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(54) Label Holders.

(57) A holder for a label, the holder comprising a body portion 1 adapting releasably to receive a label 2 and fastening means 3 operable, in use, to secure the holder to an article 23 to be labelled, the fastening means being in the form of a substantially rigid elongate strap 3 attached at one end to the body portion 1 and attachable at the other end also to the body portion having at least partially encircled a portion 25 of the article 23 to which the holder is to be applied, the strap 3 being provided with a plurality of generally transverse fold lines 14-19 which in use enable the strap 3 to fold around said portion 25 of the article 23 to which the holder is applied, the strap 3 then being attached to the body portion 1 to secure the holder in position.

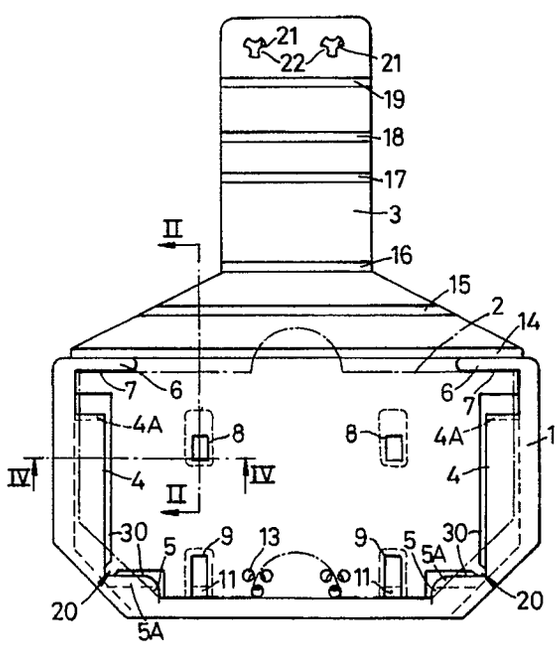

Fig. 1

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LABEL HOLDERS

This invention relates to label holders and more particularly, but not exclusively, to such holders for use with crates employed to transport merchandise from a depot or warehouse to a shop or store.

Large retail establishments tend to hold merchandise in one or more large distribution depots or warehouses and fulfil individual shop or store orders therefrom, the merchandise being carried in crates. For a given establishment, a very wide variety of merchandise may be involved, from food to clothing for example, but essentially one standard crate is employed as regards length and breadth although the depth thereof may vary. Typically, the crates are moulded from a synthetic plastics material and although of the basic standard dimensions of length and breadth referred to above, they may have rims of differing thicknesses. The crates are designed to stack one within another when empty in order to maximise the number of crates which can be loaded into a given space for return to the depot or warehouse. In use, the crates can be supported one above the other in stacked form, with means being provided on each crate to support the crate immediately thereabove. The support means may be in the form of a pivotable bar disposed at or towards each end of the crate and which may be swung to and from the operative position, or the support means may be provided by the crate itself, for example by the crate being designed to stack within another crate when similarly oriented with respect thereto but to be supported by the other crate when turned through 180° with respect thereto.

Each crate needs to be provided with a label bearing information as to the contents thereof, these labels normally being applied at the depot or warehouse and then removed prior to the crate being returned from the shop or store.

The location of the label on each crate needs to be standardised so that the insertion and removal of the labels can be carried out as expeditiously as possible and also so that the labels can be readily accessed for purposes of sorting and despatch both at the depot or warehouse and the shop or store. The growing trend towards using bar codes means that this form of presentation of the information as regards the contents of a given crate can be used which makes the standardisation of location of the label even more essential so that a stack of crates can be scanned quickly by electronic scanning means.

The crates, and hence labels, have to withstand a relatively harsh physical environment, particularly at the depot or warehouse end where it is not unusual for stacks of some 20 - 30 crates to be moved by fork-lift trucks within the depot or warehouse and then into the transporting vehicle. The stacking of crates one on top of the other, whether empty of full, and the movement of stacks by fork-lift trucks or other means, gives rise to a high incidence of impacts between crates in a given stack and between stacks themselves, whereby labels and any holders therefor are likely to be damaged if not positively located.

Previously, labels have been adhered directly to the crates but this has not proved satisfactory because the labels become torn, defaced or actually removed due to the harsh physical treatment referred to above. In cases where holders for labels have been employed, the holders themselves have been subjected to the harsh physical treatment with a result that they have become damaged and thus rendered useless. Even if a holder escapes damage, the vibration which the crate is subjected to during loading and subsequent transportation from the depot or warehouse to the shop or store often results in the label becoming dislodged with the attendant time-consuming operation required at the shop or store to determine the contents of an unlabelled crate.

There is thus a much felt want for a means of labelling a crate which will withstand the type of environment discussed above and have substantially universal application so as to avoid the need for different devices to suit crates having slightly different characteristics, as regards rim size for example, even though they are basically standard as regards length and breadth.

According to one aspect of the present invention there is provided a holder for a label, the holder comprising a body portion adapted releasably to receive a label, and fastening means operable, in use, to secure the holder to an article to be labelled, the fastening means being in the form of a substantially rigid elongate strap attached at one end to the body portion and attachable at the other end also to the body portion having at least partially encircled a portion of the article to which the holder is to be applied, the strap being provided with a plurality of generally transverse fold lines which in use enable the strap to fold around said portion of the article to which the holder is applied, the strap then being attached to the body portion to secure the holder in position.

The generally transverse fold lines may be formed by creasing or kerfing but preferably are provided by so-called living hinges. Living hinges are areas of reduced material thickness to provide the required flexibility or hinge but which have sufficient structural strength not to fracture or split

when the adjacent portions joined by the hinge are moved relative to one another. The fold lines are preferably arranged so that the strap can accommodate a plurality of thicknesses of said portion of the article which, in use, it at least partially encircles. To this end, the strap may be provided with a first set of a plurality of relatively closely spaced fold lines at the end attached to the body portion and with a second set of a plurality of relatively closely spaced fold lines at the opposite end of the strap which is attachable also to the body portion. Once the strap has been folded so as least partially to encircle said portion of the article to which the holder is applied and attached to the body portion, the rigidity of the strap secures the holder about said portion of the article as well as along said portion and furthermore, resists any impact which the body portion might receive from above, below, or from either side.

The strap is preferably provided with attachment means at the end which is attachable to the body portion of the holder, these attachment means being of a substantially permanent nature once engaged. The attachment means may comprise cooperable portions provided on the body portion of the holder and on the strap. The attachment once engaged or rendered operative may be made permanent by ultrasonic welding, for example.

According to a second aspect of the present invention there is provided a holder for a label, the holder comprising a body portion adapted releasably to receive a label, and means for attaching the holder to an article to be labelled, ramp means being provided on the back of the holder which, in use, is adjacent the article to which the holder is applied, the ramp means extending from the rear of the holder and tapering towards the lower edge of the holder, whereby the ramp means serve to move the holder away from the article to which it is applied if impacted from below.

With this arrangement, when a labelled crate is stacked within another crate, then if the upper edge of the lower crate happens to engage the label holder of the upper crate, that edge will tend to ride up the ramp means and thus force the label holder away from the associated face of the crate to which it is attached, thereby preventing the label holder from becoming wedged between the crate to which it is applied and the crate immediately below. If such wedging were to occur, then damage to the label holder may be occasioned and/or the accessibility thereof reduced. Spacers may be provided on the rear of the body portion and these may be tapered towards the end to which the strap is attached to assist in movement of the holder away from the crate in the circumstances under discussion.

The means for securing the holder to an article to be labelled may be in the form of the fastening means according to the first aspect of the present invention but alternatively may in the form of plate attachable to the rear of body portion of the label holder with, in use, a portion of the article to which the holder is attached sandwiched therebetween.

The holder according to both aspects of the invention is preferably provided with chamfered side edges which act as deflector means in order to deflect an object which may impact the holder from one side or the other and thus reduce the likelihood of the holder becoming damaged and/or dislodged. Furthermore, the body portion of the holder according to either the first or second aspect of the present invention may comprise a rear portion operable to support a label applied to the holder, and side and bottom portions spaced from the rear portion so as to provide slot means for receiving corresponding edges of a label applied to the holder. Preferably, the side portions terminate short of the upper edge of the holder and both the side and bottom portions have chamfered top edges to provide lead-ins for a label. The body portion of the holder is provided at or towards its upper edge with one or more ribs or other extensions under which a label snaps when being inserted into the holder. Preferably, two spaced apart ribs or other extensions are provided, with the label having a tab extending from its upper edge and being locatable between the spaced ribs or extensions, the tab facilitating insertion and removal of a label with respect to the holder.

The holder according to the first and second aspect of the present invention is preferably moulded as a single item and high density polythene has been found a satisfactory material.

A label holder in accordance with the present invention represents a significant advance in the art in as much as a generally universal label holder is provided to fit at least a number of crates with different sizes of rims and yet once fixed in position will resist impacts from all directions, thus maintaining the label in a given position and orientation. In addition, the label holder retains a label in position during transit so that any vibrational movement does not result in the label becoming detached from the holder.

Label holders constructed in accordance with the present invention will now be described in greater detail, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is a front view of one embodiment of label holder,

Figure 2 is a section, to a larger scale, along the line II-II of Figure 1,

Figure 3 is a plan view from below of Figure 1,

Figure 4 is a section, to a larger scale, along the line IV-IV of Figure 1,

Figure 5 is a side view of Figure 1,

Figure 6 is a rear view of the label holder of Figure 1,

Figure 7 is a partial perspective view of a number of stacked crates to which the label holder of Figure 1 has been applied,

Figure 8 is a front view of a preferred embodiment of the invention,

Figure 9 is a side view of Figure 8, and

Figure 10 is a plan view of Figure 8.

With reference to Figures 1 to 7 of the drawings, there is illustrated a label holder designed for application to the rims of crates for holding merchandise and for transporting the same between a depot or warehouse and a shop or store. The label holder is produced as a single item by moulding and one material found satisfactory is a high density polythene.

The label holder comprises a body portion 1 adapted releasably to receive a label 2 which is indicated in full in Figure 7 but only in outline in Figure 1. The label holder further comprises fastening means in the form of a substantially rigid elongate strap 3 which is formed integrally with, and extends from, the upper edge of the body portion 1 and tapers inwardly for a distance from that edge.

The body portion 1 is generally planar and rectangular (save for cut-away lower corners) with separate portions 4 of each of the two side edges and portions 5 of the lower edge being spaced forwardly from the front surface of the body portion 1 in order to provide slots 10 (Figure 4) to receive corresponding portions of the side edges and bottom edge of the label 2. The adjacent side and lower portions 4 and 5 are interrupted by portions 20 which serve to strengthen the cut-away corners of the body portion 1. The widths of the portions 4 and 5 are less than the corresponding cut-away portions of the body in order to provide specific gaps 30. This avoids the possibility of the edges of the portions 4 and 5 locking with the corresponding edges of the cut-away portions upon distortion of the body portion 1 which locking would close the slots 10 and prevent entry of a label 2. The top edges of the portions 4 and 5 are chamfered at 4A and 5A, respectively, to provide lead-ins for a label. The front face of the body portion 1 is provided with two spaced extensions in the form of ribs 6 which have a lower edge 7 (Figure 5) for a purpose to be described. The side edges of the portions 4 and 5 are chamfered.

The rear face of the body portion 1 of the label holder is provided with a number of extensions, the first being in the form of a pair of spaced apart spacers 8 which serve to space the body portion of the label holder from the crate or other article to which, in use, it is attached. A further pair of extensions 9 is also provided on the rear face of the body portion 1 of the label holder, these extensions extending a slightly greater distance from the rear face of the body portion 1 than the spacers 8. Furthermore, the extensions 9 taper towards the bottom edge of the body portion 1 to provide ramps 11 for a purpose to be described. A third pair of extensions are provided on the rear face of the body portion 1 of the label holder in the form of two cylindrical members or pegs 12 provided with domed ends and three equispaced arcuate undercuts 13 terminating short of the outer ends of the members.

Turning now to the strap 3, this is provided with six living hinges designated 14-19, each of these hinges being formed by areas of reduced material thickness as is more readily seen from Figure 5 of the drawings. At the outer end of the strap 3 there is provided a pair of spaced apertures 21 which are generally circular but have three equispaced arcuate portions 22 extending inwardly into the respective apertures. The apertures 21 are spaced apart by the same amount as the pegs 12 on the rear face of the body portion 1 of the label holder and form therewith complementary portions of the attachment means.

As already mentioned, the label holder illustrated in the drawings is designed for use with crates for holding merchandise and Figure 7 illustrates three such crates 23 which are empty and are stacked one within another. The ends of each crate 23 are provided with three apertures 24 below the rim 25 thereof and the label holders are applied to the rim at the location of the left-hand aperture 24. The crates 23 are of the type having a pivotal rod 26 at each end, each rod being movable so as to span the opposed sides of the crate and thus provide supports for the crate disposed thereabove when full crates are stacked one above the other. A label holder is applied to a crate by folding the strap 3 over the rim 25 of the crate and passing the apertured end through the corresponding aperture 24 in the crate and snapping the apertures 21 over the cylindrical members 12 so that the arcuate portions 22 engaged the undercuts 12 and thus provide an essentially permanent attachment of the label holder on the crate. The various living hinges 14-19 permit this folding over of the strap 3 and the number and disposition of these hinges are such as to accommodate a variety of different sizes of crate rim 25 so that a different label holder does not have to be provided for each size of rim.

When in position on a crate, the spacers 8 serve to space the label holder from the adjacent side or end of the crate and the substantially rigid strap 3 resists essentially any movement of the

holder but particularly sideways movement, whereby the label holders are retained in position. The upper ends of the spacers 8 normally engage the undersides of the rims 25, and the ends of the straps 3 attached to the top edge of the body portions 1 lie generally flat on top of the rims 25 so as not to impede the label holders of a crate stacked immediately thereabove.

Once a crate has been filled with merchandise, it is necessary to identify the contents thereof and to this end, a label 2 is furnished with the appropriate information either by printing and/or in bar code form or indeed in any other form. The label 3 is then inserted into the label holder by sliding the edges into the slots provided by the portions 4 and 5 (the chamfers 4A and 5A helping to lead-in the label) and snapping the upper edge of the label under the ribs 6 so as to engage the lower edges 7 thereof. Thus, the label 3 is positively retained in position and will not become dislodged due to vibrations, for example, during handling and transportation. The labels 3 are conveniently cut from a strip of card or other material and provided with a tab 23 for ease of insertion and removal although this is not essential.

Should a label holder receive an impact from either side during handling, the chamfered outer edges of the portions 4 tend to deflect the impacting item and thus minimise damage to the label holder. The cut-away corners also minimise the number of impacts likely to occur. When the crates 23 are being stacked, either full or empty, and a label holder is impacted from below, for example by the rim of a crate therebelow which often happens when being stacked empty, then the ramp means 11 on the extensions 9 serve to deflect the label holder outwardly from the associated end of the crate 23 to which it is attached so as both to avoid damage to the label holder but, more importantly, to prevent a label holder becoming wedged between the crate to which it is attached and a crate stacked therebelow which could prevent insertion and removal of a label 2 and/or the reading of the information contained on that label. If the information is provided on the labels 2 by bar codes, for example, then the labels can be scanned electronically in order to determine the contents of a given load, whereby it is particularly important in this respect that the labels are presented at substantially the same position on each crate in order to effect expeditious scanning. The positive holding of a label 2 within the label holder has been found to advantageous as has the holder itself by virtue of its resistance to impacts from all directions and to the generally universal nature of the strap 3 which makes it suitable for a range of crate rim sizes.

Referring now to Figures 8 to 10, these show a preferred embodiment of label holder in accordance with the present invention. Although the embodiment of Figures 1 to 7 positively retains a label 2 as described, it has been found that when the holder is used in a damp environment, for example in cold store, the label if made of paper or card becomes damp and if subjected to an impact has a tendency to tear and/or be scuffed out of the holder, whereby the intelligence carried by that label is lost. To overcome this problem, the upper edges of the side portions 4 (the same reference numerals are used for like components) are interconnected by a bar 31 which is also spaced from the front surface of the body portion 1 of the holder and thus forms part of the slots 10 for receiving a label 2 (not shown in Figures 8 to 10). The bar 31 serves both to protect a label from impact and to prevent a label from being torn or scuffed out of the holder 1 should it in fact still be subjected to a direct impact.

The label holder of Figures 8 to 10 is otherwise very similar to that of Figures 1 to 7, although the cut-away portions of the body 1 corresponding to the side and lower portions 4 and 5 have been dispensed with, as have the ribs 6, and the spacers 8 and extensions 9 are each in the form of a pair of closely-spaced planar members 8′ and 9′ with a ramp 11 being provided, as before, on the extensions 9′. In the embodiment of Figures 8 to 10, the depth of the spacers 8′ is slightly less than that of the extensions 9′.

The invention has been discussed primarily in connection with crates for holding merchandise but is applicable to any item requiring labelling and having appropriate means to receive the label holder. Some merchandise itself would be suitable to receive the label holder direct, for example the handlebars or other component of a bicycle, tricycle or motorbike, or the rim of mobile trolleys used in stores and other establishments to transport merchandise from storage to shop floor. These trolleys are often in the form of wheeled bases with relatively high sidewalls, which may be of mesh or in the form of a tarpaulin (or a combination thereof), to retain the merchandise during transit.

Claims

1. A holder for a label, the holder comprising a body portion adapted releasably to receive a label, and fastening means operable, in use, to secure the holder to an article to be labelled, the fastening means being in the form of a substantially rigid elongate strap attached at one end to the body portion and attachable at the other end also to the body portion having at least partially encircled a portion of the article to which the holder is to be

applied, the strap being provided with a plurality of generally transverse fold lines which in use enable the strap to fold around said portion of the article to which the holder is applied, the strap then being attached to the body portion to secure the holder in position.

2. A label holder according to claim 1, wherein the strap is provided with a first set of a plurality of fold lines at the end attached to the body portion and a second set of a plurality of fold lines at the opposite end.

3. A label holder according to claim 2, wherein one fold line of the first set is at the junction between the end of the strap and the body portion to which that end is attached.

4. A label holder according to claim 1, wherein the strap is provided with attachment means at the end which is attachable to the body portion of the holder, the attachment means being of a substantially permanent nature once engaged.

5. A label holder according to claim 4, wherein the attachment means comprises complementary portions on the end of the strap attachable to the body portion and on the body portion itself.

6. A label holder according to claim 4, wherein the attachment means once engaged or rendered operative, are made permanent by ultrasonic welding.

7. A label holder according to claim 1, wherein the body portion is provided with first spacer means on a rear face thereof, the spacer means being operable, in use, to space the body portion from the adjacent part of the article to which the holder is attached.

8. A label holder according to claim 1, wherein the rear face of the body portion is provided with second spacer means at or towards its lower edge, the second spacer means having ramp means inclining towards said lower edge and being operable to deflect the label holder away from the article to which it is attached if the label holder is impacted from below.

9. A label holder according to claim 1, wherein the body portion is provided with edge portions spaced from the body portion in order to provide slot means to receive corresponding edge portions of a label.

10. A label holder according to claim 9, wherein the body portion has cut-away portions corresponding to said spaced edge portions but dimensioned to prevent interference between adjacent edges of the cut-away portions and the edge portions.

11. A label holder according to claim 10, wherein said spaced edge portions comprise parts of two adjacent sides of the body portion with those parts interrupted to provide corner reinforcement.

12. A label holder according to claim 9, wherein the tops of the spaced edge portions are chamfered to provide lead-ins for a label.

13. A label holder according to claim 1, wherein the front face of the body portion is provided with one or more extensions operable to retain a label in position in the label holder.

14. A label holder according to claim 9, wherein the edge portions are interconnected by a bar further defining said slot means and operable to retain and protect a label with the holder.

15. A label holder according to claim 1, wherein the body portion is provided with chamfered side edges which, in use, act as deflector means in order to deflect an object which may impact the holder from one or other side.

16. A holder for a label, the holder comprising a body portion adapted releasably to receive a label, and means for attaching the holder to an article to be labelled, ramp means being provided on the back of the holder which, in use, is adjacent the article to which the holder is applied, the ramp means extending from the rear of the holder and tapering towards the lower edge of the holder, whereby the ramp means serve to move the holder away from the article to which it is applied if impacted from below.

17. A label holder according to claim 16 and further comprising fastening means for attaching the holder to an article.

18. A label holder according to claim 17, wherein the fastening means is in the form of a substantially rigid, elongate strap provided with a plurality of transverse fold lines.

19. A label holder according to claim 17, wherein the fastening means is in the form of a plate attachable to the rear of the body portion with, in use, a portion of the article to which the holder is attached sandwiched therebetween.

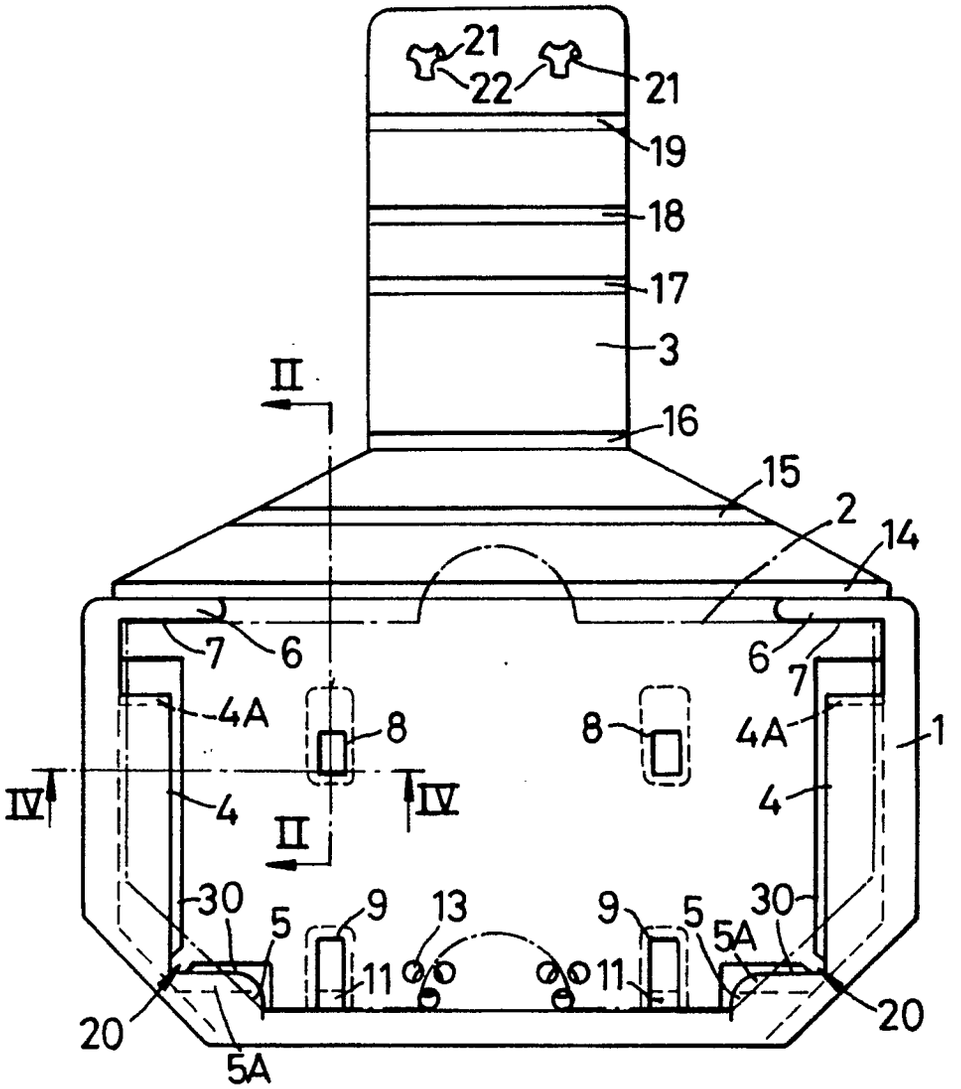

Fig. 1

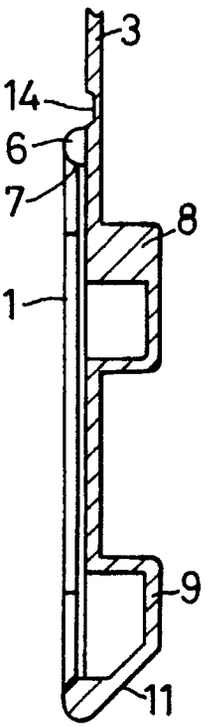

Fig. 2

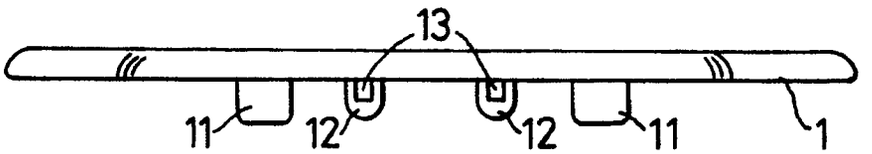

Fig. 3

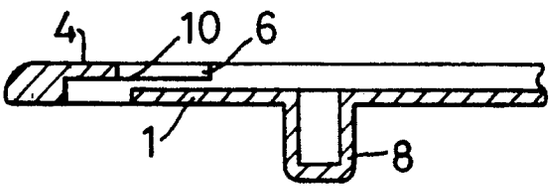

Fig. 4

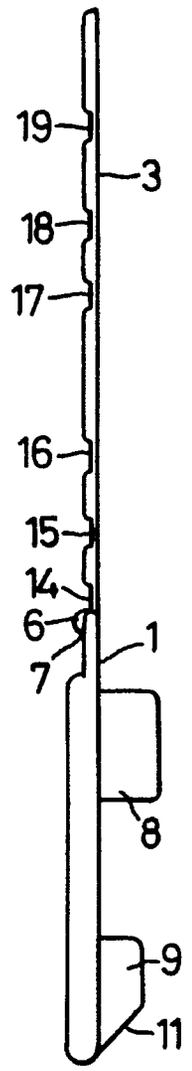
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Fig. 5

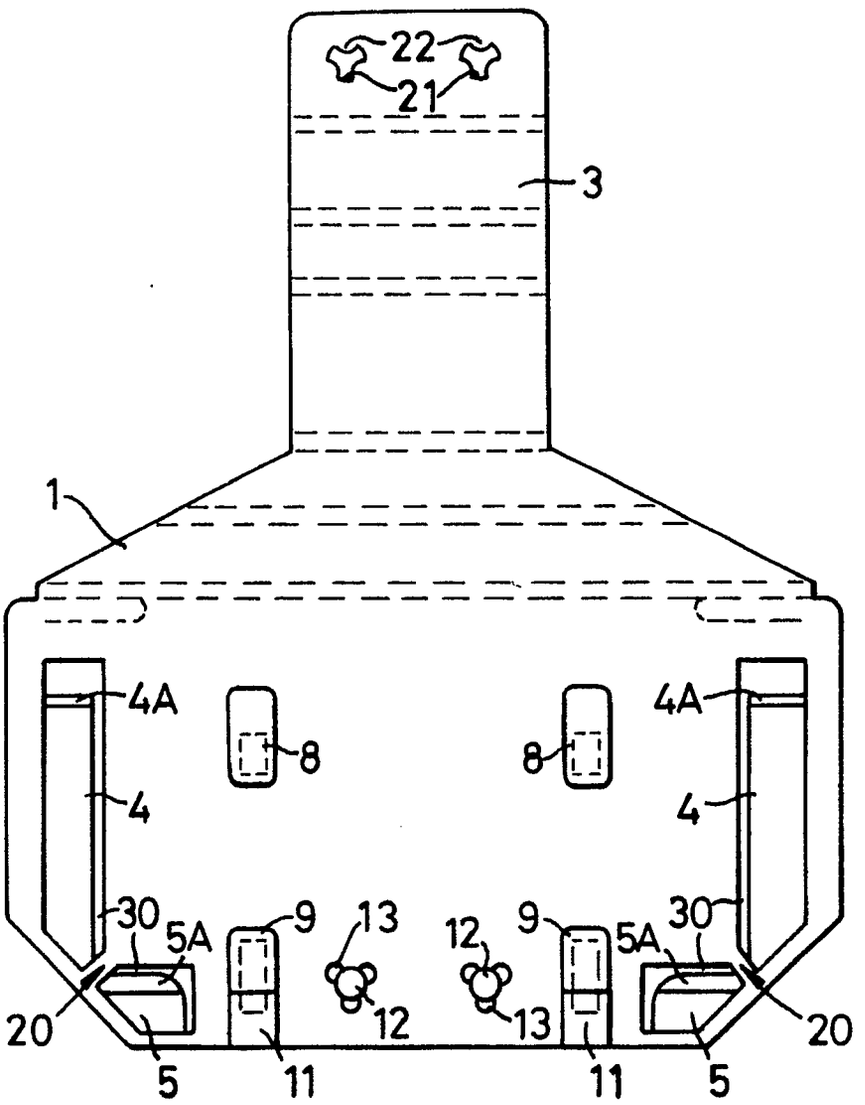
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Fig. 6

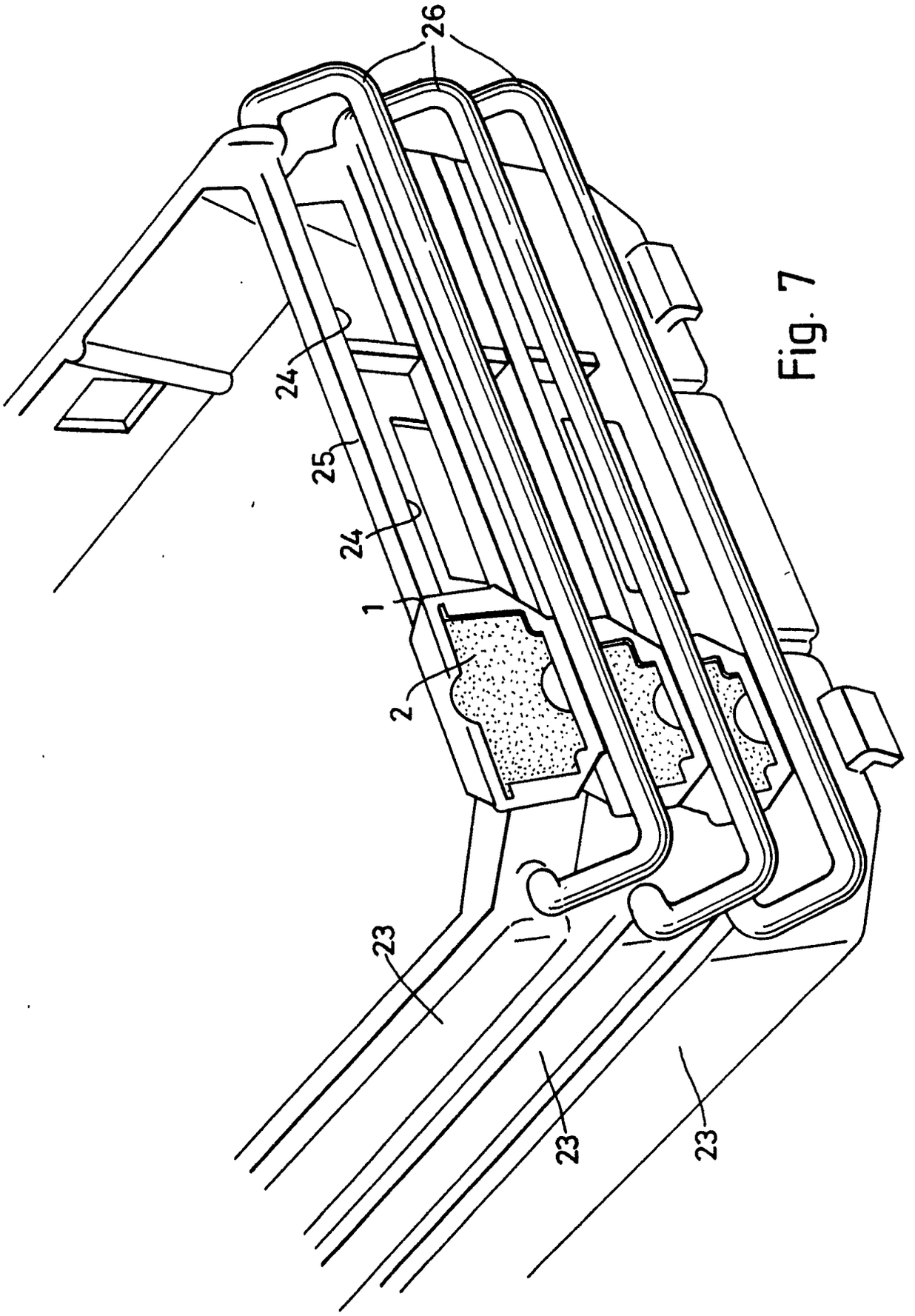

Fig. 7

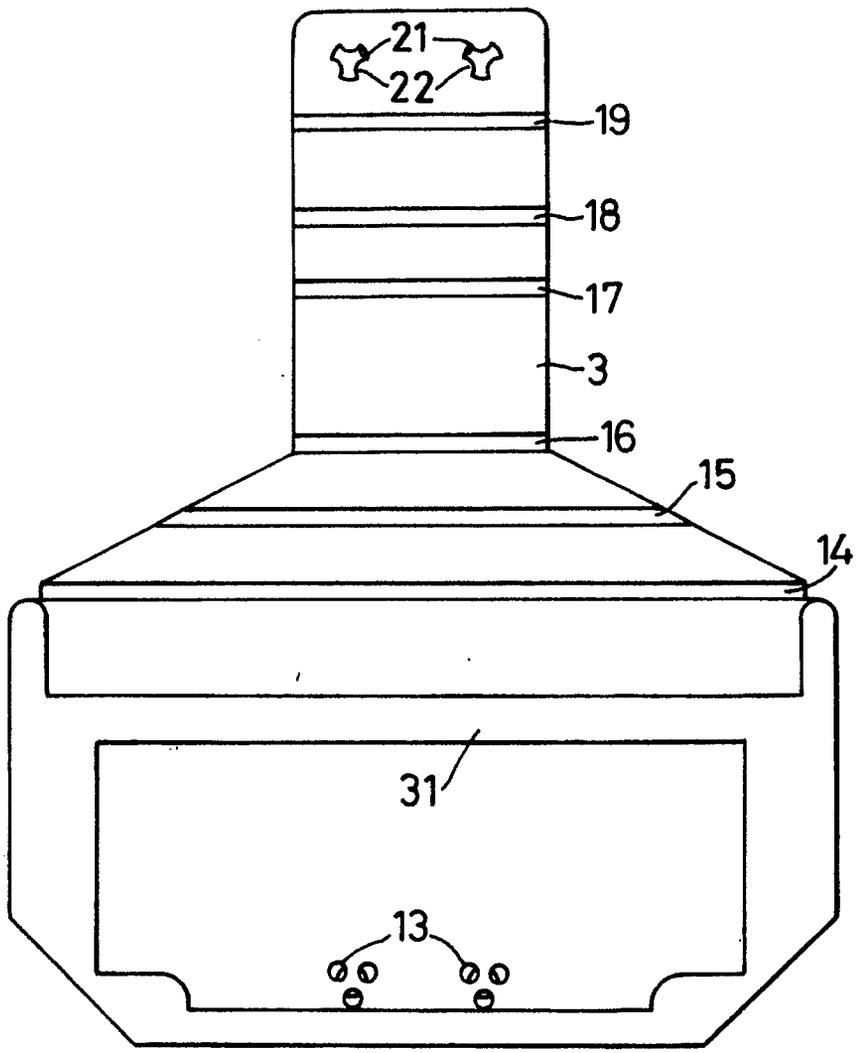

Fig. 8

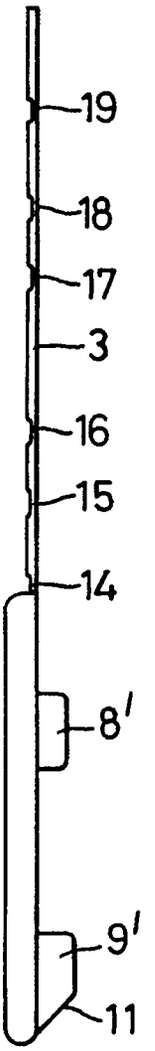

Fig. 9

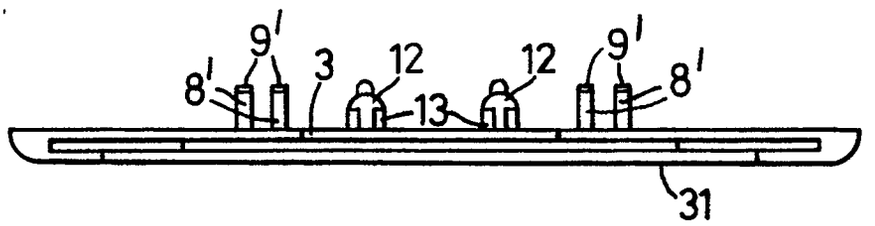

Fig. 10