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(71) Applicant: **ESE World B.V.**
6199 AM Maastricht-Airport (NL)

(72) Inventor: **Reinier, den Boer**
5658PK Eindhoven (NL)

(74) Representative: **Müller, Thomas**
Patentanwalt
emescon
Balanstraße 57
81541 München (DE)

(54) **LID DEVICE FOR A WASTE CONTAINER**

(57) The present invention relates to a lid device (20), which is provided for covering the receiving opening of a container, preferably of a waste container (10), wherein the lid device (20) comprises a lid body (22) and at least one handle device (30) being provided at the lid body (22). In order to prevent a user, who operates the lid device (20), from getting contaminated with harmful substances such as impurities, bacteria viruses and the like, when touching the handle device (30), it is provided according to one aspect of the invention, that the handle device (30) comprises a basic element (31), that the handle device (30) comprises a contact face element (35), which is at least partially curved, and that the contact face element (35) protrudes from the basic element (31) and over the margin of the basic element (31) in the direction of an edge (25, 26) of the lid body (22), and optionally at least partially over said edge (25, 26) of the lid body (22). According to a different aspect, the handle device (30) at least partially comprises a material being selected from the group consisting of a germ-resistant material, an antimicrobial material, an antibacterial material, an antiviral material.

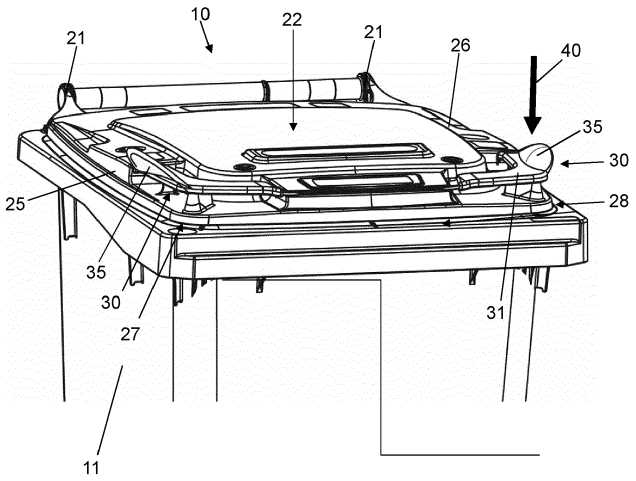


Fig. 3

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Description

[0001] The present invention refers to a lid device according to the preamble of independent claim 1 as well as to the preamble of independent claim 2. Furthermore, the present invention is directed to a waste container according to the preamble of independent claim 15.

[0002] Waste containers per se are well known in prior art. Usually they are used for temporarily storing waste and/or valuable substances, 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 generally 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. Usually the lid device comprises a lid body and at least one handle device which is provided at the lid body.

[0003] When a user wants to throw in waste or valuable substances into the waste container, she or he grabs the handle device by hand, such that the lid device can get tilted up.

[0004] For the purpose of hygiene and to protect health, it may be desirable that the handle device is not touched with the bare hand. This is particularly an issue when the waste container is used by several people or by an undefined group of people, for example when the waste container is located in a residential complex or in public spaces. In such a case, it cannot be avoided that impurities, bacteria or viruses may adhere to or be deposited on the handle device. These can then be transferred to the user's hands and lead to illnesses.

[0005] For this reason, it has already become known in the field of door handles to provide such door handles with specially designed handle devices, which enable the door handle to be actuated with the forearm or elbow of the user, so that the user no longer has to touch the door handle with his bare hand. Such a solution is disclosed in DE 20 2020 101 567 U1. This document discloses a door handle attachment that is attached to a door handle. The door handle attachment has a bracket element, which in turn has a partially curved surface. The bracket element protrudes upwards from the door handle. The user can guide his forearm behind this bracket element so that the forearm is located between the door leaf and the bracket element. The user can now open or close the door via his forearm without having to touch the door handle with his bare hand. He can also press the door handle downwards by pressing the forearm on the bracket element and thus open the door.

[0006] However, such a door handle attachment cannot be used for a waste container, since the lid device, which rests on the upper edge of the container body in the closed state, has to get tilted up to open. This requires the application of pressure from below against the lid device. In contrast, when a door handle is operated, pressure is exerted from above.

[0007] It is the object of the present invention to provide a lid device for a container, preferably for a waste container, said lid device having a lid body and a handle device being provided at the lid body, wherein a user, who operates the lid device, is prevented from getting contaminated with harmful substances such as impurities, bacteria viruses and the like being located thereon when touching the handle device.

[0008] In accordance with the present invention, this object is solved according to a first aspect of the invention by the lid device 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 2, and according to a third aspect of the present invention by the waste container with the features according to independent claim 15.

[0009] Additional features and details of the present invention become apparent from the dependent claims, from the description and from the drawings.

[0010] 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.

[0011] According to the first aspect, the handle device of the lid device at least partially is made of or comprises a special material. According to the second aspect, the handle device of the lid device is configured in a special way. However, both aspects underlie the same common basic idea, that a handle device is provided, which is configured in such a way that any harmful substances such as impurities, bacteria, viruses and the like, which contaminate the handle device, cannot get transmitted to the bare skin, in particular to the bare hand, of the user.

[0012] Preferred embodiments for both aspects are described in more detail further below.

[0013] According to the present invention, the handle device as well as the lid device comprising such a handle device are used in connection with a container. The present invention is not limited to specific types of such containers or to specific fields of application for such containers. According to a preferred embodiment, which however does not delimit the scope of protection, the handle device as well as the lid device 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, which is equipped with a lid device according to the invention is described in detail.

[0014] Such a waste container may have a holding ca-

pacity between 200 litres and 700 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.

[0015] 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.

[0016] 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 and configurations 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.

[0017] 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 than, in particular a multiple of the width and/or 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 and defines the upper edge of the container body as well, the container body comprises a receiving opening for the waste and/or for the valuable substances. According to a preferred embodiment, the receiving opening is bordered by the sidewall of the container body, such that the receiving opening spans the entire cross section of the container body at its upper end or edge.

[0018] 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.

[0019] 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.

[0020] For covering the receiving 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. This can be achieved by means of at least one hinge device. According to a preferred embodiment, the lid device is configured as a hinged lid device. The lid device comprises a lid body and at least one handle device being provided at the lid body. By means of the handle device, the user can open and close the lid device. It is sufficient that the lid body comprises only one handle device. Nevertheless, according to a preferred embodiment, the lid device comprises two such handle devices which are arranged on the lid body.

[0021] Preferably the lid device, in particular the lid body thereof, comprises an upper surface as well as a lower surface. In the closed operational mode, the lower surface of the lid device is directed to the receiving opening of the container body. Therefore, the lower lid surface also functions as the inner surface of the lid device, whilst the upper lid surface also functions as the outer surface of the lid device. In addition, the lid device, and in particular the lid body, is limited by one or more lid edges. If the lid device is rectangular in shape it may comprise four edges, which are a front edge, a rear edge and two side edges, whereby the respective edges abut against each other in so called abutting edges.

[0022] According to the first aspect, the present invention is directed to a lid device, which comprises the features of independent claim 1.

[0023] As described further above, the lid device is provided for covering the receiving opening of a container, a waste container for example. The lid device comprises a lid body. Preferably the lid body is configured as a face element. In particular a face element according to the present invention is a flat or thin member, a plate-like or disc-like member for example, which means that its length and width each are greater than its thickness, preferably a multiple thereof.

[0024] Furthermore, the lid device comprises at least one handle device being provided at the lid body.

[0025] According to the first aspect of the invention, the handle device at least partially comprises a material being selected from the group consisting of a germ-resistant material, an antimicrobial material, an antibacterial material, an antiviral material.

[0026] According to a preferred embodiment the material used for the handle device comprises a basic material, a basic plastic material for example, such as a polymer, a thermoplastic elastomer or the like. This basic material is provided with additives such as bio-stabilizers and/or additives having the aforementioned properties, such as germ-resistant properties, antimicrobial properties, antibacterial properties, antiviral properties. These active ingredients or additives kill viruses, bacteria or fungi or inhibit their growth by releasing more or less toxic compounds. The aforementioned properties can get produced and established during the manufacturing process of the material, a compounding process for example. For example, the additives can get embedded into the matrix of the basic material. As a result, the aforementioned advantageous effect is not limited to the surface, but applies to the entire handle device.

[0027] According to a preferred embodiment, the handle device and the lid body are made of different materials. For example, the lid body and its components, except the handle device, 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. According to a preferred embodiment, the lid body is made of a HDPE (High Density Ethylene) material. Since the material, that shows the advantageous properties mentioned further above, is pretty much more expensive than the material used for the lid body, only those components, which usually come into direct contact with the users hand, are made of this material, that is the at least one handle device or at least a portion of the handle device such as the contact face element described further below in the present case.

[0028] According to the second aspect, the present invention is directed to a lid device, which comprises the features of independent claim 2.

[0029] As described further above, the lid device is provided for covering the receiving opening of a container, a waste container for example. The lid device comprises a lid body. Preferably the lid body is configured as a face element. In particular, the face element according to the present invention is a flat or thin member, a plate-like or disc-like member for example, which means that its length and width each are greater than its thickness, preferably a multiple thereof.

[0030] Furthermore, the lid device comprises at least one handle device being provided at the lid body. According to the second aspect of the invention, the handle device is configured in a special way.

[0031] According to the present invention, the handle device comprises a basic element, in particular a basic face element. In particular the basic face element is a flat or thin member, a plate-like or disc-like member for example, which means that its length and width each are greater than its thickness, preferably a multiple thereof.

[0032] Furthermore, the handle device comprises a contact face element. Again, in particular the contact face element is a flat or thin member, a plate-like or disc-like member for example, which means that its length and width each are greater than its thickness, preferably a multiple thereof. The contact face element is provided and configured in such a way that ii is, in its operational mode, capable of coming in contact with the user's arm, with the user's forearm and/or elbow for example.

[0033] According to the present invention, the contact face element, in particular its shape, is at least partially curved. The present invention is not limited to specific kinds and types of shape. Preferably, the shape of the curved contact face element is adapted and therefore corresponds to the form of the user's arm the forearm and/or elbow for example. According to a preferred embodiment, the contact face element is configured in such a way that its shape, in particular its curvature, corresponds to the general configuration of a human elbow, in particular a human elbow in its bent posture.

[0034] Furthermore, according to the invention, the contact face element protrudes from the basic element and over the margin of the basic element. This means, that the contact face element protrudes beyond an edge that borders the basic element. Therefore, the contact face element juts out from and extends over the surrounding surface of the basic element According to a preferred embodiment, especially, if the basic element is a basic face element, the basic element passes over into the contact face element. In such a case, both elements can be provided as one single, integral element. In this case, the handle device is provided as one single member, one portion of which defining the basic element and another portion of which defining the contact face element. According to a different preferred embodiment, the basic element and the contact face element can be provided as independent elements which are connected or which get connected in a suitable way, by means of a clip connection, or a plug connection, or a snap-in connection, or a screw connection for example. According to this embodiment, it is preferably provided that the contact face element is detachably arranged on the basic element. In such a case the contact face element can get manufactured as an individual component and therefore independently from the rest of the handle device. During an assembling step the contact face element gets connected to the basic element. Preferably, the contact case element is exchangeable and/or can get mounted to the basic element afterwards, or as a supplement.

[0035] In addition, the contact face element protrudes in the direction of an edge of the lid body, and preferably at least partially over said edge of the lid body. In the latter case the contact face element at least partially protrudes beyond an edge that borders the lid body.

[0036] When a lid device having a lid body and a handle device configured as mentioned before are in use, the user does not have to grab the handle device with his bare hand. Instead, he can use his arm, his forearm and/or elbow for example, which comes in contact with the contact face element. Due to the curved shape of the contact face element, the user can exert a defined pressure force on the handle device and therefore on the entire lid device by use of his forearm and/or elbow, such that the lid device can get tilted up from its closed position into its opened position.

[0037] Besides the aforementioned, advantageous health aspect, the lid device according to the second aspect still has another advantage. It is often the case that the user has both hands full when he approaches the waste container. To open the lid device, the user first has to clear at least one hand so that he can then use the free hand to operate the lid device. To do this, he must put down the object in his hand. This is cumbersome. With the handle device according to the second aspect of the invention the user can keep the objects in both hands, since he can operate the lid device by use of his forearm and/or elbow.

[0038] According to a preferred embodiment, the han-

dle device at least partially comprises a material being selected from the group consisting of a germ-resistant material, an antimicrobial material, an antibacterial material, an antiviral material. 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 the 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. According to a preferred embodiment only the contact face element is made of such a material. According to a different preferred embodiment, the handle device, in particular the basic element and the contact face element are made of such a material.

[0039] The present invention is not limited to specific shapes and configurations of the contact face element. In the following, a number of preferred embodiments will get described in more detail.

[0040] According to a preferred embodiment, the contact face element comprises an upper surface which is directed away from the lid body. The contact face element, in top view onto the upper surface, that is in viewing direction onto the upper surface, comprises a convex curved course. A convex curved course means that the contact face element is curved or rounded in an outward direction, that means into the direction of the viewer. In a similar way the contact face element may comprise a lower surface which is directed towards the lid body. The contact face element, in top view onto the lower surface, that is in viewing direction onto the lower surface, comprises a concave curved course. A concave curved course means that the contact face element is curved or rounded in an inward direction, that means in a direction away from the viewer.

[0041] According to a different preferred embodiment, the contact face element has the shape of a bowl or a shell. Having the shape of a bowl particularly means that the contact face element has a shape which corresponds or which is at least approximated to the shape of a concave usually nearly hemispherical vessel. Having the shape of a shell particularly means that the contact face element has a shape in form of a thin usually spherical layer or surface enclosing a space.

[0042] According to yet another preferred embodiment, the contact face element comprises a single curved course. In this case, the contact face element preferably represents a so-called cylinder shell, which has a curvature in only one direction over the longitudinal extent. Such an embodiment is particularly suitable if the contact face element is to be operated with the forearm.

[0043] According to a different preferred embodiment, the contact face element comprises a double curved course. In particular, the double-curved face can be created by the movement of a first plane curve along a second plane curve. This means the contact face element has a curvature in two directions over the longitudinal extent. Such an embodiment is particularly suitable if the contact face element is to be operated with the elbow. Preferably, such a contact face element has a spherical shape, or an arched shape, in particular a dome shape.

[0044] According to a preferred embodiment, the handle device is detachably arranged on the lid body. In such a case the handle device can get manufactured as an individual component and therefore independently from the lid device. During an assembling step the handle device gets connected to the lid device, preferably to the lid body thereof. Preferably, the handle device is exchangeable and/or can get mounted to the lid device afterwards, or as a supplement.

[0045] For detachably arranging the handle device on the lid body, the handle device, and the lid device, preferably comprise suitable fastening devices, which interact with each other. The present invention is not limited to specific types of fastening devices. According to a number of preferred embodiments, fastening of the handle device with the lid body can get realised by means of a clip connection, or a plug connection, or a snap-in connection, or a screw connection.

[0046] According to a different preferred embodiment, the handle device is an integral component of the lid body. That means that the handle device is mounted to the lid body in a non-detachable way. For example, the lid body and the handle device can be formed as one single member. Or the handle device is arranged on the lid device in such a way that it cannot get removed again without permanently destroying the connection between the handle device and the lid body. According to one advantageous embodiment, the basic element of the handle device is provided as an integral component of the lid body, and the contact face element is, in particular detachably, mounted to the basic element.,

[0047] According to a preferred embodiment, the handle device is arranged on an upper surface of the lid body.

[0048] Preferably the handle device is arranged on the lid body in the area of at least one boundary edge of the lid body. According to a preferred embodiment, the handle device is arranged at an abutting edge of two boundary edges of the lid body.

[0049] According to the present invention the handle device is not limited to specific configurations. According to one preferred embodiment, the handle device, preferably the basic element, in particular the basic face element, is configured as a straight longitudinal member. According to a different preferred embodiment, the handle device, in particular the basic element, preferably the basic face element, comprises a first section and a second section, said first section and said second section being aligned in a defined angle, in particular in a right angle, in relation to one another. Thus, the handle device has a shape that is approximated to an "L". Such a configuration of the handle device is advantageous, if the handle device is arranged on the lid body at an abutting

edge of two boundary edges of the lid body, or in the area of such an abutting edge. If the basic element comprises two such sections, and if the handle device comprises a contact face element, the contact face element preferably protrudes from one of the sections of the basic element only.

[0050] Preferably, the handle device can be coloured in different colours, whereby the different colours preferably represent different pieces of information. For example, the colours of the handle device can provide an information on the sort of waste or valuable substances which are to be collected by the waste container.

[0051] 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 substances and which comprises the features of indepe3ndent claim 15. This waste container comprises a container body. Furthermore, the waste container comprises a lid device for covering a receiving opening being provided in the container body. The lid device is pivotally mounted to the container body. According to the present invention, the waste container is characterized in that the lid device is configured according to the first or second aspect of the invention. Therefore, the disclosure of the first aspect and of the second aspects 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 further above 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.

[0052] 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 lid device according to the present invention;

Figure 2 depicts an enlarged cut-out "A" shown in Figure 1, which shows a handle device of the lid device in detail;

Figure 3 depicts a waste container having a lid device according to Figures 1 and 2, wherein the lid device is shown in a closed operational mode; and

Figure 4 depicts a waste container having a lid device according to Figures 1 and 2, wherein the lid device is shown in an opened operational mode.

[0053] Figures 1 to 4 each show 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 a receiving opening 12, which is closed by a lid device 20. The waste container 10 shown in the figures is a so-called 2-Wheel-Container having two wheels 13 for getting moved and handled.

[0054] The lid device 20, which is pivotally attached to the container body 11 by means of at least one hinge device 21, preferably by means of two hinge devices 21, comprises a lid body 22. The lid body 22 is rectangular or almost rectangular in shape, such that the lid body 22 is bordered by four edges in form of a front edge 23, a rear edge 24 and two side edges 25, 26.

[0055] Two handle devices 30 are arranged on the upper surface 29 of the lid body 22. As shown in the drawings, each handle device 30 is arranged in the area of an abutting edge 27, 28. A first abutting edge 27 is provided as an abutting edge of the left side edge 25 and the front edge 23 of the lid body 22, whilst the second abutting edge 28 is provided as an abutting edge of the right side edge 26 and the front edge 23 of the lid body 22. The hinge devices 21 are provided at the rear edge 24 of the lid body 22.

[0056] By means of the handle devices 30, a user can move the lid device 20 from a closed position, as shown in Figure 3, into an opened position, as shown in Figure 4, by generating a pivoting motion 42 as shown in Figure 4.

[0057] In order to avoid a situation in which a user, who operates the lid device 20, might get contaminated with harmful substances such as impurities, bacteria, viruses and the like, when touching the handle device 30, the handle devices 30 used for the waste container are configured in a special way. This will now be explained in view of Figures 1 and 2..

[0058] The handle device 30 comprises a basic element 31, in particular a basic face element. The basic element 31 comprises a first section 33 and a second section 34, which are aligned in a right angle in relation to each other. By means of a fixing devise 36, which is preferably configured for providing a clip-connection, the handle device 30 is detachably connected to the lid body 22 via its basic element 31. According to a different embodiment, the basic element is an integral portion of the lid body.

[0059] Furthermore, the handle device 30 comprises a contact face element 35. The contact face element 35 is provided and configured in such a way that ii is, in its operational mode, capable of coming in contact with the user's arm, with the user's elbow 41 for example, which is shown in Figure 4.

[0060] The contact face element 35, in particular its shape, is at least partially curved. Preferably, the shape of the curved contact face element 35 is adapted and therefore corresponds to the form of the user's elbow 41.

[0061] The contact face element 35 protrudes from the basic element 31 and over the margin of the basic element 31. In addition, the contact face element 35 also protrudes in the direction of an edge, which is side edge 26 shown in Figure 2, of the lid body 22, and optionally

at least partially over said side edge 26 of the lid body 22.

[0062] The contact face element 35 comprises an upper surface 32, which is directed away from the lid body 22. The contact face element 35, in top view 40 onto the upper surface 32, as shown in Figure 3, comprises a convex curved course. According to a preferred embodiment, the contact face element and the basic element form one single, integral member. According to a different preferred embodiment, the contact face element is, in particular detachably, connected to the basic element.

[0063] When a lid device 20 having the lid body 22 and the handle devices 30 configured as mentioned before are in use, the user does not have to grab the handle device 30 with his bare hand. Instead, he can use his elbow 41, which comes in contact with the contact face element 35, as shown in Figure 4. Due to the curved shape of the contact face element 35, the user can exert a defined pressure force on the handle device 30 and therefore on the entire lid device 20 by use of his elbow 41, such that the lid device 20 can get tilted up from its closed position (Figure 3) into its opened position (Figure 4).

[0064] According to a preferred embodiment, the handle device 30 and the lid body 22 are made of different materials. For example, the lid body 22 is manufactured from a plastic material, a weatherproofed, a resilient plastic material for example, from metal or from a combination of different such materials. According to a preferred embodiment, the lid body 22 is made of a HDPE (High Density Ethylene) material.

[0065] The handle device 30 at least partially comprises a material being selected from the group consisting of a germ-resistant material, an antimicrobial material, an antibacterial material, an antiviral material. Since this material is pretty much more expensive than the material used for the lid body 22, only those components, which usually come into direct contact with the user's hand, are made of this material, that is the at least one handle device 30 in the present case, at least the contact face element and/or the basic element thereof.

List of reference numerals

[0066]

10 Waste container
11 Container body
12 Receiving opening
13 Wheel

20 Lid device
21 Hinge device
22 Lid body
23 Front edge
24 Rear edge
25 Side edge
26 Side edge
27 Abutting edge
28 Abutting edge
29 Upper surface of lid body

30 Handle device
31 Basic element
32 Upper surface of contact face element
33 First section
34 Second section
35 Contact face element
36 Fixing device

40 Top View
41 Elbow of a user
42 Pivoting motion

Claims

1. A lid device (20), which is provided for covering the receiving opening of a container, preferably of a waste container, wherein the lid device (20) comprises a lid body (22) and at least one handle device (30) being provided at the lid body (22), **characterized in that** the handle device (30) at least partially comprises a material being selected from the group consisting of a germ-resistant material, an antimicrobial material, an antibacterial material, an antiviral material.

2. A lid device (20), which is provided for covering the receiving opening of a container, preferably of a waste container, wherein the lid device (20) comprises a lid body (22) and at least one handle device (30) being provided at the lid body (22), **characterized in that** the handle device (30) comprises a basic element (31), in particular a basic face element, that the handle device (30) comprises a contact face element (35), which is at least partially curved, and that the contact face element (35) protrudes from the basic element (31) and over the margin of the basic element (31) in the direction of an edge (25, 26) of the lid body (22), and preferably at least partially over said edge (25, 26) of the lid body (22).

3. The lid device (20) according to claim 2, **characterized in that** the handle device (30) at least partially comprises a material being selected from the group consisting of a germ-resistant material, an antimicrobial material, an antibacterial material, an antiviral material.

4. The lid device (20) according to claim 2 or 3, **characterized in that** the contact face element (35) comprises an upper surface (32) which is directed away from the lid body (22), and that the contact face element (35), in top view (40) onto the upper surface (32), comprises a convex curved course.

5. The lid device (20) according to anyone of claims 2 to 4, **characterized in that** the contact face element (35) has the shape of a bowl or a shell.

6. The lid device (20) according to anyone of claims 2 to 5, **characterized in that** the contact face element (35) comprises a single curved course.

7. The lid device (20) according to anyone of claims 2 to 5, **characterized in that** the contact face element (35) comprises a double curved course, and that the contact face element (35) optionally has a spherical shape or an arched shape, in particular a dome shape.

8. The lid device (20) according to anyone of claims 1 to 7, **characterized in that** the handle device (30) is detachably arranged on the lid body (22), in particular by means of a clip connection, or a plug connection, or a snap-in connection, or a screw connection.

9. The lid device (20) according to any one of claims 1 to 7, **characterized in that** the handle device (30) is an integral component of the lid body (22).

10. The lid device (20) according to anyone of claims 1 to 9, **characterized in that** the handle device (30) is arranged on an upper surface (29) of the lid body (22).

11. The lid device (20) according to anyone of claims 1 to 10, **characterized in that** the handle device (30) comprises a first section (33) and a second section (34), said first section (33) and said second section (34) being aligned in a defined angle, in particular in a right angle, in relation to one another.

12. The lid device (20) according to anyone of claims 1 to 11, **characterized in that** the handle device (30) is arranged at an abutting edge (27, 28) of two boundary edges (23,25; 23,26) of the lid body (22).

13. The lid (22) device according to any one of claims 1 to 12, **characterized in that** two handle devices (30) are arranged on the lid body (22).

14. The lid device (20) according to anyone of claims 1 to 13, **characterized in that** the lid device (20) is configured as a hinged lid device (20).

15. 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), and wherein the waste container (10) comprises a lid device (20) for covering a receiving opening (12) being provided in the container body (11), said lid device (20) being pivotally mounted to the container body (11), **characterized in that** the lid device (20) is configured according to anyone of claims 1 to 14.

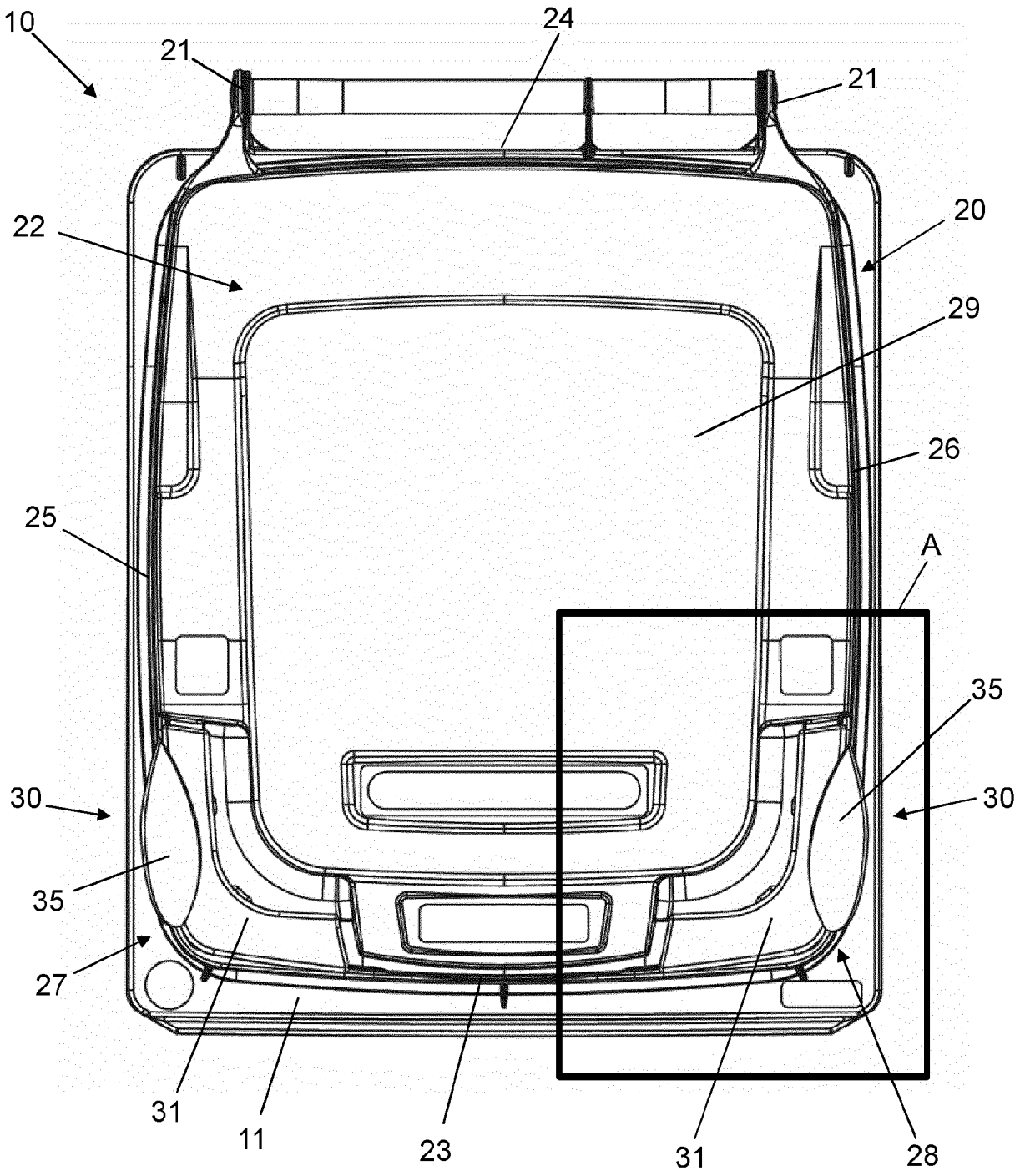


Fig. 1

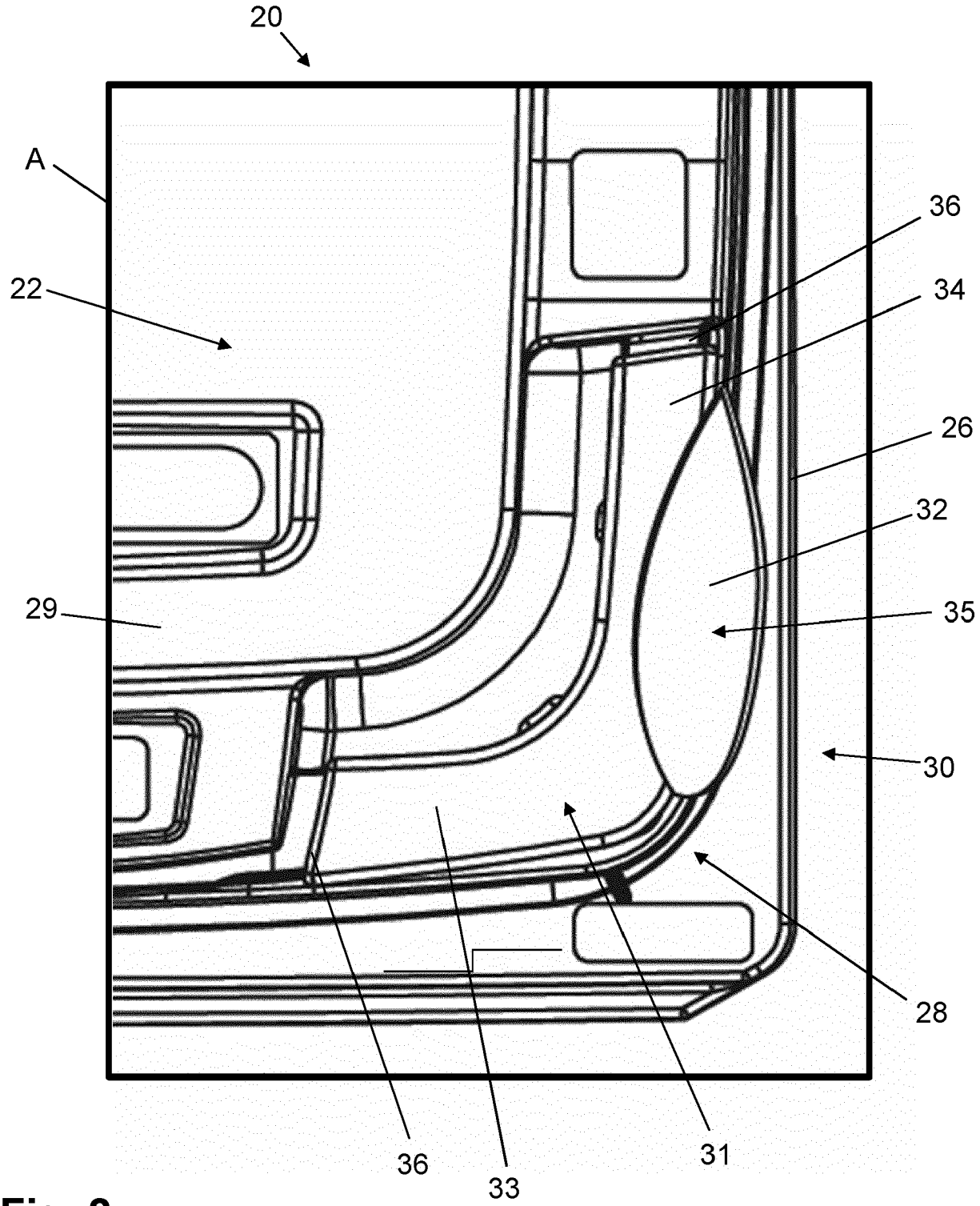


Fig. 2

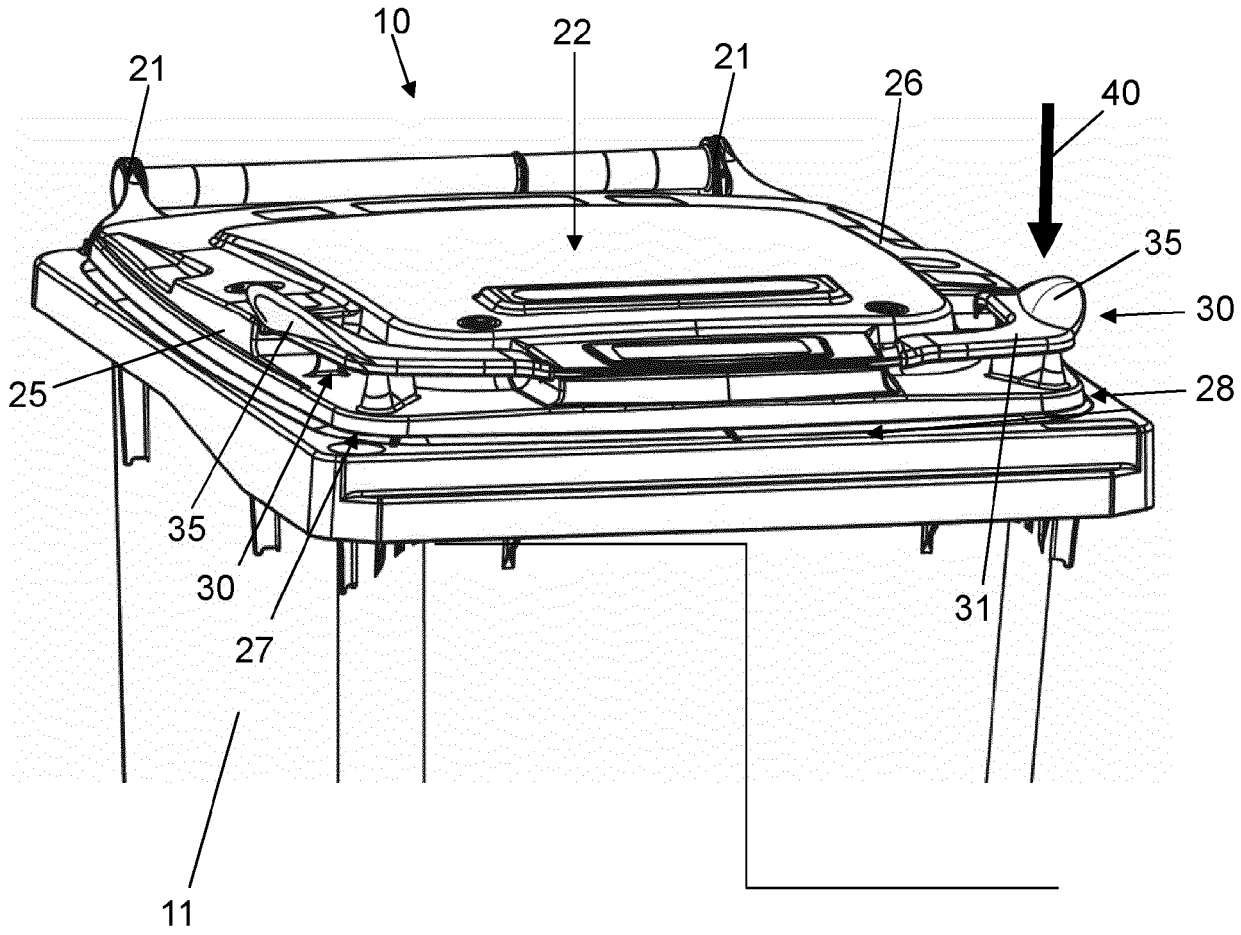


Fig. 3

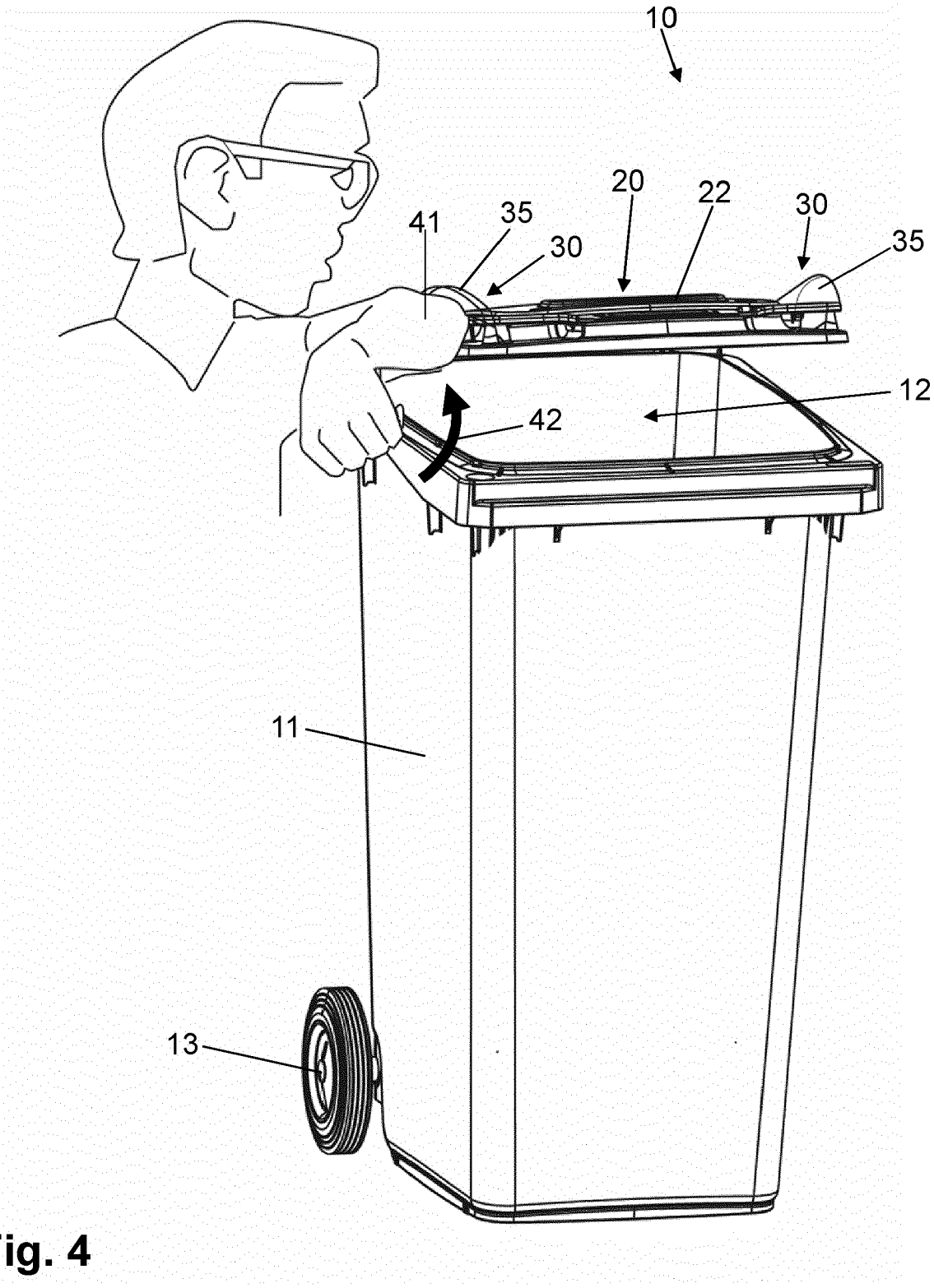


Fig. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 20 18 5764

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Place of search	Date of completion of the search	Examiner
The Hague	16 December 2020	Sommer, Jean

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