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(54) **SUPPORT HANDLE FOR SUPPORTING THE SUSPENDING CROSSBAR IN BOXES FOR TRANSPORTING ARTICLES OF CLOTHING.**

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FR-A- 2 245 544
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Description

This invention relates to a support handle for supporting the suspending crossbar in boxes for transporting articles of clothing.

Support handles for applying to the two facing vertical walls of a generally cardboard box are known for supporting a metal or plastics crossbar from which articles of clothing are suspended on relative clothes hangers.

One of these known support handles comprises an essentially U-shaped plate which straddles the upper edge of the box after folding its upper closure flap outwards. To the inner branch of the U-shaped plate there is applied a tubular element to which one end of the crossbar for supporting the clothes hangers is secured. This known type involves a certain complexity in its fitting, which firstly requires the crossbar to be fixed to the two tubular elements, after which the whole unit is fitted to the box. The fitting also requires the upper closure flaps of the box to be previously folded outwards and downwards, resulting in an often unacceptable increase in the overall size of the box. Finally, the articles of clothing, which stress the crossbar, could result in a lateralal yielding of the box walls, with the consequent possibility of the crossbar escaping from the tubular elements and the articles of clothing falling into the bottom of the box.

A support is also know comprising a plastics plate provided on its outer surface with a raised portion for fixing to the box wall and supporting a handle, and provided on its inner surface with a sleeve into which the crossbar is inserted. To fit it, an aperture complementary to the raised portion of the support is formed in two opposing walls of the box, after which, having fixed the crossbar to the two supports, these are secured from the inside to the corresponding walls of the box.

Compared with the preceding, this type reduces the overall size of the box but has all the other stated drawbacks thereof.

FR-A-2245544 describes a support handle for the suspension crossbar in boxes for trasporting articles of clothing comprising a prismatic body which may be inserted into an aperture provided in the box, and means for securely ensuring the disengagement of said body once it has been inserted.

According to the invention, a particularly effective solution is achieved by a support handle for the suspension crossbar in boxes for transporting articles of clothing as described in claim 1.

Two preferred embodiments and one modification of the present invention are described hereinafter with reference to the accompanying drawings, in which:

Figure 1 is a front view of a support according to the invention fitted to the side wall of a box;

Figure 2 is a vertical section therethrough on the line II-II of figure 1;

Figure 3 shows a different embodiment in the same view as figure 1;

Figure 4 is a vertical section therethrough on the line IV-IV of figure 3;

Figure 5 shows a modification thereof in the same view as figure 1; and

Figure 6 is a vertical section therethrough on the line VI-VI of figure 5.

As can be seen from the figures, the support handle according to the invention, which is preferably of plastics construction, comprises substantially a U-piece 1 with two lateral branches 2,2' and an upper connection branch 3.

The two branches 2,2' are also connected together by a tubular portion 4, fixed abuttingly against the inner branch 2' and open at its other end, where it is fixed to the outer branch 2. To the outer branch 2 there is also fixed a tubular sleeve 5, which passes through the inner branch 2' and projects beyond this towards the interior of the box.

The end of a tubular crossbar 6 for supporting a plurality of clothes hangers (not shown) can be inserted into the tubular sleeve 5.

To fit the support to the correspondings side wall 7 of the container, an aperture 8 is firstly formed in said side wall, to comprise a slot provided where the upper closure flap 9 is hinged to the upper edge of said wall 7 and having a length equal to the length of the U-piece 1, and an underlying opening of length equal to the horizontal dimension of the tubular portion 4 and a height equal to the distance between the lower edge of this latter and the upper branch 3 of the U-piece 1.

The aperture 8 can be formed by punching, either during the actual formation stage of the cardboard box, or later.

To fit the two handles to the box, each of them is inserted from above with the outer branch 2 through the upper slot of the aperture 8 and then slid downwards until the tubular portion 4 rests on the bottom of said aperture and the branch 3 of the U-piece 1 rests against its upper edge. The tubular element 6 is then inserted into the two opposing sleeves 5 of the two handles, after forcing the two side walls 7 slightly otwards.

From the aforegoing it is apparent that the support handle of the invention has numerous advantages, and in particular:

- it produces practically no increase in the lateral extension of the box;
- it can be easily and quickly fitted, even by the user;
- it enables the two handles to be fitted separately from the crossbar;
- it presents a large exposed surface, which can be used for publicity, trademarks or commercial information in general;

- it has a large bearing area against the side walls of the box, so reducing the specific loading of these walls by the articles of clothing. In this particular case a greater strength can be obtained if the lower portion of the aperture 8 is folded downwards instead of being removed.

In the embodiment shown in figures 3 and 4, in which corresponding parts are indicated by the same reference numerals plus 100, the U-piece 101 is of lesser height than hte preceding, the outer branch 102 then extending beyond the tubular portion 104 by means of a portion for retaining the sleeve 105 holding the crossbar 106, this portion then bending horizontally at the upper edge, to form a resting branch 103.

In this case, the aperture to be formed in the two side walls 107 comprises three different portions, ie a lower portion 108 for passage of the U-piece 101 and for housing just the tubular portion 104, an intermediate portion 108' for passage of the tubular sleeve 105, and an upper slot 108" for housing the horizontal branch 103.

In this case, the support handle according to the invention is fitted to the corresponding side wall 107 of the box from the outside.

Compared with the preceding embodiment, this second embodiment has a greater resistance to downward tangential withdrawal of the box during its lifting and transportation.

In both these described embodiments, the tubular sleeve 5, 105 which receives the crossbar 6, 106 can be replaced by a tubular support 205 in which the crossbar 206 lowerly and laterally rests. In this case, the support 205 can be porvided with two opposing appendices 210, with which two corresponding diametrical notches 21 provided at the two ends of the crossbar can engage.

In this case, said crossbar is inserted from above through an aperture provided in the branch 3,103.

Compared with the preceding, this modified embodiment has the further advantages of not requiring even slight lateral deformation of the box for mounting the crossbar, and in addition allows the crossbar to act as a tie bar to prevent any deformation of the box, even under load.

Claims

1. A support handle for the suspension: crossbar in boxes for transporting articles of clothing, characterised by comprising a reverse U-piece (1) to be applied, close to the upper edge of the box, to an aperture formed in a vertical wall thereof, the two branches (2,2';102,102') of the reverse U-piece consisting of an inner branch (2',102') and an outer branch (2,102) and being connected together by an outwardly open tubular portion (4,104,204), both branches overlapping said outwardly open tubular portion (4,104,204) in lateral and downward direction as to receive the edges of the aperture between them, said tubular portion (4,104,204) resting on the lower edge of said aperture and forming a handgrip for lifting the box, said reverse U-piece (1) ending in an upper resting branch (3,103) for arresting the handle against the upper edge of the aperture and being provided with a member (5,105,205) for supporting said suspension crossbar (6,106,206), which cooperated with the suspension member of another support handle fitted to the opposing side wall.

2. A handle as claimed in claim 1, characterised in that the outer branch (102) extends upwardly beyond the tubular portion (104) by means of the retention portion for the sleeve (105), said portion bending at its top to form a resting branch (103).

3. A handle as claimed in claim 1, characterised in that both branches (2,2') extend beyond the tubular portion (4) and are connected together at their top by a resting branch (3).

4. A handle as claimed in claims 1 and 3, characterised in that the two branches (2,2') are connected together by the support member (5).

5. A handle as claimed in claim 1, characterised in that the support member consists of a tubular sleeve (5,105).

6. A handle as claimed in claim 1, characterised in that the support member consists of a tubular support (205).

7. A handle as claimed in claim 6, characterised in that the tubular support (205) is provided with opposing appendices (210) for engaging corresponding diametrical notches (214) provided in the crossbar (206).

Patentansprüche

1. Stützgriff zum Stützen der Querstange in Schachteln zum Transport von Kleidungsstücken, gekennzeichnet durch ein nach unten weisendes U-Stück (1), das nahe dem oberen Rand der Schachtel in einer vertikalen Wand in einer Öffnüng eingesetzt ist, wobei die beiden Arme (2, 2'; 102, 102') des nach unten weisenden U-Stückes aus einem inneren Arm (2', 102') und einem äußeren Arm (2, 102) bestehen und durch einen nach außen offenen Rohrabschnitt (4, 104, 204) miteinander verbunden sind, wobei beide

Arme den nach außen offenen Rohrabschnitt (4, 104, 204) in Seiten- und Abwärtsrichtung überlappen, um die Ränder der Öffnung zwischen sich aufzunehmen, wobei der Rohrabschnitt (4, 104, 204) auf dem unteren Rand der Öffnung ruht und einen Handgriff zum Anheben der Schachtel bildet, und das nach unten weisende U-Stück (1) in einem oberen Stützarm (3, 103) zum Fixieren des Griffes an dem oberen Rand der Öffnung endet und mit einem Stützglied (5, 105, 205) für die Querstange (6, 106, 206) versehen ist, die mit einem Stützglied eines weiteren Stützgriffes, der an der gegenüberliegenden Seitenwand befestigt ist, zusammenwirkt.

2. Griff nach Anspruch 1, dadurch gekennzeichnet, daß der äußere Arm (102) aufwärts über den Rohrabschnitt (104) mit einem Halteabschnitt für die Hülse (5) hinausragt, wobei dieser Abschnitt an dem oberen Ende abgebogen ist, um einen Stützarm (103) zu bilden.

3. Griff nach Anspruch 1, dadurch gekennzeichnet, daß beide Arme (2, 2') über den Rohrabschnitt (4) hinausragen und an ihren oberen Enden durch einen Stützarm (3) miteinander verbunden sind.

4. Griff nach Anspruch 1 und 3, dadurch gekennzeichnet, daß die beiden Arme (2, 2') durch das Stützglied (5) miteinander verbunden sind.

5. Griff nach Anspruch 1, dadurch gekennzeichnet, daß das Stützglied aus einer rohrförmigen Hülse (5, 105) besteht.

6. Griff nach Anspruch 1, dadurch gekennzeichnet, daß das Stützglied aus einem Stützrohr (105) besteht.

7. Griff nach Anspruch 6, dadurch gekennzeichnet, daß das Stützrohr (205) mit gegenüberliegenden Vorsprüngen (210) versehen ist, die in entsprechende diametral gegenüberliegende Nuten (214) in der Querstange (206) eingreifen.

Revendications

1. Une poignée de support pour la barre de suspension dans des boîtes pour le transport de vêtements, caractérisée en ce qu'elle comprend une pièce en U renversé (1) à appliquer près du bord supérieur de la boîte, à une ouverture pratiquée dans une paroi verticale de celle-ci, les deux branches (2, 2' ; 102, 102') de la pièce en U renversé consistant en une branche intérieure (2', 102') et une branche extérieure (2, 102) et étant reliées ensemble par une partie tubulaire ouverte vers l'extérieur (4, 104, 204), les deux branches recouvrant ladite partie tubulaire ouverte vers l'extérieur (4, 104, 204) dans des directions latérale et vers le bas pour recevoir les bords de l'ouverture entre elles, ladite partie tubulaire (4, 104, 204) s'appuyant sur le bord inférieur de ladite ouverture et formant une poignée pour soulever la boîte, ladite pièce en U renversé (1) se terminant en une branche d'appui supérieur (3, 103) pour fixer la poignée contre le bord supérieur de l'ouverture et étant prévue avec un élément (5, 105, 205) pour supporter ladite barre de suspension (6, 106, 206) qui coopère avec l'élément de suspension d'une autre poignée de support fixée à la paroi opposée.

2. Une poignée conforme à la revendication 1, caractérisée en ce que la branche extérieure (102) s'étend vers le haut au-dessus de la partie tubulaire (104) au moyen de la partie de rétention pour le manchon (105), ladite partie se courbant à son sommet pour former une branche d'appui (103).

3. Une poignée conforme à la revendication 1, caractérisée en ce que les deux branches (2, 2') s'étendent au-dessus de la partie tubulaire (4) et sont reliées à leur extrémité par une branche d'appui (3).

4. Une poignée conforme aux revendications 1 et 3, caractérisée en ce que les deux branches (2, 2') sont reliées ensemble par l'élément de support (5).

5. Une poignée conforme à la revendication 1, caractérisée en ce que l'élément de support consiste en un manchon tubulaire (5, 105).

6. Une poignée conforme à la revendication 1, caractérisée en ce que l'élément de support consiste en un support tubulaire (205).

7. Une poignée conforme à la revendication 6, caractérisée en ce que le support tubulaire est pourvu d'appendices opposés (210) pour s'engager dans des encoches diamétrales correspondantes (214) prévues dans la barre (206).

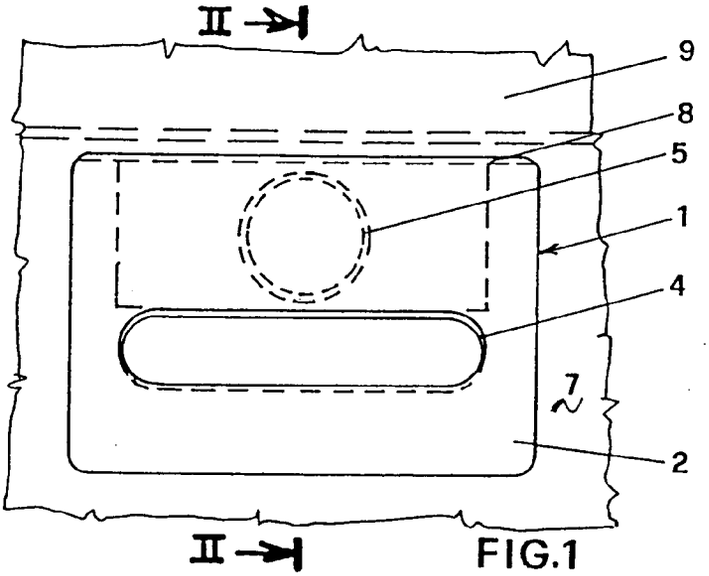

FIG.1

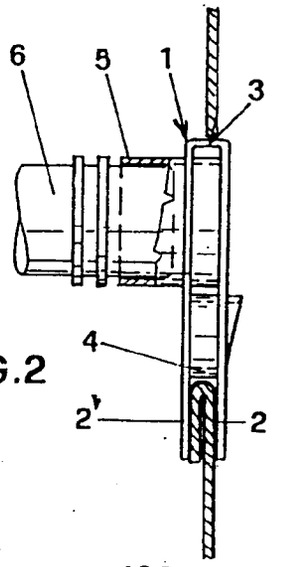

FIG.2

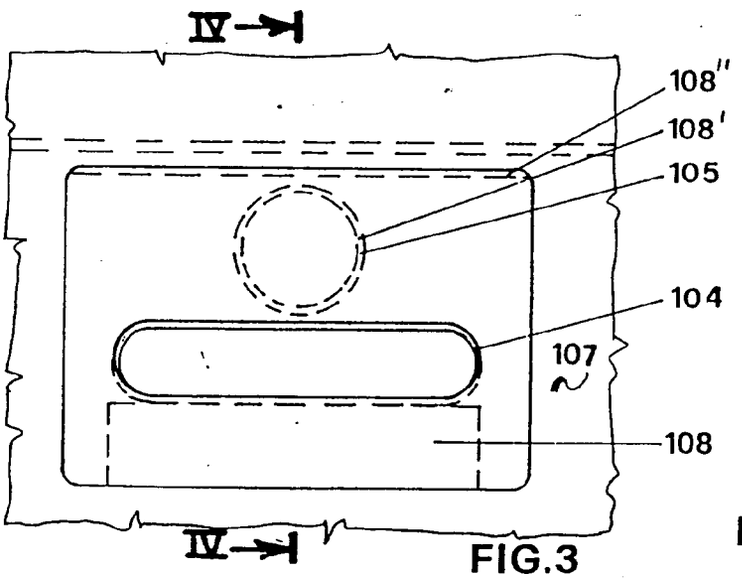

FIG.3

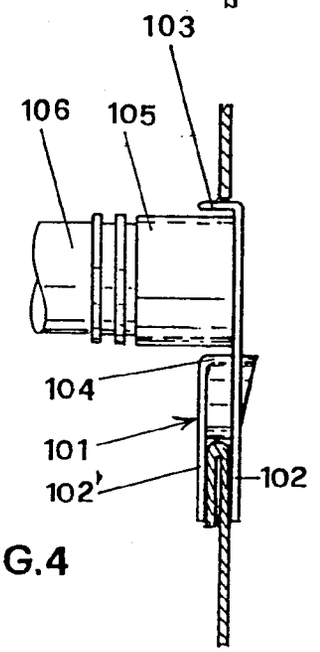

FIG.4

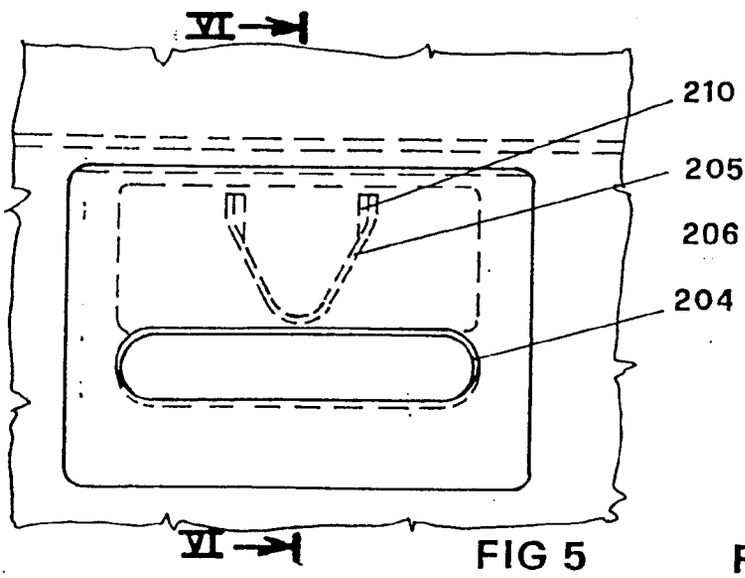

FIG 5

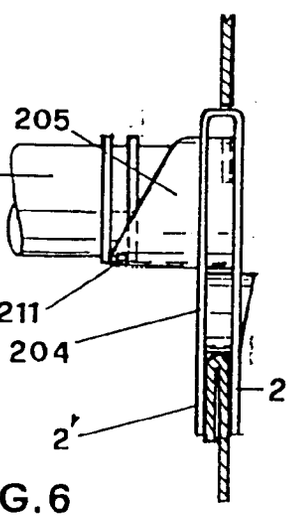

FIG.6