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(54) **HANDLE ARRANGEMENT FOR FRAMELESS LIGHT DOOR**

(57) In the present disclosure, a lock housing casing arrangement (1) for arrangement to a door (100) is provided. The lock housing casing arrangement (1) comprising: a casing body (2) shaped in size and form to define a housing space (20) configured to house a lock housing (4) of a predetermined collection of lock housing standards; a mounting portion (3) configured to be provided to a door (100) and to receive the casing body (2) in a mounting portion recess (30) so that, when in use, the casing body (2) is arranged to intersect a mounting plane (MP) of the door (100); attachment means (21; 21a, 21b, 21c; 11a, 11b, 11c) configured to fixate the casing body (2) to the mounting portion (3) when arranged in the mounting portion recess (30); wherein the attachment means (21; 21a, 21b, 21c; 11a, 11b, 11c) includes an attachment flange (21; 21a, 21b, 21c) extending from the casing body (2) in a direction, when in use, in parallel with the mounting plane (MP) of the door (100), which attachment flange (21; 21a, 21b, 21c) is configured to engage with an attachment surface (31; 31a, 31b, 31c) of the mounting portion (3) facing into the mounting portion recess (30).

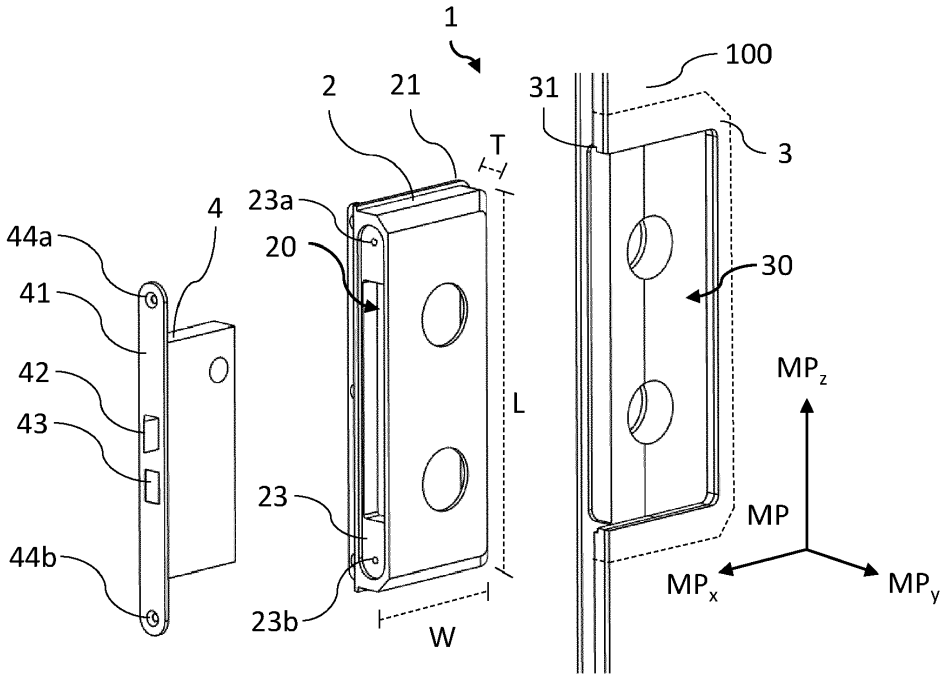

Fig. 2

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Description

Technical Field

[0001] The present disclosure relates to a casing for housing a lock housing when arranged to a door, and in particular a casing for housing any of a collection of standardized lock housings when arranged to a door.

Background

[0002] It is sometimes desired to change the lock housing of a door. This may occur for instance when keys have been lost in the public or that it is desired to improve the security of a house, a garage, an office etc. This may in some cases be extremely inconvenient and costly whenever a desired lock housing has a different form factor than the old lock housing, whereby incompatibility issues with the door may arise and the door itself must be adjusted or replaced. This problem has been mitigated to some degree by conforming lock housings to existing lock housing standards; however, there are still a great variety of lock housing standards, which may still result in compatibility issues between a desired lock housing and a door.

[0003] Further, it is sometimes desirable to provide a door arrangement wherein you can mount panels onto the door frame wherein the face of the door and the mounted panels are essentially levelled, providing a hidden door frame. This design choice generally requires the door to be relatively thick in order for the door to close accordingly and to provide the desired offset to the frame such that an attached panel becomes in level with the door. These design limitations introduce a problem of the door becoming heavy when using standard door material. A heavy door is difficult to mount and may also introduce the risk of a higher degree of wear over time.

[0004] Thus, there are problems with existing solutions and this technical field would benefit from an improved solution which alleviates at least some of the above-mentioned problems and other aspects also.

Summary

[0005] It is an object of the present invention to provide an improved solution that alleviates the mentioned drawbacks with present solutions. Furthermore, it is an object to provide a casing for housing a lock housing when arranged to a door.

[0006] According to a first aspect of the invention, a lock housing casing arrangement for arrangement to a door is provided. The lock housing casing arrangement may comprise a casing body shaped in size and form to define a housing space configured to house a lock housing of a predetermined collection of lock housing standards. The lock housing casing arrangement may comprise a mounting portion configured to be provided to a door and to receive the casing body in a mounting portion recess so that, when in use, the casing body is arranged to intersect a mounting plane of the door. The lock housing casing arrangement may comprise attachment means configured to fixate the casing body to the mounting portion when arranged in the mounting portion recess. The attachment means may include an attachment flange extending from the casing body in a direction, when in use, in parallel with the mounting plane of the door. The attachment flange may be configured to engage with an attachment surface of the mounting portion facing into the mounting portion recess.

[0007] By this invention, installing and changing a selected lock housing to a door may be facilitated. The casing body may be configured to remain attached to the mounting portion and consequently to the door when installing or changing a selected lock housing. Thus, the invention enables a selected lock housing to be changed at will to another standardized lock housing in a facilitated manner without needing to adjust the door for a different lock housing standard.

[0008] A further advantage of said invention is that it enables mounting a greater variety of lock housings of different lock housing standards to relatively thin doors, wherein the thickness of the thin door conventionally limits the lock housing standard that may be used. This is solved by the casing body providing a housing space with additional space for housing a lock housing when mounted to a relatively thin door than what the door itself could provide.

[0009] A further advantage of said invention is that it allows for offsetting the lock housing relative a central door plane towards the mounting plane or beyond the mounting plane. Such a configuration is desired when a front plane of the door, i.e. opposite the door side with the mounting door plane, is to protrude a certain distance out from the door frame when the door is in a closed position in the door frame. This certain distance may correspond to the thickness of one or more panels configured to be mounted onto the door frame, thereby reducing the offset from a panel plane and a front facing door plane. It may also allow for hiding the door frame behind the one or more panels when the offset distance is selected accordingly to the thickness of the one or more panels. The offset from the panel plane defined by the one or more panels and the front facing door plane may be less than 16mm, 12mm, 10 mm, 8 mm, 6 mm, 4 mm, 2 mm. The offset from the panel plane and the front facing door plane may be less than 1 mm or it may be approximately 0 mm, i.e. the panel plane and the front facing door plane may be aligned. This invention thus enables a door arrangement with the design choice of a hidden frame.

[0010] Further, in the case of relatively thin doors, the manner of mounting the lock housing to a door may become an issue. Conventional attachment means such as a plurality of screws configured to fixate a lock housing to the door are unsuitable if merely mounted on a mounting plane of a thin door, as this may require that the screws extend into the door through the mounting plane

at right angles. In thinner door, this causes a problem since the thickness of the door limits the length of such attachment means that may be used. While shorter attachment means may be an option to accommodate for the limited space in a thin door, such attachment means may fail to provide a secure mounting solution. The present solution solves this problem by means of the attachment flange, which is configured to, when in use, extend in a direction parallel to the mounting door plane and to engage with an attachment surface of the mounting portion facing into the mounting portion recess. Thus, by this, a secure mounting of a lock housing may be achieved. Further, the attachment flange and the attachment surface may improve upon structural integrity. The attachment flange and the attachment surface may prevent the casing body to be removed from the mounting portion and the door at a right angle with respect to the mounting plane. By mounting plane of the door it may be meant a surface plane of one side of the door.

[0011] The casing body may have a cuboid shape or a general cuboid shape. The casing body may extend a distance in a longitudinal direction, i.e. a predetermined length. The casing body may extend a distance in a lateral direction, i.e. a predetermined width. The casing body may extend a distance along a direction orthogonal to the longitudinal and lateral directions, i.e. a predetermined thickness. The length may be larger than both the width and the thickness. The width may be larger than the thickness. Generally, the casing body may have two opposing lateral surfaces separated by the predetermined width. The casing body may have two opposing longitudinal surfaces separated by the predetermined length. Further, the casing body may have an inward facing surface configured to face into the mounting portion recess when the casing body is arranged to the mounting portion. The casing body may also have an outward facing surface configured to face away from the mounting portion recess when the casing body is arranged to the mounting portion. The inward facing surface and the outward facing surface may be separated by the predetermined thickness. The insert opening for receiving the lock housing may be provided to extend through one of the lateral surfaces. The casing body may comprise a first set of first and second operation holes for operating the lock housing. The first and second operation holes may be arranged on opposite sides of the casing body.

[0012] The mounting portion may be provided to a door. Further, it may be provided in a recess of the door. Such a door recess may be provided with a predetermined size and shape to provide space for the mounting portion and the casing body. The mounting portion may be arranged in place by means of attachment means. The attachment means may be screws which are configured to be extend through walls of the mounting portion into the door in a parallel manner with the door plane.

[0013] By predetermined collection of lock housing standards, it may mean a collection of lock housings which are sized and adapted to fit in a standard door. They can vary in size, both with respect of the lock housing body and the strike plate, and also vary in mounting options in terms of number of fastening elements, distances between said fastening elements.

[0014] According to one embodiment, the mounting portion recess of the mounting portion is shaped in size and form so that, when in use, the casing body protrudes a predetermined protruding distance out of the mounting portion recess when arranged therein. By this, the lock housing may be offset a distance from a center plane of a door. The offset distance may be between 1 cm - 10 cm, preferably 2 cm - 5 cm.

[0015] According to one embodiment, the attachment surface of the mounting portion is provided in an attachment slot, which attachment slot is configured to receive said attachment flange of the casing body in a sliding manner when the casing body is inserted into the mounting portion recess. By this, installing a casing body in the mounting portion is facilitated. Further, it may also improve structural integrity. The attachment flange and the attachment slot may thus prevent the casing body to be removed at a right angle from the mounting portion and the door. It may also prevent the casing body to be pushed into the mounting portion.

[0016] According to one embodiment, the mounting portion may be provided as an integral part of the door. By this, it may facilitate installing the casing body to a mounting plane of the door. The mounting portion may be provided in a door using tools so as to provide the mounting recess in a desired shape and size. It may provide the attachment surface and optionally the attachment slot. The step of providing the mounting portion may involve removing a portion of the door so as to form the mounting portion recess and the attachment surface and optionally the attachment slot. The mounting portion may thus be defined as the door portion defining the mounting portion recess.

[0017] According to one embodiment, the mounting portion may comprise a first and a second boundary portion oppositely bounding the mounting portion recess and a third boundary portion bounding the mounting portion recess along a side adjacent the first and the second boundary portions. The first, second and third boundary portion may be arranged so as to define a recess corresponding to the casing body with the attachment surface and optionally the attachment slot provided therein or in connection thereto. The mounting portion recess may be cuboid-shaped.

[0018] According to one embodiment, said attachment surface is provided, as seen in a direction into the mounting recess, beneath one of the first, second and third boundary portions. The mounting portion may comprise a plurality of attachment surfaces arranged beneath any of the first, second and third boundary portions. The mounting portion may comprise three attachment surfaces each located beneath a corresponding boundary portion. The attachment surfaces arranged beneath the first and second boundary portion may be configured to ex-

tend in parallel with each other.

[0019] According to one embodiment, the attachment means may comprise a plurality of attachment flanges extending from the casing body, wherein each attachment flange is configured to engage with a corresponding attachment surface provided, as seen in a direction into the mounting recess, beneath any of the first, second and third boundary portions. The corresponding attachment surfaces may be provided in each respective attachment slot. The corresponding attachment surfaces may be interconnected.

[0020] According to one embodiment, the attachment flange or said plurality of attachment flanges form a common attachment flange extending at least 20%, preferably at least 40%, and most preferably at least 80% along the perimeter of the casing body along a first and second longitudinal side and a lateral side of the casing body. It may extend 100% along the perimeter of the casing body along the first and second longitudinal sides and the lateral side of the casing body.

[0021] According to one embodiment, the lock housing casing arrangement may comprise a removable insert plate configured to provide or restrict an insert hole through which the selected lock housing is inserted into the casing body. By this, a lock housing may be more securely fitted in the casing body. The insert plate may be securely attached to the casing body by means of attachment elements, such as screws.

[0022] According to one embodiment, the attachment means may comprise one or more attachment elements configured to engage in attachment element holes located along a mounting flange extending from the casing body, wherein the mounting flange is configured to be arranged to the mounting portion. By this, the casing body may be arranged securely in the mounting portion. It may fix the casing body in position along its sliding direction into the mounting portion. The attachment element may be screws. The mounting flange may be provided by the insert plate. The mounting flange may form an integral part of the casing body.

[0023] According to one embodiment, the casing body may be shaped in size and form to provide a recessed area for receiving the strike plate of the lock housing. By having a recessed area, it may facilitate maintaining the lock housing in a secure manner in the casing body. The bottom surface of the recessed area may be provided by the insert plate.

[0024] According to one embodiment, the casing body may be further shaped in size and form to provide symmetric insertion of the selected lock housing in a first orientation and a flipped second orientation. This may be enabled by the casing body having a symmetrically shaped body, wherein it is provided with a corresponding second set of first and second operation holes for operating the lock housing.

[0025] According to a second aspect of the invention, a door handle arrangement for arrangement to a door is provided. The door handle arrangement may comprise a handle. The door handle arrangement may comprise a lock housing selected from a collection of predetermined standard lock housings. The door handle arrangement may comprise a lock housing casing arrangement according to the first aspect of the invention or any embodiments thereof.

[0026] According to a third aspect of the invention, a door arrangement is provided. The door arrangement may comprise a door. The door arrangement may comprise a door frame to which the door is configured to be arranged. The door arrangement may comprise a lock housing casing arrangement according to the first aspect of the invention or any embodiments thereof. The door arrangement may comprise a door handle arrangement according to the second aspect of the invention or any embodiments thereof. The lock housing casing arrangement may be configured to be mounted to a mounting plane of the door, wherein a front plane of the door is offset relative the front facing side of the door frame in an outward direction when the door is in a closed position.

[0027] According to one embodiment, the offset may correspond to the thickness of a panel configured to be mounted over the front facing side of the door frame.

[0028] The invention is defined by the appended independent claims, with embodiments being set forth in the appended dependent claims, in the following description and in the drawings.

Brief Description of the Drawings

[0029] The invention will in the following be described in more detail with reference to the enclosed drawings, wherein:

Figs. 1a-1b show a door arrangement to which the lock housing casing arrangement according to one embodiment of the invention is arranged;

Fig. 2 shows an exploded view of the lock housing casing arrangement according to one embodiment of the invention;

Fig. 3 shows a mounting portion of the lock housing casing arrangement according to one embodiment of the invention;

Figs. 4a-4c show various views of a lock housing casing arrangement according to one embodiment of the invention;

Figs. 5a-5d show various views of the casing body of the lock housing casing arrangement according to one embodiment of the invention;

Figs. 6a-6b show two perspective views of the casing body of the lock housing casing arrangement according to one embodiment of the invention wherein no lock housing is inserted;

Fig. 7 shows a cross sectional view of a door arrangement comprising the lock housing casing arrangement according to one embodiment of the invention,

Figs. 8a-8b show a perspective view of a door ar-

rangement according to one embodiment of the present invention.

Description of Embodiments

[0030] The present invention will be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. In the drawings, like numbers refer to like elements.

[0031] Figs. 1a-1b show a door arrangement to which a lock housing casing arrangement 1 according to one embodiment of the invention is arranged. The door arrangement comprises a door 100 and a door frame 110. The door 100 is rotatably mounted in the door frame 110 so as to be able to be rotated from an open position and a closed position. This is enabled by means of hinges 102. Fig. 1a show the door arrangement when the door 100 is in a closed position. The lock housing casing arrangement 1 is arranged to the door 100 as can be seen in Fig. 1b. The lock housing casing arrangement 1 is arranged on a mounting door plane MP, which is the door plane facing into the door frame 110. The other door plane on the opposite side of the door is in the following referenced to as front plane FP. The front plane FP faces out of the door frame 110. The door arrangement may also comprise a door handle 101 which is schematically shown in Fig. 1a as a dashed ellipse.

[0032] Fig. 2 shows an exploded view of the lock housing casing arrangement 1 according to one embodiment of the invention. The lock housing casing arrangement 1 comprises a casing body 2 shaped in size and form to define a housing space 20 configured to house a lock housing 4 of a predetermined collection of lock housing standards. The lock housing casing arrangement 1 comprises a mounting portion 3 configured to be provided on or in a door 100 and to receive the casing body 2 in a mounting portion recess 30 so that, when in use, the casing body 2 is arranged to intersect a mounting plane MP of the door 100. The mounting plane MP is spanned by the first and third orthogonal axes MP_x and MP_z. The first orthogonal axis MP_x is defined to extend along a lateral direction of the door 100. The third orthogonal axis MPZ is defined to extend in a longitudinal direction of the door 100. Orthogonal to both axes MP_x, MP_z is a second axis MP_y which is defined to extend orthogonally from the mounting plane MP.

[0033] Further, the lock housing casing arrangement 1 comprises attachment means 21 configured to fixate the casing body 2 to the mounting portion 3 when arranged in the mounting portion recess 30. The attachment means 21 includes an attachment flange 21 extending from the casing body 2 in a direction, when in use, in parallel with the mounting plane MP of the door 100, which attachment flange 21 is configured to engage with an attachment surface 31 of the mounting portion 3 facing into the mounting portion recess 30.

[0034] As can be seen in Fig. 2, the lock housing 4 has a cuboid shaped body. To the lock housing body, a strike plate 41 is arranged. The strike plate 41 is provided with two holes through which a latch 42 and a bolt 43 is configured to move through when operated to move. The casing body 2 is provided with an insert opening 20a through which the lock housing 4 is inserted into the casing body 2. The insert opening 20a is rectangular in shape so as to correspond with the cross-sectional shape of the lock housing body as view in the insert direction. Depending on the type of the lock housing 4, there may be a gap between the boundaries of the insert opening 20a and the lock housing body. The insert opening 20a is dimensioned so as to enable lock housings 4 of various standards to fit in the insert opening 20a and the casing body 2.

[0035] Further, the strike plate 41 also comprises mounting holes 44a, 44b provided on the strike plate 41 configured to align with corresponding mounting holes 23a, 23b provided on the casing body 2. Screws may then be inserted into the mounting holes 44a, 44b, 23a, 23b to secure the lock housing 4 to the casing body 2. The casing body 2 comprises a recessed area 23 around the insert opening 20a. The recessed area is shaped in size and form so as to receive the strike plate 41 of the lock housing 4 when the lock housing 4 is inserted into the casing body 2. The mounting holes of the casing body 2 may be provided in the recessed area 23.

[0036] The casing body 2 has a shape resembling that of a cuboid also. The casing body extends a distance L in a longitudinal direction, i.e. length L, and a distance W in a lateral direction, i.e. width W. The casing body 2 also extends a distance T along a direction orthogonal to the longitudinal direction, i.e. thickness T. In the referenced figures, the length L is larger than both the width W and the thickness T. The width W is larger than the thickness T, wherein one of the lateral surfaces are adjacent insert opening 20a. Generally, the casing body 2 has two opposing lateral surfaces separated by the width W, and two opposing longitudinal surfaces separated by the length L. Further, the casing body 2 has an inward facing surface configured to face into the mounting portion recess 30 when arranged to the mounting portion 3. The casing body 2 also has an outward facing surface configured to face away from the door. The inward facing surface and the outward facing surface are separated by the thickness T.

[0037] Further, as seen in Fig. 2, the two opposing longitudinal surfaces are connected to the outward facing surface by respective slanted surfaces. The lateral surface opposing the lateral surface adjacent the insert opening is connected to the outward facing surface by a respective slanted surface.

[0038] The casing body 2 is also provided with a plurality of operation openings for allowing operation of the

lock housing 4 when inserted into the casing body 2, see in particular Figs. 6a-6b. The operation openings are symmetrically placed so as to allow a first insert orientation of the lock housing and a second flipped orientation of the lock housing 4.

[0039] Fig. 3 shows a mounting portion 3 of the lock housing casing arrangement 1 according to one embodiment of the invention. The mounting portion 3 is provided as an integrated part of the door 100. In an alternative embodiment, the mounting portion 3 may be provided as a separate component to the door 100. The mounting portion 3 comprises a first and a second boundary portions 31a, 31b which bound the mounting portion recess 30 along opposing first and second longitudinal sides of the mounting portion recess 30. The mounting portion recess 30 is open towards a first lateral side of the mounting portion recess 30 along which the casing body 2 is inserted into the mounting portion recess 30. Opposite the first lateral side of the mounting portion recess, the second lateral side of the mounting portion recess 30 is bounded by a third boundary portion 31c. A respective attachment surface 32a, 32b, 32c is arranged beneath each first, second and third boundary portions and facing into the mounting portion recess 30. The distance between the bottom surface of the mounting portion recess 30 and the common attachment surface corresponds to the thickness of the common attachment flange, thereby forming an attachment slot in the mounting portion recess 30 configured to receive the common attachment flange 21 of the casing body 2.

[0040] Figs. 4a-4c show various views of a lock housing casing arrangement 1 according to one embodiment of the invention. Fig. 4a shows a perspective view of the lock housing casing arrangement 1 when arranged to a door 100. Fig. 4b shows how a center plane LH of the lock housing 4 is offset a distance d from a center plane C of the door by means of the present invention. Fig. 4c shows the lock housing casing arrangement 1 arranged to a door 100 which has been moved to an open position relative the door frame 110. The lock housing casing arrangement 1 is arranged at a position of the door so that the lock housing 4 can engage with a door frame locking member 112 arranged to the door frame 110.

[0041] Figs. 5a-5d show various views of the casing body 2 of the lock housing casing arrangement 1 according to one embodiment of the invention. In Fig. 5a, we see into the housing space 20 of the casing body 2 from an inward facing side of the casing body 2. As can be seen in Fig. 5a, the housing space 20 is much larger than the lock housing body and is therefore suitable for other lock housing standards also. Fig. 5b show a front facing side of the casing body 2. Fig. 5c show a longitudinal side of the casing body 2. Fig. 5d show a perspective view of the casing body 2.

[0042] Further, as can be seen in Figs. 4a-c, Fig. 5c and Fig. 5d in particular the casing body comprises an insert plate 22. The insert plate 22 has a planar shape and is configured to provide the insert opening 20a through which the lock housing body is inserted. The insert plate 22 provides a mounting flange 221 by which attachment means may fix the casing body 2 to the mounting portion 3. The insert plate 22 may be configured to be replaced to a different insert plate 22 with a different sized insert opening 20a corresponding to some other lock housing standard. At the mounting flange 221, the casing body 2 can be attached to the mounting portion 3 on a lateral door portion 33 (see Fig. 3).

[0043] Figs. 6a-6b show two perspective views of the casing body 2 of the lock housing casing arrangement 1 according to one embodiment of the invention wherein no lock housing is inserted. As has been disclosed previously, the casing body 2 comprises an insert opening 20a through which a selected lock housing 4 is configured to be received.

[0044] Fig. 7 shows a cross sectional view of a door arrangement comprising the lock housing casing arrangement 1 according to one embodiment of the invention. As is seen in Fig. 7, the front plane FP of the door is offset relative the door frame 110 a certain distance S in an outward direction. This allows for panels 111 to be mounted over the front facing side of the door frame 110. Fig. 8a-8b show this more clearly. Fig. 8a shows when no panels 111 are installed over the front facing side of the door frame 110, while Fig. 8b shows when panels 111 are installed over the front facing side of the door frame 110. Thus, the present invention allows for a hidden door frame 110, as viewed when facing the door arrangement from a front side.

[0045] In the drawings and specification, there have been disclosed preferred embodiments and examples of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for the purpose of limitation, the scope of the invention being set forth in the following claims.

Reference list

[0046]

d - Lock housing offset distance
s - Door offset distance
MP - Mounting plane
FP - Front plane
1 - Lock housing casing arrangement
11a, 11b, 11c- Attachment means, screws
2 - Casing body
20 - Housing space
20a - Insert opening
21 - Common flange
21a, 21b, 21c - Attachment means, flanges
22 - Insert plate
221 - Mounting flange
221a, 221b, 221c - Screw holes
23 - Recessed area
23a, 23b - Mounting holes
3 - Mounting portion

3a, 3b, 3c - First, second, third boundary portion
30 - Mounting portion recess
31 - Common attachment surface
31a, 31b, 31c - Attachment surface
32a, 32b, 32c - Attachment slot
4 - Lock housing
41 - Strike plate
42 - Door latch
43 - Lock bolt
100 - Door
102 - Hinges
110 - Door frame
111 - Panel
112 - Door frame locking member

Claims

1. Lock housing casing arrangement (1) for arrangement to a door (100), the lock housing casing arrangement (1) comprising:

a casing body (2) shaped in size and form to define a housing space (20) configured to house a lock housing (4) of a predetermined collection of lock housing standards;
a mounting portion (3) configured to be provided to a door (100) and to receive the casing body (2) in a mounting portion recess (30) so that, when in use, the casing body (2) is arranged to intersect a mounting plane (MP) of the door (100);
attachment means (21; 21a, 21b, 21c; 11a, 11b, 11c) configured to fixate the casing body (2) to the mounting portion (3) when arranged in the mounting portion recess (30);
wherein the attachment means (21; 21a, 21b, 21c; 11a, 11b, 11c) includes an attachment flange (21; 21a, 21b, 21c) extending from the casing body (2) in a direction, when in use, in parallel with the mounting plane (MP) of the door (100), which attachment flange (21; 21a, 21b, 21c) is configured to engage with an attachment surface (31; 31a, 31b, 31c) of the mounting portion (3) facing into the mounting portion recess (30).

2. Lock housing casing arrangement (1) according to claim 1, wherein the mounting portion recess (30) of the mounting portion (3) is shaped in size and form so that, when in use, the casing body (2) protrudes a predetermined protruding distance (d1) out of the mounting portion recess (30) when arranged therein.

3. Lock housing casing arrangement (1) according to any of claims 1 - 2, wherein the attachment surface (31; 31a, 31b, 31c) of the mounting portion (3) is provided in an attachment slot, which attachment slot is configured to receive said attachment flange (21; 21a, 21b, 21c) of the casing body (2) in a sliding manner when the casing body (2) is inserted into the mounting portion recess (30).

4. Lock housing casing arrangement (1) according to any of claims 1 - 3, wherein the mounting portion (3) is provided as an integral part of the door (100).

5. Lock housing casing arrangement (1) according to any of claims 1 - 4, wherein the mounting portion (3) comprises a first and a boundary portion (3a, 3b) oppositely bounding the mounting portion recess (30) and a third boundary portion (3c) bounding the mounting portion recess (30) along a side adjacent the first and the second boundary portions (3a, 3b).

6. Lock housing casing arrangement (1) according to claim 5, wherein said attachment surface (31; 31a, 31b, 31c) is provided, as seen in a direction into the mounting recess (30), beneath one of the first, second and third boundary portions (3a, 3b, 3c).

7. Lock housing casing arrangement (1) according to any of claims 5-6, wherein the attachment means (21; 21a, 21b, 21c; 11a, 11b, 11c) comprises a plurality of attachment flanges (21a, 21b, 21c) extending from the casing body (2), wherein each attachment flange (21a, 21b, 21c) is configured to engage with a corresponding attachment surface (31a, 31b, 31c) provided, as seen in a direction into the mounting recess (30), beneath any of the first, second and third boundary portions (3a, 3b, 3c).

8. Lock housing casing arrangement (1) according to any of claims 5 - 7, wherein the attachment flange or said plurality of attachment flanges (21a, 21b, 21c) form a common attachment flange (21) extending at least 20%, preferably at least 40%, and most preferably at least 80% along the perimeter of the casing body along a first and second longitudinal side and a lateral side of the casing body (2).

9. Lock housing casing arrangement (1) according to any of claims 1 - 8, comprising a removable insert plate (22) configured to provide or restrict an insert hole (20a) through which the selected lock housing (4) is inserted into the casing body (2).

10. Lock housing casing arrangement (1) according to any of claims 1 - 9, wherein the attachment means (21; 21a, 21b, 21c; 11a, 11b, 11c) comprises one or more attachment elements (11a, 11b, 11c) configured to engage in attachment element holes (12a, 12b, 12c) located along a mounting flange (221) extending from the casing body (1), wherein the mounting flange (221) is configured to be arranged to the mounting portion (3).

11. Lock housing casing arrangement (1) according to any of claims 1 - 10, wherein the casing body (2) is shaped in size and form to provide a recessed area (23) for receiving the strike plate (41) of the lock housing (40).

12. Lock housing casing arrangement (1) according any of claims 1 - 11, wherein the casing body (2) is further shaped in size and form to provide symmetric insertion of the selected lock housing (4) in a first orientation and a flipped second orientation.

13. A door handle arrangement for arrangement to a door (100), comprising a handle, a lock housing (4) selected from a collection of predetermined standard lock housings, and a lock housing casing arrangement (1) according to any of claims 1 - 12.

14. A door arrangement comprising a door (100), a door frame (110) to which the door (100) is configured to be arranged, a door handle arrangement according to claim 13 configured to be mounted to a mounting plane (MP) of the door (100), wherein a front plane (FP) of the door is offset relative the front facing side of the door frame (110) in an outward direction when the door (100) is in a closed position.

15. The door arrangement according to claim 14, wherein the offset corresponds to the thickness of a panel (111) configured to be mounted over the front facing side of the door frame (110).

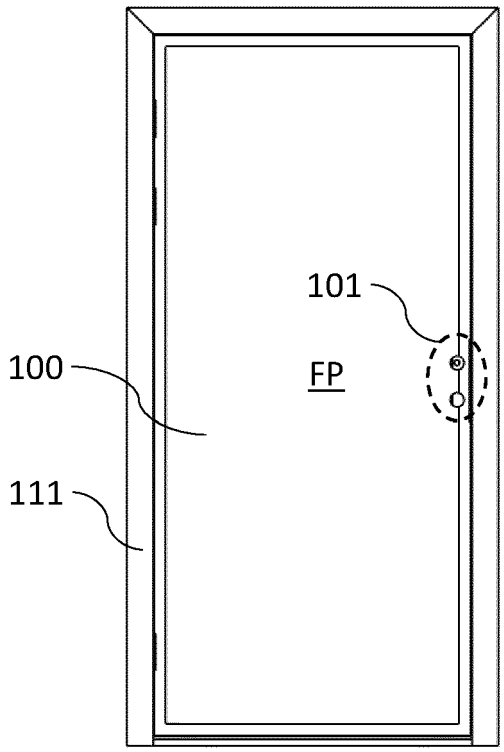

Fig. 1a

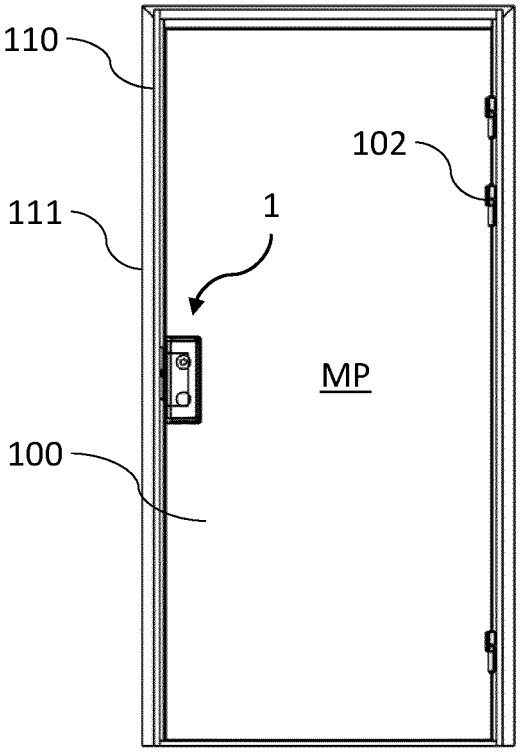

Fig. 1b

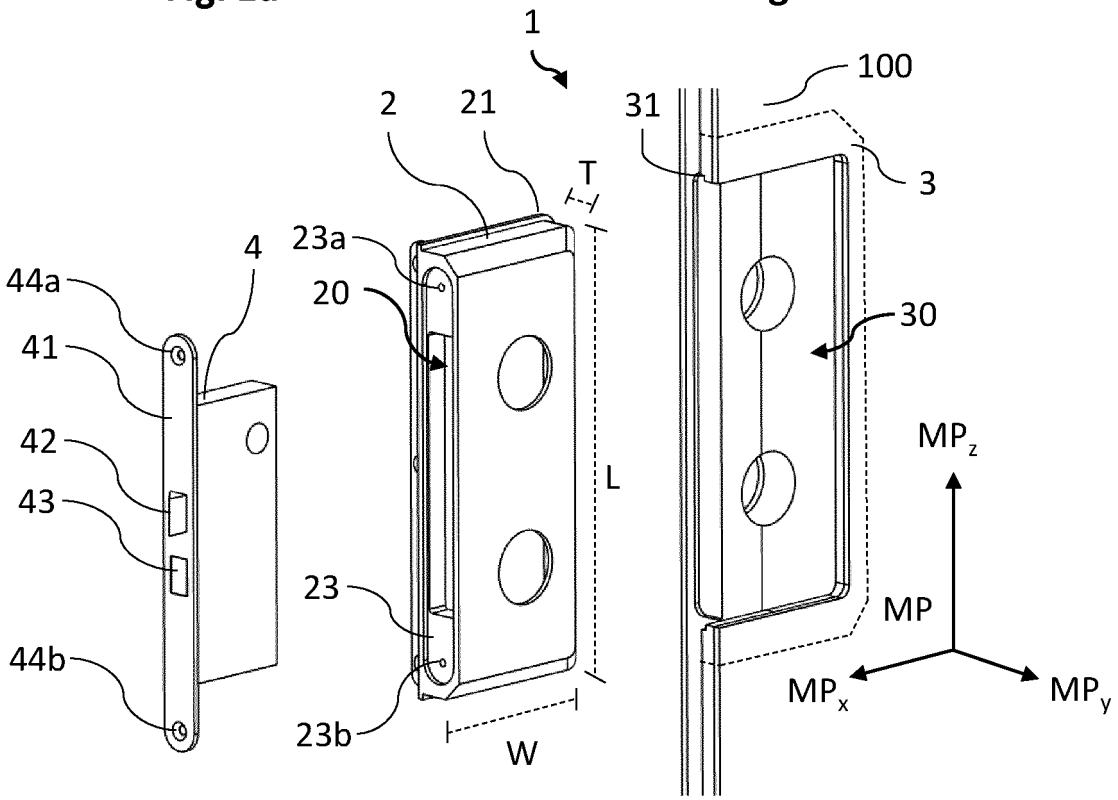

Fig. 2

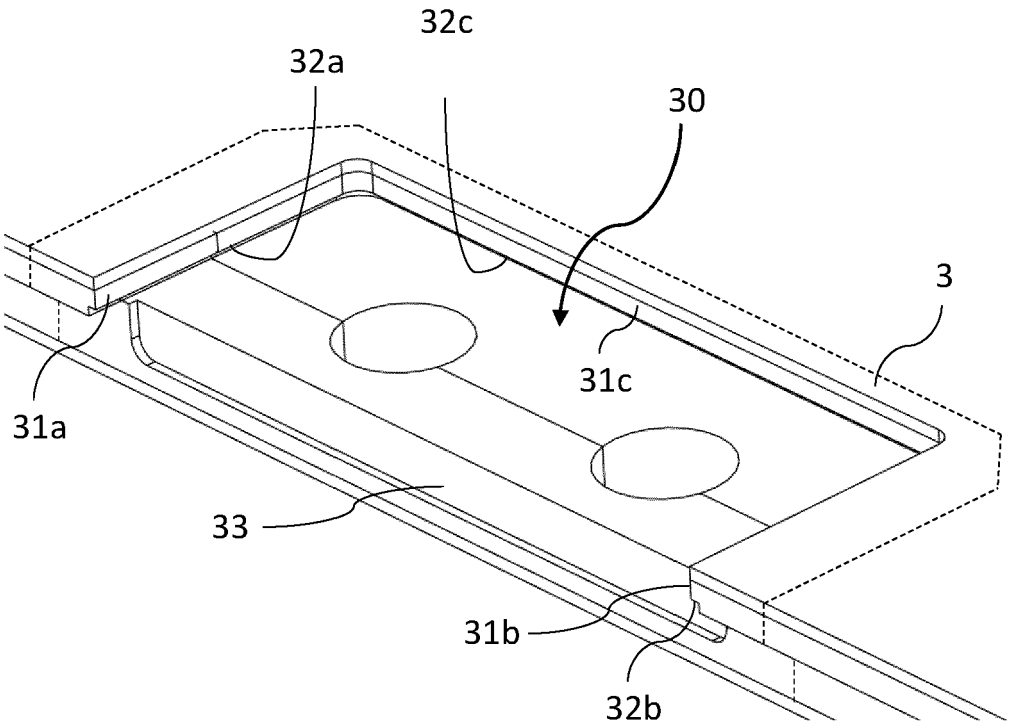

Fig. 3

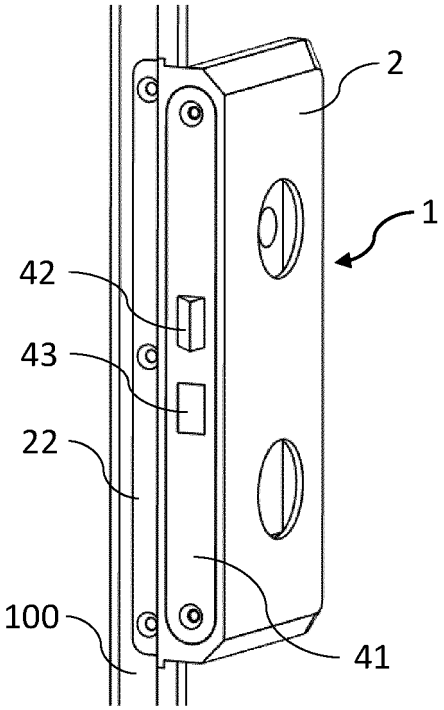

Fig. 4a

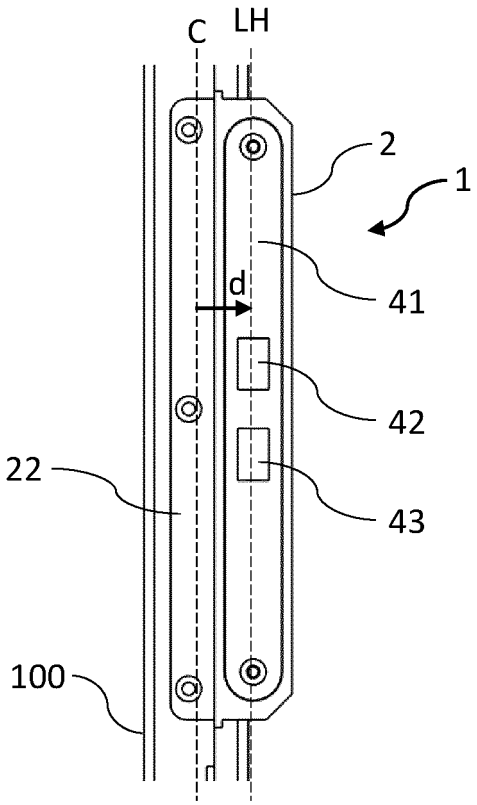

Fig. 4b

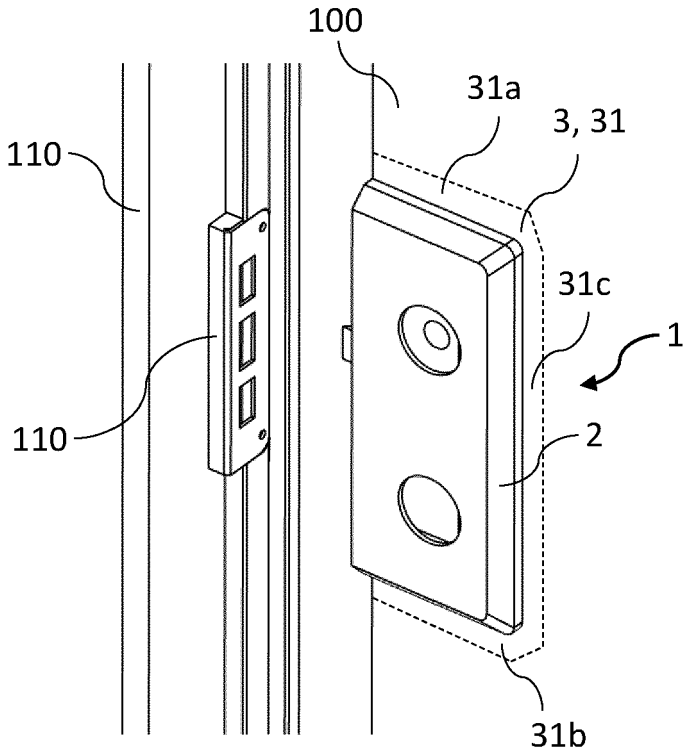

Fig. 4c

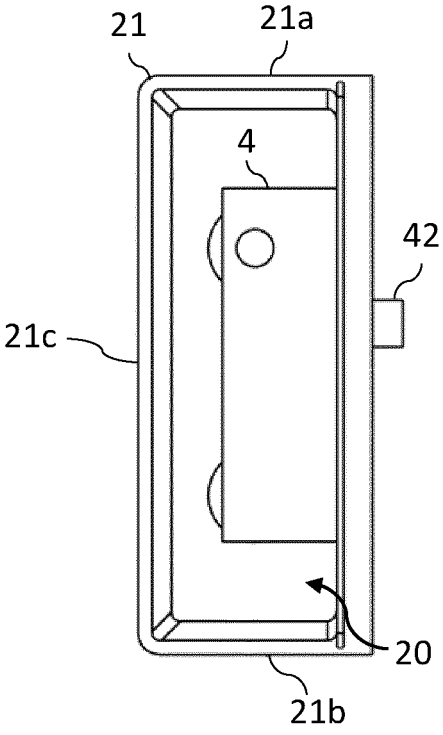

Fig. 5a

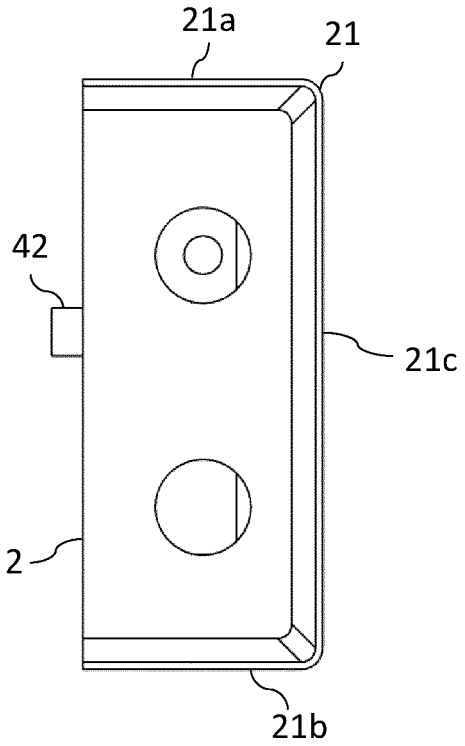

Fig. 5b

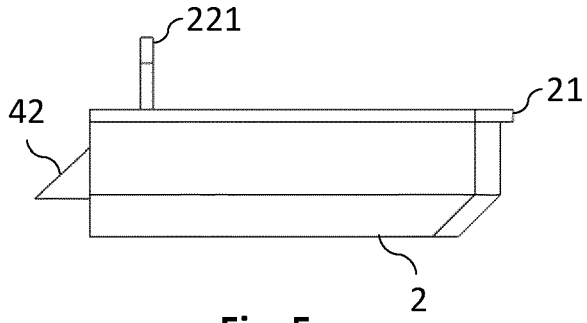

Fig. 5c

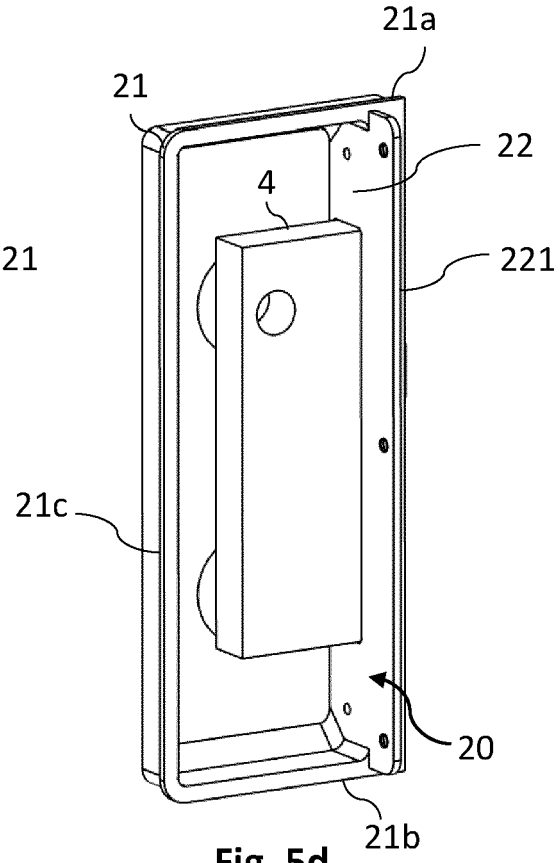

Fig. 5d

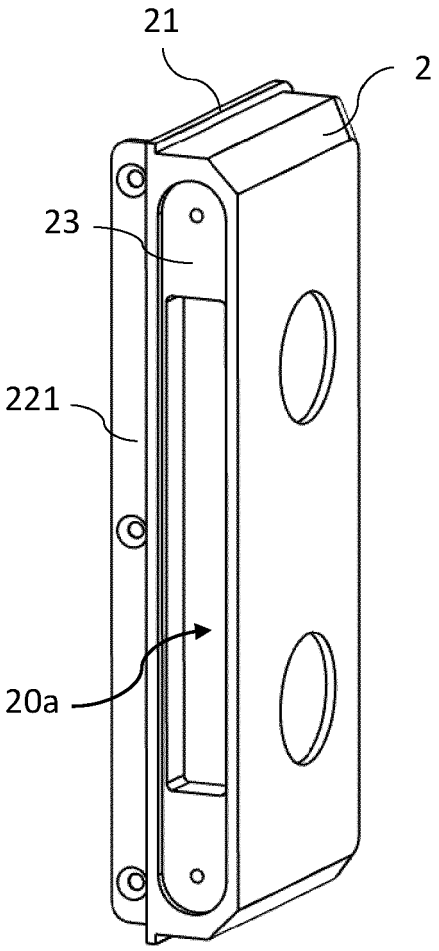

Fig. 6a

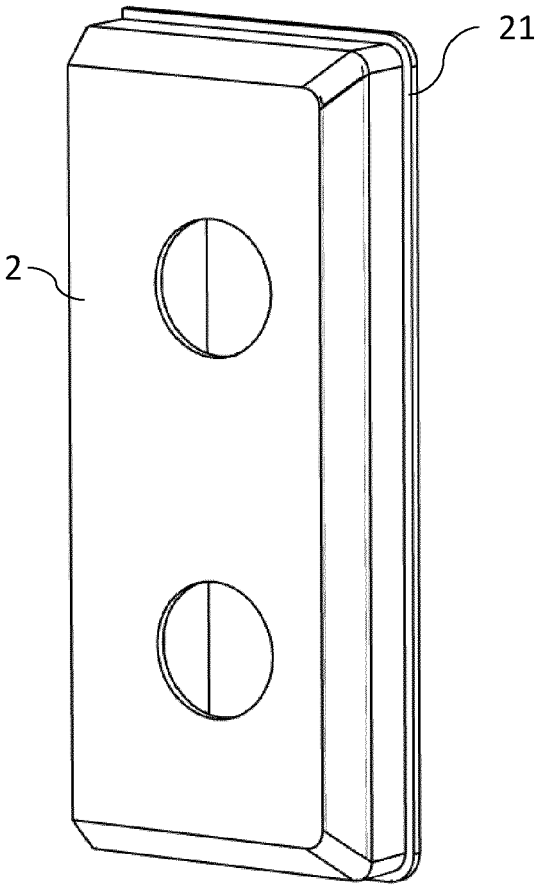

Fig. 6b

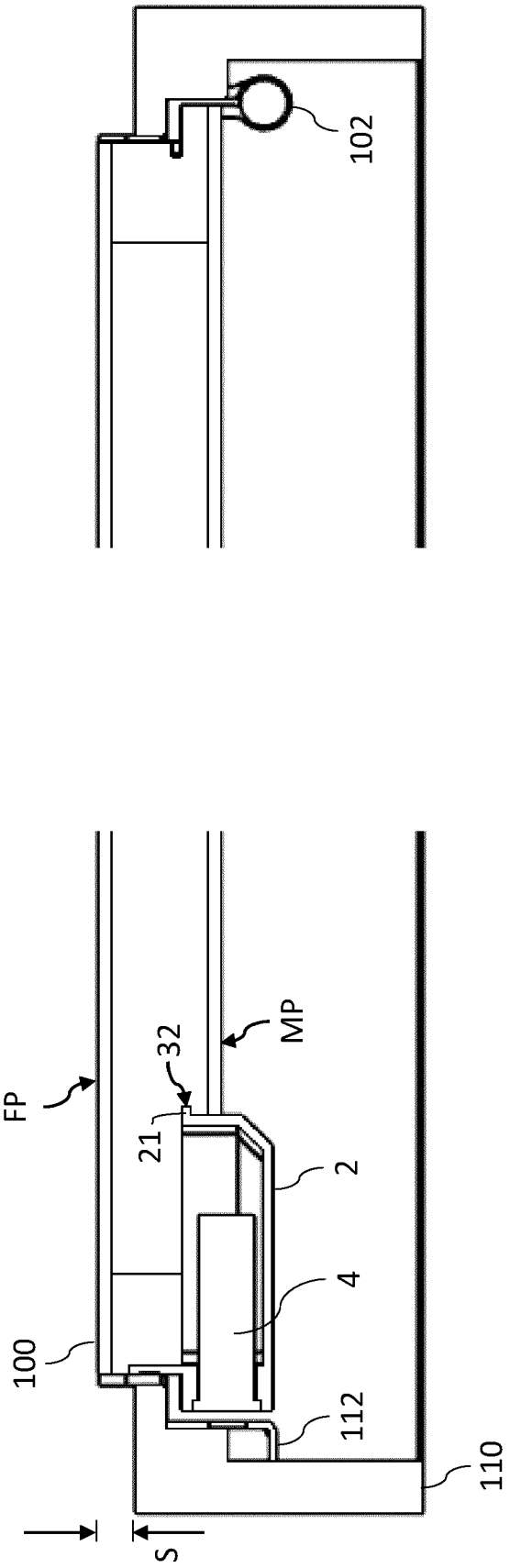

Fig. 7

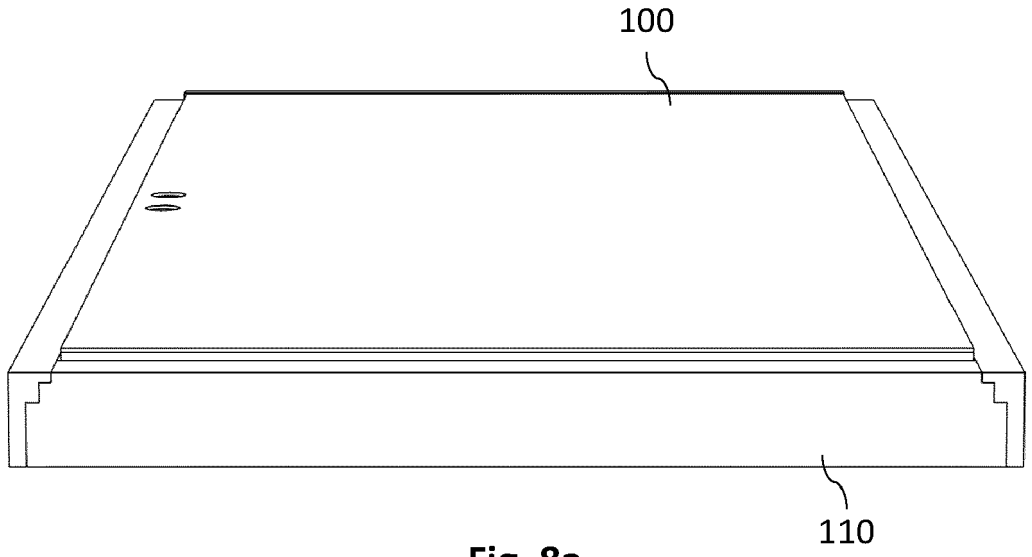

Fig. 8a

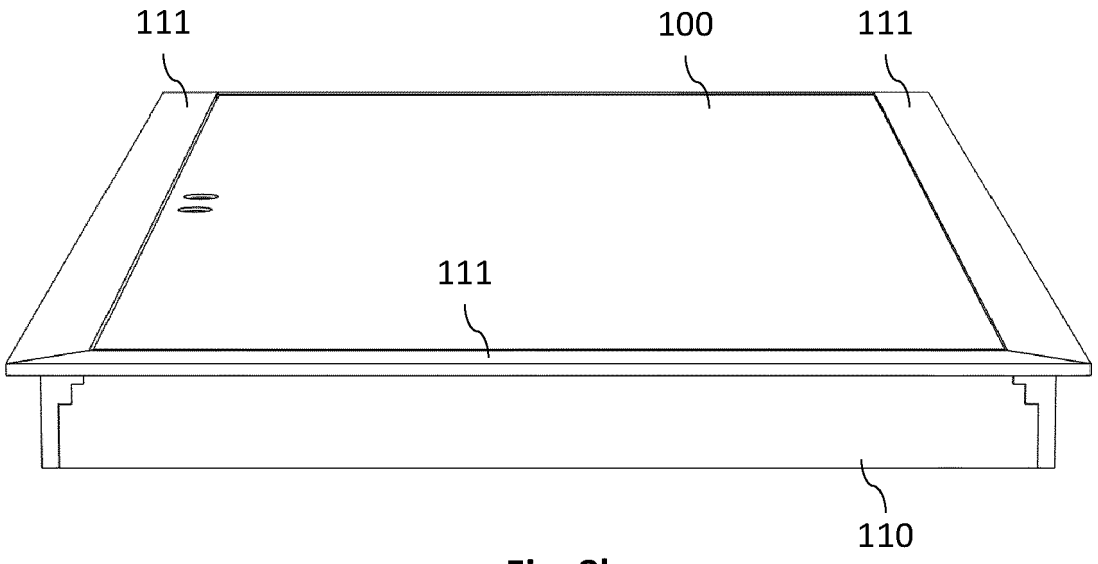

Fig. 8b

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EUROPEAN SEARCH REPORT

Application Number
EP 20 18 1849

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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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	16 November 2020	Geerts, Arnold

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