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(11)

EP 1 639 917 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
29.03.2006 Bulletin 2006/13

(51) Int Cl.:
A47B 88/00 (2006.01) A47B 88/04 (2006.01)

(21) Application number: **04381040.7**

(22) Date of filing: **27.09.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK

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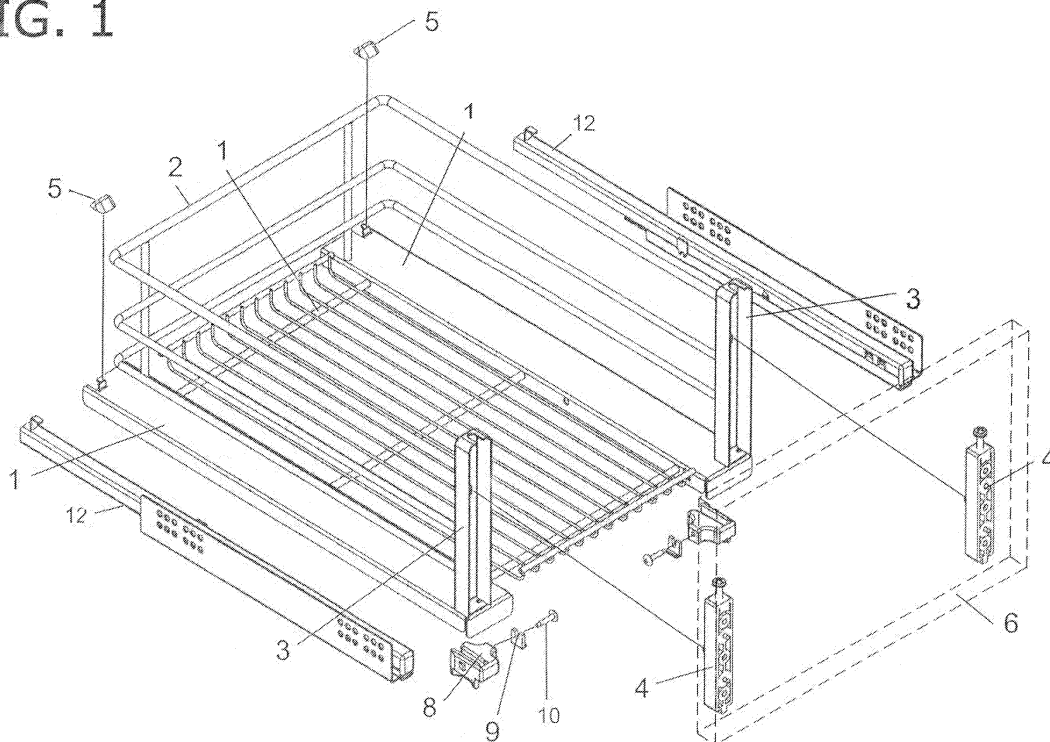
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(54) **Pullout metal drawer adjustable and adaptable for the interior of a kitchen cabinet**

(57) Drawer formed by a lateral protection structure and a base structure, both welded to lateral supports (1), allowing its adjustment to various inner spaces of kitchen furniture, for which it is provided with spacers (9) on the inner or outer part of the lateral supports, adjusting it to

the inner space of the kitchen furniture. It is also provided with means (3,4) for adjusting the height, front/back position and angle of the front panel of the kitchen furniture. It also allows attaching and releasing the drawer from the runner in a manual way without requiring the use of any tools.

FIG. 1



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Description

OBJECT OF THE INVENTION

[0001] The present invention relates to a pullout metal drawer adaptable for the interior of a kitchen furniture piece (particularly for modular kitchen cabinets) that can be adjusted in several positions, from among drawers having runners or means for facilitating the extraction and insertion of the drawer, with the specific characteristic of having means that allow adapting the drawer to several interior spaces of kitchen furniture, as well as means for adjusting the front panel of this furniture.

[0002] The present invention is also characterised by having means that when fitted on the drawer structure allow attaching and releasing the drawer from the runners manually without requiring any tools.

[0003] Therefore, the present invention lies within the field of drawers whose end base consist of a grille made by welding together several steel rods, which slide along telescoping runners, and more specifically lies within those that can be used in different interior spaces of kitchen furniture, as well as adjusting the front panel to the kitchen furniture by a regulation means.

BACKGROUND OF THE INVENTION

[0004] Already known are drawers having a basket formed by metal rods that define a grid-like basket, this basket attached to two lateral supports, the basket's lateral supports and end base being conformed independently.

[0005] However, no system hitherto known has managed to define a drawer that allows its adjustment and adaptation to different interior spaces of kitchen furniture, without having to use a different drawer and/or telescoping runners, allowing to use the same drawer.

[0006] In addition, it has not been possible until now, in combination with the aforementioned characteristic, to develop means for adjusting and adapting the front panel to the kitchen furniture, as well as providing means that allow the attachment and release of the drawer and the runners manually, without requiring any tools.

[0007] Thus, the object of the present invention is to develop a drawer, formed from a steel metal structure, consisting of a grille obtained by welding several rods welded in turn to two lateral supports and two cases welded to these lateral supports, having means for adaptation to the inner space of the kitchen furniture, as well as manual means for attaching and releasing the drawer to/from the runner.

DESCRIPTION OF THE INVENTION

[0008] The pullout adjustable and adaptable metal drawer object of the invention consists of a drawer formed by a lateral protection structure for the drawer and a base structure, both welded to lateral supports.

[0009] Attached to these lateral supports are the means for adjusting the width to the various interior spaces of kitchen furniture, as well as the means for attaching and releasing the drawer to/from the runners. Finally, emerging from the lateral supports are cases that, together with clamps attached on the inner face of the kitchen furniture front panel, allow adjusting and adapting the drawer to the furniture.

[0010] The interior of kitchen furniture can be different because they can be made from sheets of different thickness (normally 16 mm, alternatively 19 mm) always with the same outer width. As 16 mm thick sheets are normally used, the drawer is provided mounted for this thickness.

[0011] If it is necessary to use this drawer in a smaller interior space, because 19 mm sheets have been fitted, a spacer is removed from the inner face of the lateral supports, then attaching the 19 mm spacer to the outer face of the lateral support.

[0012] In addition, the adaptation means are based on the cooperation of the grooves provided in the emerging cases on the front of the lateral supports and the screws provided on the clamps used for attachment to the inner face of the kitchen furniture front panels.

[0013] Depending on which screw of the clamps is turned, the height, forward or backward position or positive and negative angle can be regulated.

[0014] Finally, inside the front part of the lateral supports is housed a piece that attaches the front part of the drawer structure to the runners. On the back of the lateral supports is another piece that attached the rear part of the drawer structure to the runners. Both attachments on either side conform a compact structure that allows sliding the drawer out and in. Pressing the front parts manually cancels the pressure exerted by them on the runners, allowing a complete release of the drawer from them without using any tool.

DESCRIPTION OF THE DRAWINGS

[0015] To complete the description provided below and in order to aid a better understanding of the characteristics of the invention, a set of drawings is accompanied where, for purposes of illustration only and in a non-limiting sense, the most meaningful details of the invention area shown.

[0016] Figure 1 shows a perspective view of the drawer object of the invention, providing a general view of part of the set of elements participating in the intended objective.

[0017] Figure 2 shows in detail the process of assembling the clamps on the adjustment cases.

[0018] Figure 3 shows the various elements involved in the regulation that can be performed with respect to the front panel of the kitchen furniture.

[0019] Figure 4 shows the front and rear attachment parts to the runner.

[0020] Figure 5 shows the means for joining the front attachment part to the runner.

[0021] Figure 6 shows the spacer used on the inner face of the lateral supports and the position of the attachment stop with respect to the runner when the drawer is adapted to kitchen furniture made with 16 mm sheets.

[0022] Figure 7 shows the spacer used on the outer part of the lateral supports as well as the position of the attachment stop with respect to the runner when the drawer is adapted to kitchen furniture made with 19 mm sheets.

[0023] Figure 8 shows the procedure used to attach and release the drawer from the runner.

PREFERRED EMBODIMENT OF THE INVENTION

[0024] In view of the figures, a preferred embodiment of the invention proposed is described below.

[0025] Figure 1 shows that the drawer is a compact steel structure formed by a metal base with two lateral supports (1), a lateral protector (2) and two cases (3), all of them welded to one another.

[0026] Emerging from the front of the supports (1) are the cases (3), inside which are housed two clamps (4) that when attached to the inner face of the front panel (6) allow adjusting and correctly positioning the panel with respect to the kitchen furniture.

[0027] Inside the front part of the lateral supports (1) are housed the attachment parts (8) and the spacers (9) for the 16 mm sheets joined by a screw (10).

[0028] Finally, on the back of the lateral supports (1) are pyramid-shaped parts (5) that are the rear stops for attachment of the runners (12).

[0029] Figure 2 shows the process for assembling the clamps (4) inside the cases (3).

[0030] Figure 3 shows that the clamps (4), see fig. 2, have on top of them a screw (4.1) for adjusting the height, while the screws (4.2) allow a front/back or angular adjustment, according to which screws are turned and to how much they are turned.

[0031] The screw (4.3) of the clamp (4) passes through the orifice (3.1) of the case (3) and is used to attach the case (3) to the clamp (4).

[0032] The case (3) naturally has orifices (3.2) allowing an adjustment by turning the screws (4.2).

[0033] Figure 4 shows the front attachment pieces (8) attachment to the inside of the lateral support (1) by a screw (10), as well as the rear attachment piece (5) inserted in a tab of the lateral support (1).

[0034] The front attachment of the runner to the basket is performed by an attachment piece (8), which has a tooth (8.1) that is inserted in a housing (12.1) of the runner (12), as is clearly shown in figure 5.

[0035] The rear attachment of the runner to the basket is performed by an attachment piece (5), which acts as a stop for a tab (12.2) of the runner (12).

[0036] Both attachments allow to define a compact structure between the basket and the runner, ensuring a perfect insertion and extraction of the basket in the kitchen furniture.

[0037] Figure 6 shows a spacer (9) provided on the inner surface of the support (1), used when the kitchen furniture is made with 16 mm thick sheets. It also indicates the position of the tab (12.2) with respect to the rear stop (5), which is sized to absorb various positions of the tab (12.2).

[0038] Figure 7. If the drawer is used in an inner space (with 19 mm thick sheets) the spacer (9) is removed by loosening the screw (10), and a spacer (11) is placed on the outer face of the lateral supports (1), tightening the screw (10). In this way the structural attachment to the runner is maintained. Also shown is the position of the tab (12.2) with respect to the rear stop (5).

[0039] The spacer (11) has a blind central groove, in which is housed the edge of the lateral support (1).

[0040] Figure 8 shows how a manually exerted pressure on the deformable arms (8.2) that attach the tooth (8.1) to the housing (12.1) allows releasing the drawer from the runners without using any tools.

[0041] The essence of this invention is not affected by variations in the materials, shape, size and arrangement of the component elements, which are described in a non-limiting manner that should allow its reproduction by an expert in the field.

Claims

1. Pullout metal drawer adjustable and adaptable for the interior of a kitchen cabinet, from among drawers having a basket welded to two lateral supports, **characterised in that**, from the front part of the supports and attached to them, emerge cases that together with clamps attached to the inner face of the front panel of a kitchen furniture allow its adjustment with respect to the kitchen furniture. It also has means for adjusting the drawer to different interior spaces of the aforementioned kitchen furniture, based on the use of spacers placed on either the inner or the outer face of the lateral supports; finally, and also on the front and rear part of the lateral supports, are housed pieces for attaching the drawer to the runners: the front parts are designed so that a pressure exerted on them allows manually releasing the drawer from the runners and also manually attaching the drawer to the runners to form a compact structure.
2. Pullout metal drawer adjustable and adaptable for the interior of a kitchen cabinet, according to claim 1, **characterised in that** the adjustment means comprise cases (3) and clamps (4) which have a screw (4.1) on their top for adjusting the height, while screws (4.2) allow a front/back or angular adjustment, depending on which screws are turned and how much; it is also provided with a screw (4.3) for joining the case (3) to the clamp (4) by passing through the orifice (3.1) and attaching it; in addition, the cases (3) have orifices (3.2) through which the

adjustment screws (4.2) are actuated.

3. Pullout metal drawer adjustable and adaptable for the interior of a kitchen cabinet according to claim 1, **characterised in that** the means for adjusting the width consist of a spacer (9) attached by a screw (10) to the inner face of the lateral support (1), so that when the drawer has to be used in a smaller inner space the aforementioned spacer (9) is removed and another spacer (11) is placed on the outer face of the supports (1), tightening the screw (10) again. 5 10
4. Pullout metal drawer adjustable and adaptable for the interior of a kitchen cabinet according to claim 1, **characterised in that** the attachment piece (8) for attaching the drawer to the runner (12) has a deformable arm (8.2) such that when a pressure is exerted manually on it the arm is separated from the runners, allowing to fully release the drawer from the runners in a manual form. 15 20
5. Pullout metal drawer adjustable and adaptable for the interior of a kitchen cabinet according to claim 1, **characterised in that** in order to attach the drawer to the runners, the rear part of the lateral support (1) has stops (5) for attachment to the runners (12), these stops having a certain range of motion to adapt to the inner space of the kitchen furniture according to the thickness of the sheet used. 25 30

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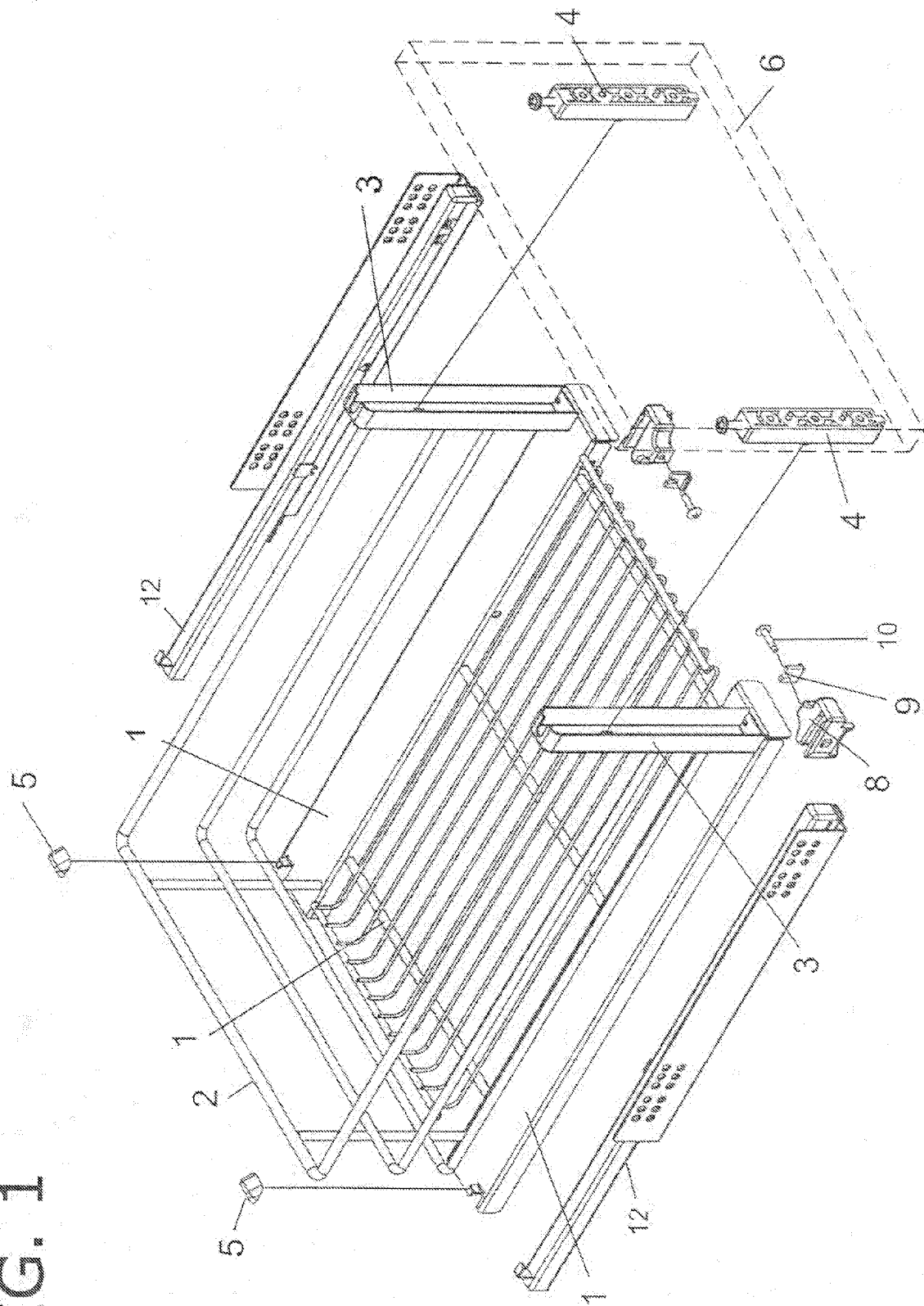
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FIG. 1



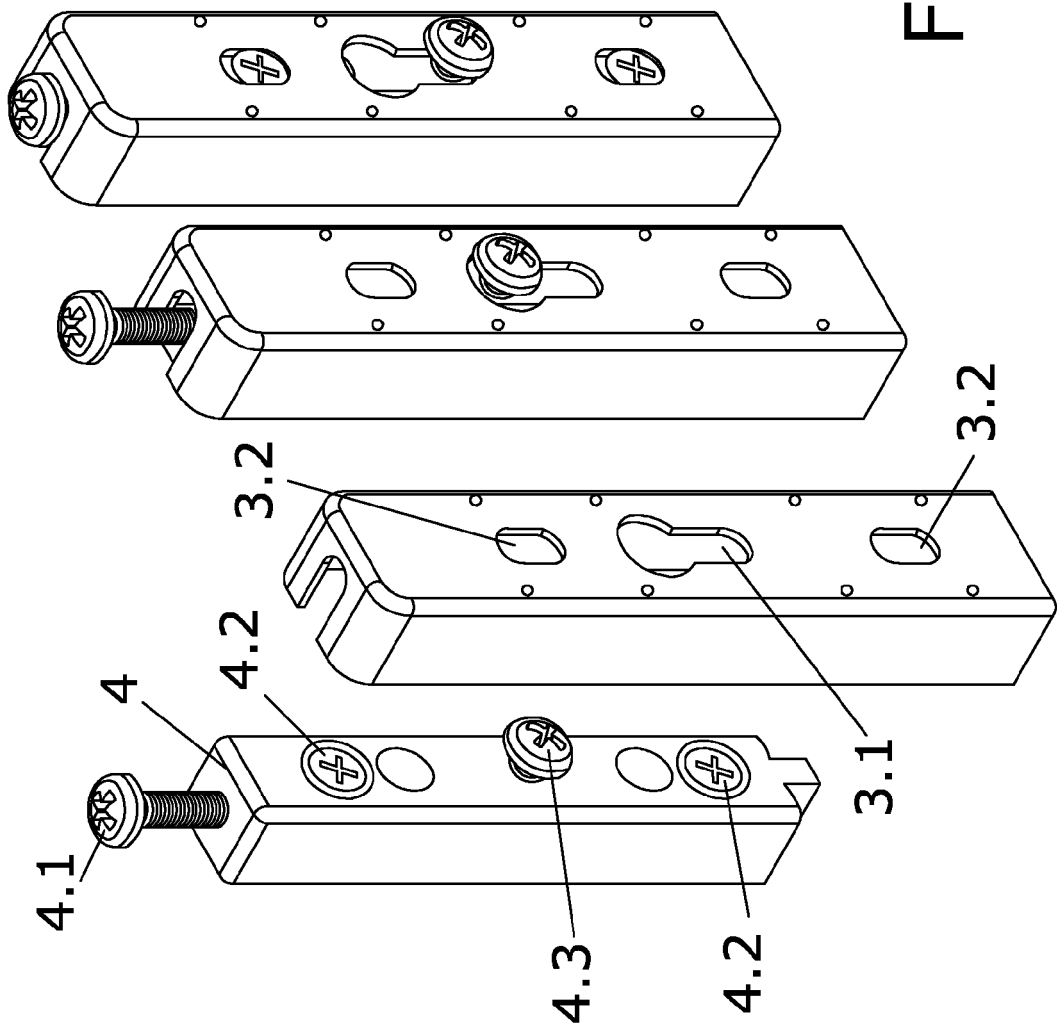
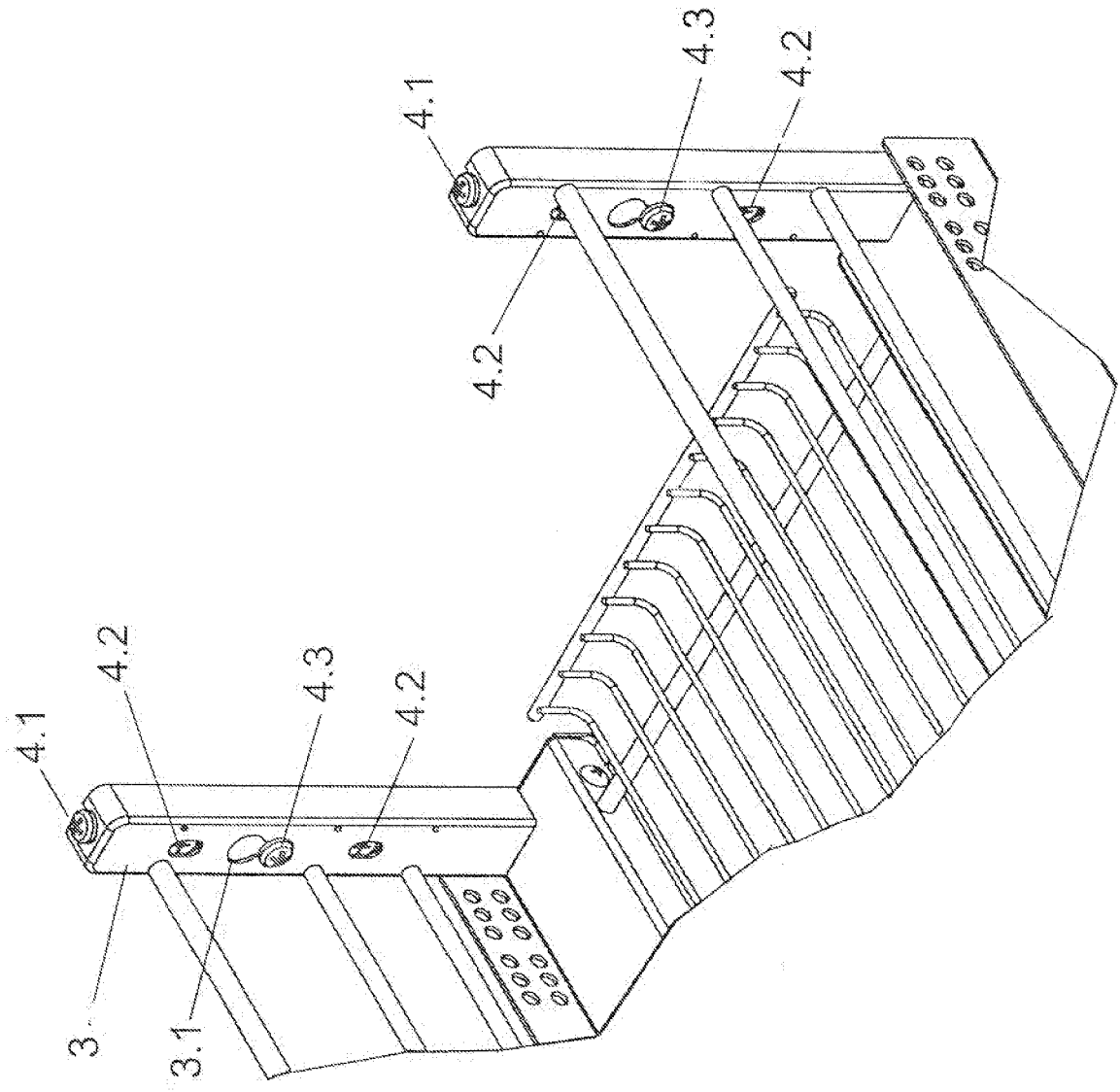


FIG. 3



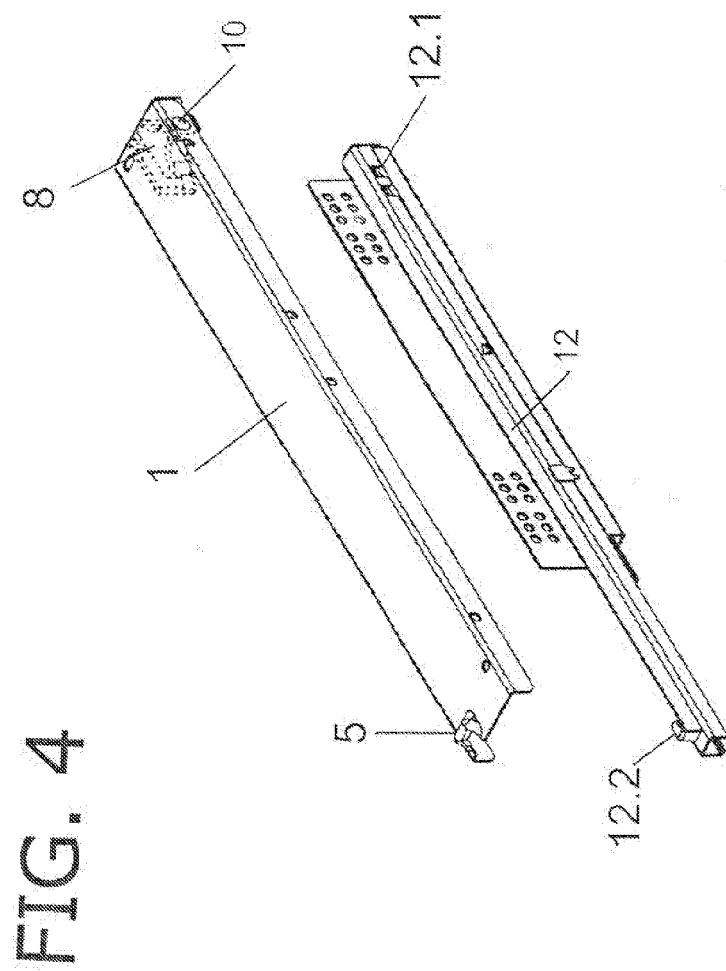


FIG. 5

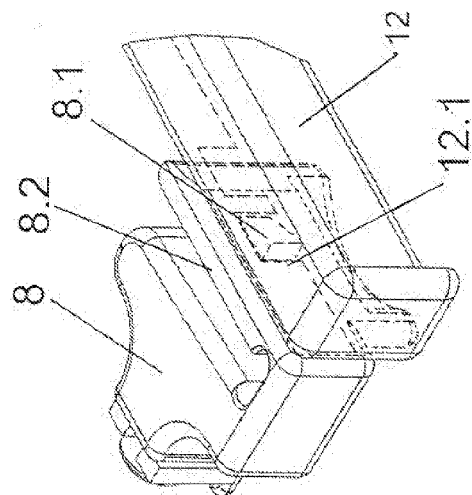


FIG. 6

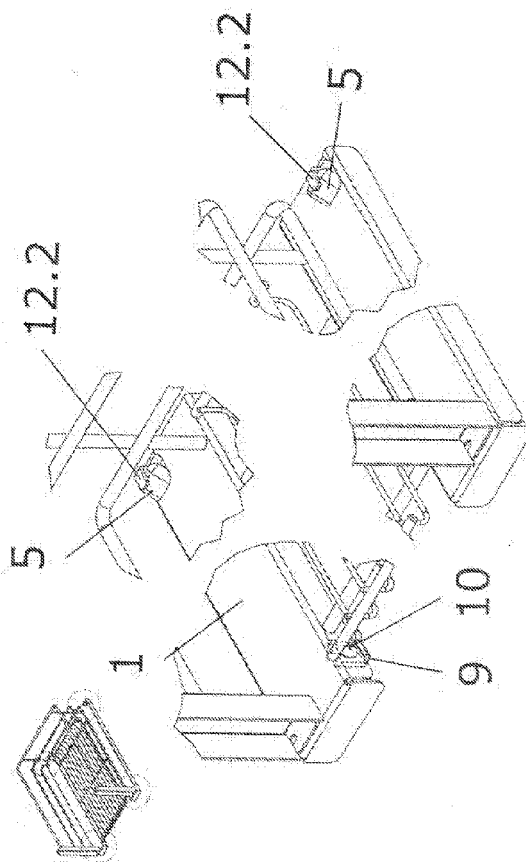
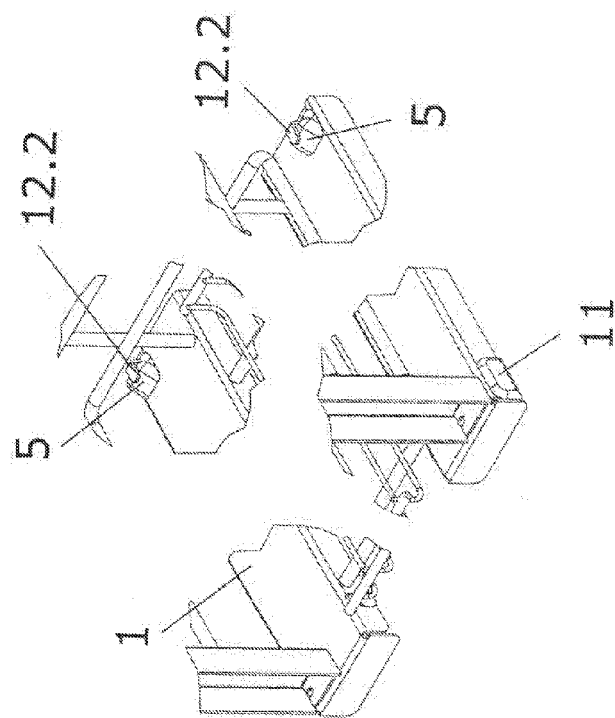


FIG. 7



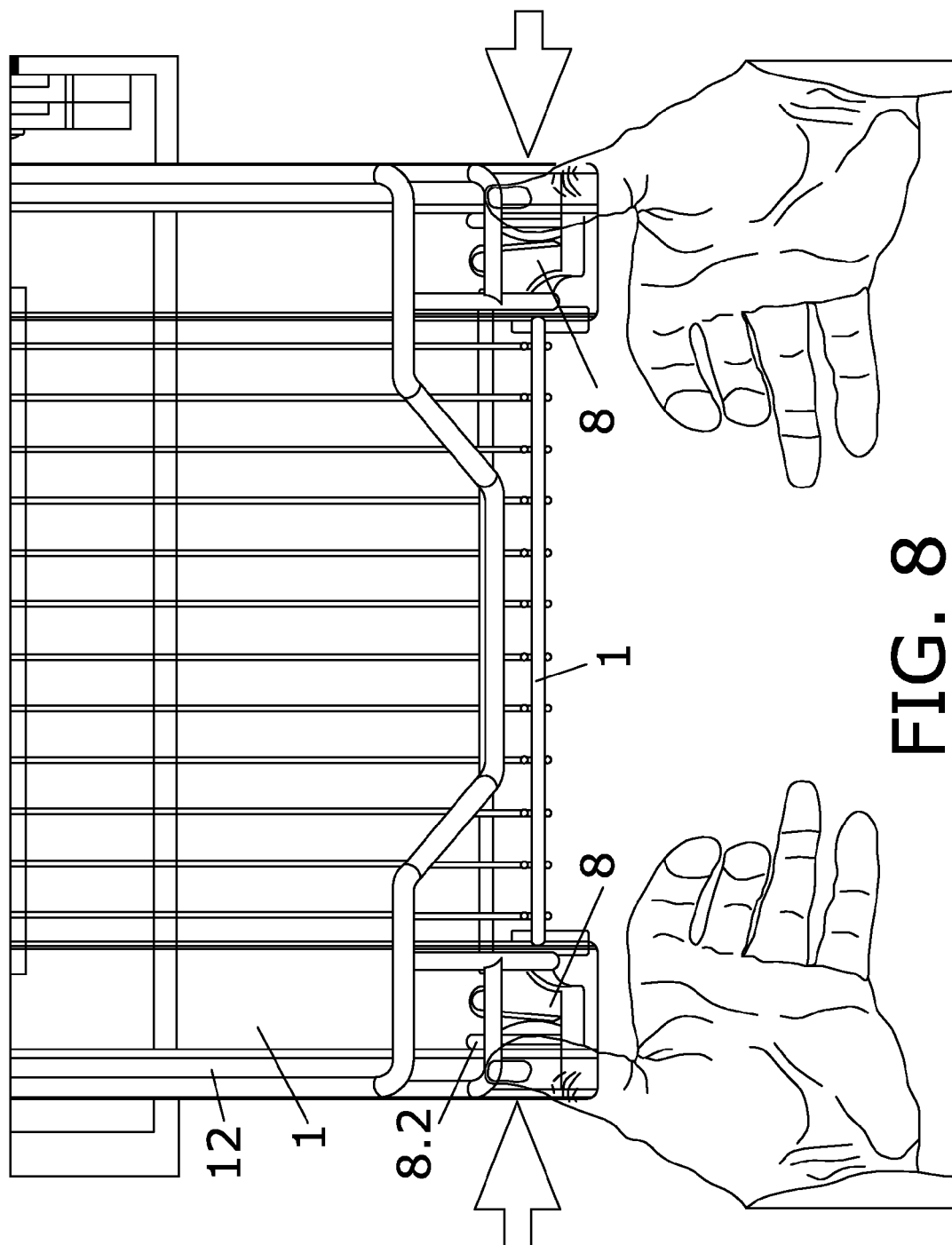


FIG. 8



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 04 38 1040

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	US 2002/124348 A1 (COMPAGNUCCI ROSSANO) 12 September 2002 (2002-09-12) * the whole document *	1-5	A47B88/00 A47B88/04
Y	DE 299 23 509 U1 (BLANCO GMBH & CO. KG) 23 November 2000 (2000-11-23) * page 2, paragraph 1 - page 4, paragraph 3 * * figures 1-4 *	1-5	
Y	DE 24 22 408 A1 (ALFRED GRASS KG METALLWARENFABRIK, HOECHST, VORARLBERG) 9 October 1975 (1975-10-09) * page 3, paragraph 1 * * page 4, paragraph 2 * * page 12, line 20 - page 16, line 2 * * figures 1-13 *	1-5	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		15 March 2005	van Hoogstraten, S
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 38 1040

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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15-03-2005

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002124348 A1	12-09-2002	IT MC20000049 A1	06-12-2001
		AU 7448801 A	17-12-2001
		CN 1380816 A	20-11-2002
		DE 60105253 D1	07-10-2004
		EP 1211965 A1	12-06-2002
		WO 0193722 A1	13-12-2001

DE 29923509 U1	23-11-2000	NONE	

DE 2422408 A1	09-10-1975	AT 329218 B	26-04-1976
		AT 269274 A	15-07-1975
		AT 334571 B	25-01-1976
		AT 446875 A	15-05-1976
		DE 2462141 A1	26-02-1976
		DE 2462538 A1	18-08-1977
