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(54) **A CONTAINER WITH A MOVABLE PARTITION**

(57) A container comprising: a cuboid body (100); a first compartment (160) and a second compartment (170) separated by a movable partition (213) within the body (100); characterized in that: the partition (213) is made of an elastic sheet (200) attached to the body (100) at two attachment positions (216, 217) separated by a regulation distance (w_2) wherein the elastic sheet (200) has a length (w_5) greater than the regulation distance (w_2) such that it forms a protrusion constituting the partition (213) movable between the attachment positions (216,217).

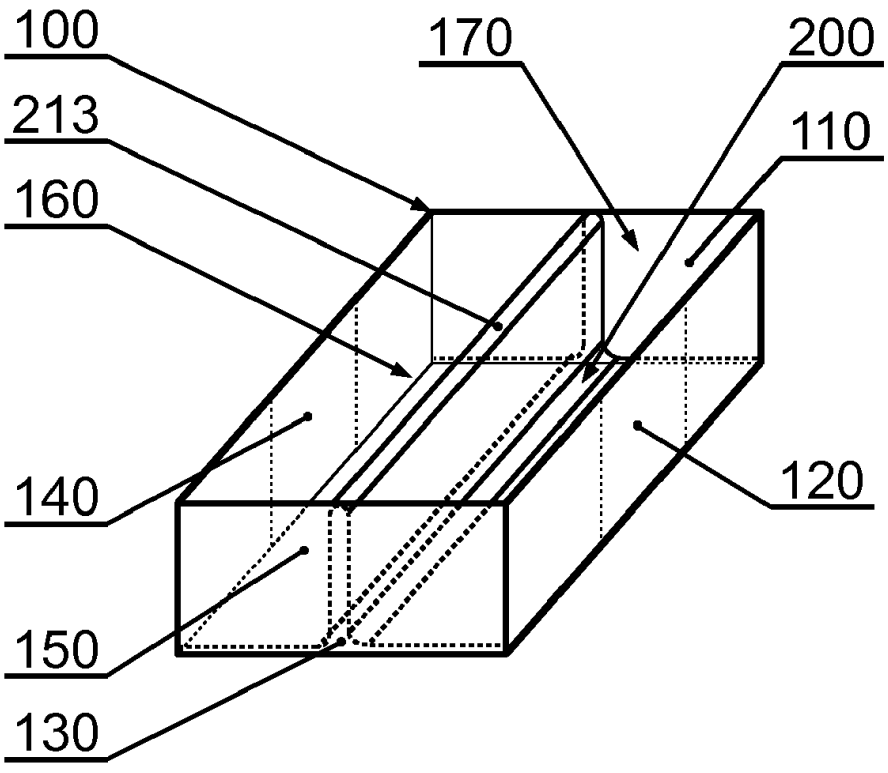

Fig. 1A

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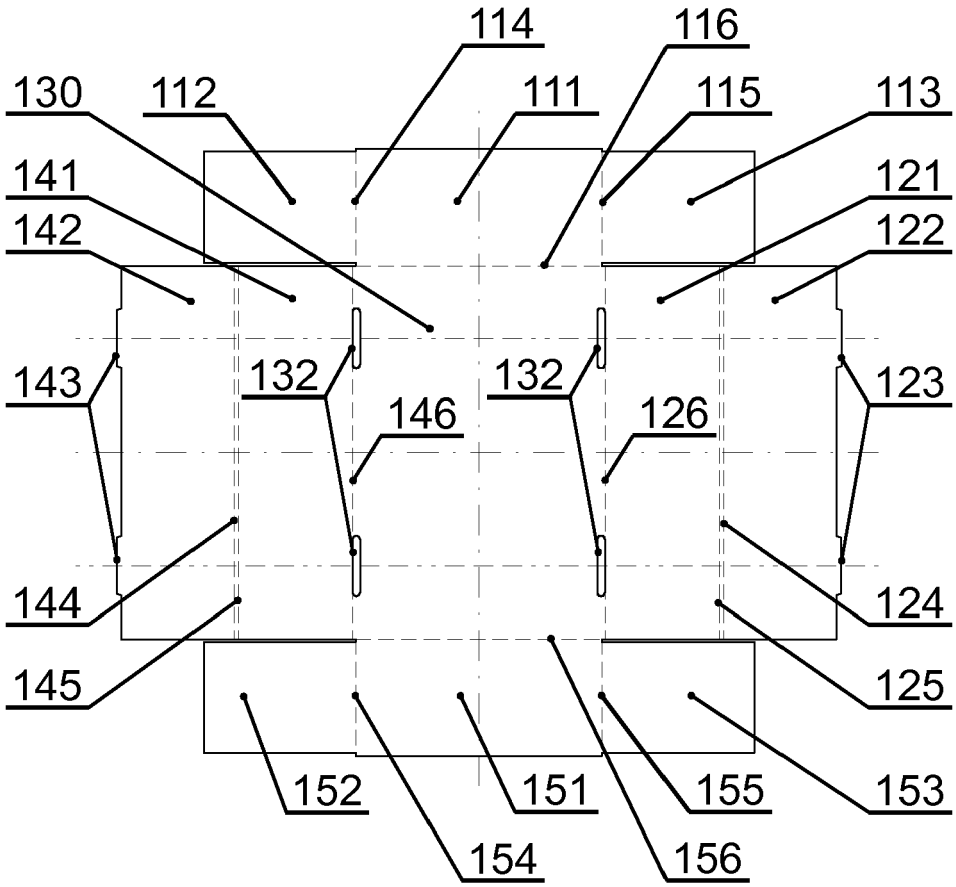
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Fig. 1B

Description

TECHNICAL FIELD

[0001] The present invention relates to a container with a movable partition.

BACKGROUND

[0002] There are known various types of containers having a partition which divides the container into two compartments. Such containers are typically used to store or transport two different kinds of products or substances, one type in each compartment. There are also known containers having a movable partition where the position of the partition can be adjusted to a predetermined location, thus changing the volume of each compartment. Usually, to change the position of the partition, it is necessary to take the partition out of the container and place it into a new location inside the container. The positions of the partitions may be defined by grooves formed in the side walls of the container. While changing the position of the partition the two products or substances currently stored inside the container may easily mix with each other.

[0003] Therefore, there is a need to provide an alternative structure of a container with a movable partition, that will allow changing the position of the partition in a smooth manner without the risk of mixing the products within the container.

SUMMARY

[0004] There is disclosed a container comprising: a cuboid body a first compartment and a second compartment separated by a movable partition within the body characterized in that: the partition is made of an elastic sheet attached to the body at two attachment positions separated by a regulation distance wherein the elastic sheet has a length greater than the regulation distance such that it forms a protrusion constituting the partition movable between the attachment positions.

[0005] The partition can be suspended on a support slidable in notches formed in two opposing side walls of the body.

[0006] The support can be C-shaped and has arms of different length.

[0007] The two opposing side walls of the body of the container can be double-layer walls.

[0008] The elastic sheet may comprise two folded tabs which are located between the layers of the double-layer side walls of the body.

[0009] The partition can be driven by a support assembly comprising two shafts positioned at the bottom of the partition, slidable in the notches formed in two opposing side walls of the body and a support shaft wherein the ends of the shafts are connected with a clip and with a clamp.

[0010] The container may comprise more than one partition.

BRIEF DESCRIPTION OF DRAWINGS

[0011] Further details and features of the present invention, its nature and various advantages will become more apparent from the following detailed description of the preferred embodiments shown in drawings, in which:

Fig. 1A presents a container according to the invention;
Fig. 1B presents a template for forming a body of the container;
Fig. 2A and 2B present an elastic sheet;
Fig. 3 presents the container in a cross-sectional view A-A;
Fig. 4 presents details and dimensions of the template of the body;
Fig. 5 presents details and dimensions of the template of the elastic sheet;
Figs. 6A-6B present formulas describing relations between dimensions of the templates of the body and the elastic sheet of the container;
Figs. 7A-7C present steps of forming of the partition;
Figs. 8A-8H present steps of forming the container;
Fig. 9 presents another embodiment of a body 100A;
Fig. 10 presents an example of a support having a form of a C-shaped shaft;
Figs. 11A-11C present details and dimensions of the shaft;
Fig. 12 presents a template of the body 100A;
Fig. 13 presents a container with the body 100A in a cross-section A-A;
Figs. 14 - 18 present another embodiment of a support assembly 1200 and its dimensions;
Fig. 19A presents another embodiment of a body 100B;
Fig. 19B presents a template of the body 100B;
Fig. 20 presents a container with the body 100B and the support assembly 1200 in a cross-section;
Fig. 21 presents another embodiment of the container having the body 100B and several partitions 213 driven by the support assemblies.

DETAILED DESCRIPTION

[0012] Fig. 1A presents a container comprising a cuboid body 100 with side walls 110, 120, 140, 150 and a bottom 130, in which there are two compartments: a first compartment 160 and a second compartment 170 separated by a movable partition 213 made of an elastic sheet 200.

[0013] The container may be adapted to store various products or substances, such as small electronic or mechanical components, loose materials or even liquid substances (if appropriate sealing means are provided).

[0014] The body 100 of the container may be made of

paper, sheet metal or plastic which can be formed into relatively thin plates which are possible to be folded in order to manually create the container out of a template without the need of welding, soldering, screwing or riveting. In other embodiments, the body 100 of the container can be also assembled by means of gluing, welding, screwing or riveting. In yet other embodiments, the body 100 of the container may be a moulded element.

[0015] Fig. 1B presents an example embodiment of a template for forming the body 100 of the container. The template comprises elements 111, 151 which, after folding, form side walls 110, 150 and elements 141, 142, 121, 122 which, after folding, form double-layer walls 140, 120 of the body 100. The elements 142 and 122 have edge protrusions 143 and 123, which after folding are inserted into openings 132 located in the bottom 130. The template further comprises tabs 112, 152 and 113, 153 which after folding are positioned between two layers of the double-layer side walls 141, 142 and 121, 122 respectively. The elements are folded along folding lines 114, 115, 116, 124, 125, 126, 144, 145, 146, 154, 155, 156 as will be explained later in the document.

[0016] Fig. 2A and 2B present a structure of the elastic sheet 200 for forming the partition.

[0017] Fig. 2A presents the elastic sheet 200 in a top view. In a first part 211 and in a second part 212 of the elastic sheet 200 there can be two openings 232, which after introducing the elastic sheet 200 into the body 100, coincide with the openings 132 located in the bottom 130.

[0018] Fig. 2B presents the elastic sheet 200 in a cross-sectional view along the line A-A. The elastic sheet 200 comprises the first part 211 and the second part 212 and a middle portion located between the first 211 and the second 212 part, for forming the partition 213 when the elastic sheet 200 is installed within the body 100 of the container. The elastic sheet 200 may additionally comprise two folded tabs 214, 215 located at the end of the first part 211 and the second part 212 respectively. The first part 211 of the elastic sheet 200 forms a layer adjacent to the bottom 131 of the first compartment 160 and the second part 212 forms a layer adjacent to the bottom 133 of the second compartment 170 as presented in Fig. 3.

[0019] Fig. 3 presents the container in a cross-sectional view along the line A-A. In the presented embodiment, the two attachment positions 216, 217 of the elastic sheet 200 are located in line with the elements 142 and 122 forming the layers of the double-layer side walls 140, 120, respectively. Thus, the regulation distance of the partition 213 is equal to w_2, which means that the partition 213 may be located in any position between side walls 140, 120 of the body 100. The folded tabs 214, 215 of the elastic sheet 200 are located between the layers 141, 142 and 121, 122, respectively.

[0020] The attachment positions 216, 217 can be located at various positions within the body 100, typically depending on how the elastic sheet 200 is fixed with respect to the body 100. For example, the elastic sheet 200 can be fixed to the bottom 130 of the body 100, then the attachment positions 216, 217 are located at the bottom 130. Alternatively, the elastic sheet 200 can be fixed to the side walls 120, 140, then the attachment positions 216, 217 are located at the side walls 120, 140. Furthermore, the attachment positions 216, 217 can be located at the edge between the bottom 130 and the side walls 120, 140.

[0021] The elastic sheet 200 has a length w_5 greater than the regulation distance w_2, therefore it bends between the attachment positions 216, 217 upwards, as shown in Fig. 1A, thereby forming a protrusion constituting the partition 213.

[0022] As a result, the first compartment 160 is formed by the movable partition 213 and the side wall 140 and at least part of the bottom 130 of that compartment is formed by the fragment 211 of the elastic sheet 200. The second compartment 170 is formed by the movable partition 213 and the side wall 120 and at least part of the bottom 130 of that compartment is formed by the fragment 212 of the elastic sheet 200.

[0023] Fig. 4 presents details and dimensions of the template of the body 100. A thickness of the sheet of the template is equal to g_1. A height of the side walls elements 111, 151 is equal to h1 and their width is equal to w_2, while a width of the bottom 130 is equal to w_1, wherein $w_2 = w_1 - 2g_1$. A length of the bottom 130 and the layers 141, 142, 121, 122 is equal to l_1, which is the length of the container wherein $l_1>w_1>h_1>>g_1>g_2$ (g_2 is a thickness of the elastic element 200). A width of the layers 141, 121 is equal to h_2 and a width of the layers 142, 122 is equal to h_3 wherein $h_2=h_1-g_1$ and $h_3 =h_2-g_2$. A distance between the folding lines 124 and 125, 144 and 145 is equal to $w_3=g_1+g_2$. A width of the protrusions 123, 143 is equal to $d_2=d_1 - (g_1+g_2)$ and a height of the protrusion 123, 143 is equal to w_3. The tabs 112, 113, 152, 153 have a width equal to w_4, while their height is equal to h_1-2g_1, wherein $l_2+1/2d1<w_4<1/21_1$, wherein l_2 is the distance between the axis of symmetry of the protrusion 123, 143 being also the axis of symmetry of the corresponding opening 132 and the edge of the side wall layers 141, 142, 121, 122. The openings 132 have a form of slotted openings and have a width equal to $d_3=2g_1+g_2$ and a length equal to d_1, wherein $d_1<l_2<=3/101_1$. The relation between d_1 and l_1 is $1/7l_1<d_1<=1/5l_1$. A distance between the end radii center points is equal to $d_4=d_1-d_3=d_1-2r_1$, where the end radius is equal to $r_1=1/2d_3=1/2\ (2g_1+g_2)$.

[0024] Fig. 5 presents details and dimensions of a template of the elastic sheet 200. The template has a thickness g_2, the length l_1 and a width $w_{10}=w_5+2h_4$, where h_4 is a height of the tabs 214, 215, which is $1/4h_2<=h_4<=h_2$. A distance between folding lines 246, 226 is equal to $w_5=w_1-2(g_1+g_2)+2(h_5-r_2)-4r_2-2g_2+2\pi(r_2+g_2)$, where $r_2=r_3+g_2$ and $r_2>=g_1+g_2$ is the radius of each bending formed by an elastic sheet 200 necessary to form the partition 213 as presented in fig. 2A and 2B and $h_5=h_1-2r_2$ is a height of the partition 213 (the distance between

the surface of the bottom 130 of the body 100 and the center of the radii of the top of the partition 213, when the partition 213 is located in the body 100). The openings 232 may have a form of a half of the opening 132 when it is divided by a longitudinal axis of symmetry (parallel to the folding lines 126, 146). Therefore, the straight side of the openings 232 located adjacent to the tab 214 lies on the folding line 246 and the straight side of the openings 232 located adjacent to the tab 215 lies on the folding line 226. A width of the openings 232 is equal to g_1.

[0025] Figs. 6A-6B present formulas describing relations between dimensions of the templates of the body and the elastic sheet of the container as described above.

[0026] Figs. 7A-7C present steps of forming of the partition. The partition 213 is formed of the template of the elastic sheet 200. In the first step the tabs 214, 215 are folded by 90 degrees along the folding lines 246, 226 and the sheet having the width w_5 is obtained. Next the protrusion constituting the partition 213 is formed after approximating the tabs 214, 215 towards each other, until the width of the elastic sheet 200 is equal to w_2, while maintaining their 90 degrees angle with respect to the remaining surface of the elastic sheet 200 (simultaneously maintaining their parallelism).

[0027] Figs. 8A-8H present steps of forming the container. First steps relate to formation of the template of the body 100. In the first step tabs 112, 113, 152, 153 are folded by 90 degrees along the folding lines 114, 115, 154, 155 respectively. Next the side walls elements 111, 151 are folded by 90 degrees along the folding lines 116, 156 respectively in order to form side walls 110, 150 of the body 100. Next the layers 141, 142 are folded by 90 degrees along the folding line 146 and the layer 122 is folded by 90 degrees along the folding line 124 as can be seen in fig. 8D. In this stage the previously formed elastic sheet 200 is introduced inside the body 100 so that the tab 214 is adjacent to the layers 141/142 and the tab 215 is near the side element 121 as shown in fig. 8E and fig. 8F. Next the side element 142 is folded by 90 degrees along the folding line 145 and the side layer 121 is folded by 90 degrees along the folding line 126 as shown in fig. 8G. Next the partition 213 is moved to a position in which it allows the side element 142 to be folded by 90 degrees along the folding line 144 so that the protrusions 143 enter into the openings 232 in the elastic sheet 200 and into the openings 132 inside the body 100. In the last step the side layer 122 is folded by 90 degrees along the folding line 125 so that the protrusions 123 enter into the openings 232 inside the elastic material 200 and into the openings 132 inside the body 100. The assembled container is presented in fig. 8H in a top view.

[0028] Fig. 9 presents another embodiment of a body 100A of the container which has longitudinal notches 117, 157 in an upper part of the side walls 110A, 150A respectively. The notches are designed to accept a support 700 on which the partition 213 is suspended. Such design increases the rigidity of the partition 213 and makes it easier to change its position within the body 100A. The support 700 slides along the notches 117, 157 while the partition 213 is being moved.

[0029] Fig. 10 presents an example of a support 700 having a form of a C-shaped shaft. The support 700 comprises a main part 730 which is in contact with the partition 213 and a first arm 710 and a second arm 750 which prevent the support from falling out of the notches 117, 157.

[0030] Figs. 11A-11C present details and dimensions of the shaft 700. The shaft 700 is formed by bending a straight piece of a rod or wire along bending lines 716 and 756. The first arm 710 has a length h_7 and it is bent by 90 degrees along the bending line 716 where $1/4h_5<h_7<1/2h_5$. The second arm 750 has a length h_6 and it is bent by 90 degrees along the bending line 756 which results in a C-shape where $1/2h_5<h_6<h_5$. The main part 730 has a length $l_3=l_1+2g_1$ and it is located between the first arm 710 and the second arm 750. The circular cross-section of the rod has a radius $r_3>=g_1$. The radius r_3 relates to the radius r_2 according to the formula $r_2=r_3+g_2$.

[0031] Fig. 12 presents a template of the body 100A. The notches 117, 157 have a form of slotted notches in which a distance between the end radii center points is equal to $w_6=w_2-4(r_3+g_2)=w_2-4r_2$ where the end radius is equal to r_3. The notches 117, 157 are positioned on side wall elements 111A, 151A in a distance h_5 from the folding lines 116A, 156A respectively being in parallel to them.

[0032] Fig.13 presents a container with the body 100A in a cross-section A-A. The partition 213 is suspended on the main support part 730 which slides along the notches 117, 157.

[0033] The support 700 is introduced into a container having the body 100A and the partition 213 by aligning the arms 710, 750 in parallel to the notches 157, 117 and inserting the first arm 710 into the notch 157 under the top of the partition 213 until the first arm 710 protrudes through the notch 117 on the other side of the body 100A. Next the support 700 is rotated so that the arms 710, 750 are hanging vertically so that the movement of the support 700 along the axis of the main part 730 is restricted.

[0034] Figs. 14 - 18 present another embodiment of a support assembly 1200 and its dimensions. The support assembly 1200 comprises a support shaft 1031 on which the partition 213 is suspended and two forming shafts 1032, 1033 for forming the partition 213 near its base (near the bottom 130B). The shafts 1031, 1032, 1033 are integrated with a clip 1050 which together are denoted as element 1000. The element 1000 is secured with a clamp 1110. The clamp 1110 has openings 1131, 1132 and 1133 for receiving ends of the shafts 1031, 1032, 1033 respectively.

[0035] A distance between the openings 1132 and 1133 in the clamp 1110 is equal to $d_5=4r_3+2g_2$. A distance between the surface, determined by two axes of the openings 1132 and 1133, to the axis of the opening 1131

is equal to $h_8=h_5-(r_3+g_2)$. A height of the clamp 1110 is equal to $h_9=h_8+2(r_3+g_1+g_2)$ where r_3 is the radius of the opening 1131, 1132, 1133 and $r_3>=g_1$. A thickness of the clamp 1110 is equal to $d_7=2r_3$. A radius of the upper rounded end of the clamp 1110 is equal to $r_4=r_3+g_1+g_2$. Similarly radiuses of the lower rounded end of the clamp 1110 is equal to r_4 and a width of the lower end of the clamp 1110 is equal to $d_6=d_5+2r_4$. A length of the shafts 1031, 1032, 1033 is equal to $l_4=l_3+2r_3=l_3+d_7$. The shape and dimensions of the clamp 1110 is the same as of clip 1050.

[0036] Fig. 19A presents another embodiment of a body 100B. The body 100B has notches 118, 158 which cooperate with a support 1031 on which the partition 213 is suspended and additionally has notches 119, 159 located in the lower part of side walls 110B and 150B. The notches 119, 159 are designed to accept two additional shafts 1032, 1033 for forming the partition 213 near the bottom 130B.

[0037] Fig. 19B presents a template of the body 100B. The notches 119, 159 have a form of slotted notches in which a distance between the end radii center points is equal to w_6 where the end radius is equal to r_3. The notches 119, 159 are positioned on side walls elements 111B, 151B in a distance $h_{10}=r_3+g_2$ from the folding lines 116B, 156B respectively being in parallel to them. The notches 118 and 158 (corresponding to the notches 117, 157 in the body 100A) have a distance between the end radii center points equal to $w_7=w_6-2(r_3+g_2)$. A distance between the notches 118 and 119, 158 and 159 is equal to $h_8=h_5-(r_3+g_2)$.

[0038] Fig. 20 presents a container with the body 100B and the support assembly 1200 in a cross-section. The support assembly 1200 maintains a permanent shape of the partition 213 even if the container is empty.

[0039] Fig. 21 presents another embodiment of the container having the body 100B and several partitions 213 driven by the support assemblies 1200, 1200B, 1200C. In such case the length of the elastic sheet has to be adequately longer to form additional partitions. Having three partitions 213, the container has four compartments.

[0040] The scope of protection is not limited to the preferred embodiments described in the specification, but is only limited by the claims that follow.

Claims

1. A container comprising:

- a cuboid body (100);
- a first compartment (160) and a second compartment (170) separated by a movable partition (213) within the body (100);

characterized in that:

- the partition (213) is made of an elastic sheet (200) attached to the body (100) at two attachment positions (216, 217) separated by a regulation distance (w_2) wherein the elastic sheet (200) has a length (w_5) greater than the regulation distance (w_2) such that it forms a protrusion constituting the partition (213) movable between the attachment positions (216, 217).

2. The container according to claim 1, **characterized in that** the partition (213) is suspended on a support (700) slidable in notches (117, 157) formed in two opposing side walls of the body (100A).

3. The container according to claim 2, **characterized in that** the support (700) is C-shaped and has arms (710, 750) of different length.

4. The container according to any of previous claims, **characterized in that** the two opposing side walls (120, 140) of the body (100) of the container are double-layer walls (121, 122, 141, 142).

5. The container according to any of previous claims, **characterized in that** the elastic sheet (200) comprises two folded tabs (214, 215) which are located between the layers (141, 142; 121, 122) of the double-layer side walls of the body (100).

6. The container according to any of claims 1, 4 or 5 **characterized in that** the partition (213) is driven by a support assembly (1200) comprising two shafts (1032, 1033) positioned at the bottom of the partition (213), slidable in the notches (119, 159) formed in two opposing side walls of the body (100B) and a support shaft (1031) wherein the ends of the shafts (1032, 1033, 1031) are connected with a clip (1050) and with a clamp (1110).

7. The container according to any of previous claims, **characterized in that** the container comprises more than one partition (213).

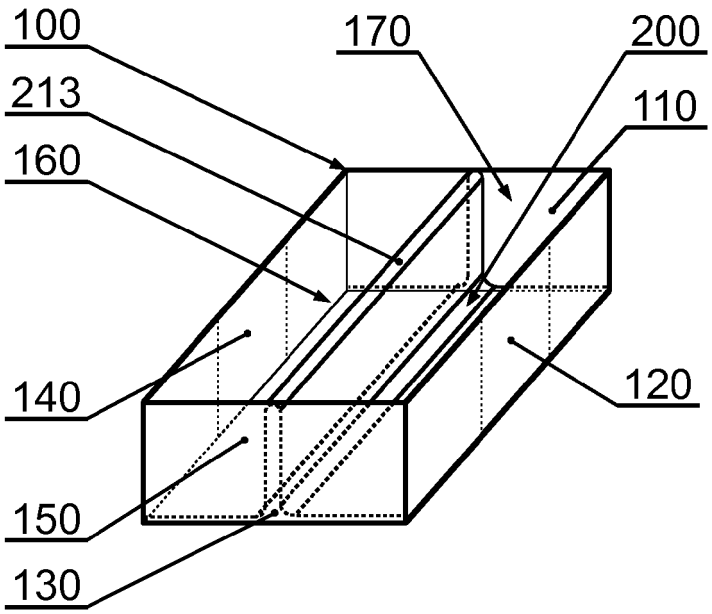
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Fig. 1A

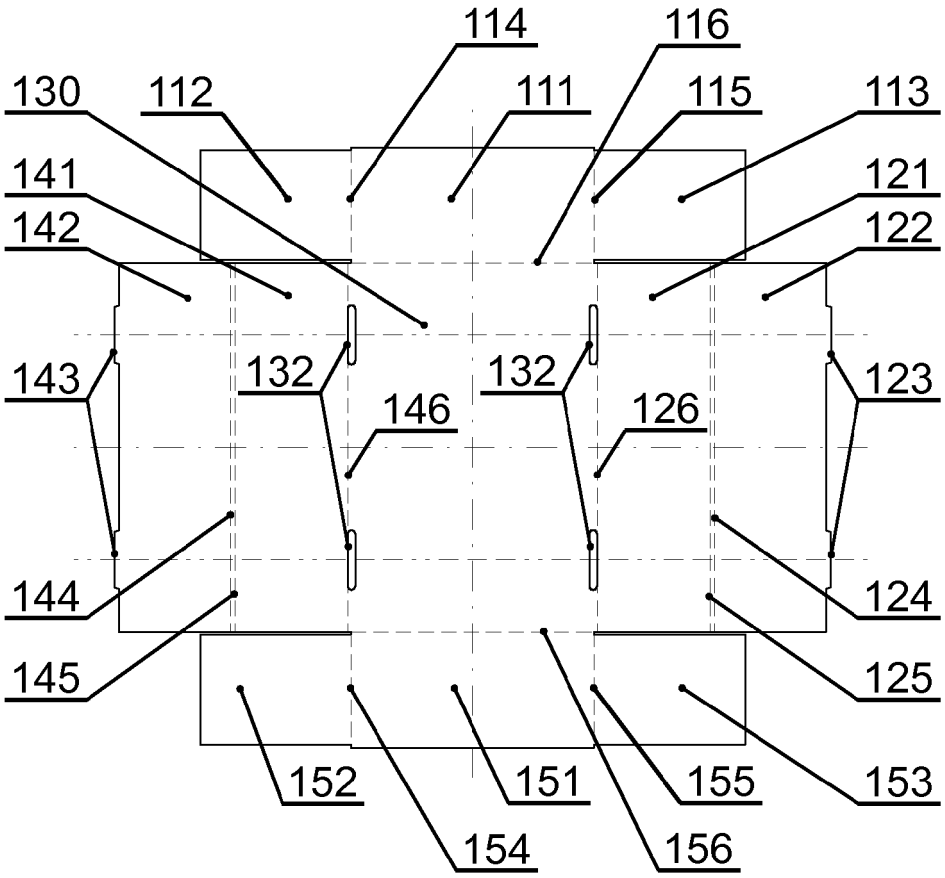
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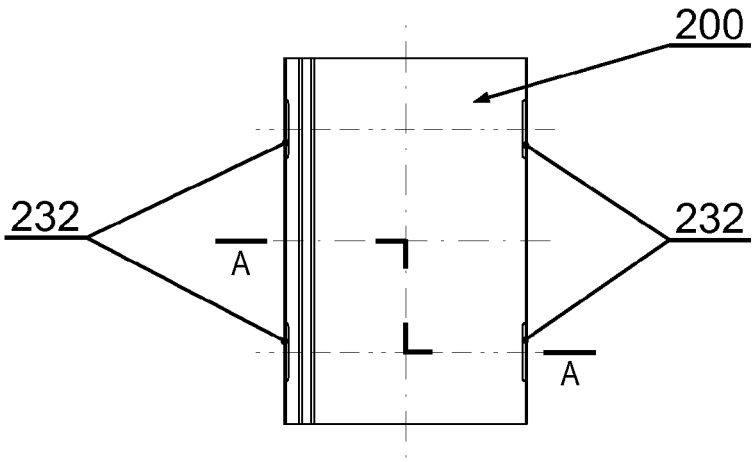
Fig. 1B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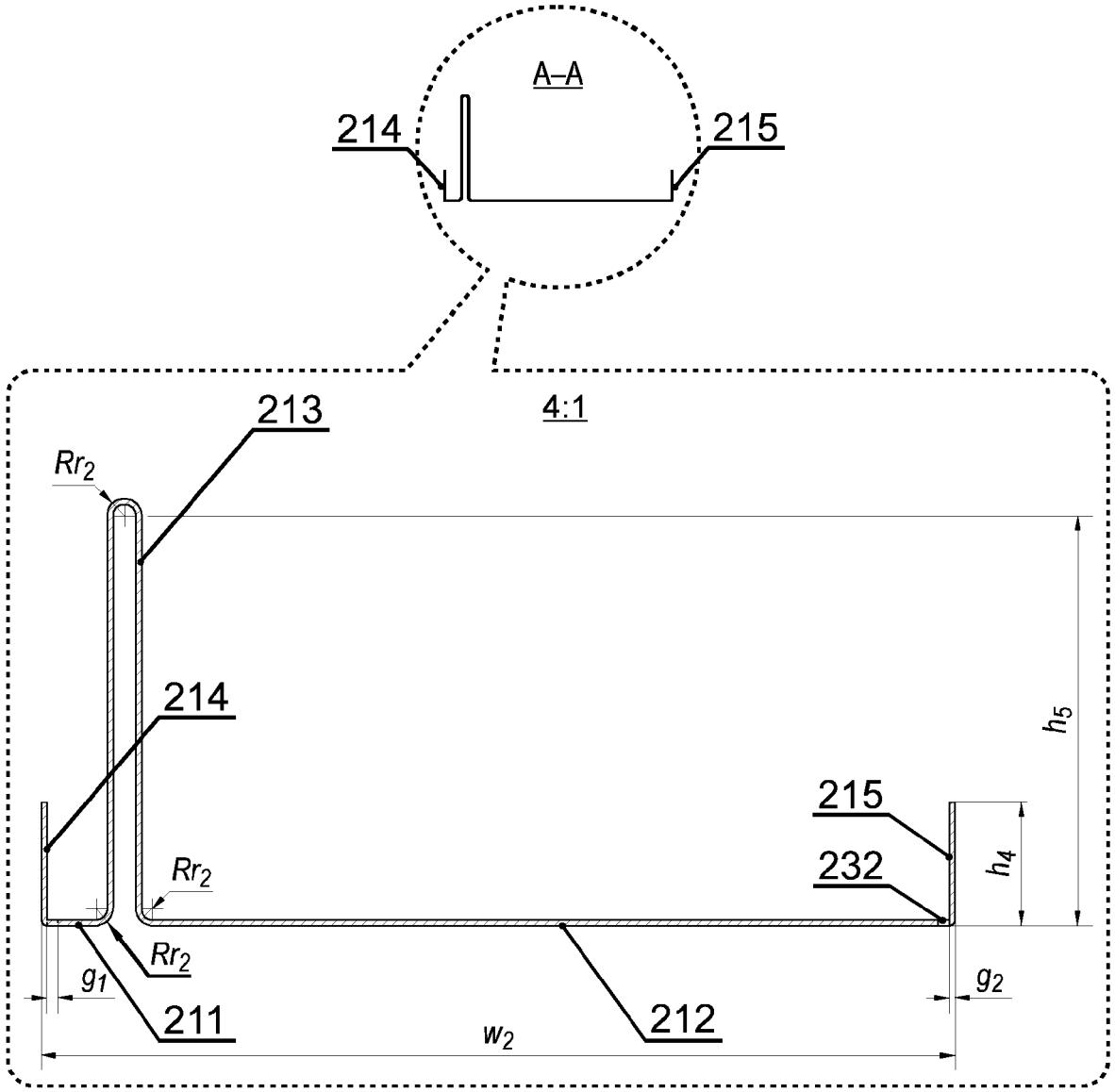
232
232
A
A

Fig. 2A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215
4:1
213
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214
h_5
215
232
h_4
Rr_2
Rr_2
g_1
g_2
211
212
w_2

Fig. 2B

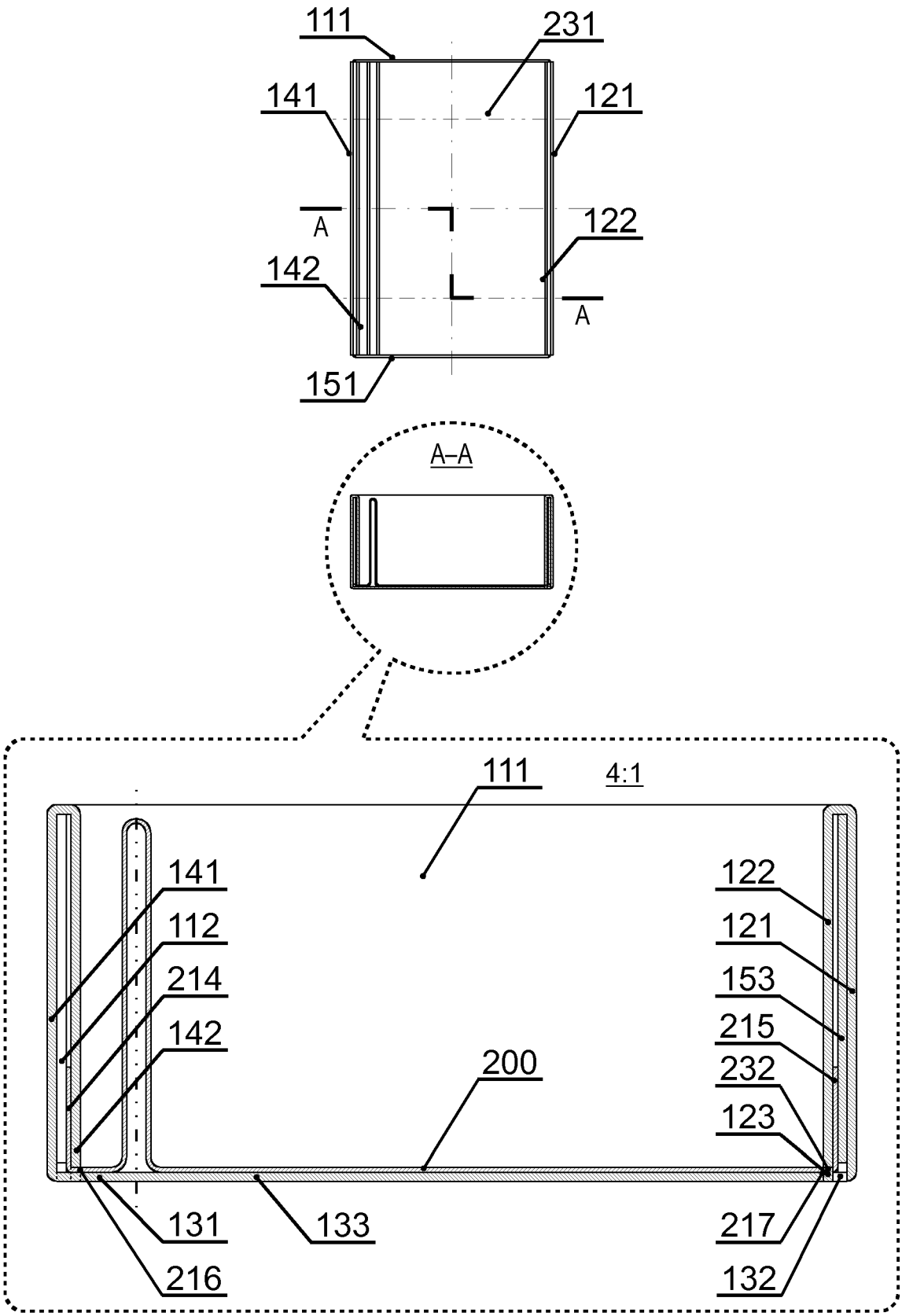
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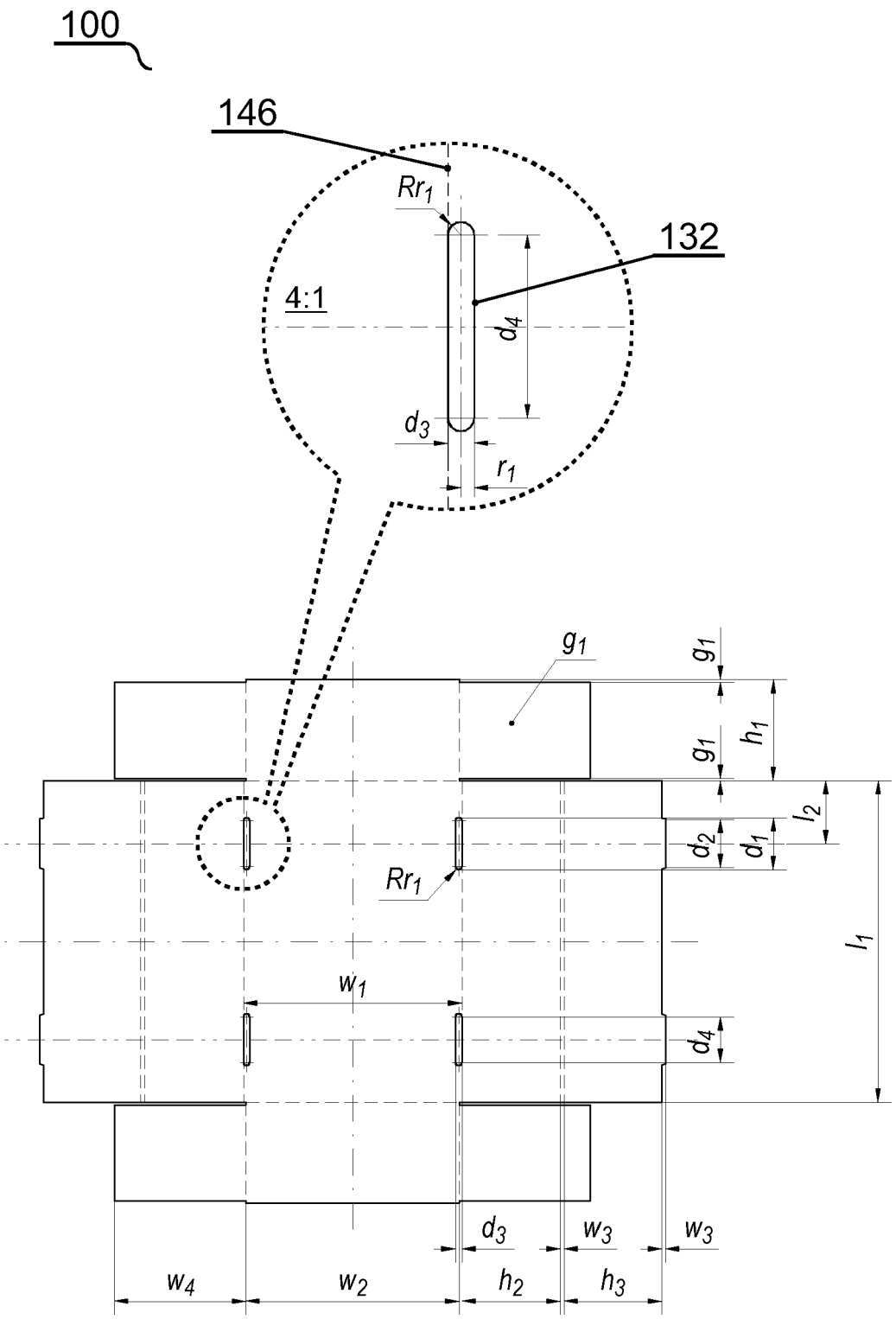
Fig. 3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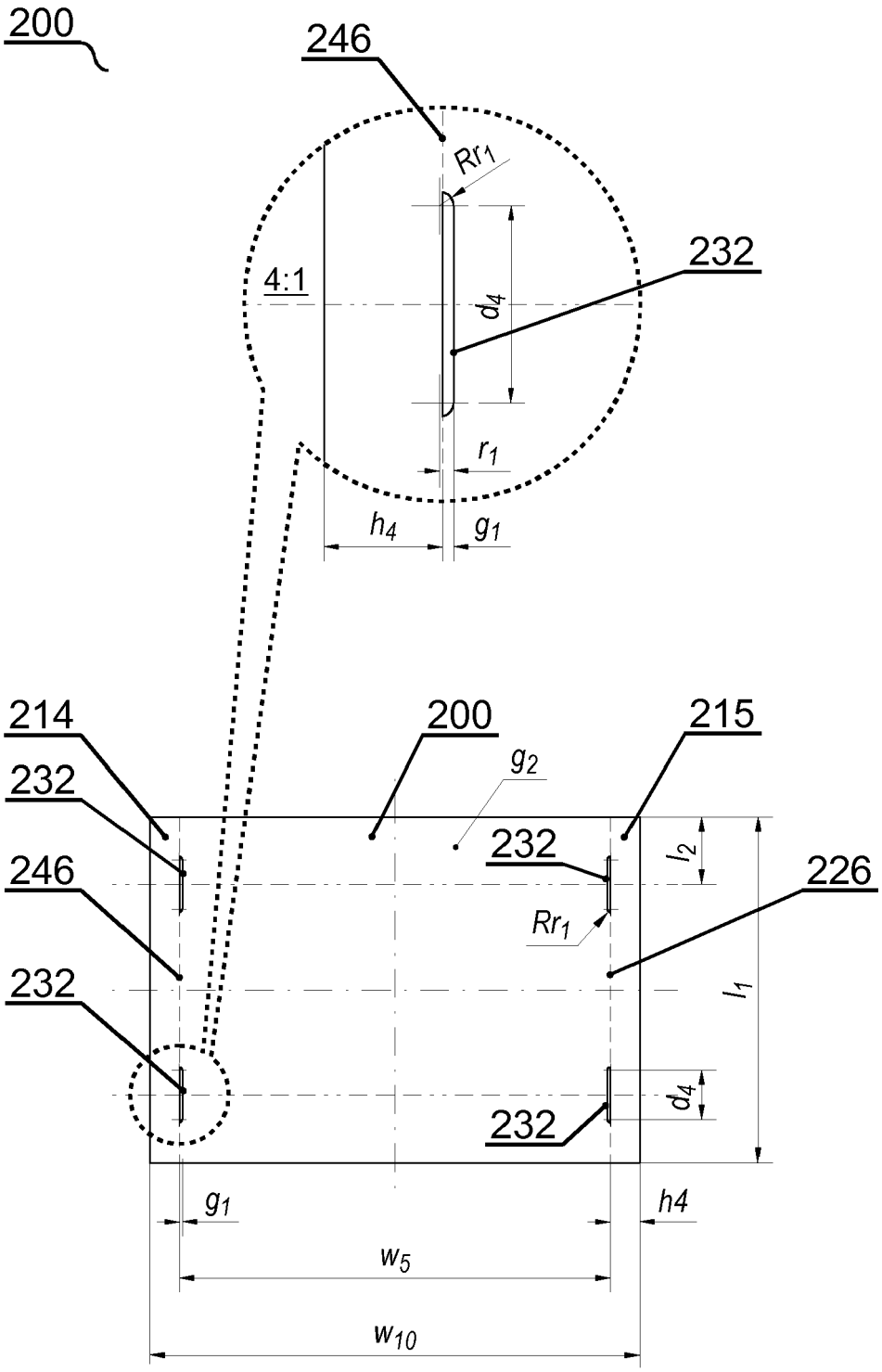
w2
h2
h3

Fig. 4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215
232
g2
232
l2
226
246
Rr1
232
l1
d4
232
g1
h4
w5
w10

Fig. 5

$l_1 > w_1 > h_1 \gg g_1 > g_2$

$d_1 < l_2 \leqslant \frac{3}{10} l_1$

$\frac{1}{7} l_1 < d_1 \leqslant \frac{1}{5} l_1$

$w_2 = w_1 - 2g_1$

$d_2 = d_1 - (g_1 + g_2)$

$w_3 = g_1 + g_2$

$d_3 = 2g_1 + g_2$

$l_2 + \frac{1}{2} d_1 < w_4 < \frac{1}{2} l_1$

$d_4 = d_1 - d_3 = d_1 - 2r_1$

$h_2 = h_1 - g_1$

$r_1 = \frac{1}{2} d_3 = \frac{1}{2}(2g_1 + g_2)$

$h_3 = h_2 - g_2$

Fig. 6A

$\frac{1}{4} h_2 \leqslant h_4 \leqslant h_2$

$r_2 \geqslant g_1 + g_2$

$r_2 = r_3 + g_2$

$h_5 = h_1 - 2r_2$

$w_5 = w_1 - 2(g_1 + g_2) + 2(h_5 - r_2) - 4r_2 - 2g_2 + 2\pi(r_2 + g_2)$

Fig. 6B

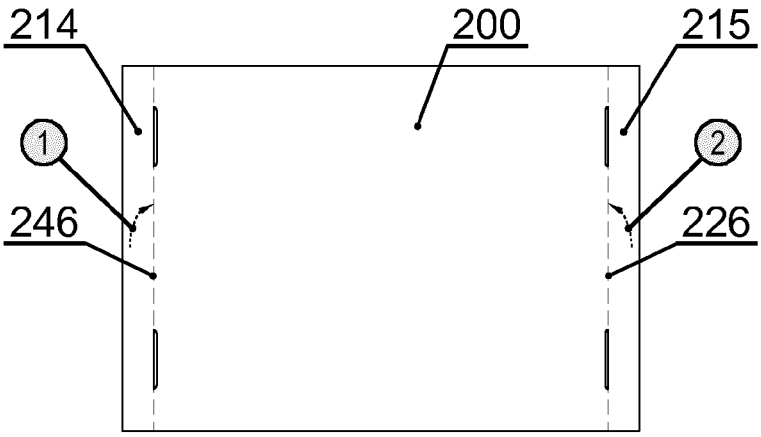


Fig. 7A

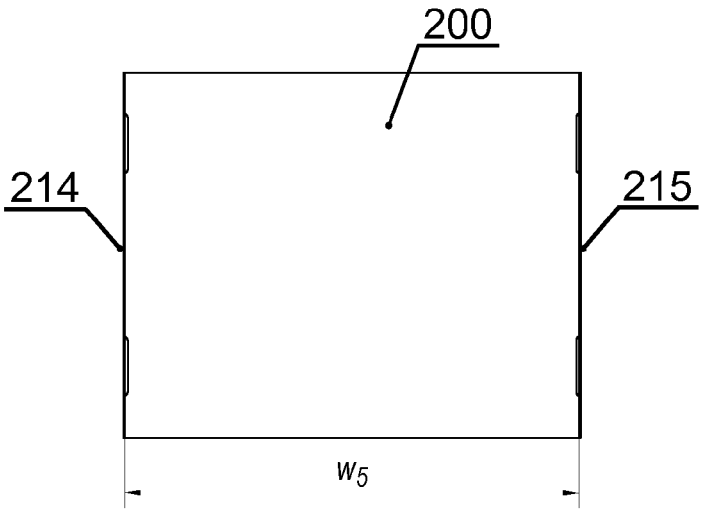


Fig. 7B

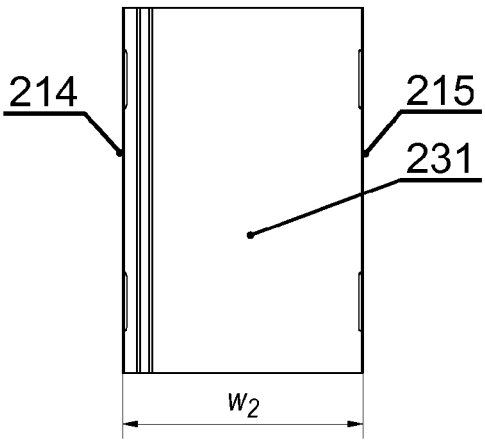
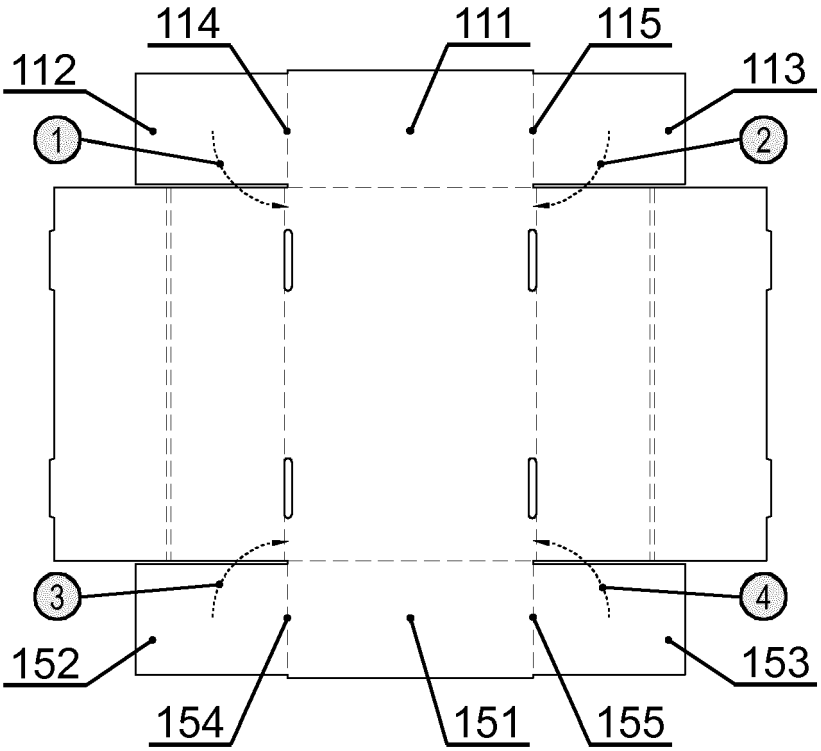


Fig. 7C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111
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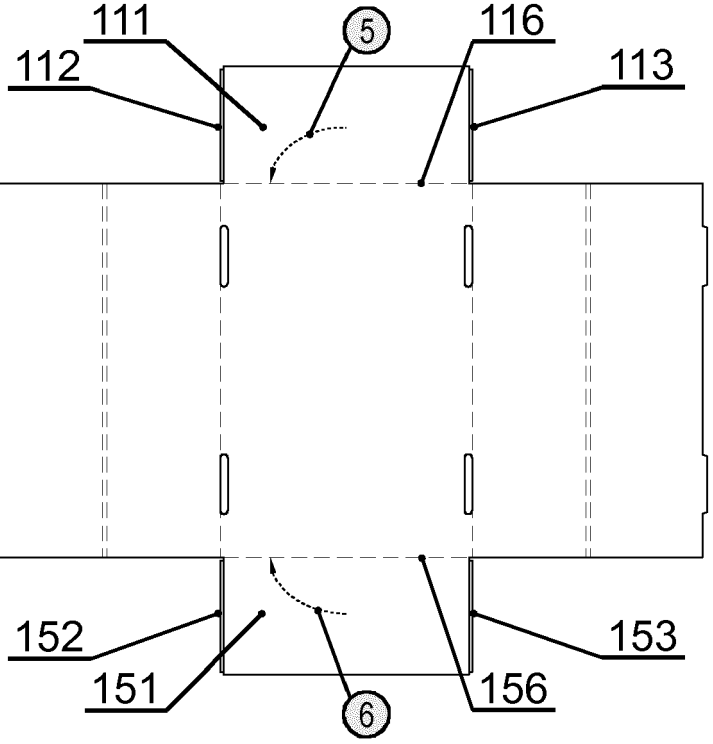
112
113
1
2
3
4
152
153
154
151
155

Fig. 8A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6

Fig. 8B

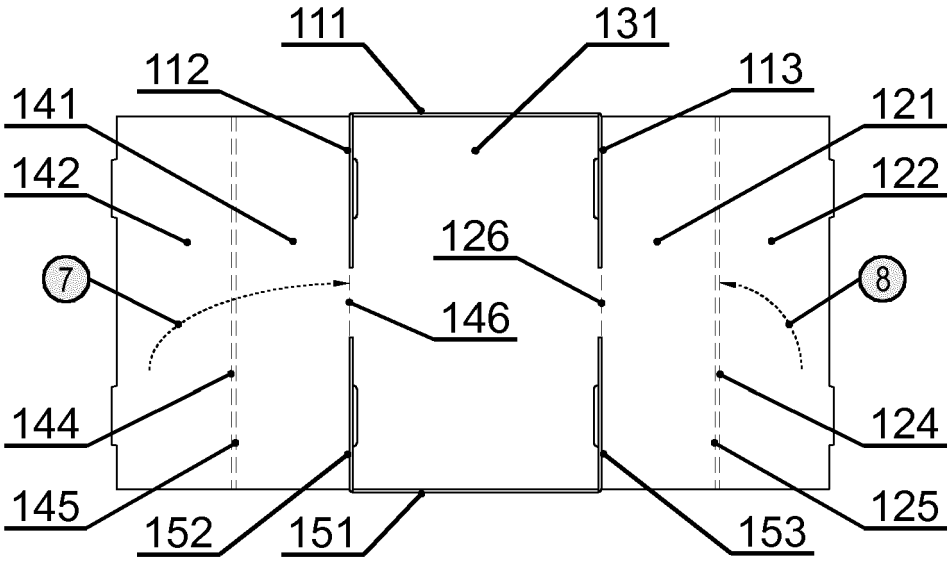
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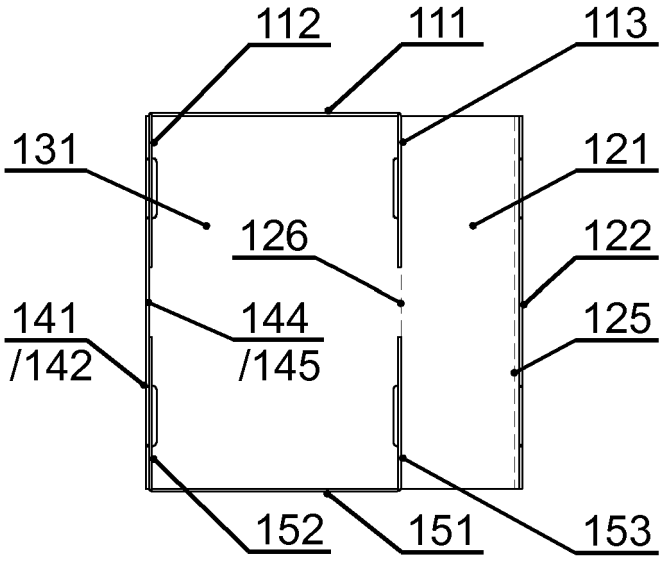
Fig. 8C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126
122
141
/142
144
/145
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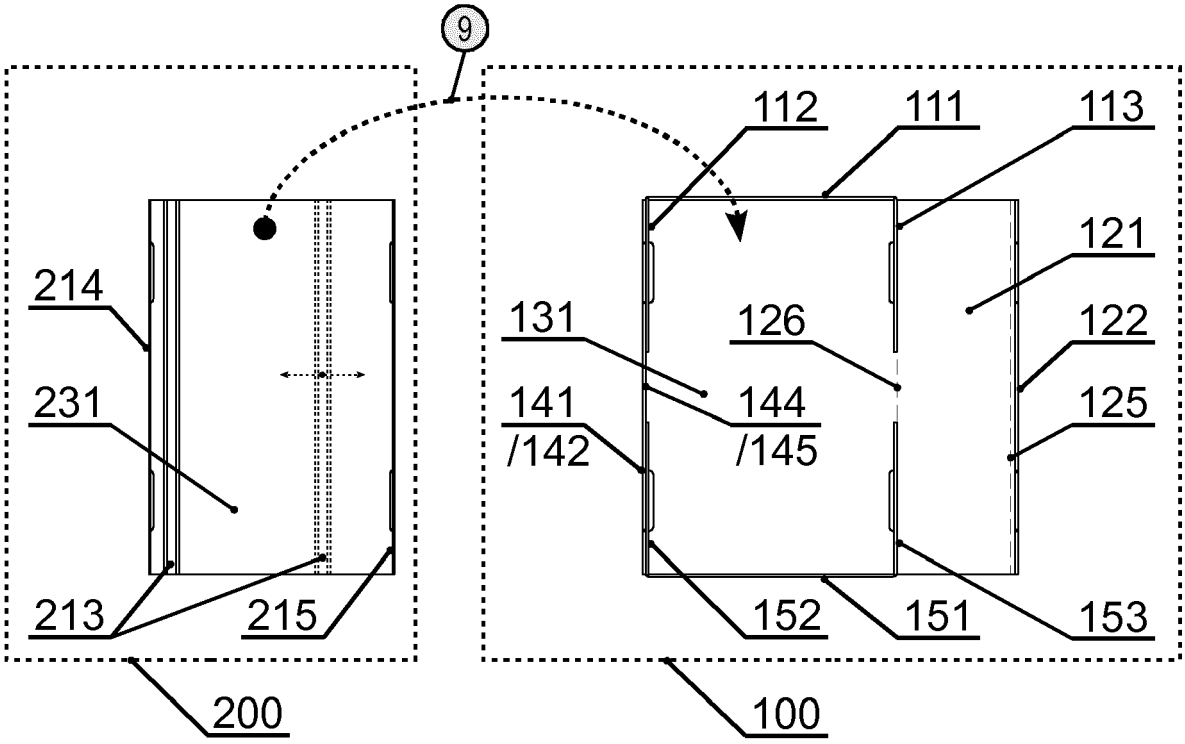
152
151
153

Fig. 8D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113
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/145
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213
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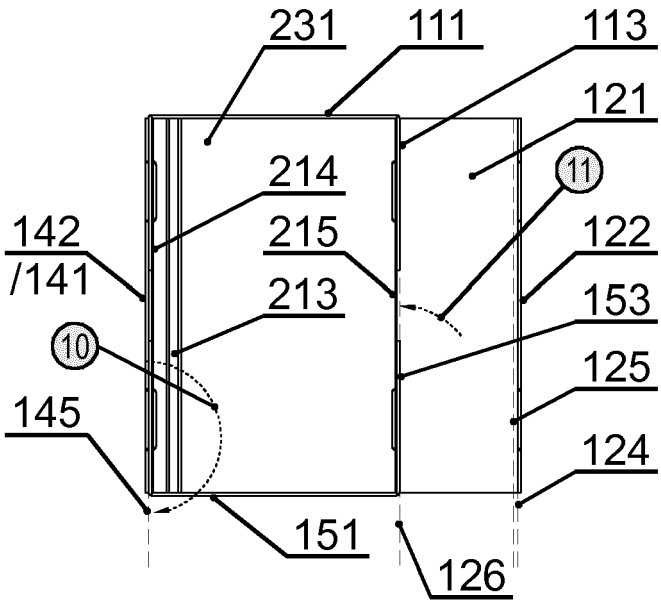
152
151
153
200
100

Fig. 8E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122
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153
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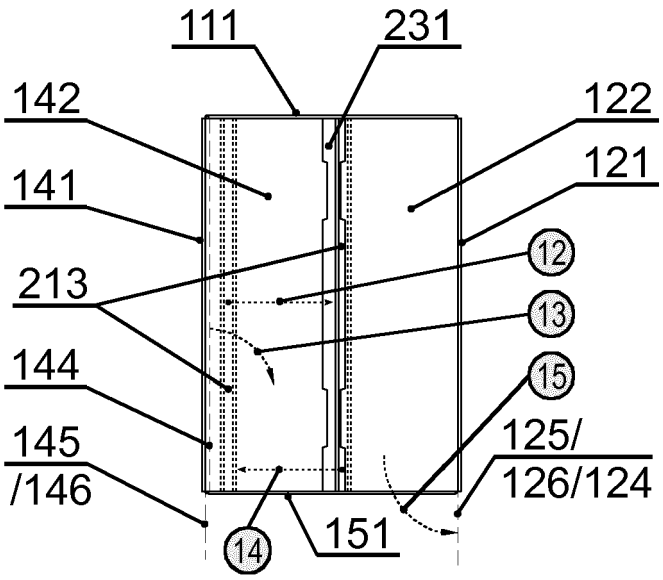
151
126

Fig. 8F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231
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12
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15
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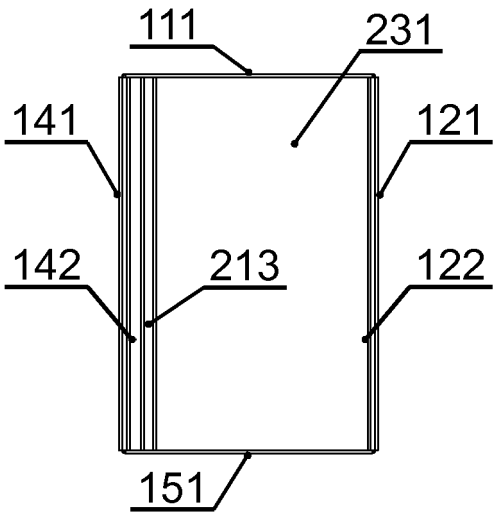
/146
125/
126/124
14
151

Fig. 8G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231
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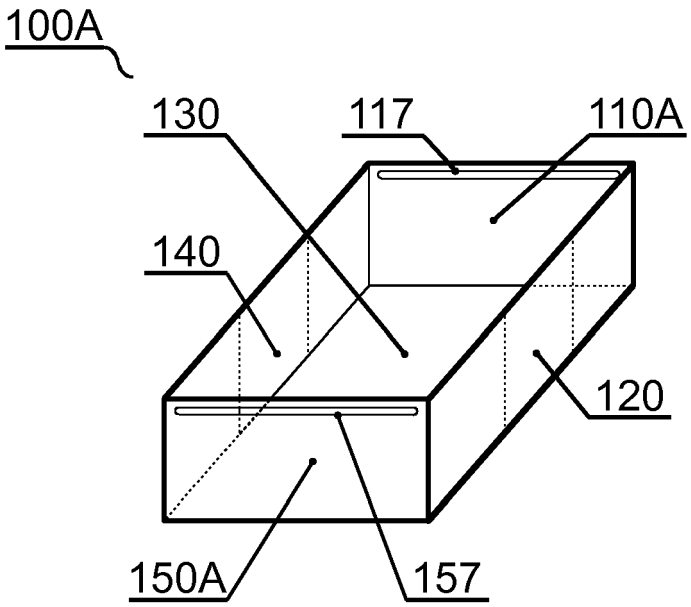
213
122
151

Fig. 8H


100A
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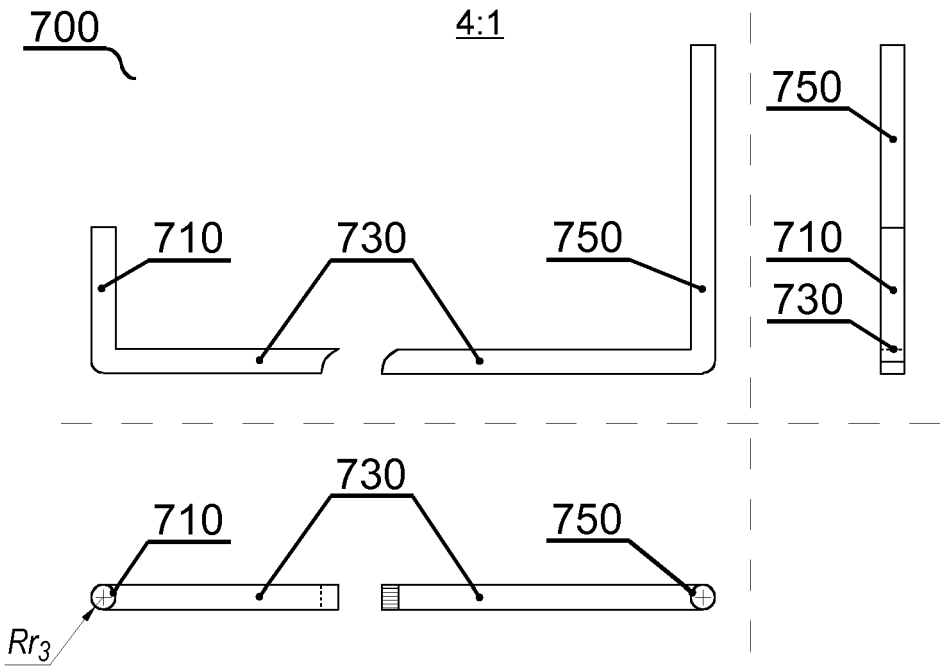
117
110A
140
120
150A
157

Fig. 9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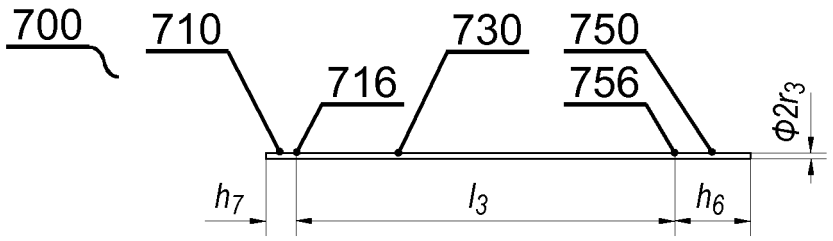
4:1
750
710
730
750
710
730
730
710
750
Rr3

Fig. 10



$\frac{1}{2}h_5 < h_6 < h_5$

$\frac{1}{4}h_5 < h_7 < \frac{1}{2}h_5$

$l_3 = l_1 + 2g_1$

Fig. 11A

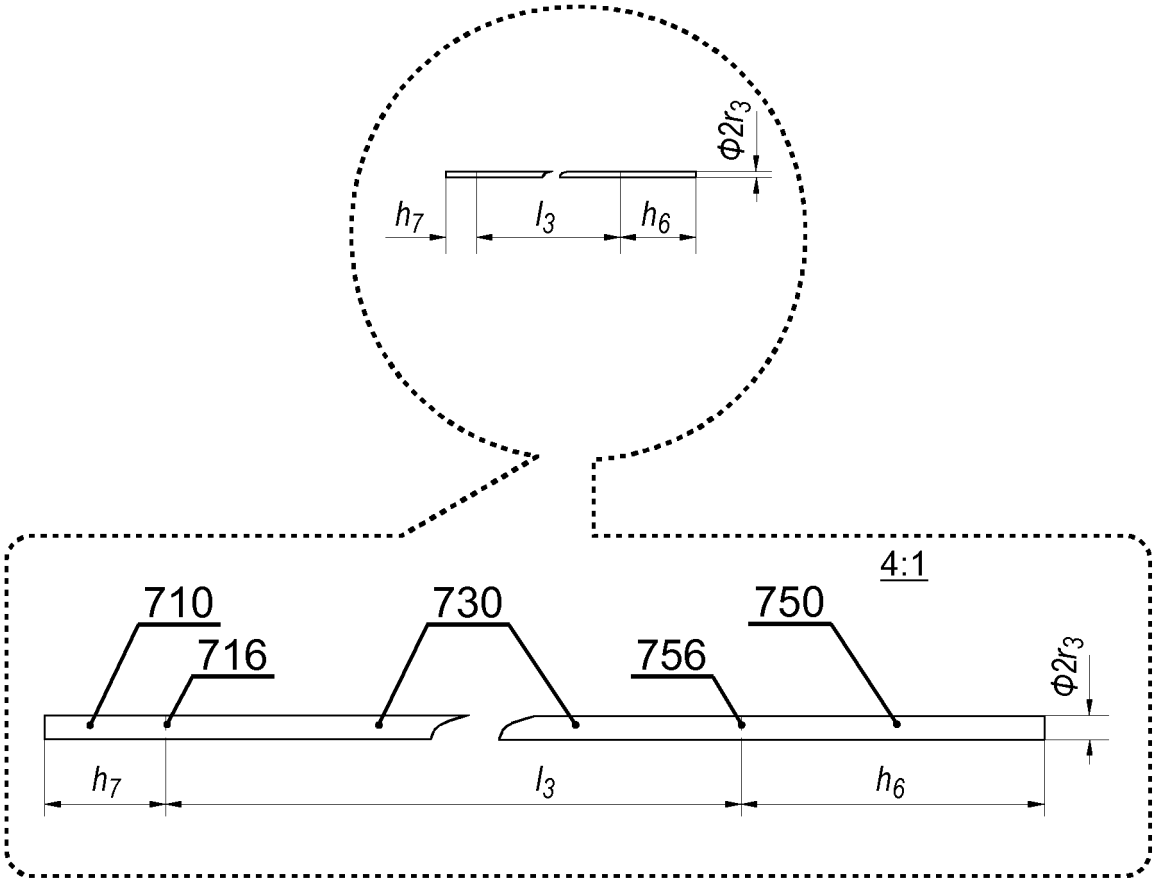


Fig. 11B

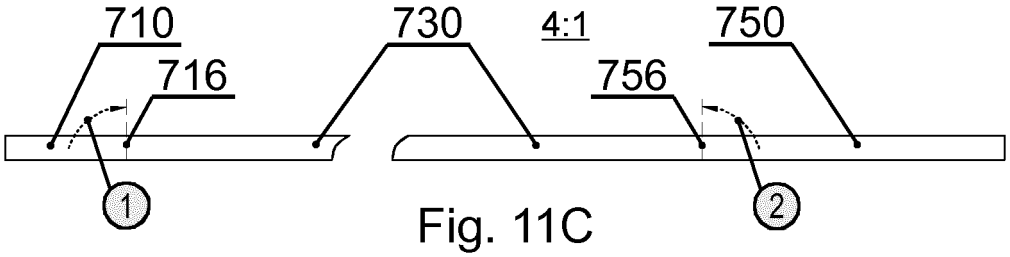


Fig. 11C

100A

$$r_2 = r_3 + g_2$$

$$w_6 = w_2 - 4(r_3 + g_2) = w_2 - 4r_2$$

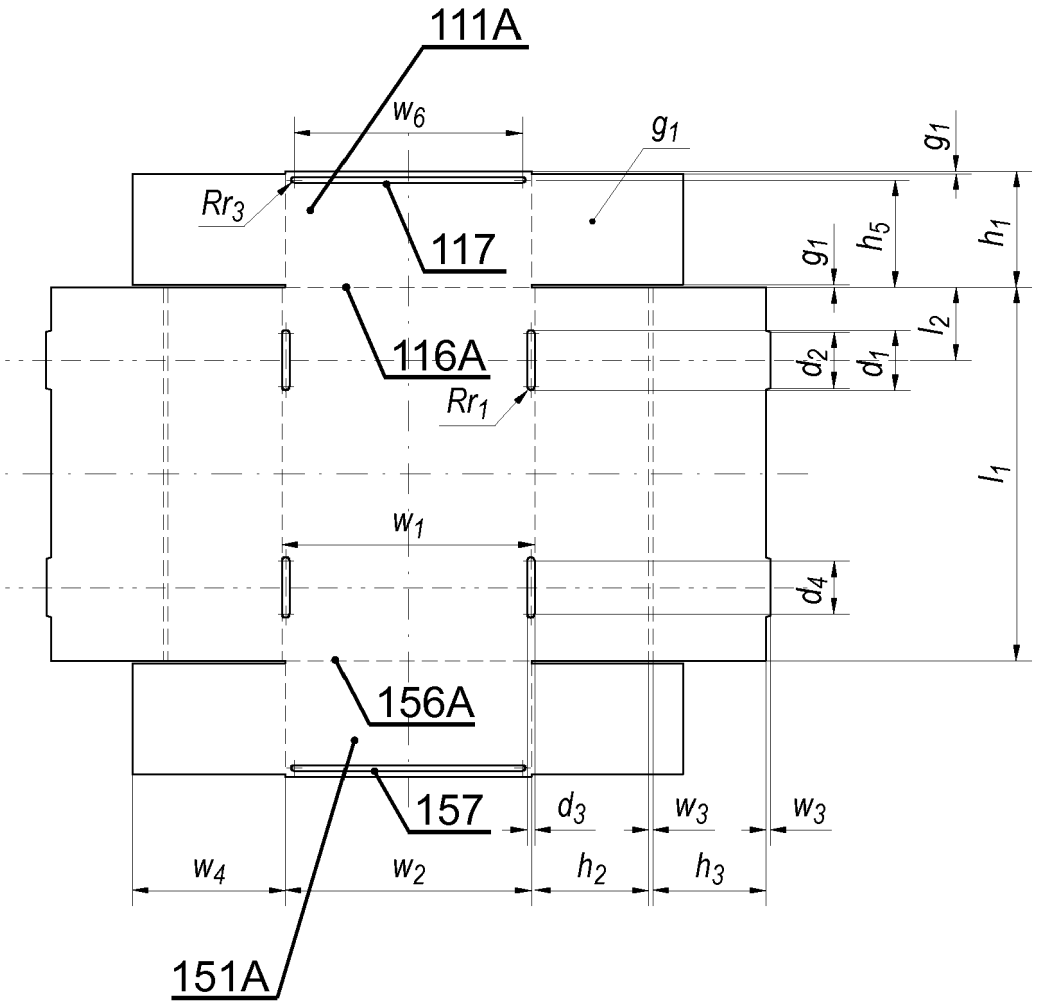
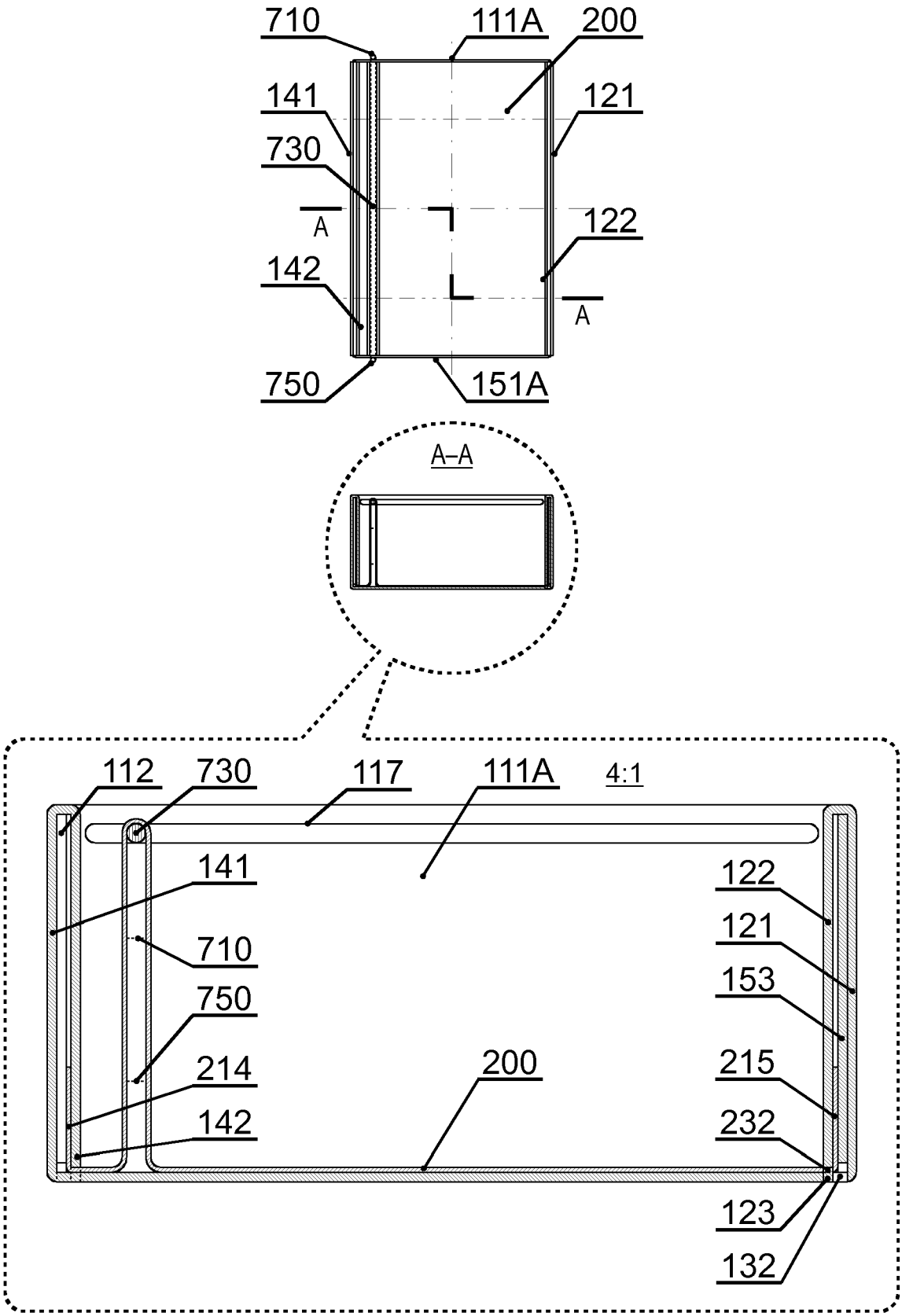


Fig. 12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111A
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121
730
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142
A
750
151A
A–A
4:1
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117
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141
122
121
710
153
750
214
200
215
142
232
123
132

Fig. 13

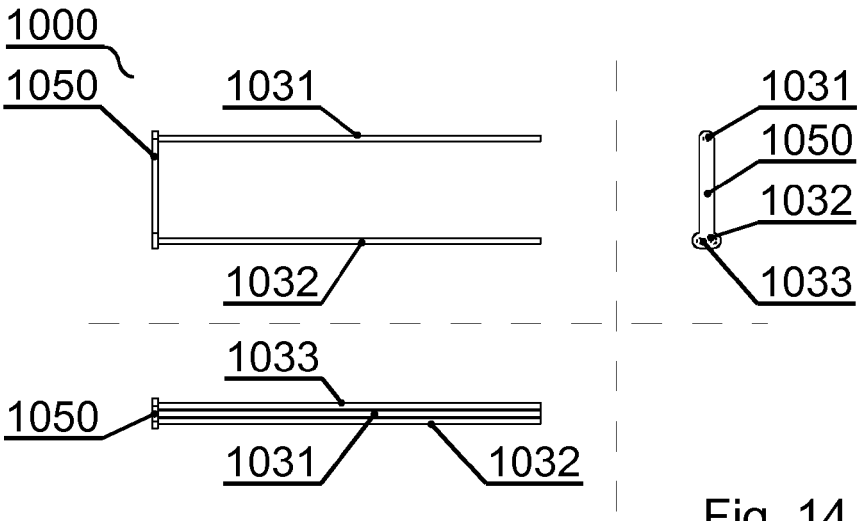


Fig. 14

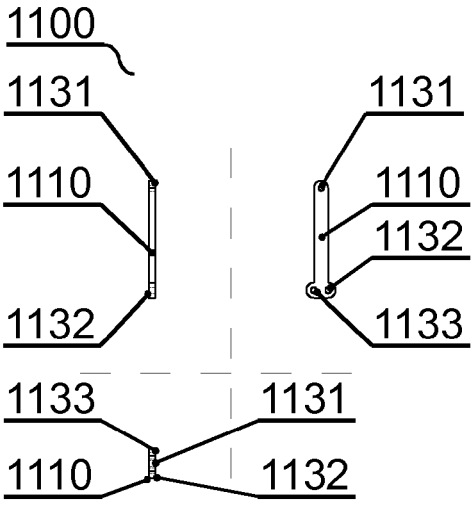


Fig. 15

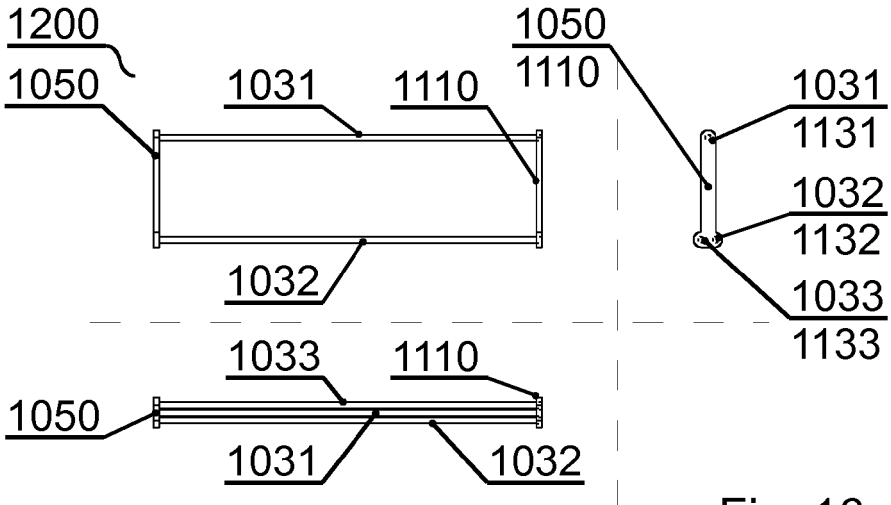
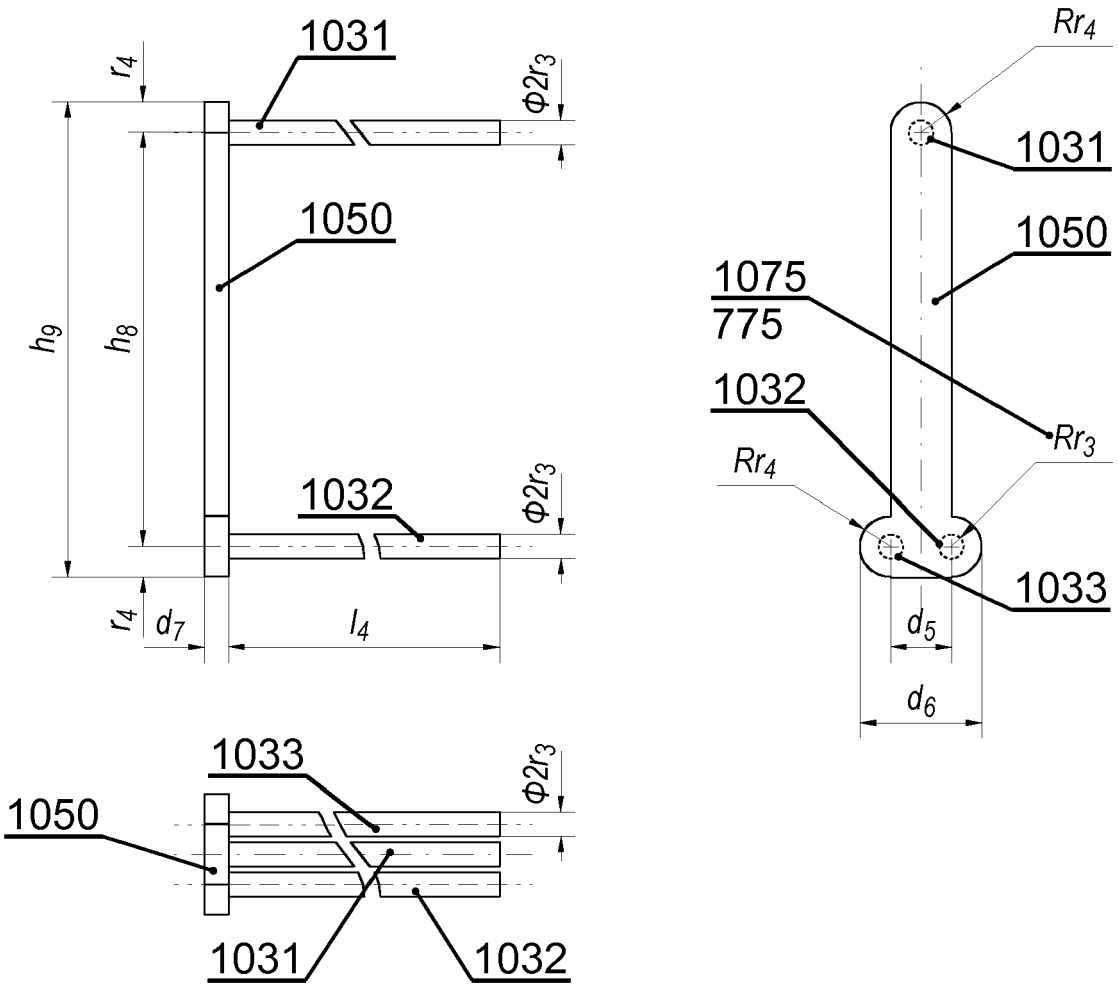


Fig. 16

4:1



$r_3 \geqslant g_1$	$r_4 = r_3 + g_1 + g_2$
$l_4 = l_3 + 2r_3 = l_3 + d_7$	$d_5 = 4r_3 + 2g_2$
$h_8 = h_5 - (r_3 + g_2)$	$d_6 = d_5 + 2r_4$
$h_9 = h_8 + 2(r_3 + g_1 + g_2)$	$d_7 = 2r_3$

Fig. 17

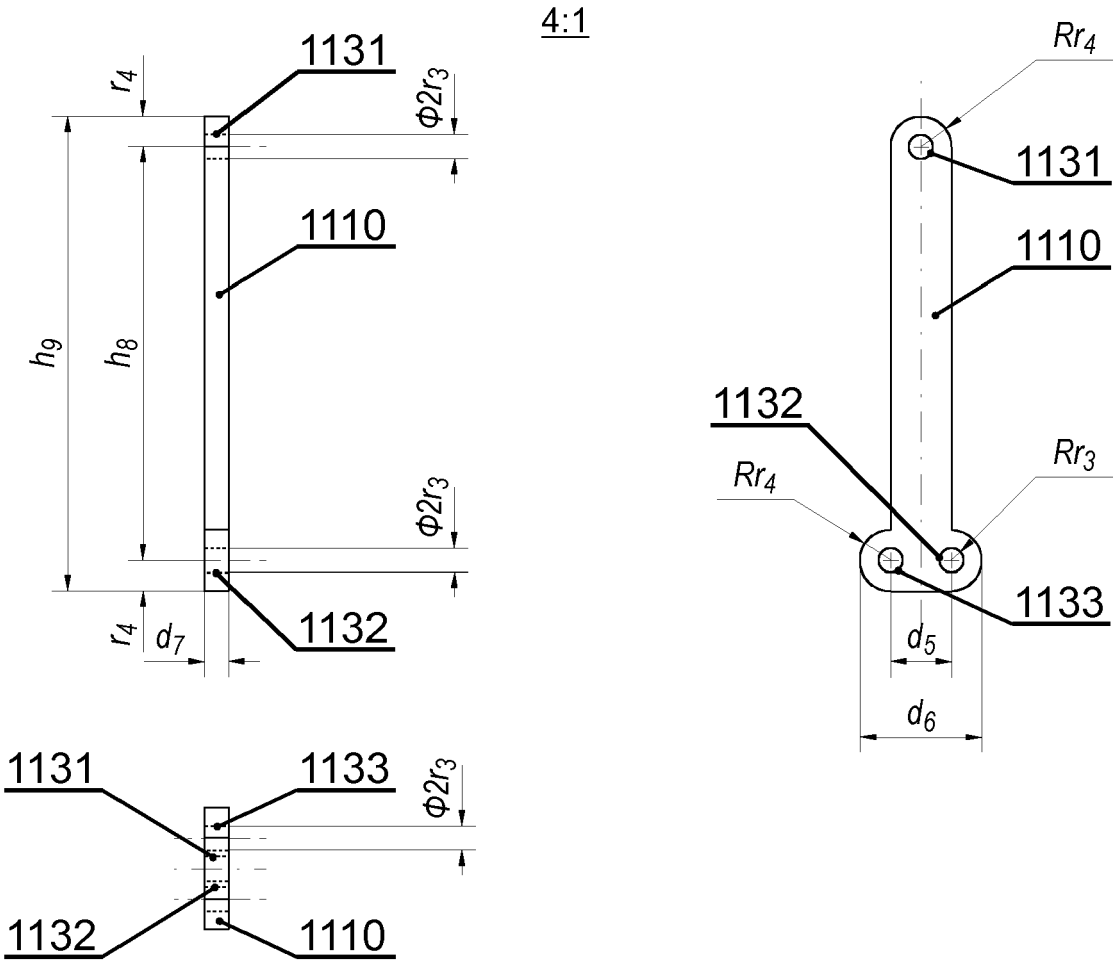


Fig. 18

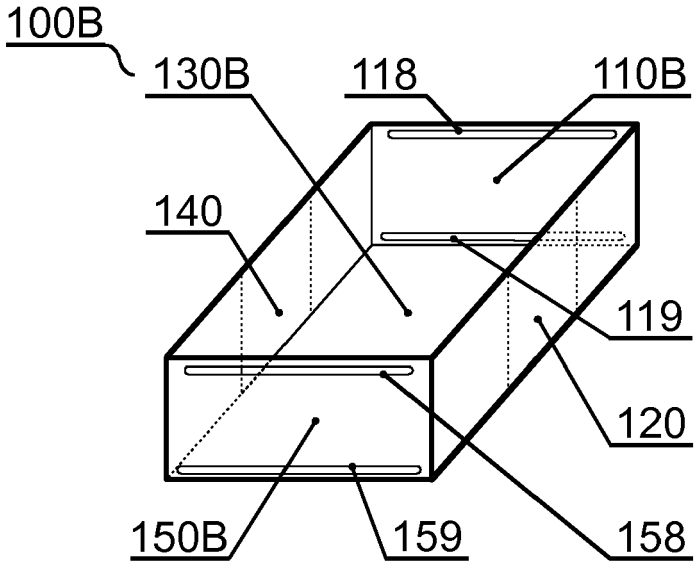


Fig. 19A

100B

$$h_8 = h_5 - (r_3 + g_2)$$

$$h_{10} = r_3 + g_2$$

$$w_7 = w_6 - 2(2r_3 + g_2)$$

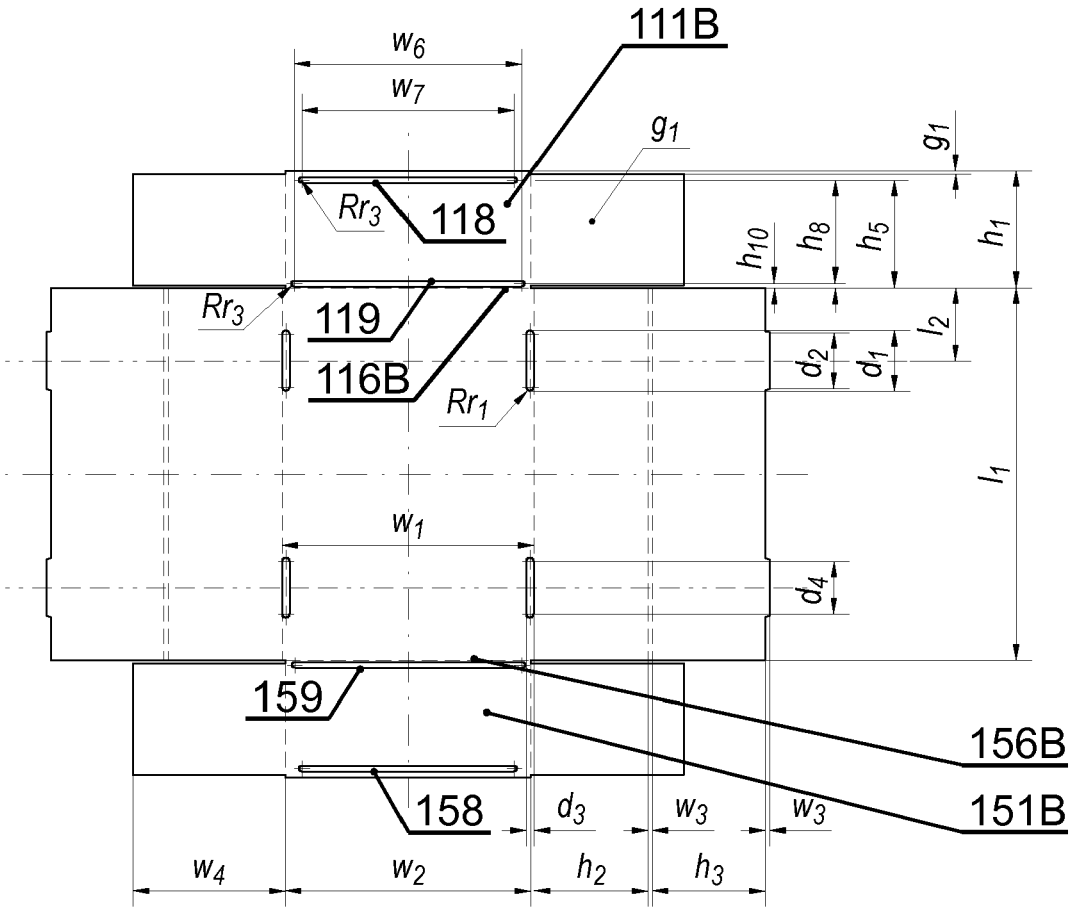
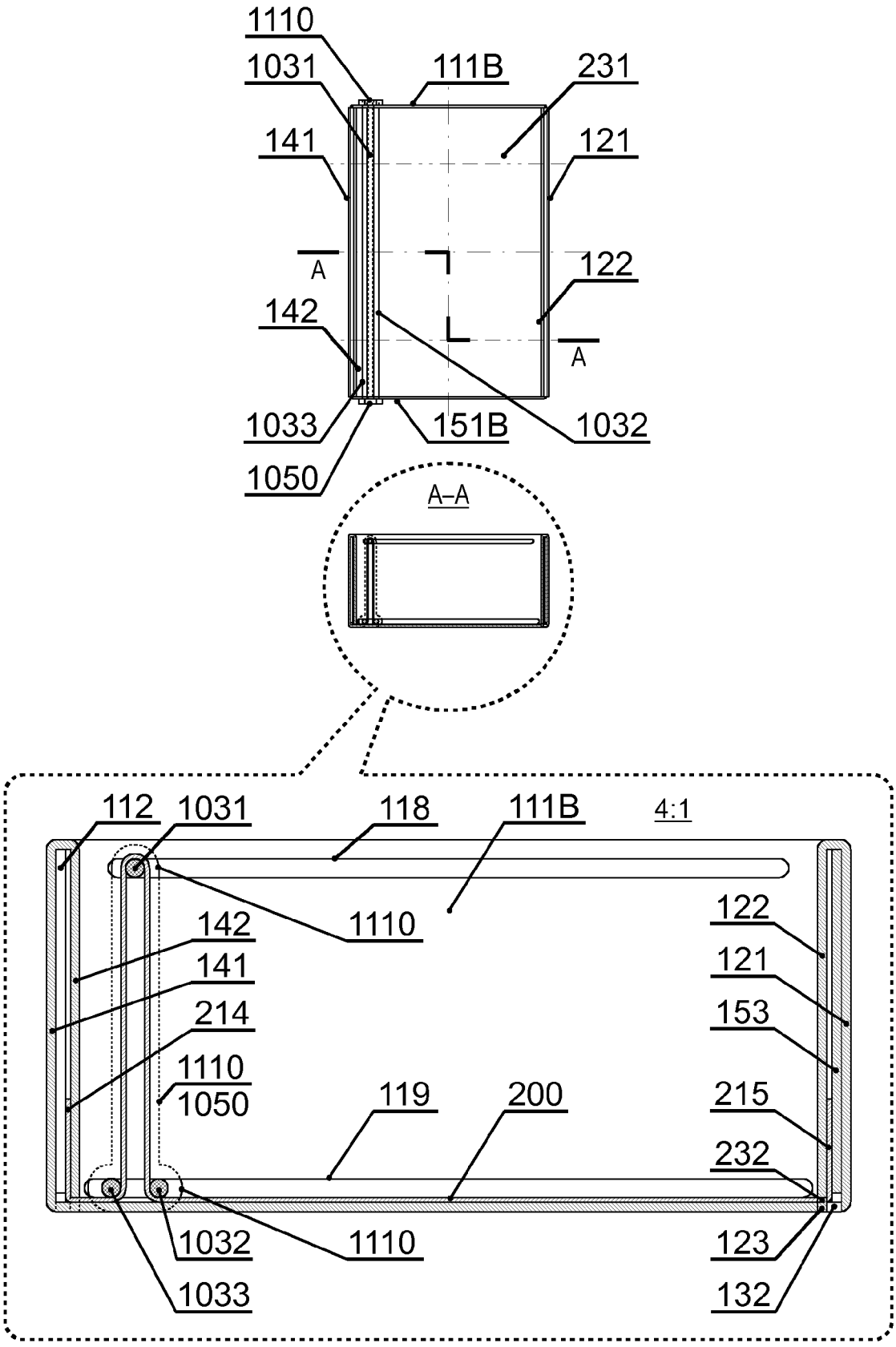


Fig. 19B


1110
1031
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A
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1050
A–A
4:1
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111B
1110
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121
153
119
200
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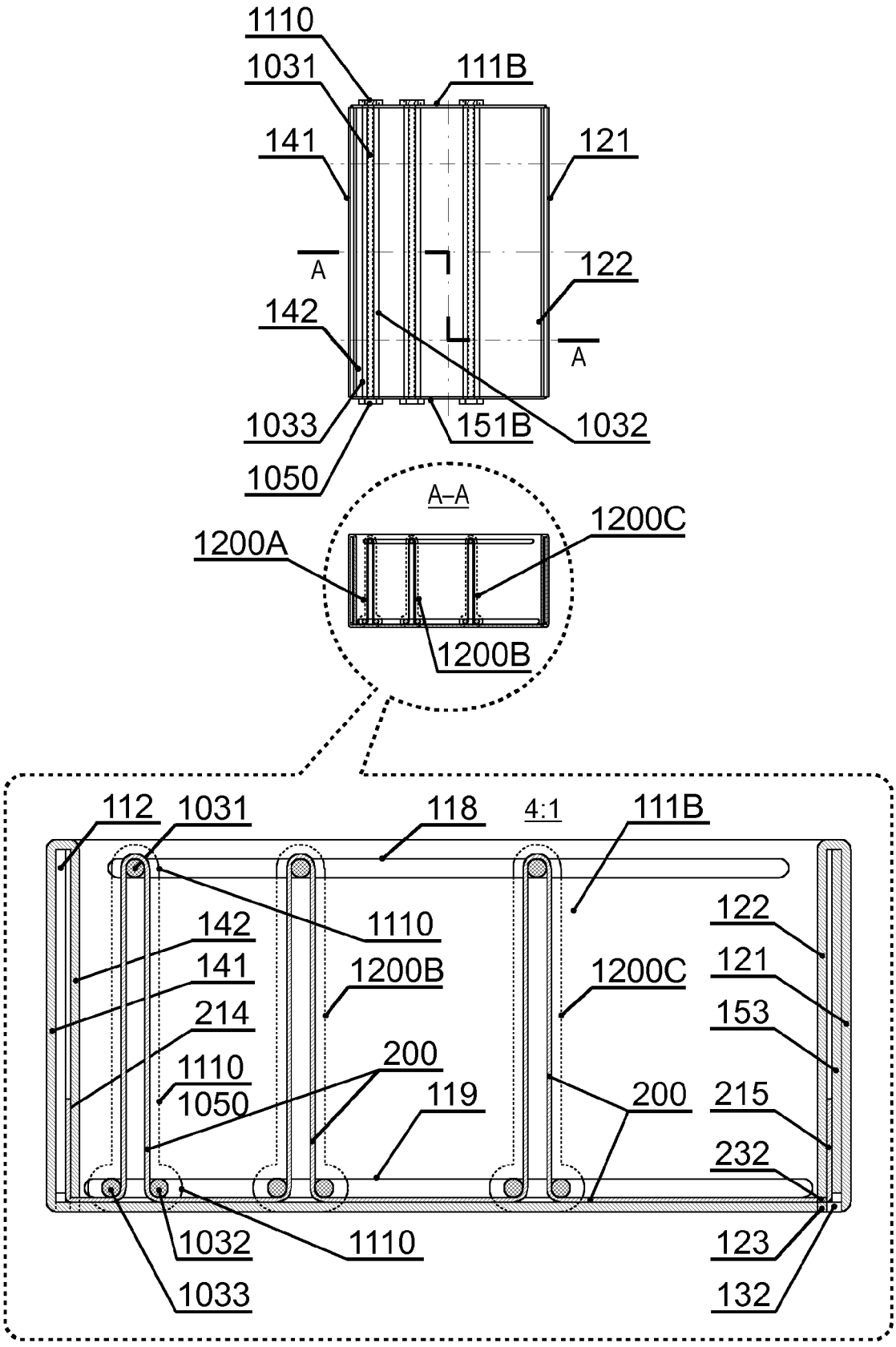
232
1032
1110
123
1033
132

Fig. 20


1110
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A
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151B
1032
1050
A–A
1200C
1200A
1200B
112
1031
118
4:1
111B
142
1110
122
141
1200B
1200C
121
214
153
200
1110
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119
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215
232
1032
1110
123
1033
132

Fig. 21

Europäisches Patentamt
European Patent Office
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EUROPEAN SEARCH REPORT

Application Number
EP 17 16 3121

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	DE 195 06 042 A1 (FRUEHAUF ALLAN [DE]) 22 August 1996 (1996-08-22) * column 1, line 25 - line 44 * * column 3, line 8 - column 4, line 21; figures 1-4 *	1,7	INV. B65D25/06 B65D5/49 ADD. B65D5/22
X	US 2006/249515 A1 (DOBRINSKI BRIAN T [US]) 9 November 2006 (2006-11-09) * paragraph [0096] - paragraph [0109] * * figures 13-16 *	1,2,7	
X	US 2016/002844 A1 (FLEMING HEATHER [US] ET AL) 7 January 2016 (2016-01-07) * paragraph [0020] - paragraph [0026] * * figures 1-3 *	1	
A	WO 2016/024239 A1 (GD SPA [IT]) 18 February 2016 (2016-02-18) * page 9, line 34 - page 12, line 31 * * figures 21-24 *	1-7	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	31 August 2017	Fitterer, Johann

CATEGORY OF CITED DOCUMENTS

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31-08-2017

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