according to claim 1 or 2, wherein the second fixation portion (27) extends over essentially the entire length of the profile element.

4. Fixation device according to any of claims 1-3, wherein the second fixation portion (27) is arranged at the mounting portion (20).

5. Fixation device according to any of claims 1-4, wherein the second fixation portion (27) comprises a second accessory channel portion (27) defining an elongated longitudinally open channel (28).

6. Fixation device according to any of claims 1-5, wherein the second fixation means comprises at least one ridge (32, 33).

7. Fixation device according to claim 6, wherein the at least one ridge projects into a channel (28).

8. Fixation device according to any of claims 1-7, wherein the cross section of the first fixation portion (40) exhibits an upper edge portion (45) and a lower edge portion (46), which edge portions form part of the first fixation portion's fixation means (45, 46) and are adapted to allow a plurality of fist accessories (60, 600) to be engaged by snap-fitting onto the first fixation portion (40).

9. Fixation device according to claim 8, wherein at least one of the upper (45) and lower (46) edge portions is convexly curved.

10. Fixation device according to any of claims 1-9, wherein the first fixation portion (40) is pivotally connected to the mounting portion (20) and movable relative to the mounting portion, between a first angular position and a second angular position.

11. Fixation device according to claim 10, comprising first angle retention (50) means for retaining the fix-

ation portion (40) in one of the first and the second angular position.

12. Fixation device according to claim 11, comprising second angular retention means (30, 31, 43, 47) for releasable retention of the first fixation portion (40) in the other of the first and second angular position.

13. System for releasable fixation of shelf accessories to a shelf, comprising a profile element according to any of claims 1-12, at least one first accessory (60, 600) which comprises first accessory engagement means (64, 65, 640, 650, 651) adapted to cooperate with the first fixation means (45, 46) for releasable fixation of the first accessory to the first fixation portion (40) and at least one second accessory (70) comprising second accessory fixation means (71, 73) adapted to cooperate with the second fixation means (25, 32, 33) for releasable fixation of the second accessory to the second fixation portion (20).

14. System according to claim 13, wherein one of the second fixation means (25, 32, 33) and the second accessory fixation means (71, 73) comprises at least one ridge (32, 33) and the other comprises at least two ridges (73), the ridges being arranged to allow fixation of the second accessory at two or more different distances from the shelf, when the fixation device (1) is mounted to the shelf.

15. System according to claim 13 or 14, wherein the first accessory (60, 600) is a label holder and the second accessory (70) is a holder for a light source.

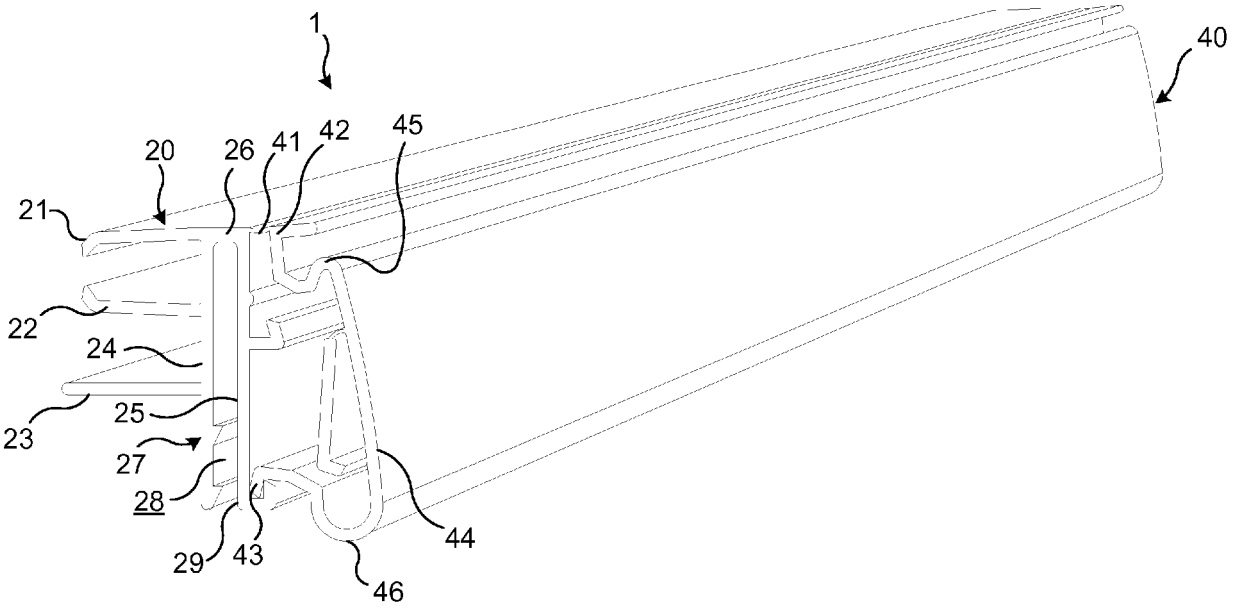

Fig. 1

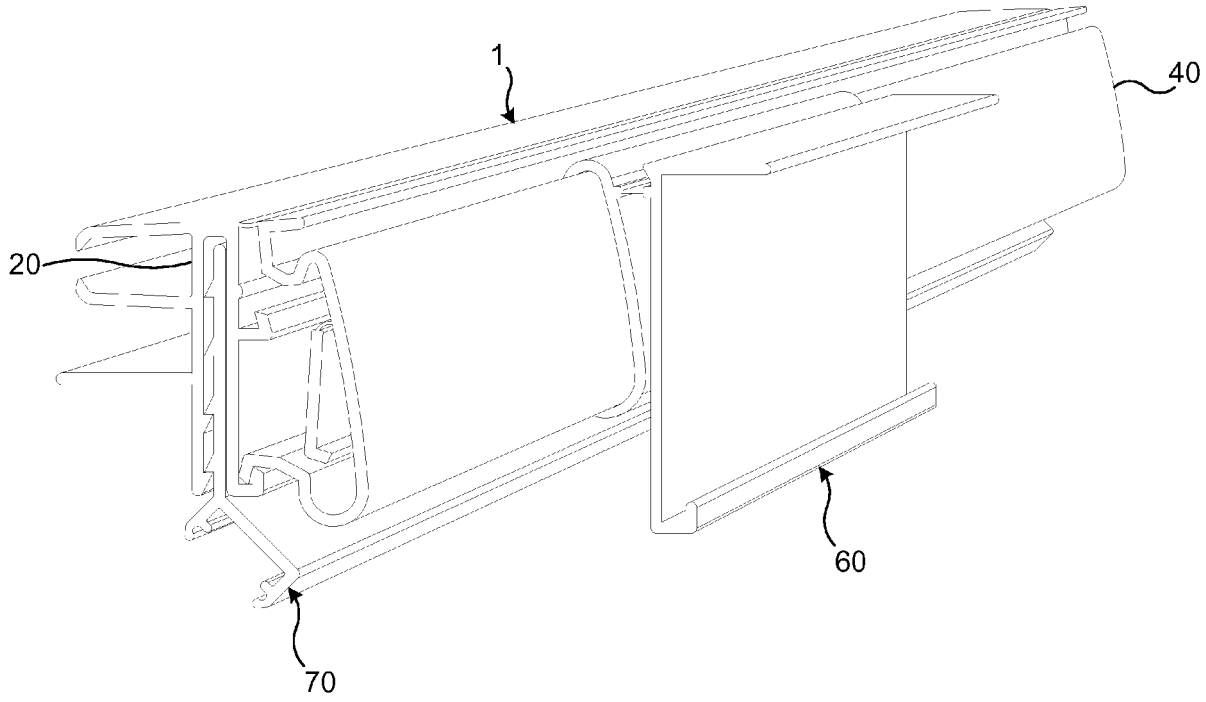

Fig. 2

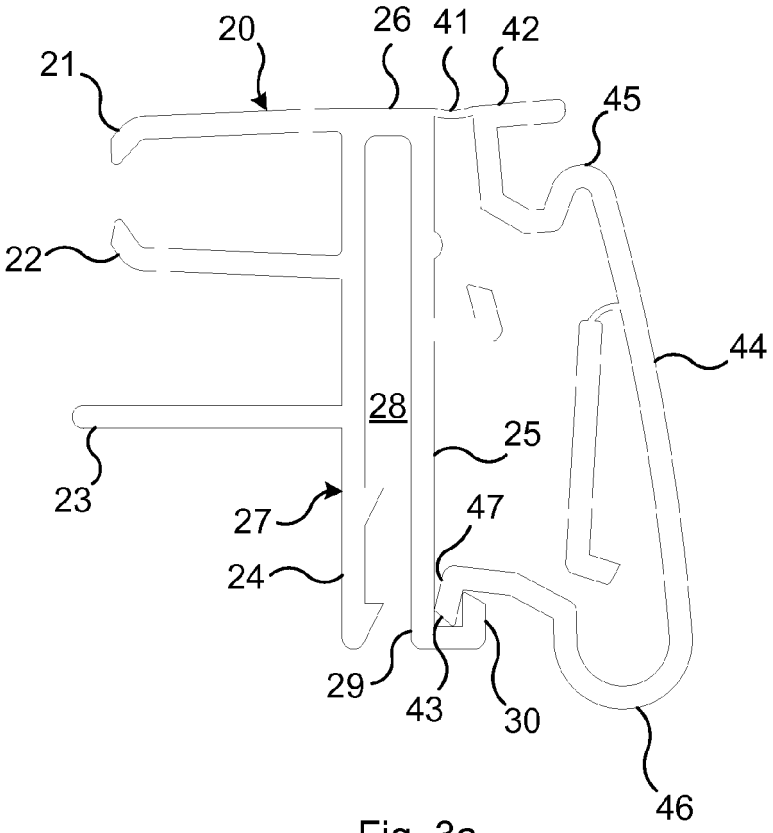
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Fig. 3a

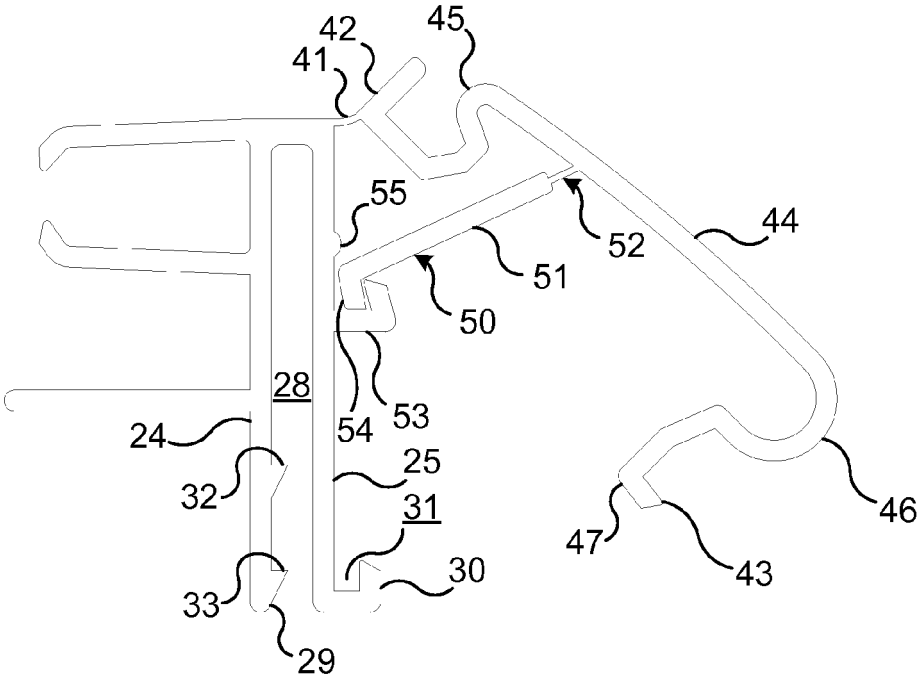
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Fig. 3b

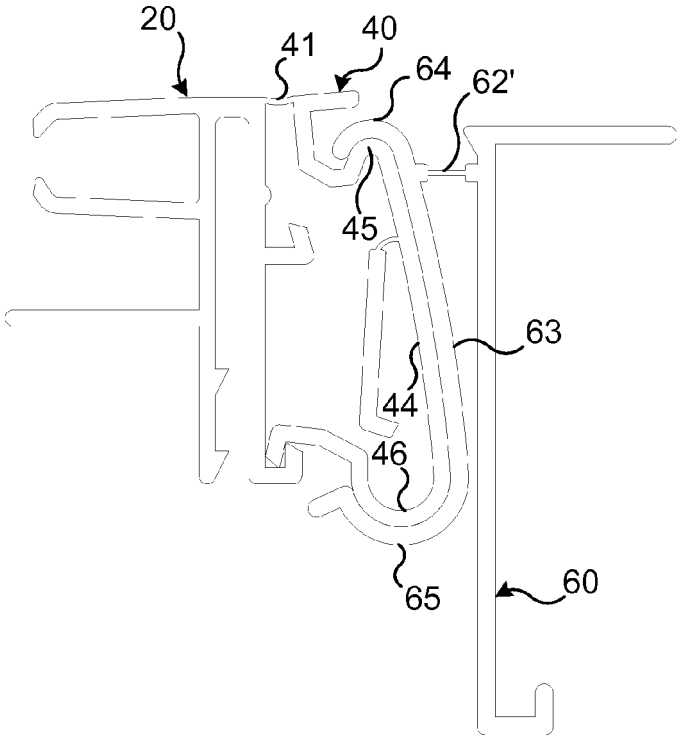

Fig. 4a

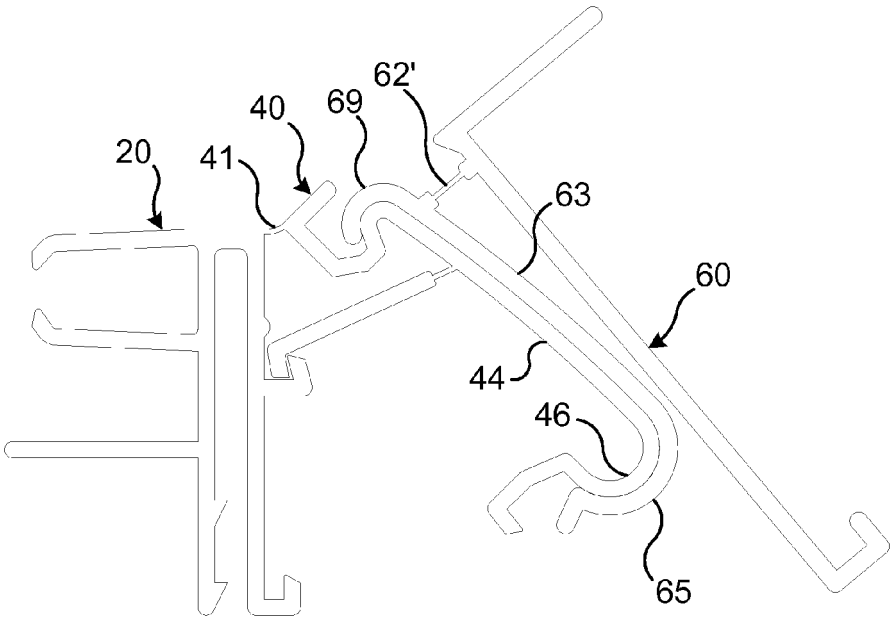

Fig. 4b

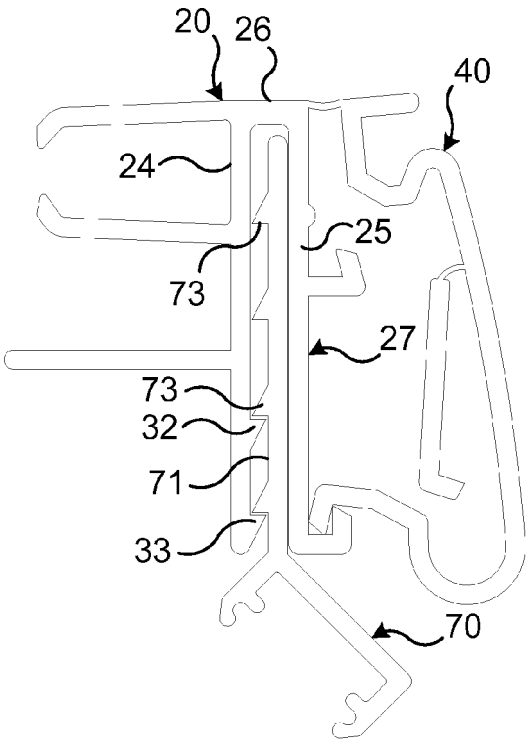

Fig. 5a

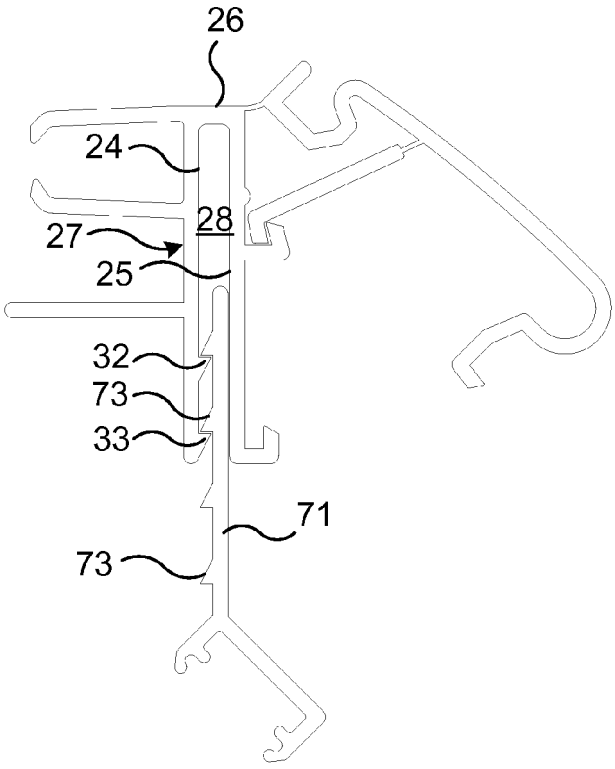

Fig. 5b

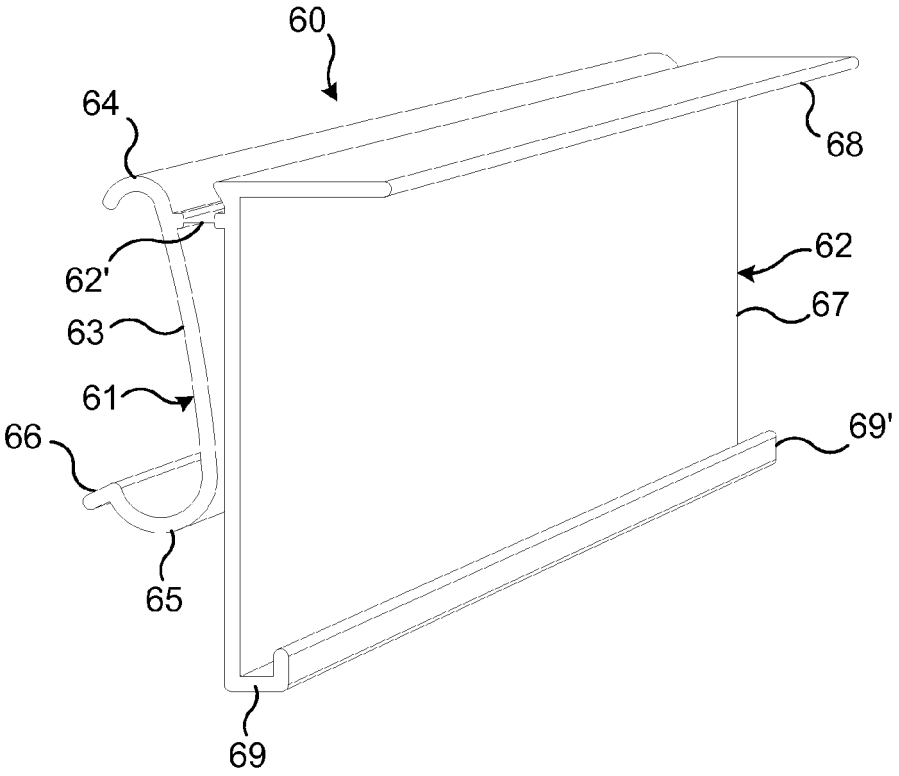

Fig. 6a

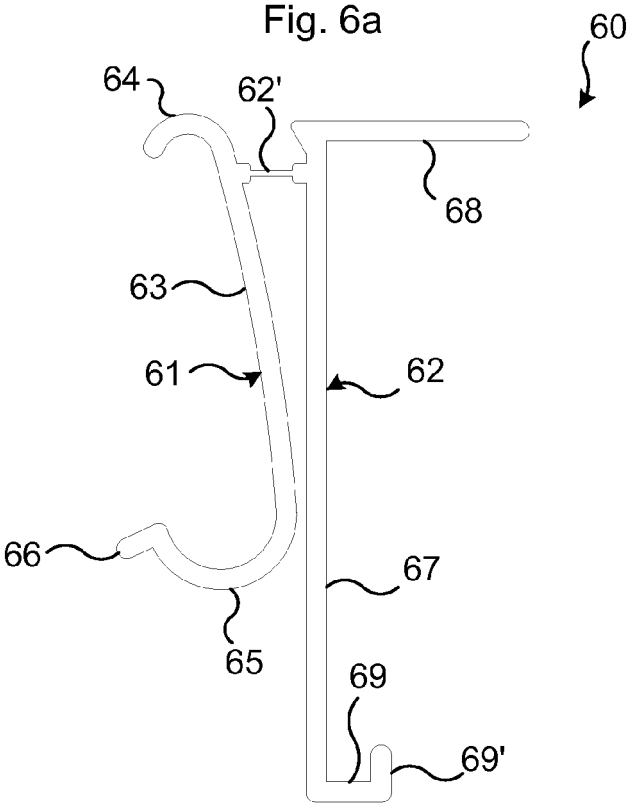

Fig. 6b

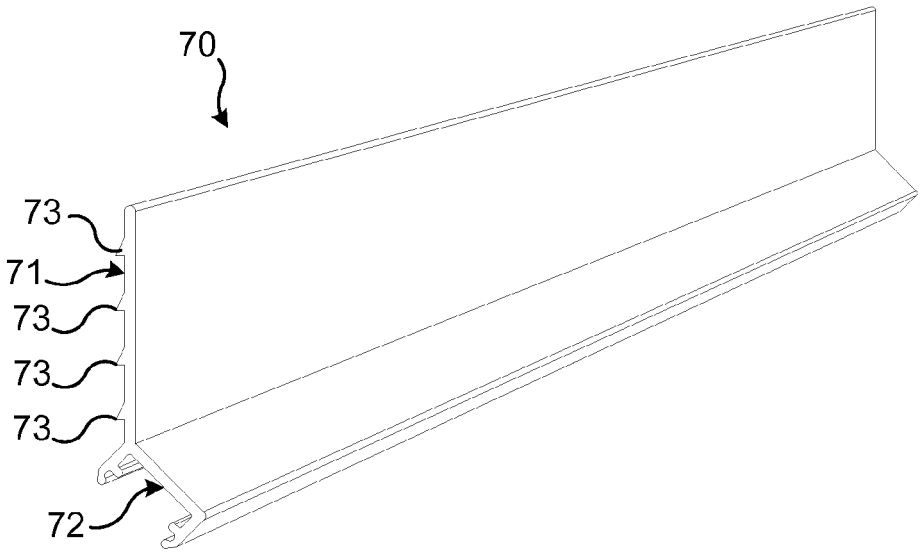

Fig. 7a

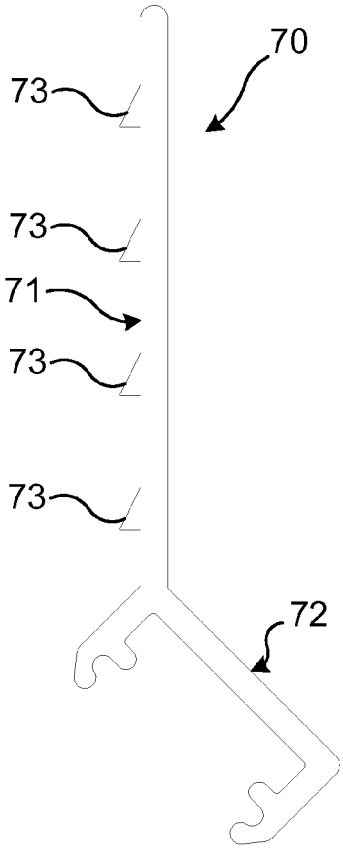

Fig. 7b

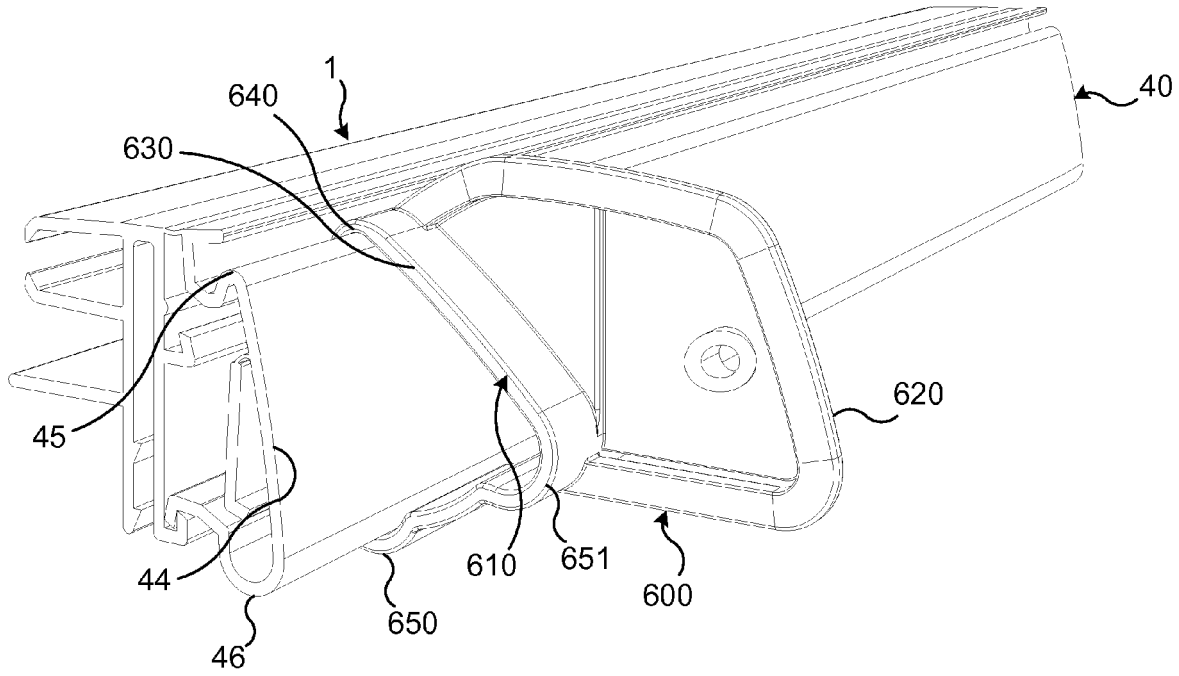

Fig. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 14 19 9184

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2008/098337 A1 (KOST KLIP MFG LTD [CA]; THATCHER KRISTEN [CA]; HINES PHILIP J [CA]) 21 August 2008 (2008-08-21) * the whole document *	1-15	INV. G09F3/20 ADD. A47F5/00
A	EP 0 392 137 A2 (REHAU AG & CO [DE]) 17 October 1990 (1990-10-17) * figure 1b *	12	

TECHNICAL FIELDS SEARCHED (IPC)

G09F
A47F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	9 June 2015	Ottesen, Rune

CATEGORY OF CITED DOCUMENTS

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D : document cited in the application
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EPO FORM 1503 03.82 (P04C01)

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09-06-2015

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

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- WO 2007073294 A1 **[0009]**