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(54) **FUNCTIONAL ELEMENT FOR A WASTE CONTAINER**

(57) The present invention relates, among other aspects to a functional element (20), which is provided for being attached to a receiving device (13) for the functional element (20) of a waste container (10) for at least temporarily storing waste and/or valuable substances, or of a lid device (12) for a waste container (10) for at least temporarily storing waste and/or valuable substances. In order to provide a functional element, which is simple in construction, which can be easily mounted to a waste container and which, in addition, is capable of indicating different pieces of information, the functional element (20) is provided for directly or indirectly displaying a piece of information, whereby the functional element (20) is provided in such a manner that it generates a snap-fit connection and that it gets, in particular detachably, attached to the receiving device (13) by means of said snap-fit connection. Furthermore, the present invention is directed to a lid device and to a waste container incorporating such a functional element as well.

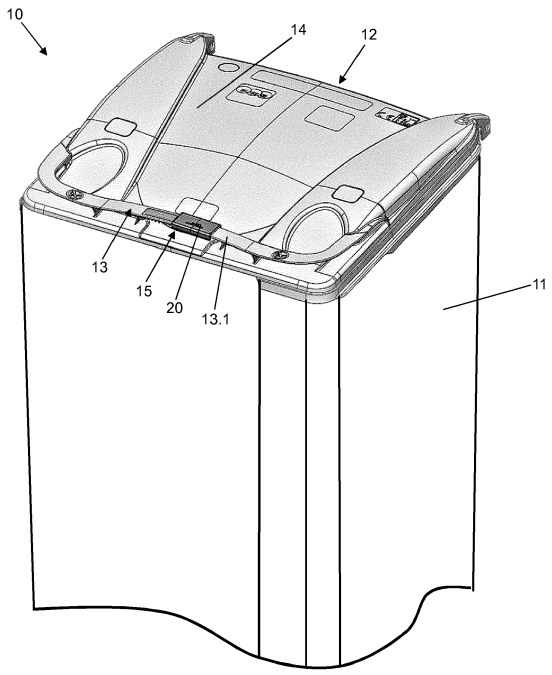

Fig. 1

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Description

[0001] The present invention refers to a functional element which is provided for being attached to a waste container or to a lid device of such a waste container according to the preamble of independent claim 1. Furthermore, the present invention relates to a lid device for a waste container and to a waste container itself incorporating such a functional element.

[0002] Waste containers per se are well known in prior art. Usually they are used for temporarily storing different fractions of waste or valuable substances. Quite often, waste containers are used to storing different fractions of waste at the same time, wherein a waste fraction represents a specific type of waste and/or of a valuable substance, such as glass, metal, plastic, organic waste, paper, residual waste or the like, A waste container usually comprises a container body which incorporates the receiving space for receiving the waste or the valuable substances. Such a container body comprises a container base and a side wall protruding from the container base. At its upper end, which generally represents the upper edge of the container body as well, the container body comprises a receiving opening, through which waste or valuable substances are inserted into the container body. The receiving opening is covered by a lid device, said lid device being, in particular pivotally, mounted to the container body.

[0003] Sometimes there is a need for the user of such a waste container to provide information to those people, who discharge the waste container, the waste disposal company for example. Such information can be displaced by use of suitable stickers or information plates for example.

[0004] However, such a way of displaying information is not applicable for all situations. This can be explained by way of an example. For example, the user of a waste container might give notice that she or he needs new paper bags for storing organic waste. Such paper bags are quite often delivered by the waste disposal company. If the user wants to indicate that she or he is in need of new paper bags she or he might provide a respective information at the waste container. For example, a red indication can mean that the user needs new paper bags. Then, a green indication can mean that everything is in good order and that the user currently does not need any new paper bags.

[0005] Furthermore, if the waste container is capable of simultaneously storing different fractions of waste or valuable substances it might be advantageous to give the user some information at hand, which portion inside the waste container body is used for storing which kind of waste or valuable substances.

[0006] It is the object of the present invention to provide a functional element, which is simple in construction, which can be easily mounted to a waste container and which, in addition, is capable of indicating different pieces of information.

[0007] In accordance with the present invention, this object is solved according to a first aspect of the invention by the functional element with the features according to independent claim 1, according to a second aspect of the present invention by the lid device with the features according to independent claim 8, and according to a third aspect of the present invention by the waste container with the features according to independent claim 9.

[0008] Additional features and details of the present invention become apparent from the dependent claims, from the description and from the drawings.

[0009] Therein, features and details which are described in connection with one of the aspects according to the invention apply with respect to their disclosure in their entirety also to the other aspects according to the invention, so that statements made with respect to one aspect of the invention also apply to their full extent to the other aspects of the invention, and vice versa.

[0010] All different aspects of the present invention underlie the same common basic idea, that a specific functional element is provided, said functional element being capable to get attached to a lid device of a waste container or to a waste container itself, to the container body for example.

[0011] A functional element in the light of the present invention generally is an element of an entity, which serves a specific purpose or which is used for a specific purpose. According to the present invention it is the specific purpose of the functional element that it directly or indirectly displays at least one piece of information, or that it is capable of displaying at least one piece of information.

[0012] According to a first alternative, if the functional element directly displays a piece of information it might get manufactured in a specific shape or colour, or it might show the respective piece of information on one of its surfaces. In the latter case the piece of information can be attached onto the functional element, by means of a sticker for example. Or, the piece of information can be realised in the functional element itself, for example in the surface of the functional element, by means of an engraving for example.

[0013] According to a second alternative, if the functional element is provided for indirectly displaying a piece of information, it might be provided such that it is capable of at least temporarily covering a respective piece of information, in particular either one of more than one pieces of information at a time.

[0014] Preferred embodiments for both alternatives are described in more detail further below.

[0015] According to the first aspect, the present invention is directed to the functional element itself. According to the second aspect, the present invention is directed to a lid device, to which such a functional element is or gets mounted. According to the third aspect the present invention is directed to a waste container to which the functional element is or gets mounted.

[0016] In particular, the functional element is provided

as a supplement member, that can be easily added on a lid device or on a waste container. Due to its configuration, that will be explained in detail further below, the functional element according to the present invention can be easily attached to a lid device or to a waste container, as well as detached therefrom.

[0017] In its operational mode, which is the mode when the functional element is attached to the lid device or to the waste container, the functional element is actually attached to the lid device or to the waste container. Preferred embodiments are described in more detail further below, in particular with regard to the second and third aspect of the present invention.

[0018] According to the present invention the functional element as well as the lid element are used in connection with a waste container for at least temporarily storing waste and/or valuable substances, such as glass, metal, plastic, organic waste, paper, residual waste and the like. In the following a preferred embodiment of such a waste container is described in detail, wherein a functional element of the present invention can be implemented.

[0019] Such a waste container may have a holding capacity between 200 litres and 700 litres, in particular a holding capacity of 240 litres or of 370 litres or of 660 litres. Nevertheless, the present invention is also applicable in connection with bigger waste containers having a holding capacity of up to 1700 litres. In any case the present invention is not limited to waste containers having a specific holding capacity.

[0020] In particular the waste container is a movable waste container, which means that the waste container is equipped with a number of wheels, two, three or four wheels for example. In particular the wheels are attached to the waste container at its lower end, in the area of the container bottom for example.

[0021] In its basic configuration the waste container comprises at least a container body. The container body comprises a side wall which sideways borders a receiving space inside the container body. The present invention is not limited to specific shapes of the side wall and therefore, of the container body. For example, the side wall can have a round shape, an elliptical shape, an oval shape or the like. According to a different embodiment the side wall can have a polygonal shape, According to a preferred embodiment the side wall comprises a rectangular shape or a shape approaching at least a rectangle, such that the container body shows a respective shape as well.

[0022] Downwardly closed is the container body by means of a base element, which is the bottom of the container body and from which the side wall protrudes upwardly. Preferably the height of the sidewall is greater then, in particular a multiple of the width and of the depths of the bottom of the container body. At the upper end of the side wall, which is, in comparison to the container bottom, the opposite end of the side wall, and which represents the upper edge of the container body as well, the container body comprises an insertion opening for the waste and/or for the valuable substances. According to a preferred embodiment, the insertion opening is bordered by the sidewall of the container body, such that the insertion opening spans the entire cross section of the container body at its upper end or edge.

[0023] At its upper end, the container body preferably comprises at least one handle element, which is attached to the container body and which preferably protrudes outwardly therefrom. By means of such a handle element the user can move the waste container.

[0024] For covering the insertion opening, the waste container is provided with a lid device, said lid device being mounted to the waste container, to the container body for example. According to a preferred embodiment the lid device is pivotally mounted to the container body at the upper edge of the container body. Preferably, the lid device comprises a handle element, a handle strip for example, by means of which the user can open and close the lid device.

[0025] The sidewall and the base element of the container body limit an inner space of the container body, said inner space being the receiving space for storing the waste and/or the valuable substances.

[0026] For the purpose of storing different fractions of waste and/or of valuable substances at the same time, it is preferably provided that the inner space of the container body is divided into a number of different compartments, for example by use of one or more separation plates, by use of additional insertion containers or by uses of a combination thereof. If one or more insertion containers are placed inside the container body, which functions as the main container body of the waste container in this situation, the one or more additional insertion containers are preferably mounted to some kind of a frame. According to a preferred embodiment such a multi compartment waste container is provided for storing two or more different fractions of waste and/or valuable substances at the same time.

[0027] Preferably the waste container and its components is/are manufactured from a plastic material, a weatherproofed, a resilient plastic material for example, from metal or from a combination of different such materials.

[0028] According to the first aspect the present invention is directed to a functional element, which is provided for being attached to a receiving device for the functional element of a waste container for at least temporarily storing waste and/or valuable substances, or to a lid device for a waste container for at least temporarily storing waste and/or valuable substances. The functional element is characterized in that the functional element is provided for directly or indirectly displaying a piece of information, and that the functional element is provided in such a manner that it generates a snap-fit connection and that it gets, in particular detachably, attached to the receiving deice by means of said snap-fit connection.

[0029] According to the first aspect the present invention relates to a functional element which is used in con-

nection with a lid device or with a waste container.

[0030] The functional element is provided for being attached to a receiving device for the functional element of a waste container for at least temporarily storing waste and/or valuable substances, or to a lid device for a waste container for at least temporarily storing waste and/or valuable substances. In its operational state or mode, the functional element is mounted to the lid element or to the waste container. According to one alternative, the functional element is mounted to the lid device for such a waste container. In the field of manufacture of waste containers, it is not unusual that such lid devices are manufactured separately from the rest of the waste container, and therefore that such lid devices are offered and sold independently from the rest of the waste container. However, in almost the same manner it is also common practice that the waste containers are offered and sold in their entirety. Therefore, according to another alternative, in its operational state or mode, the functional element is mounted to the waste container, said waste container preferably comprising a container body and a lid device for closing the insertion opening being provided in the container body. In such a case, in the operational state or mode of such a waste container, the functional element is preferably mounted to the container body and/or to the lid device.

[0031] According to the present invention the functional element cooperates with a corresponding receiving device. The receiving device is a portion of the lid device or of the waste container to which the functional element is to be attached or gets attached, whereby the receiving device interacts with the functional element. Preferred embodiments, how this can be achieved are described in more detail further below.

[0032] According to the present invention the functional element is provided in a specific manner.

[0033] According to the present invention the functional element is provided for directly or indirectly displaying a piece of information. This has already been explained in more detail further above. Therefore, full reference is made to the respective disclosure further above.

[0034] According to the present invention the functional element is provided in such a manner that it generates a snap-fit connection. In particular a snap-fit connection makes use of the elasticity of the functional element. The functional element, which is preferably made of a plastic material, can deform itself elastically or can be elastically deformed and then subsequently can be attached to a corresponding receiving device of the lid device or of the waste container by means of getting caught for example. Therefore, it is the nature of such a snap-fit connection that the functional element gets, in particular detachably, attached to the receiving deice. Preferred embodiments of such functional elements allowing and generating a snap-fit connection are described in more detail further below.

[0035] In particular, the functional element is provided to generate an immediate connection with the corresponding receiving device of the lid device or of the waste container. This means that the connection is directly generated by means of the functional element, in particular at least by means of parts of the functional element.

[0036] According to a preferred embodiment, the functional element is provided in such a manner, that it is capable to at least partially encompassing the receiving device for generating the snap-fit connection. The term "encompassing" preferably means that the functional element is provided such that it at least partially surrounds the corresponding receiving device, such that the receiving device has a hold inside the functional element. For that reason, it is preferably provided, that the functional element comprises a course, which limits a receiving space being in particular partly open, said receiving space being provided for receiving and holding the receiving device. That means that the functional element is realised in such a way that it forms a receiving space whereby the receiving space is limited by the different components of the functional element. The receiving space is adapted for receiving the receiving device of the lid device or of the waste container. In the operational state or mode, the receiving device of the lid device or of the waste container is received and held inside the receiving space of the functional element Thus, the functional element at least partially surrounds the receiving device. In particular, the shape of the receiving space of the functional element corresponds to the shape of the receiving device. In order that the functional element can fulfil its snap-fit connection it is preferably provided that the functional element encompasses the receiving device only partially. In such a case it is preferably provided that the receiving space being provided by the functional element is not closed all-around, but that there is at least a gap or a recess in the functional element, such that the functional element can fulfil its elastic property, by bending the free ends of the functional element for example.

[0037] According to a preferred embodiment, the functional element is provided as a longitudinal member having an expansion in longitudinal direction which is a multiple of its expansion in width direction.

[0038] Next, a preferred embodiment of the functional element will be explained. According to this preferred embodiment, the functional element, which is preferably made of a plastic material having at least some elasticity, comprises a U-shaped basic shape, having a base element, a first leg which protrudes from the base element at a first end thereof and a second leg which protrudes from the base element at a second end thereof, whereby the base element and the first and second legs limit the receiving space. In order to generate the snap-fit connection, the base element can get bended. For example, in its rest position, the legs can protrude perpendicular or almost perpendicular from the base element. If the base element gets bended the course of the legs protruding from the base element is spread open. In addition, or according to a different alternative, the legs, due to their elastic material can get bended outwardly. Due to

a spring mechanism, the bended parts of the functional element return back into the original alignment, once the bending forces have been removed, for example when the functional element surrounds the receiving device and the snap-fit connection has been completed.

[0039] According to a preferred embodiment, a latching hook is arranged or provided at a free and of the first leg. This latching hook cooperates with a corresponding receiving element of the receiving device. Alternatively, a latching finger or a latching flap is arranged or provided at a free end of the first leg. In particular a latching finger is provided in such a way that its length, which is the distance from the free end of the first leg, where the latching finger protrudes, to the free end of the latching finger, is greater than, in particular a multiple of, the width of the latching finger. In particular, a latching flap is provided in such a manner that its length, which is the distance from the free end of the first leg, where the latching flap protrudes, to the free end of the latching flap, is smaller, in particular much smaller, than the width of the latching flap. According to a preferred embodiment the latching flap has a width which is the same as the length or almost the length of the functional element if the functional element is a longitudinal element.

[0040] The latching finger or the latching flap preferably protrudes from the first leg into the direction of the second leg, in particular in a right angle, whereby the latching finger or the latching flap particularly comprise, preferably at the free end thereof, a snap-in nose, said snap-in nose protruding into the receiving space.

[0041] According to the aforementioned embodiment, all parts of the functional element, that is the base element, the first leg with the latching hook or the first leg with the latching finger or the latching flap limit the receiving space of the functional element which receives the corresponding part of the receiving device of the lid device or of the waste container.

[0042] By means of the latching hook, the latching finger or the latching flap it is preferably provided that the functional element can be held at the receiving device, via a clip. connection or via a rest connection for example. Furthermore, as will be explained in more detail further below, such an arrangement of the functional element has the advantage that the latching hook or the latching finger or the latching flap generates some kind of a resistance which prevents the functional element from being undesirably moved.

[0043] In the same way it is preferably provided, that a latching hook is arranged or provided at a free and of the second leg, or that a latching finger or a latching flap is arranged or provided at a free end of the second leg, whereby the latching finger or the latching flap protrudes from the second leg into the direction of the first leg, in particular in a right angle, whereby the latching finger or the latching flap particularly comprise a snap-in nose, said snap-in nose protruding into the receiving space.

[0044] According to one preferred embodiment, both the first and second leg comprise a latching hook at their respective free ends.

[0045] According to a different embodiment, both the first and second leg comprise a latching finger or latching flap at heir respective free ends.

[0046] According to yet another preferred embodiment, the first leg of the U-shaped functional element comprises a latching hook as mentioned above and the second leg comprises a latching finger or a latching flap as mentioned above.

[0047] In all of the aforementioned embodiments, all parts of the functional element form and limit the receiving space for receiving the receiving device of the lid device or of the waste container.

[0048] According to yet another preferred embodiment, the base element of the U-shaped functional element comprises an inner surface being directed into the receiving space, wherein at least one, preferably two slide runner elements, in particular slide rails, is/are arranged or provided at the inner surface, in particular in the direction of the longitudinal extension of the functional element. In case that two such slide runner elements are provided, these slide runner elements are provided in a defined distance from each other, as will be explained in more detail further below. These slide runner elements preferably establish a distance between the functional element, in particular between the inner surface of the base element thereof, and an outer surface of the receiving device of the lid device or of the waste container. This is of advantage, when the functional element gets moved or slid over the receiving device.

[0049] On the outer surface of the functional element, of the base element of the functional element for example, some pieces of information can be provided, for example by adhering a sticker thereon or by engraving the information into the surface.

[0050] According to the second aspect, the invention is directed to a lid device, which is provided for closing a waste container for at least temporarily storing waste and/or valuable substances, wherein the lid device comprises at least one functional element, wherein the functional element is provided according to the first aspect of the invention, wherein the lid device comprises at least one receiving device for receiving the functional element and wherein the functional element is, in particular detachably, attached to the receiving device.

[0051] Therefore, the disclosure of the first aspect of the invention as well as the general description of the invention with regard to the lid device and with regard to the waste container apply with respect to the disclosure in entirety also to the lid device according to the second aspect according to the invention, so that all of the statements made with respect to first aspect of the invention and with respect to the general description of the invention also apply to their full extent to the second aspect of the invention, and vice versa.

[0052] According to the third aspect, the present invention is directed to a waste container, which is provided for at least temporarily storing waste and/or valuable sub-

stances, wherein the waste container comprises a container body, wherein the waste container comprises a lid device for closing a insertion opening being provided in the container body, wherein the waste container comprises at least one functional element, wherein the functional element is provided according to the first aspect of the invention, wherein the container body and/or the lid device comprises at least one receiving device for receiving the functional element and wherein the functional element is, in particular detachably, attached to the receiving device.

[0053] Therefore, the disclosure of the first aspect and of the second aspect of the invention as well as the general description of the invention with regard to the lid device and with regard to the waste container apply with respect to the disclosure in entirety also to the waste container according to the third aspect according to the invention, so that all of the statements made with respect to first and second aspect of the invention and with respect to the general description of the invention also apply to their full extent to the third aspect of the invention, and vice versa.

[0054] In the following, a number of preferred embodiments will be explained in detail, whereby the features of these embodiments apply both to the lid device according to the second aspect of the invention and to the waste container according to the third aspect of the invention.

[0055] According to a preferred embodiment, the receiving device is attached to or provided at the container body and/or at the lid device at least in sections in a spatial distance to the container body and/or to the lid device. Therefore, there is an intermediate or free space between the receiving device and the lid device or the waste container in these sections. Thus, the functional element, in particular its receiving space, can easily encompass the receiving device, preferably in such a way, that parts of the functional element, the base element for example, are located above the receiving device, whilst other parts of the functional element, the latching hook and/or the latching finger or latching flap for example, are located beneath the receiving device. Other components of the functional element, the legs of the functional element for example, can be located sideways of the receiving device.

[0056] In particular, the receiving device is provided as a handle element, said handle element being part of the lid device according to the second aspect and/or of the waste container according to the third aspect. In the latter case the handle element can be attached to the container body and/or to the lid device, or can be a part thereof.

[0057] According to yet another preferred embodiment, the receiving device is provided as a longitudinal member having an expansion in longitudinal direction which is a multiple of its expansion in width direction.

[0058] According to a preferred embodiment, it is preferably provided, that the functional element is movably attached to the receiving device, in particular in the direction of the longitudinal expansion of the receiving device. In such a case the functional element, by means of its components which are capable of generating the snap-fit connection, the functional element gets preferably put over the receiving device and can snap-in, by means of the latching hook(s) and/or the latching finger(s) or the latching flap(s) for example, beneath the receiving device, Now, the functional element can be moved over the receiving device, a handle element for example. That means that the functional element is slid along the receiving element, a handle element for example.

[0059] According to yet another preferred embodiment, the receiving device comprises at least one information element whereby the at least one functional element is provided in such a manner that it is capable of at least temporarily covering the information element. In case that the functional element is movably or slidably attached to the receiving device, the functional element can cover this piece of information that is not relevant at the moment. For example, two information elements with different content can be provided at the receiving device, whereby the functional element can be moved between a first position where it covers the first information element, into a second position, where it covers the second information element, and vice versa.

[0060] For example, as explained with regard to the introduction at the beginning of the specification, the user of a waste container might give notice that she or he needs new paper bags for storing organic waste. Such paper bags are quite often delivered by the waste disposal company. If the user indicates, that she or he is in need of new paper bags she or he might provide a respective information at the waste container. For example, the functional element gets moved in a way that it covers the second information element, such that the first information element is visible, indicating, that new paper bags are needed. If the user moves the functional element over the first information element, the second information element gets visible, indicating that everything is fine and that no new bags are needed.

[0061] In case that the functional element gets moved over the receiving device, two of the afore mentioned slide runner elements are preferably used, whereby these slide runner elements have a distance to each other, such that there is a distance above and below the information element(s) between the respective slide runner element and the information element(s).Thus, the functional element, in particular the base element of a U-shaped functional element, can be held in a distance to the receiving device and the functional element can get easily moved over the receiving device. Nevertheless, it is avoided that the slide runner element(s), the slide rails for example, can damage the information element(s), which are preferably provided as sticker elements.

[0062] Preferably, the lid device or the waste container comprises at least two functional elements, whereby the functional elements are attached to the same or to dif-

ferent receiving device(s), in particular adjacent to each other to the same receiving device.

[0063] For a better understanding of the present invention, a preferred embodiment of the present invention will now be described by way of an example with reference to the accompanying drawings, in which

Figure 1	depicts a schematic view of a waste container according to the present invention incorporating a functional element of the present invention;
Figures 2 and 3	depict different positions of the functional element thus showing different pieces of information; and
Figure 4	depicts a detail of the functional element according to cutting line IV-IV as depicted in Figure 3, whereby Figure 4 depicts the details of a preferred embodiment of the functional element.

[0064] Figure 1 shows a schematic representation of a waste container 10 for temporarily storing waste and/or valuable substances. The waste container 10 comprises a container body 11, which receives the waste and/or the valuable substances. At its upper edge, the container body 11 comprises an insertion opening (not shown), which is closed by a lid device 12. The lid device 12, which is pivotally attached to the container body 11, comprises a lid element 14 and a receiving device 13 for a functional element 20. The receiving device 13 is provided as a handle element 13.1 of the lid device 12. As can be seen from Figure 1, the handle element 13.1, which is used to open and to close the lid device 12, is provided in sections in a spatial distance to the lid device 12, in particular to the lid element 14, such that a free space 15 is provided between the lid device 12, the lid element 14 for example, and the handle element 13.1 in these specific sections.

[0065] To the handle device 13.1, a functional element 20 is attached, said functional element 20 being provided for displaying different pieces of information. For that reason, the functional element 20 is movably attached to the handle element 13.1.

[0066] As can be seen from Figures 2 and 3, handle element 13.1 comprises an outer surface 18, which is directed to the functional element 20. On this outer surface 18, the handle element 13.1 comprises two information elements 16, 17, said information elements 16, 17 being stickers adhered to the outer surface 18 of handle element 13.1.

[0067] The first information element 16 comprises a first piece of information. This first piece of Information can be the message "everything is fine". The second information element 17 comprises a second piece of information. This second piece of information can be the message "we need new food waste bags". In order to display the different pieces of information, the functional element 20 can be moved by choice over and along the handle device 13.1 between a first position in which the first information elements 16 is covered, into a second position in which the second information element 17 is covered, and vice versa.

[0068] The functional element 20 is provided as a longitudinal member having an expansion in longitudinal direction 21 which is a multiple of its expansion in width direction 22, as can be seen in Figure 3.

[0069] For allowing functional element 20 to get easily moved along handle element 13.1 between these two positions, the functional element 20 is provided in a manner as depicted in Figure 4.

[0070] The functional element 20 is provided in such a way that it is capable of generating a snap-fit connection. In the embodiment shown in the drawings, the functional element 20 comprises a U-shaped configuration having a base element 23, a first leg 24 and a second leg 25. The first leg 24 protrudes from a first end 26 of base element 23. At its free end 27, first leg 24 comprises a latching hook 28. The latching hook 28 cooperates with a corresponding receiving element 13.2 of the handle element 13.1. The second leg 25 protrudes from a second end 29 of base element 23. At its free end 30, a latching finger or a latching flap 31 is provided, which protrudes from the second leg 25 into the direction of the first leg 24, in particular in a right angle. At its free end 32, the latching flap 31 comprises a snap-in nose 33, said snap-in nose 33 protruding into a receiving space 34.

[0071] As can be seen from Figure 4, the functional element 20 is provided in such a manner that it at least partially encompasses the handle element 13.1, whereby the handle element 13.1 is received inside the receiving space 34 of functional element 20.

[0072] By means of the base element 23, the first leg 24 with latching hook 28 and the second leg 25 with latching flap 31, the functional element 20 comprises a course, which limits the receiving space 34 being partly open, said receiving space 34 being provided for receiving and holding the handle element 13.1.

[0073] At an inner surface 35, the base element 23 comprises two slide runner elements 36, which are provided as slide rails 36.1. Both slide rails 36.1 are provided in a distance from each other. They establish a distance between the inner surface 35 of base element 23 and the outer surface 18 of handle element 13.1 of the lid device 12. Therefore, the functional element 20 can get easily moved over and along the handle element 13.1.

[0074] On the outer surface 37 of the base element 23 of the functional element 20, some pieces of information can be provided, for example by engraving the information into the outer surface 37, an arrow and the word "SLIDE" in the present case.

[0075] The functional element 20 as depicted in the drawings is preferably used to indicate the need of new paper bags for organic waste. However, the functional element 20 is not limited to this application.

[0076] By means of the snap-fit connection the func-

tional element 20 is put over the handle element 13.1 and snaps or latches beneath the handle element 13.1. Now, the functional element 20 can be moved along handle element 13.1, in particular in a pre-defined area, or over a pre-defined length.

[0077] The latching finger or latching flap 31, which is provided beneath the base element 23 of functional element 20, generates some kind of resistance, in particular by means of the snap-in nose 33. Therefore, an unintended movement of the functional element 20, due to wind for example, can be avoided.

[0078] The two slide rails 36.1, which are provided at the inner surface 35 of base element 23, which is the underside of base element 23, generate a distance to the outer surface 18 of handle element 13.1, on which both information elements 16, 17 are mounted. At the outer surface 37 of base element 23, additional pieces of information can be provided, which can be engraved or which can be provided by means of a sticker for example.

[0079] One preferred function of such a functional element 20 is the indication of a need for new paper bags for organic waste. If the functional element 20 is moved in such a way that it covers the first information element 16, which means that the second information element 17 is visible indicating the need of new paper bags is exposed to the view of a service person handling the waste container, the service person applies a pack of new paper bags onto the waste container. If the functional element 20 is moved such that the first information element 16 is visible indicating that everything is in good order and that there is no need for new paper bags, no new paper bags will be applied on the waste container.

[0080] The pieces of information on the information elements 16, 17 can be words, phrases colours or the like. In case of colours, a red coloured information element preferably indicates the need of new paper bags, whilst a green coloured information element preferably indicates that everything is in good order and that no new paper bags are needed for the moment.

[0081] Nevertheless, the functional element 20 can serve other purposes as well. For example, the functional element 20 can indicate the need, that the waste container is ready to be discharged, or that the waste container contains a temporary or extracurricular waste fraction. Due to the snap-fit connection the functional elements can be easily removed or exchanged, if necessary.

[0082] According to a preferred embodiment, two functional elements 20 are attached to the handle element 13.1 adjacent to each other. In such a case it is preferably provided that the functional elements 20 are not movable along handle element 13.1. In this case the different functional elements 20 themselves preferably serve to indicate an information, an indication of a specific waste fraction for example. This can be achieved by means of using functional elements 20 with different colours.

List of reference numerals

[0083]

10	Waste container
11	Container body
12	Lid device
13	Receiving device
13.1	Handle element
13.2	Receiving element
14	Lid element
15	Free space
16	First information element
17	Second information element
18	Outer surface of handle element
20	Functional element
21	Longitudinal direction
22	Width direction
23	Base element
24	First leg
25	Second leg
26	First end of base element
27	Free end of first leg
28	Latching hook
29	Second end of base element
30	Free end of second leg
31	Latching flap
32	Free end of latching flap
33	Snap-in nose
34	Receiving space
35	Inner surface
36	Slide runner element
36.1	Slide rail
37	Outer surface

Claims

1. A functional element (20), which is provided for being attached to a receiving device (13) for the functional element (20) of a waste container (10) for at least temporarily storing waste and/or valuable substances, or of a lid device (12) for a waste container (10) for at least temporarily storing waste and/or valuable substances, **characterized in that** the functional element (20) is provided for directly or indirectly displaying a piece of information, and that the functional element (20) is provided in such a manner that it generates a snap-fit connection and that it gets, in particular detachably, attached to the receiving device (13) by means of said snap-fit connection.

2. The functional element according to claim 1, **characterized in that** the functional element (20) is provided in such a manner, that it is capable to at least partially encompass the receiving device (13) for generating the snap-fig connection, and that the functional element (20) optionally comprises a

course, which limits a receiving space (34) being in particular partly open, said receiving space (34) being provided for receiving the receiving device (13).

3. The functional element according to claim 1 or 2, **characterized in that** the functional element (20) is provided as a longitudinal member having an expansion in longitudinal direction (21) which is a multiple of its expansion in width direction (22).

4. The functional element according to anyone of claims 2 or 3, **characterized in that** the functional element (20) comprises a U-shaped basic shape, having a base element (23), a first leg (24), which protrudes from the base element (23) at a first end (26) thereof and a second leg (25) which protrudes from the base element (23) at a second end (29) thereof, and that the base element (23) and the first and second legs (24, 25) limit the receiving space (25).

5. The functional element according to claim 4, **characterized in that** a latching hook (28) is arranged or provided at a free end (27) of the first leg (24), or that a latching finger or a latching flap is arranged or provided at a free end of the first leg, whereby the latching finger or the latching flap protrudes from the first leg into the direction of the second leg, in particular in a right angle, whereby the latching finger or the latching flap particularly comprise a snap-in nose, said snap-in nose protruding into the receiving space.

6. The functional element according to claim 4, **characterized in that** a latching hook is arranged or provided at a free and of the second leg, or that a latching finger or a latching flap (31) is arranged or provided at a free end (30) of the second leg (25), whereby the latching finger or the latching flap (31) protrudes from the second leg (25) into the direction of the first leg (24), in particular in a right angle, whereby the latching finger or the latching flap (31) particularly comprise a snap-in nose (33), said snap-in nose (33) protruding into the receiving space (34).

7. The functional element according to anyone of claims 4 to 6, **characterized in that** the base element (23) comprises an inner surface (35) being directed into the receiving space (34), and that at least one, preferably two slide runner elements (36), in particular slide rails (36.1), is/are arranged or provided at the inner surface (35), in particular in the direction of the longitudinal extension of the functional element (20).

8. A lid device (12), which is provided for closing a waste container (10) for at least temporarily storing waste and/or valuable substances, wherein the lid device (12) comprises at least one functional element (20), wherein the functional element (20) is provided according to anyone of claims 1 to 7, wherein the lid device (12) comprises at least one receiving device (13) for receiving the functional element (20) and wherein the functional element (20)is, in particular detachably, attached to the receiving device (13).

9. A waste container (10), which is provided for at least temporarily storing waste and/or valuable substances, wherein the waste container (10) comprises a container body (11), wherein the waste container (10) comprises a lid device (12) for closing a insertion opening being provided in the container body (11), wherein the waste container (10) comprises at least one functional element (20), wherein the functional element (20) is provided according to anyone of claims 1 to 7, wherein the container body (11) and/or the lid device (12) comprises at least one a receiving device (13) for receiving the functional element (20) and wherein the functional element (20) is, in particular detachably, attached to the receiving device (13).

10. The lid device according to claim 8, or the waste container according to claim 9, **characterized in that** the receiving device (13) is attached to or provided at the container body (11) and/or at the lid device (12) at least in sections in a spatial distance to the container body (11) and/or to the lid device (12).

11. The lid device according to claim 8 or 10, as far as referred back to claim 8, or the waste container according to claim 9 or 10, as far as referred back to claim 9, **characterized in that** the receiving device (13) is provided as a handle element (13.1).

12. The lid device according to claim 8 or 10 to 11, as far as referred back to claim 8, or the waste container according to claim 9 or 10 to 11, as far as referred back to claim 9, **characterized in that** the receiving device (13) is provided as a longitudinal member having an expansion in longitudinal direction which is a multiple of its expansion in width direction.

13. The lid device according to claim 8 or 10 to 12, as far as referred back to claim 8, or the waste container according to claim 9 or 10 to 12, as far as referred back to claim 9, **characterized in that** the functional element (20) is movably attached to the receiving device (13), in particular in the direction of the longitudinal expansion of the receiving device (13).

14. The lid device according to claim 8 or 10 to 13, as far as referred back to claim 8, or the waste container according to claim 9 or 10 to 13, as far as referred back to claim 9, **characterized in that** the receiving

device (13) comprises at least one information element (16, 17) and that the at least one functional element (20) is provided in such a manner that it is capable of at least temporarily covering the information element (16, 17).

15. The lid device according to claim 8 or 10 to 14, as far as referred back to claim 8, or the waste container according to claim 9 or 10 to 14, as far as referred back to claim 9, **characterized in that** the lid device (12) or that the waste container (10) comprises at least two functional elements (20) and that the functional elements (20) are attached to the same or to different receiving device(s) (13), in particular adjacent to each other to the same receiving device (13).

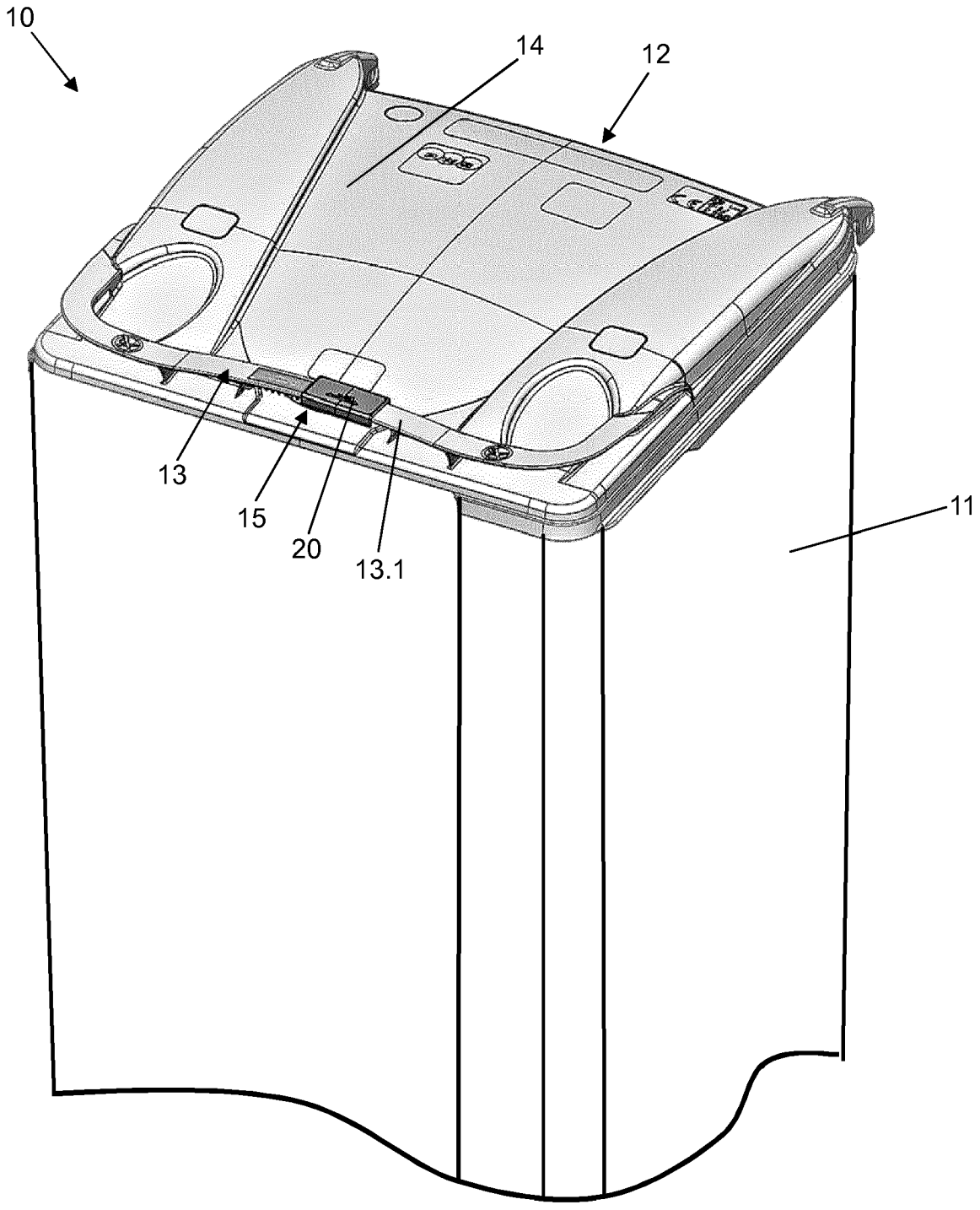

Fig. 1

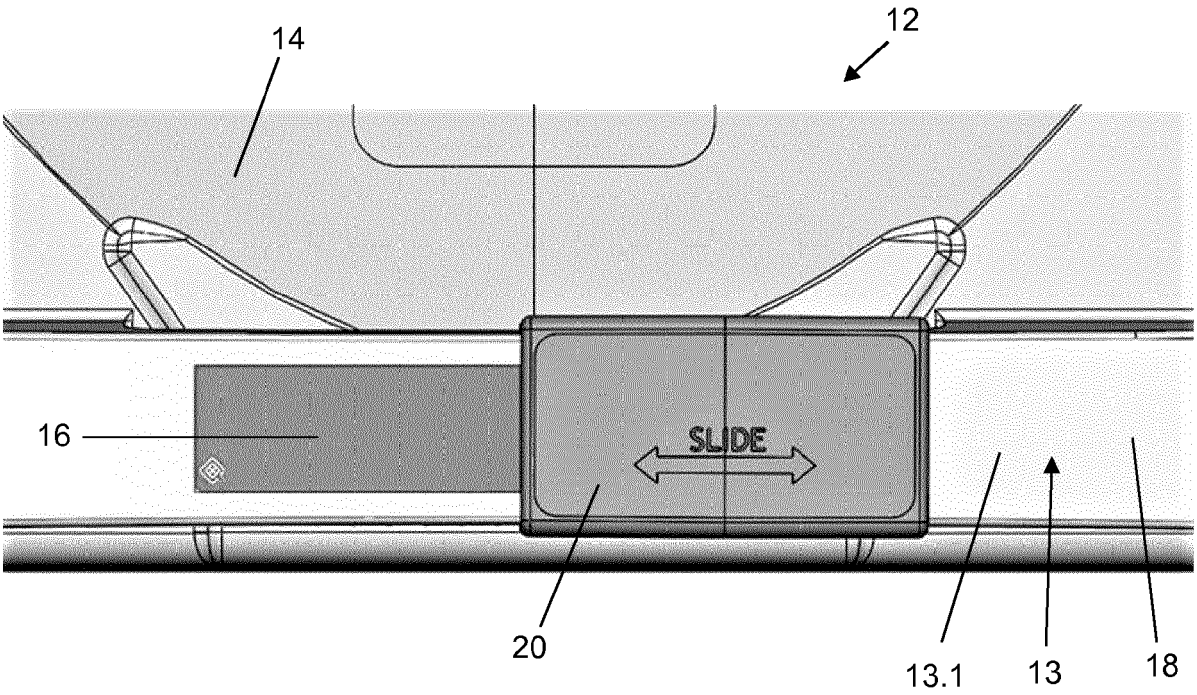

Fig. 2

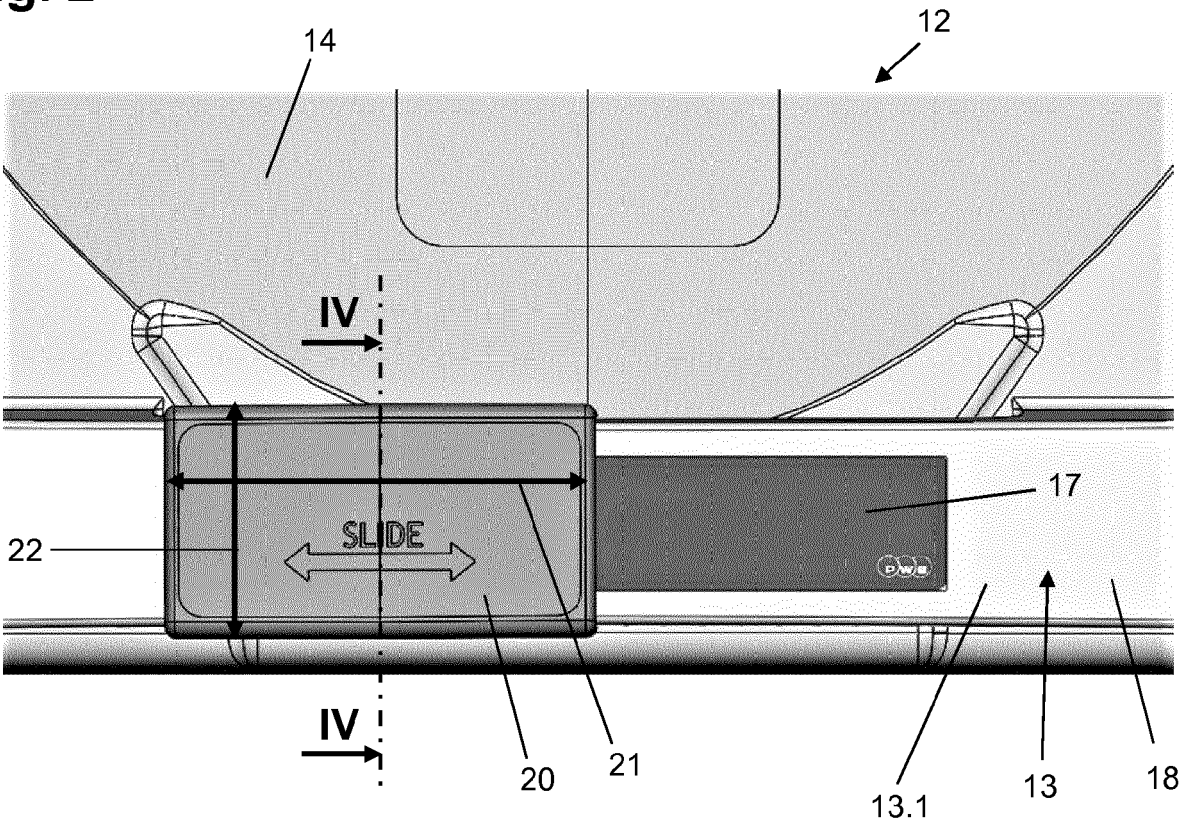

Fig. 3

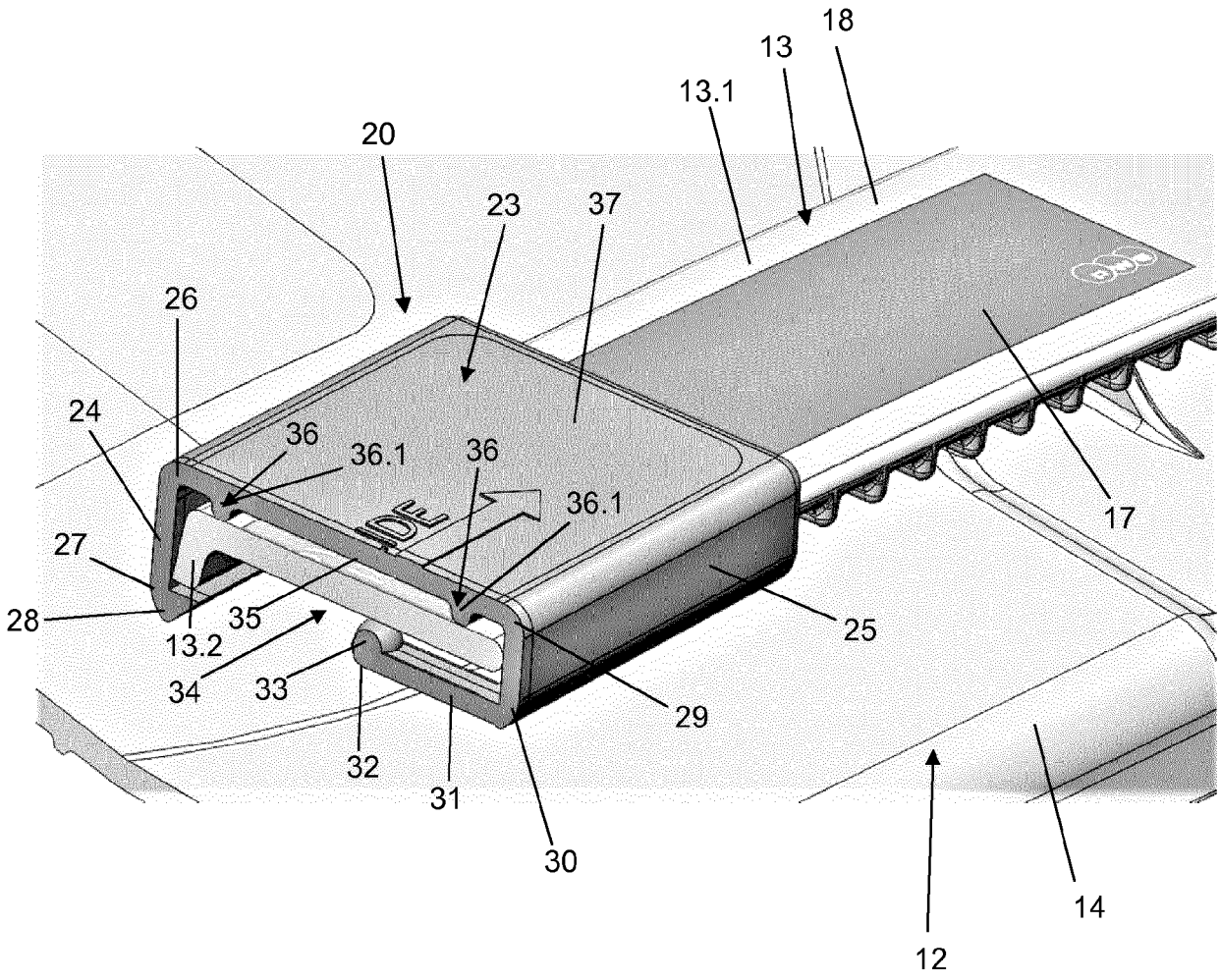
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Fig. 4

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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	9 November 2018	Pardo Torre, Ignacio

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EUROPEAN SEARCH REPORT

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