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(54) **DOOR PROFILE AND CORRESPONDING SELF-CLAMPING HINGE AND SELF-CLAMPING ADAPTER**

(57) The present invention relates to a door profile, comprising a wall profile and a fitting profile, wherein the fitting profile comprises a substantially U-shaped channel, which U-shaped channel comprises two upright ribs and a connecting rib, wherein the U-shaped channel comprises at least one clamping rib on one of the upright ribs; the door profile further comprising at least one self-clamping adapter, the adapter comprising a receiving body wherein the receiving body comprises at least one clamping element, and wherein the clamping ele-

ment comprises a clamping plate with a width profile dimensioned to fit between the clamping rib and the opposing upright rib, and with a length profile dimensioned not to fit between the clamping rib and the opposing upright rib, the clamping plate being rotatable relative to the adapter; and wherein a substantially flat slot is defined between said clamping rib and the connecting rib suitable for fixedly clamping said clamping plate.

Further aspects relate to a self-clamping hinge and a self-clamping adapter.

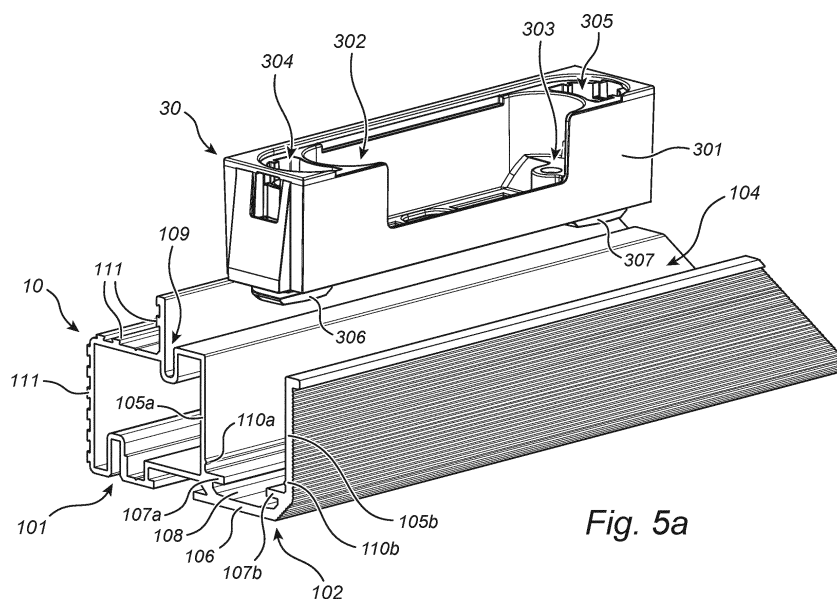


Fig. 5a

Description

TECHNICAL FIELD

[0001] The invention relates to doors, door profiles and associated door fittings.

[0002] More specifically, the invention is in the technical area of the concealed incorporation of door fittings in a door profile.

PRIOR ART

[0003] US 3 001 224 describes a seven-pin hinge, which allows the hinge to be largely concealed in a wall. Fixing the hinge to a door and/or wall is done by means of bolts or screws. This implies that the installation must be thoroughly measured and planned in advance and that no adaptation and/or adjustment is possible on site, neither during installation nor afterwards. In view of a concealed arrangement of the hinge, however, adjustment is an important aspect, since only a small deviation can be detrimental to the aesthetic result.

[0004] EP 1 780 357 discloses a multi-pin hinge suitable for concealed incorporation in a door profile, which hinge allows a certain adjustment after installation. The extent to which adjustment is possible, however, is limited and comprises a plurality of operations wherein one or more screws must be fully or partially unscrewed and the movement of the hinge relative to a fixing plate must be carried out manually. Given the limited adjustment options, thorough pre-measurement remains essential, and the door profile must be tailor-made to the specific installation conditions. Only small error margins can be compensated for by adjusting.

[0005] DE 10 2010 004 771 discloses a door hinge for aluminium doors with a first hinge section and a second hinge section, each having at least one hinge roller section, and which are connected to each other at the hinge roller sections to be rotatable about a vertical axis. The hinge, however, when clamped, is located on the door profile and substantially outside the door profile.

[0006] There is therefore a need for a hinge, or by extension door fittings, which can be invisibly incorporated in a wall and/or door profile and which allow for modular fixing, thereby reducing the need for measurement and customisation in advance, and installation or removal, adaptation and adjustment are easy to implement, resulting in an excellent attractive result. It should also be noted here that left-handed or right-handed doors can easily be adjusted to each other. Thus, it is also easy to change hinges, without the need for additional machining operations on the profile, which could reduce the structural strength thereof.

[0007] The object of the present invention is to at least solve some of the above-mentioned problems or disadvantages.

SUMMARY OF THE INVENTION

[0008] To this end, the present invention provides a door profile according to claim 1 in a first aspect. The door profile according to the present invention has the advantage that door fittings can be fitted in an adapter, which can easily be mounted in a suitable slot provided in the door profile. This makes preparing the door profile superfluous, and installation on site is quick and efficient. Possible errors during measurement can be corrected on site as the door profile was not permanently adjusted to the measurements and the position of the door fitting in the door profile can still be changed afterwards.

[0009] Preferred embodiments of the door profile are shown in dependent claims 2 to 8.

[0010] In a second aspect, the present invention relates to a self-clamping hinge according to claim 9.

[0011] Preferred embodiments of the hinge are shown in dependent claims 10 to 13.

[0012] A third aspect relates to a self-clamping adapter according to claim 14, with a preferred embodiment shown in dependent claim 15.

DESCRIPTION OF THE DRAWINGS

[0013]

Figure 1 shows a frontal view of an opened hinge according to a preferred embodiment of the present invention.

Figure 2a shows a first cross-section, perpendicular to the longitudinal direction, of an opened hinge according to a preferred embodiment of the present invention.

Figure 2b shows a second cross-section, perpendicular to the longitudinal direction, of an opened hinge according to a preferred embodiment of the present invention.

Figure 3a shows a perspective view of an adapter according to a preferred embodiment of the present invention.

Figure 3b shows a bottom, front and side view of an adapter according to a preferred embodiment of the present invention.

Figure 4 shows a cross-section, perpendicular to the longitudinal direction, of a door profile according to a preferred embodiment of the present invention.

Figure 5a shows a perspective view of a door profile according to a preferred embodiment of the present invention, in which a self-clamping adapter is fitted.

Figure 5b shows a perspective view of a door profile

with a self-clamping adapter according to a preferred embodiment of the present invention mounted therein.

Figure 6 shows a cross-section, perpendicular to the longitudinal direction, of a door profile according to another preferred embodiment of the present invention.

Figure 7a shows a perspective view of a door profile according to another preferred embodiment of the present invention, in which a self-clamping adapter is fitted.

Figure 7b shows a perspective view of a door profile with a self-clamping adapter mounted therein according to another preferred embodiment of the present invention.

Figure 8 shows a cross-section, perpendicular to the longitudinal direction, of a door profile according to a preferred embodiment of the present invention.

Figure 9 shows a cross-section, perpendicular to the longitudinal direction, of a door profile according to a preferred embodiment of the present invention.

DETAILED DESCRIPTION

[0014] The present invention relates to a door profile comprising an adapter suitable for the modular incorporation of door fittings.

[0015] Unless otherwise defined, all terms used in the description of the invention, including technical and scientific terms, have the meaning as commonly understood by a person skilled in the art to which the invention pertains. For a better understanding of the description of the invention, the following terms are explained explicitly.

[0016] In this document, 'a' and 'the' refer to both the singular and the plural, unless the context presupposes otherwise. For example, 'a segment' means one or more segments.

[0017] When the term 'around' or 'about' is used in this document with a measurable quantity, a parameter, a duration or moment, and the like, then variations are meant of approx. 20% or less, preferably approx. 10% or less, more preferably approx. 5% or less, even more preferably approx. 1% or less, and even more preferably approx. 0.1% or less than and of the quoted value, insofar as such variations are applicable in the described invention. However, it must be understood that the value of a quantity used where the term 'about' or 'around' is used, is itself specifically disclosed.

[0018] The terms 'comprise', 'comprising', 'consist of', 'consisting of', 'provided with', 'include', 'including', 'contain', 'containing', are synonyms and are inclusive or open terms that indicate the presence of what follows, and which do not exclude or prevent the presence of

other components, characteristics, elements, members, steps, as known from or disclosed in the prior art.

[0019] Quoting numerical intervals by endpoints includes all integers, fractions and/or real numbers between the endpoints, these endpoints included.

[0020] A first aspect of the present invention relates to a door profile comprising a wall profile and a fitting profile, wherein this wall profile comprises one or more fixing means for fixing the door profile in a door opening, and wherein the fitting profile comprises a substantially U-shaped channel which U-shaped channel extends in the longitudinal direction of the door profile. The U-shaped channel is suitable for receiving door fittings, the substantially U-shaped channel comprising two upright ribs and a connecting rib. The substantially U-shaped channel further comprises at least one clamping rib on one of the upright ribs, preferably at least one clamping rib on both of the upright ribs. The door profile further comprises at least one self-clamping adapter, suitable for interconnecting door fittings and the fitting profile. Said adapter herein comprises a receiving body, the receiving body comprising at least one clamping element, suitable for clamping the receiving body in the fitting profile. The clamping element comprises a clamping plate, which has a width profile and a length profile in the plane of the clamping plate, which width profile is dimensioned to fit between the clamping rib and the opposing upright rib and/or between the two opposing clamping ribs, and which length profile is dimensioned so as not to fit between the clamping rib and the opposing upright rib and/or the two opposing clamping ribs. The clamping plate is rotatable relative to the adapter about an axis which intersects the plane defined by the longitudinal and width profile, preferably intersecting it perpendicularly. A substantially flat slot is defined between said at least one clamping rib and the connecting rib, suitable for firmly clamping said clamping plate.

[0021] Door fittings are commonly installed in a door profile by means of screws, bolts and/or other coupling means, which require the door profile to be prepared for said installation. This preparation comprises, for example, pre-drilling and/or milling holes in the door profile. Consequently, for the standard fixing of door fittings in the door profile, each door profile must be adjusted to size in order to allow a smooth installation on site. Such customised preparation and adaptation requires a considerable amount of time and reduces the efficiency of the production process. In addition, a considerable number of measurements must be made in advance. Due to the nature of the adjustments, any door profiles that have been adjusted incorrectly are difficult to correct or adjust afterwards.

[0022] The door profile according to the present invention addresses these problems, since the door fittings do not have to be mounted in the door profile by means of the aforementioned coupling methods, but can be arranged in the slot suitable for fixedly clamping said door fittings, in particular the adapter. This makes preparing

the door profile superfluous, and installation on site is quick and efficient. Possible errors during measurement can be corrected on site as the door profile was not permanently adjusted to the measurements and the position of the door fitting in the door profile can still be changed afterwards.

[0023] Preferably, the clamping plate has a maximum dimension X in the length profile, and a maximum dimension Y in the width profile. Here, X is greater than Y, the dimension Y is smaller than the shortest distance between the clamping rib and the opposing upright rib and/or the shortest distance between the two opposing clamping ribs, and the dimension X is greater than said shortest distance between the clamping rib and the opposing upright rib and/or the shortest distance between the two opposing clamping ribs. Said dimensions X and Y guarantee a smooth connection and disconnection of the adapter in the door profile and further increase the installation efficiency.

[0024] According to a further or other embodiment, the U-shaped channel comprises two clamping ribs facing each other, which clamping ribs are oriented parallel to the connecting rib and are each preferably coupled perpendicularly to one of the upright ribs, the substantially flat slot being defined between said clamping ribs and the connecting rib. The presence of two clamping ribs ensures a firmer clamping of the adapter in the door profile, whereby mainly the clamping plate is loaded. Load on the receiving body of the adapter itself is hereby reduced.

[0025] Preferably, the two clamping ribs facing each other are positioned at the same relative height relative to the connecting rib on the upright ribs, and the dimension X is greater than the shortest distance between the two clamping ribs, the dimension Y being smaller than the shortest distance between the two clamping ribs. A substantially symmetrical position of the clamping ribs in the U-shaped channel as described here ensures a uniform load on the clamping element and the adapter, whereby a more stable clamping of the adapter in the door profile can be obtained.

[0026] According to a further or other embodiment, the two clamping ribs facing each other are positioned at a mutually different relative height relative to the connecting rib on the upright ribs, the dimension X being greater than the shortest distance between the clamping ribs, preferably greater than the shortest distance between each clamping rib and the respective upright rib opposite the clamping rib; and wherein the dimension Y is smaller than the shortest distance between each clamping rib and the respective upright rib opposite the clamping rib, preferably less than the shortest distance between the two clamping ribs in a plane perpendicular to the direction in which the upright ribs extend. The adapter can herein only be clamped in the door profile in one way, which minimises the risk of incorrect installation. Moreover, the adapter is extremely easy to insert into the U-shaped opening as a result of this asymmetrical structure.

[0027] According to an embodiment, the one or more clamping ribs extend substantially over the entire length of the U-shaped channel. The position of different adapters can therefore be chosen completely freely over the fully utilised length of the door profile mounted in a wall.

[0028] According to a further or other embodiment, the one or more clamping ribs extend to the free ends of the upright ribs. As a result, a more robust but less light construction is obtained which is capable of accommodating heavier doors and/or heavier door fittings.

[0029] According to an embodiment, the flat slot has a height-width ratio comprised between 1:5 and 1:15. This height-width ratio allows door fittings to be clamped in the door profile by means of a clamping element with limited dimensions, while a firm and durable clamping is achieved. The limited dimensions are particularly advantageous if a compact, preferably substantially invisible, arrangement of door fittings in the door profile is envisaged.

[0030] According to a further or other embodiment, the door profile comprises a recess suitable for receiving a sealing profile. The location of the recess mentioned is variable depending on whether the door is mounted opening inwards or outwards. The recess is preferably always situated on the side of the closing direction of the door in order to guarantee an optimum seal between the door and the door profile. With doors that open outwards, the door profile preferably comprises a recess which is situated substantially centrally between the wall and the fitting profile. With doors that open inwards, the door profile preferably comprises a recess which is located on the fitting profile, on the side opposite to the wall profile. According to an embodiment, the sealing profile is made of an elastic material, suitable for sealingly and enclosingly receiving a door panel in the door profile. The thickness of the door profile is variable depending on the thickness of the door to be mounted.

[0031] According to an embodiment, the door profile according to the present invention is suitable for receiving doors with a thickness between 40 and 50 mm. Preferably, the doors have a thickness of 40 and/or 44 mm.

[0032] According to an embodiment, the two upright ribs of the substantially U-shaped channel are each provided with a protrusion extending in the longitudinal direction. The protrusion makes it possible to arrange one or more additional door fitting elements in the door profile, this merely by quickly and easily snapping in said door fitting element behind the protrusion. Said door fitting element preferably comprises for this purpose one or more clips which are complementary to the protrusion of the door profile. A possible door fitting element comprises a covering element, which covering element is suitable for closing and/or covering the U-shaped channel. To this end, such a covering element is preferably U-shaped, comprising two upright ribs and a connecting rib, wherein the upright ribs can be arranged in the U-shaped channel of the door profile, the connecting rib facing the outside of the door profile. This creates a simple and attractive

covering and/or closing of the U-shaped channel of the door profile. Preferably, the upright ribs of the covering element each comprise a clip, which clips extend in the longitudinal direction and are complementary to the protrusion of the door profile.

[0033] In a more concrete case, said covering element is suitable for covering the open space of the U-shaped channel, between two hinges arranged therein, whereby an attractive, and preferably seamless, seal of the U-shaped channel is obtained, between the different hinges. Said protrusion is therefore particularly advantageous for the minimalist, to invisible, incorporation of door fittings in a door profile, wherein open spaces between door fittings included in the profile are aesthetically sealed.

[0034] According to a further or other embodiment, the clamping element comprises a clamping screw, which extends transversely through the receiving body, and is perpendicularly coupled to the plane of the clamping plate. The clamping screw allows the clamping plate of the clamping element, which is located in the door profile during installation, to be easily manipulated from the opposing plane, which is located outside the door profile. In other words, the hinge can easily be clamped in the door profile by means of one or more manipulations at the level of the opposing plane, which plane can be easily reached during installation. Moreover, the aforementioned manipulations are extremely simple in themselves, since merely a screwing movement must be performed.

[0035] Preferably, the clamping plate is rotatable relative to the adapter via the clamping screw, through an angle which is comprised between 60° and 120°. Regular door fittings are usually mounted by means of screws or bolts in a door profile, wherein a large number of screw movements and/or revolutions of the screw or bolt is necessary in order to obtain a firm attachment. Various tools, such as electric screwdrivers, plugs, etc., are often required. The self-clamping adapter according to the present invention, however, requires only one rotating movement comprised between 60° and 120° in order to achieve a firm attachment. No aids are required here, since the clamping plate is tightened directly in the door profile. This installation method is considerably faster than commonly known installation methods and makes it possible to fix the relevant door fittings in advance in the adapter, so that only the installation of the adapter in the door profile must take place on site.

[0036] More preferably, the clamping element is rotatable through an angle of 90°. The clamping element is herein rotatable between a first position, substantially parallel to the longitudinal direction of the door profile, and a second position, substantially perpendicular to the longitudinal direction of the door profile. The displacement from the first to the second position clamps the clamping plate in the door profile and ensures the fixed installation of the adapter in the door profile. Installing a self-clamping adapter according to the present invention

is therefore considerably quick, and moreover simple and unambiguous to carry out, independent of the door fittings to be fitted.

[0037] According to an embodiment, the clamping plate is substantially quadrangular, preferably substantially rectangular, wherein at least two, preferably two, opposite corners of the clamping plate are rounded. Rounded corners simplify the clamping of the clamping plate in the door profile. A lower resistance is hereby experienced when manipulating the clamping element, and when clamping the hinge in the door profile, without adversely affecting the rigidity of the installation. This further increases the efficiency of the installation process.

[0038] A second aspect of the present invention relates to a self-clamping hinge, comprising a first receiving body, suitable for coupling the hinge in said door; and a second receiving body, suitable for coupling the hinge in said door profile, comprising a plane located on the door profile and an opposing plane. The self-clamping hinge comprises a hinged connection which hingedly connects the first receiving body and the second receiving body with each other; wherein the second receiving body comprises at least one clamping element, suitable for clamping the second receiving body in the door profile. The clamping element herein comprises a clamping plate, which clamping plate is preferably substantially rectangular, with dimensions X and Y - wherein X is greater than Y - and is positioned at the level of the plane located on the door profile, and wherein the clamping plate is rotatable parallel to this plane.

[0039] The hinge with said clamping element with said clamping plate has the advantage that the hinge can be mounted in a door profile in a self-clamping manner. The term 'self-clamping' in the context of the present invention can be interpreted as being easy to mount, without the need for technical preparation of hinge, nor door profile.

[0040] Normally, attaching a hinge in a door profile requires a certain preparation, such as drilling and/or milling holes in the door profile and/or in the wall in which the door profile is mounted, in order to be able to attach the hinge by means of screws, bolts or other coupling means. In this context, door profiles are often cut to size in advance. Various preparations, such as pre-drilling and/or milling of holes in the door profile, are also carried out beforehand, which allows for a smooth installation on site. However, such an approach requires that each individual situation be measured in advance and that both the door profile and the hinge are adjusted to the individual situation. This makes the production of both door profile and hinge rather complicated and complex, since different measurement data are taken into account for each individual situation. Every door profile that is produced is, as it were, unique. Not only does this require a thorough, accurate, and therefore time-intensive preparation; this also implies that adjustments or modifications on the spot are out of the question.

[0041] The self-clamping hinge according to the present invention makes it possible to mount the hinge

in the door profile by means of the clamping element with said clamping plate. The hinge, as it were, clamps itself in a suitable slot or recess in the door profile. This self-clamping fixation of the hinge in the door profile requires no preparation whatsoever. Specifically, there is no need to pre-drill holes in the door profile for fixing the hinge and it can be decided on the spot where the hinge is mounted in the door profile. This allows a greatly simplified production of the door profile and the hinge, i.e. not every door profile is produced uniquely, resulting in large time savings. Moreover, such self-clamping fixation has the advantage that it is possible to respond to environmental factors or unexpected circumstances in an instant and that the number of necessary measurements in advance is considerably reduced. An additional advantage is that adjustments can still be made even after installation, since the position of the hinge can easily be changed. However, despite this great modularity and adaptability, there is no increase in the dimensions of the hinge, on the contrary, the fixing method by means of the clamping element mentioned is extremely compact, in contrast to screws or bolts which often extend deep into the door profile or wall. As a result, the present self-clamping hinge is extremely suitable for a minimalist, to invisible, arrangement.

[0042] Preferably, the clamping element of the self-clamping hinge comprises a clamping screw, which extends transversely through the second receiving body, from the plane located on the door profile to the opposing plane, and which is perpendicularly coupled to the plane of the clamping plate. The clamping screw allows the clamping plate of the clamping element, which is located in the door profile during installation, to be easily manipulated from the opposing plane, which is located outside the door profile. In other words, the hinge can easily be clamped in the door profile by means of one or more manipulations at the level of the opposing plane, which plane can be easily reached during installation. Moreover, the aforementioned manipulations are extremely simple in themselves, since merely a screwing movement must be performed.

[0043] According to an embodiment of the self-clamping hinge, the clamping element is rotatable around the clamping screw, through an angle comprised between 60° and 120°. Regular hinges are usually mounted by means of screws or bolts in a door profile, wherein a large number of screw movements and/or revolutions of the screw or bolt is necessary in order to obtain a firm attachment. Various tools, such as electric screwdrivers, plugs, etc., are often required. The self-clamping hinge according to the present invention, however, requires only one rotating movement comprised between 60° and 120° in order to achieve a firm attachment. No aids are required here, since the clamping plate is tightened directly in the door profile. This installation method is considerably faster than commonly known installation methods.

[0044] Preferably, the clamping element is rotatable

through an angle of 90°. The clamping element is herein rotatable between a first position, substantially parallel to the longitudinal direction of the door profile, and a second position, substantially perpendicular to the longitudinal direction of the door profile. The displacement from the first to the second position clamps the clamping plate in the door profile and ensures the fixed installation of the hinge in the door profile. Installing a self-clamping hinge according to the present invention is therefore considerably quick and, moreover, simple and unambiguous to carry out.

[0045] According to a further or other embodiment, the clamping plate comprises at least two rounded corners. Rounded corners simplify the clamping of the clamping plate in the door profile. A lower resistance is hereby experienced when manipulating the clamping element, and when clamping the hinge in the door profile, without adversely affecting the rigidity of the installation. This further increases the efficiency of the installation process.

[0046] According to an embodiment, the hinge comprises two clamping elements, which increases the clamping strength of the hinge in the door profile. As a result, the hinge can carry a larger mass, or therefore a heavier and/or larger door, than when only one clamping element is present.

[0047] According to an embodiment, the hinged connection of the self-clamping hinge comprises a first hinge arm and a second hinge arm. The first hinge arm and the second hinge arm are hingedly connected to each other by means of a main hinge pin and are arranged relative to the first and the second receiving body in such a way that they are hingable between an open position of the hinge and a closed position of the hinge. In said open position, the hinge arms extend substantially outside the receiving bodies, and in the closed position, the hinge arms extend substantially completely within the receiving bodies. When the hinge is moved between its open position and its closed position, the hinge arms move in such a way that they only partially leave or enter the respective receiving bodies via one side of the receiving body. The specific structure and movement of the hinge allows this hinge to be mounted invisibly in a door profile, wherein a door in its closed condition fully connects to the surrounding door profile and the hinge is completely embedded in the space comprised by the door profile and the door. In this way, the hinge allows the doorway to be given an attractive and minimalist appearance.

[0048] Preferably, the first hinge arm is hingedly coupled to the first receiving body at a first end by means of a first fixing hinge pin; and the second hinge arm is hingedly coupled to the second receiving body at a first end via a second fixing hinge pin. Herein, the first hinge arm is guided at a second end by means of a guide pin into at least one guide slot of the second receiving body; and the second hinge arm is coupled at a second end to the first receiving body by means of a third fixing hinge pin. The second hinge arm comprises two hinge part arms between the main hinge pin and the third fixing

hinge pin, which part arms are hingedly connected to each other between the main hinge pin and the third fixing hinge pin by means of an intermediate hinge pin. The hinge therefore comprises a total of 6 pins. By providing a 6-pin hinge, an invisible hinge can be made more compact than already known invisible hinges. The 6-pin self-clamping hinge according to the present invention, wherein when the hinge is moved between its open position and its closed position, the hinge arms partially leave or enter the respective receiving bodies only via one side of the receiving body, allows said receiving bodies to be carried out more compactly, with a more compact hinge and a more compact door profile as a result.

[0049] To further increase the compactness of the self-clamping hinge, the guide slot can be made straight, oblique, curved or S-shaped, depending on the desired distance between the main hinge pin and the receiving bodies. With an oblique position of the guide slot, a minimum distance between the main hinge pin and the receiving bodies is obtained. As a result, the first hinge arm can be shortened, and the guide slot can also be made shorter. By making the guide slot shorter and obliquely arranged, the build-in depth of the second receiving body in the door profile and/or the wall can be considerably shortened.

[0050] According to an embodiment, the second receiving body comprises a fixed part, a guiding movable part, comprising the guide slot, and a hinged movable part, comprising the second fixing hinge pin, wherein the hinged movable part is hingedly coupled to the guiding movable part by means of an adjusting hinge pin. The said elements, furthermore also adjustment options, allow the position of a door relative to a door profile or wall not only to be adjusted accurately initially, but also when after some time different elements, such as a wall, a floor, a door profile, etc., move relative to each other as a result of expansion, shrinkage and/or wear due to use, to adjust this position. Preferably, said guiding slot of the second receiving body is in this case provided in the guiding movable part.

[0051] Preferably, the hinged movable part is hingedly movable relative to the guiding movable part by means of an adjusting screw. According to an embodiment, such an adjusting screw is capable of displacing the hingedly movable part, said hingedly movable part comprising an adjusting slot, and wherein the adjusting screw comprises a dish-shaped widening, which dish-shaped widening engages in said adjusting slot. The position of the dish-shaped widening in a direction perpendicular to the opposing plane of the second receiving body is herein adjustable with the aid of the adjusting screw, whereby when adjusting the position of the dish-shaped widening relative to the fixed part, the hinged movable part is hingedly moved relative to the fixed part. By dish-shaped widening' is meant, in the context of the present invention, a widening that is built up concentrically around the longitudinal axis of the adjusting screw and which becomes narrower with increasing distance from this axis. By

means of the above-mentioned adjusting means, an advantageous hinged displacement becomes possible for accurate adjustment of the hinge relative to the door profile. In order to obtain a completely invisible arrangement of the hinge between the door profile and the door, these accurate adjustment possibilities of the hinge are particularly advantageous.

[0052] According to a further or other embodiment, the guiding movable part is slidably movable with respect to the fixed part by means of one or more adjusting screws. Such a self-clamping hinge allows precise adjustment of the hinge relative to the door profile, in the longitudinal direction of the door profile.

[0053] The self-clamping hinge according to previous embodiments possibly comprises a third hinge arm, which at a first end is hingedly attached to a first receiving body with the aid of a fourth fixing hinge pin, and at a second end is guided into at least one guide slot of the second receiving body with the aid of a guide pin, which third hinge arm is hingedly coupled to the first hinge arm and the second hinge arm by means of the main hinge pin. The second hinge arm is herein arranged between the first and the third hinge arm. A hinge with a third hinge arm has the advantage that a larger and/or heavier door can be supported by the hinge and that any bending of the hinge in the open position is minimised.

[0054] A third aspect of the present invention relates to a self-clamping adapter suitable for interconnecting door fittings with a door profile, comprising a receiving body, which receiving body comprises one or more connecting points for coupling said door fittings to the receiving body, and wherein the receiving body comprises at least one clamping element suitable for clamping the receiving body in the door profile. The clamping element herein comprises a clamping plate, which clamping plate is preferably substantially rectangular, with dimensions X and Y wherein X is greater than Y, which clamping plate is positioned at the level of the plane situated on the door profile, and wherein the clamping plate is rotatable parallel to this plane. The term 'door fittings' in the context of the present invention means any part that may need to be mounted in a door profile or door. Examples of door fittings are hinges, locks, sliders and bolts.

[0055] In an alternative embodiment, the self-clamping adapter comprises a receiving body, which receiving body comprises one or more connecting points for coupling said door fittings to the receiving body, and wherein the receiving body comprises at least one clamping element suitable for clamping the receiving body in the door profile. The clamping element herein comprises a clamping plate with a width profile and a length profile, which are different, and which clamping plate is rotatably attached with respect to the receiving body about an axis substantially perpendicular to the plane of the clamping plate. By offering a difference in length profile with respect to width profile, the adapter allows clamping in a profile as described in the invention. In practice, this will amount to the length profile having a larger maximum length di-

mension than the width profile has a maximum width dimension, but alternatively embodiments are also possible where this is not the case, and the width profile is adapted to form a 'key' for lock positions in a profile allowing passage, wherein the length profile does not allow the passage. Of course, this has the disadvantage that clamping is only possible at the aforementioned lock positions.

[0056] The adapter with said clamping element with said clamping plate has the advantage that the adapter, and therefore any suitable door fittings, can be mounted in a door profile in a self-clamping manner. While installing door fittings normally requires one or more operations such as drilling and/or milling holes in the door profile and/or in the wall in which the door profile is installed, as well as fixing of these door fittings with screws, bolts or other coupling means, this is no longer a necessity if the present adapter is used. The self-clamping according to the present invention allows the door fittings to be mounted directly in the adapter, without taking into account the intended location relative to the door profile. After all, the adapter can be mounted on site in the door profile by means of the clamping element with said clamping plate. The adapter and the door fitting included therein, as it were, clamp themselves into a suitable slot or recess in the door profile. This self-clamping fixation of the adapter in the door profile requires no preparation, nor any pre-measurement. This allows a greatly simplified production of the door profile and the door fittings, i.e. not every door profile is produced uniquely, resulting in large time savings. Moreover, such self-clamping fixation has the advantage that it is possible to respond to environmental factors or unexpected circumstances in an instant and that the number of necessary measurements in advance is considerably reduced. An additional advantage is that adjustments can still be made even after installation, since the position of the adapter and the door fittings incorporated therein can be easily changed. The present self-clamping adapter is extremely suitable for a minimalist to invisible installation of door fittings in a door profile.

[0057] Preferably, the clamping element comprises a clamping screw, which extends transversely through the receiving body, and is perpendicularly coupled to the plane of the clamping plate. The clamping screw allows easy manipulation of the clamping element during installation.

[0058] According to a further or other embodiment, the clamping element is rotatable over the clamping screw, through an angle comprised between 60° and 120°. As a result, only one rotating movement is required, which movement guarantees the correct clamping of the adapter in a door profile.

[0059] Preferably, the clamping element is rotatable through an angle of 90°. The clamping element is herein rotatable between a first position, substantially parallel to the longitudinal direction of the door profile, and a second position, substantially perpendicular to the longitudinal direction of the door profile. The displacement from

the first to the second position clamps the clamping plate in the door profile and ensures the fixed installation of the adapter in the door profile. Installing a self-clamping adapter according to the present invention is therefore considerably quick, and moreover simple and unambiguous to carry out, independent of the door fittings to be fitted.

[0060] According to an embodiment, the clamping plate is substantially quadrangular, preferably substantially rectangular, wherein at least two, preferably two, opposite corners of the clamping plate are rounded. Rounded corners reduce the resistance when clamping, which increases the efficiency of the installation process.

[0061] According to an embodiment, the adapter comprises two clamping elements, which increases the clamping strength of the adapter in the door profile. As a result, door fittings with a larger mass can be supported than if only one clamping element were present.

[0062] A fourth aspect of the present invention relates to a door profile as described in previous embodiments, without adapter or hinge. The door profile is suitable for clamping door fittings provided with one or more clamping elements as described in previous embodiments, but can also be used without using the parts present which provide clamping possibilities.

[0063] In what follows, the invention is described by way of non-limiting figures illustrating the invention, and which are not intended to and should not be interpreted as limiting the scope of the invention.

DETAILED DESCRIPTION OF THE DRAWINGS

[0064] The self-clamping hinge **20** shown in **Fig. 1** comprises a first receiving body **201** and a second receiving body **202**, which are suitable for incorporating the hinge in a door and a door profile, respectively. Both receiving bodies **201**, **202** are hingedly connected to each other by means of the hinged connection **200**. The second receiving body **202** comprises clamping elements **214**, **215**, the clamping screws of which are visible. The clamping elements **214**, **215** make it possible to attach the second receiving body **202** to a door profile in a self-clamping manner and extend transversely through the second receiving body **202**. The clamping elements **214**, **215** are herein rotatable through an angle of 90°.

[0065] The hinged connection **200** of the hinge **20** shown comprises a first hinge arm **203** and a second hinge arm **205**, wherein the first hinge arm **203** and the second hinge arm **205** are hingedly connected to each other by means of a main hinge pin **207**, as shown in **Fig. 2**. The main hinge pin **207** forms the central axis, also called the axis of rotation, around which the entire hinge **20** moves. Said hinge arms **203**, **205** are arranged with respect to the first **201** and the second receiving body **202** such that they are hingable between an open position of the hinge **20**, wherein the hinge arms **203**, **205** extend substantially outside the receiving bodies **201**, **202**, and a closed position of the hinge **20**, wherein the hinge arms

203, 205 extend substantially completely within the receiving bodies **201, 202**. The hinge arms **203, 205** move only inside and outside of the receiving bodies **201, 202** via one side of the receiving bodies **201, 202**, which are the frontally shown sides in **Fig. 1**, when the hinge **20** is displaced between its open position and its closed position.

[0066] The hinge shown in **Figures 1, 2a and 2b** comprises a third hinged arm **222**, which at a first end **222a** is hingedly attached to the first receiving body **201** with the aid of a fourth fixing hinge pin **223**, and at a second end **222b** is guided into guide slot **209** of the second receiving body **202** with the aid of a guide pin **224**. The third hinge arm **222** is hingedly coupled to the first hinge arm **203** and the second hinge arm **205** by means of the main hinge pin **207**, and the second hinge arm **205** is herein arranged between the first **203** and the third hinge arm **222**.

[0067] **Fig. 2a** shows how, at a first end **203a**, the first hinge arm **203** is hingedly coupled to the first receiving body **201** by means of a first fixing hinge pin **204**. The second hinge arm **205**, equivalent to the first hinge arm **203**, is hingedly coupled to the second receiving body **202** at a first end **205a** by means of a second fixing hinge pin **206**. The first hinge arm **203** is herein guided at a second end **203b** by means of a guide pin **208** into a guide slot **209** of the second receiving body **202**. The second hinge arm **205** is coupled at a second end **205b**, by means of a third fixing hinge pin **210** to the first receiving body **201**. The second hinge arm **205** comprises between the main hinge pin **207** and the third fixing hinge pin **210** two hinge part arms **211, 212**, which part arms are hingedly connected to each other between the main hinge pin **207** and the third fixing hinge pin **210** by means of an intermediate hinge pin **213**.

[0068] The second receiving body **202** comprises a fixed part **216**, a guiding movable part **217**, which guiding movable part **217** comprises the guide slot **209**, and a hinged movable part **218**, which hingedly movable **217** part comprises the second fixing hinge pin **206**. The hinged movable part is hingedly coupled to the guiding movable part **217** by means of an adjusting hinge pin **219**. The hinged movable part **218** is hingedly movable with respect to the guiding movable part **217** by means of an adjusting screw **220**, as shown in **Fig. 2b**. The guiding movable part **217** is slidably movable relative to the fixed part **216** by means of two adjusting screws **221**, shown in **Fig. 1**.

[0069] **Fig. 3a and 3b** represent an adapter **30** according to a preferred embodiment of the present invention. The self-clamping adapter **30** comprises a receiving body **301** with connecting points **302, 303** for coupling door fittings to the receiving body **301**. The adapter serves as a coupling piece between said door fittings and the door profile in which the door fittings are mounted. The adapter is fixed in the door profile by means of one or more clamping elements **304, 305**, each of which comprises a clamping plate **306, 307**, which clamping plate is substantially

rectangular and is situated on the opposing plane, i.e. the plane which is directed towards the door profile. In **Fig. 3b**, the shape of the clamping plates **306, 307** is shown clearer, with representation of the rounded corners. The clamping elements **304, 305** comprise a clamping screw which extends transversely through the receiving body **301**, from the plane located on the door profile to the opposing plane, and is perpendicularly coupled to the plane of the clamping plate **306, 307**. The clamping element **304, 305** is herein rotatable around the clamping screw, through an angle of 90°.

[0070] **Figure 4** shows a cross-section, perpendicular to the longitudinal direction, of a door profile **10** according to a preferred embodiment of the present invention. The door profile **10** shown is particularly suitable for incorporating door fittings for doors that swing outwards, i.e. doors which open away from the wall profile **101**. The construction of the door profile **10** allows the incorporation of door fittings, wherein a door can be arranged so that it is completely flat within the door profile when closed. In this way, the door is substantially invisibly contained in the door profile on its opening side, i.e. away from the wall profile **101**. The wall profile **101** comprises various fixing means **103** which are suitable for fixing the door profile **10** to and/or in a wall. Wall finishing, such as plastering, takes place at the level of the finishing means **111**. In practice, the door profile **10** on its fixing means **103** is preferably fully contained in the wall structure, in order to obtain a concealed arrangement of the door profile **10**. The fitting profile **102** comprises a U-shaped channel **104** suitable for receiving door fittings. The door fittings are herein contained between two upright ribs **105a, 105b** and a connecting rib **106** of this U-shaped channel **104**. On the upright ribs **105a, 105b** there are two clamping ribs **107a, 107b** facing each other, which clamping ribs **107a, 107b** are oriented parallel to the connecting rib **106**. A flat slot **108** is defined between the clamping ribs **107a, 107b** and the connecting rib **106** into which the door fitting can be clamped. The door profile **10** is further provided with a recess **109** suitable for receiving a sealing profile. The sealing profile is preferably made of an elastic material and guarantees a tight seal between the door profile and the surface of the door received therein. The thickness of the sealing profile can be selected according to the dimensions of the door. **Fig. 5a and 5b** show more clearly how door fittings, in this case an adapter according to the present invention, can be incorporated in the door profile. A fixed attachment of door fittings in the door profile is achieved by the fixed clamping of the clamping plates **306, 307** in the flat slot **108** of the door profile **10**.

[0071] **Figure 6** shows a cross-section, perpendicular to the longitudinal direction, of a door profile **10** according to a preferred embodiment of the present invention. The door profile **10** shown is particularly suitable for receiving door fittings for doors that open inwards, i.e. doors which open towards the wall profile **101**. The construction of the door profile **10** allows the incorporation of door fittings,

wherein a door can be arranged so that it is completely flat within the door profile when closed. In this way, the door is substantially invisibly contained in the door profile on its closing side, i.e. away from the wall profile **101**. The wall profile **101** comprises, equivalent to the door profile **10**, suitable for doors that swing outwards, fixing means **103** which are suitable for attaching the door profile **10** to and/or in a wall. In practice, the door profile **10** on its fixing means **103** is preferably fully contained in the wall structure, in order to obtain a concealed arrangement of the door profile **10**. Wall finishing, such as plastering, takes place at the level of the finishing means **111**. Equivalent to the door profile **10**, suitable for doors that swing outwards, the fitting profile **102** comprises a U-shaped channel **104** suitable for receiving door fittings. The receiving of the door fitting also takes place between two upright ribs **105a**, **105b** and a connecting rib **106** of the U-shaped channel **104**. Clamping the clamping plates **306**, **307** of the door fitting is also possible in the flat slot **108** defined by the clamping ribs **107a**, **107b**, as shown in **Fig. 7a en 7b**. The door profile **10** is further provided with a recess **109** suitable for receiving a sealing profile. This recess **109** is situated on the outside of the fitting profile **102**. This position permits the tight seal between the door profile **10** and the surface of the door included therein, with the door opening towards the wall profile **101**. The thickness of the sealing profile can be selected according to the dimensions of the door. **Fig. 7a and 7b** show more clearly how door fittings, in this case an adapter according to the present invention, can be incorporated in the door profile. A fixed attachment of door fittings in the door profile is achieved by the fixed clamping of the clamping plates **306**, **307** in the flat slot **108** of the door profile **10**.

[0072] **Fig. 8** shows a cross-section, perpendicular to the longitudinal direction, of a door profile **10** according to a preferred embodiment of the present invention. Said preferred embodiment in particular shows a door profile **10** with two clamping ribs **107a**, **107b** positioned at different heights on the upright ribs **105a**, **105b** relative to the connecting rib **106** (or different depths with respect to the opening of the U-shaped channel **104**). The difference in depth can allow a better force-moment distribution, certainly if, depending on this, the deeper situated clamping rib is made thicker or thinner and/or longer or shorter relative to the higher situated clamping rib.

In such an embodiment, as well as in others, a self-clamping adapter (or hinge) can be provided with one or more clamping plates, which clamping plates have a width profile so that they can be led along the two clamping ribs deeper into the U-shaped channel. Note that in most embodiments this will amount to a maximum width dimension that is smaller than the 'horizontal' distance between the two clamping ribs, the horizontal distance being that in the plane perpendicular to the height or depth of the U-shaped channel. In addition, the clamping plate has a length profile that is dimensioned to anchor itself behind/underneath the two clamping ribs, which in most

embodiments amounts to a maximum length dimension that is greater than said horizontal distance between the two clamping ribs. By inserting the clamping plate beyond the clamping ribs in a first position where the width profile is extended between the opposing ribs of the channel, and then rotating to a second position such that the length profile extends between the opposing ribs after it extends beyond both clamping ribs, return by this route is impossible unless the clamping plate is rotated further or back to the first position. In this case the clamping plate has a non-constant thickness in some embodiments, which ensures that the clamping plate fills the areas below the clamping ribs as completely as possible along the height direction.

[0073] **Fig. 9** shows a cross-section, perpendicular to the longitudinal direction, of a door profile **10** according to a preferred embodiment of the present invention. Said preferred embodiment in particular shows a door profile with a single clamping rib **107a** on one upright rib **105a**. Under said clamping rib a slot is provided between clamping rib and connecting rib **106**.

A self-clamping adapter or hinge again comprises one or more clamping plates with a width profile such that it can be passed into the U-shaped channel beyond the clamping rib, in other words with a maximum width dimension smaller than the shortest distance between the clamping rib and the opposing rib (being the horizontal distance as discussed in the previous example). The clamping plates have a length profile that is dimensioned to be anchored behind/under the clamping rib, in most embodiments amounting to a maximum length dimension that is greater than said shortest distance between the clamping rib and the opposing rib. Note that in certain further embodiments, the slot between clamping rib and the connecting rib can span a substantial portion of the width of the U-shaped channel, since only one clamping rib is provided. Moreover, in such an application, it is also not crucial that the clamping plate be symmetrical in the longitudinal direction.

[0074] Finally, it should be noted that in no embodiment is symmetry required in terms of shape or dimensions of the ribs (or clamping plate), although this is preferably, as regards rigidity, typically the case.

[0075] In order to achieve an aesthetic incorporation of door fittings in door profile **10**, the open spaces between different door fittings can be sealed with a covering element. From **Fig. 4 to 7b** it is clear that the two upright ribs **105a**, **105b** of the U-shaped channel **104** of both profiles **10** are each provided with a longitudinally extending protrusion **110a**, **110b**, suitable for simple snapping-in of this covering element.

[0076] List of components indicated in **Figures 1 to 9**:

Door profile

[0077]

10 door profile

101	wall profile
102	fitting profile
103	attachment means
104	U-shaped channel
105a,b	upright ribs
106	connecting rib
107a,b	clamping ribs
108	flat slot
109	recess
110a,b	protrusions
111	finishing means

Self-clamping hinge

[0078]

20	self-clamping hinge
200	hinged connection
201	first receiving body
202	second receiving body
203	first hinge arm
203a	first end of first hinge arm
203b	second end of first hinge arm
204	first fixing hinge pin
205	second hinge arm
205a	first end of second hinge arm
205b	second end of second hinge arm
206	second fixing hinge pin
207	main hinge pin
208	guide pin
209	guide slot
210	third fixing hinge pin
211	hinge part arm
212	hinge part arm
213	intermediate hinge pin
214	clamping element
215	clamping element
216	fixed part
217	guiding movable part
218	hinged movable part
219	adjusting hinge pin
220	adjusting screw
221	adjusting screw
222	third hinge arm
222a	first end of third hinge arm
222b	second end of third hinge arm
223	fixing hinge pin
224	guide pin
225	clamping plate
226	clamping plate

Self-clamping adapter

[0079]

30	self-clamping adapter
301	receiving body
302	connection point

303	connection point
304	clamping element
305	clamping element
306	clamping plate
307	clamping plate

Claims

1. Door profile (10) comprising a wall profile (101) and a fitting profile (102), wherein this wall profile comprises one or more fixing means (103) for fixing the door profile in a door opening, and wherein the fitting profile comprises a substantially U-shaped channel (104) which U-shaped channel extends in the longitudinal direction of the door profile, and which is suitable for receiving door fittings, which substantially U-shaped channel comprises two upright ribs (105a, 105b) and a connecting rib (106), wherein the substantially U-shaped channel comprises at least one clamping rib (107a, 107b) on one of the upright ribs, preferably at least one clamping rib on both upright ribs; the door profile further comprising at least one self-clamping adapter (30) suitable for interconnecting door fittings and the fitting profile, the adapter comprising a receiving body (301) wherein the receiving body comprises at least one clamping element (304, 305) suitable for clamping the receiving body in the fitting profile, **characterised in that** the clamping element comprises a clamping plate (306, 307), which clamping plate has a width profile and a length profile in the plane of the clamping plate, which width profile is dimensioned to fit between the clamping rib and the opposing upright rib and/or between the two opposing clamping ribs, and which length profile is dimensioned not to fit between the clamping rib and the opposing upright rib and/or between the two opposing clamping ribs, the clamping plate being rotatable relative to the adapter about an axis which intersects, preferably perpendicularly, the plane defined by the length and width profile; wherein a substantially flat slot (108) is defined between said at least one clamping rib and the connecting rib suitable for fixedly clamping said clamping plate.
2. Door profile according to claim 1, wherein the clamping plate (306, 307) has a maximum dimension X in the length profile, and has a maximum dimension Y in the width profile, wherein X is greater than Y, and wherein the dimension Y is smaller than the shortest distance between the clamping rib (107a, 107b) and the opposing upright rib (105a, 105b) and/or the shortest distance between the two opposing clamping ribs, and wherein the dimension X is greater than said shortest distance between the clamping rib and the opposing upright rib and/or the shortest distance between the two opposing clamping ribs.

3. Door profile according to claim 1 or 2, wherein the U-shaped channel (104) comprises two mutually facing clamping ribs (107a, 107b), which clamping ribs are oriented parallel to the connecting rib (106) and are each preferably coupled perpendicularly to one of the upright ribs, the substantially flat slot (108) being defined between said clamping ribs and the connecting rib. 5
4. Door profile according to any of the preceding claims 1-3, wherein the one or more clamping ribs (107a, 107b) extend substantially over the entire length of the U-shaped channel (104). 10
5. Door profile according to any of the preceding claims 1-4, **characterised in that** the substantially flat slot (108) has a height-width ratio comprised between 1:5 and 1:15. 15
6. Door profile according to any of the preceding claims 1-5, **characterised in that** the door profile comprises a recess (109) suitable for receiving a sealing profile. 20
7. Door profile according to any of the preceding claims 2-6, **characterised in that** the two upright ribs (105a, 105b) of the substantially U-shaped channel (104) are each provided with protrusions (110a, 110b) extending in the longitudinal direction. 25
8. Door profile according to any of the preceding claims 1-7, wherein the clamping element (304, 305) comprises a clamping screw which extends transversely through the receiving body (301) and is perpendicularly coupled on the plane of the clamping plate (306, 307). 30
9. Self-clamping hinge (20), suitable for hingedly connecting a door to a door profile, comprising 35
 - a first receiving body (201) suitable for coupling the hinge in said door; 40
 - a second receiving body (202) suitable for coupling the hinge in said door profile, comprising a plane located on the door profile and an opposing plane; and 45
 - a hinged connection (200) which hingedly connects the first receiving body and the second receiving body; 50

wherein the second receiving body comprises at least one clamping element (214, 215), suitable for clamping the second receiving body in the door profile, **characterised in that** the clamping element comprises a clamping plate (225, 226), which clamping plate is preferably substantially rectangular with dimensions X and Y where X is greater than Y, which clamping plate is positioned at the level of the plane situated on the door profile, and wherein the clamping plate is rotatable parallel to this plane. 55
10. Self-clamping hinge according to claim 9, **characterised in that** the clamping element (214, 215) comprises a clamping screw extending transversely through the second receiving body (202), from the plane located on the door profile to the opposing plane, and is perpendicularly coupled to the plane of the clamping plate (225, 226).
11. Self-clamping hinge according to claim 9 or 10, the hinge connection (200) comprising a first hinge arm (203) and a second hinge arm (205), wherein the first hinge arm and the second hinge arm are hingedly connected to each other by means of a main hinge pin (207) and wherein said hinge arms are arranged with respect to the first (201) and the second receiving body (202) such that they are hingable between
 - an open position of the hinge, in which the hinge arms extend substantially outside the receiving bodies, and
 - a closed position of the hinge, in which the hinge arms extend almost completely within the receiving bodies,**characterised in that** when the hinge is moved between its open position and its closed position, the hinge arms partially leave or enter the respective receiving bodies only via one side of the receiving body.
12. Self-clamping hinge according to claim 11, wherein
 - at a first end (203a), the first hinge arm (203) is hingedly coupled to the first receiving body (201) by means of a first fixing hinge pin (204); and
 - the second hinge arm (205), is hingedly coupled to the second receiving body at a first end (205a) by means of a second fixing hinge pin (206); wherein
 - the first hinge arm is guided at a second end (203b) by means of a guide pin (208) into at least one guide slot (209) of the second receiving body;
 - the second hinge arm is coupled at a second end (205b), by means of a third fixing hinge pin (210) to the first receiving body; and wherein
 - the second hinge arm comprises two hinge part arms (211, 212) between the main hinge pin and the third fixing hinge pin, which part arms are hingedly connected to each other between the main hinge pin and the third fixing hinge pin by means of an intermediate hinge pin (213).
13. Self-clamping hinge according to claim 11 or 12,

wherein the second receiving body (202) comprises a fixed part (216), a guiding movable part (217) comprising the guide slot (209), and a hinged movable part (218) comprising the second fixing hinge pin (206), **characterised in that** the hinged movable part is hingedly coupled to the guiding movable part by means of an adjusting hinge pin (219). 5

14. Self-clamping adapter (30), suitable for interconnecting door fittings with a door profile, comprising a receiving body (301), which receiving body comprises one or more connecting points (302, 303) for coupling said door fittings to the receiving body, and wherein the receiving body comprises at least one clamping element (304, 305), suitable for clamping the second receiving body in the door profile, **characterised in that** the clamping element comprises a clamping plate (306, 307), which clamping plate is preferably substantially rectangular with dimensions X and Y where X is greater than Y, which clamping plate is positioned at the level of the plane situated on the door profile, and wherein the clamping plate is rotatable parallel to this plane. 10 15 20

15. Self-clamping adapter according to claim 14, **characterised in that** the clamping element (304, 305) comprises a clamping screw which extends transversely through the receiving body (301) and is perpendicularly coupled to the plane of the clamping plate (306, 307). 25 30

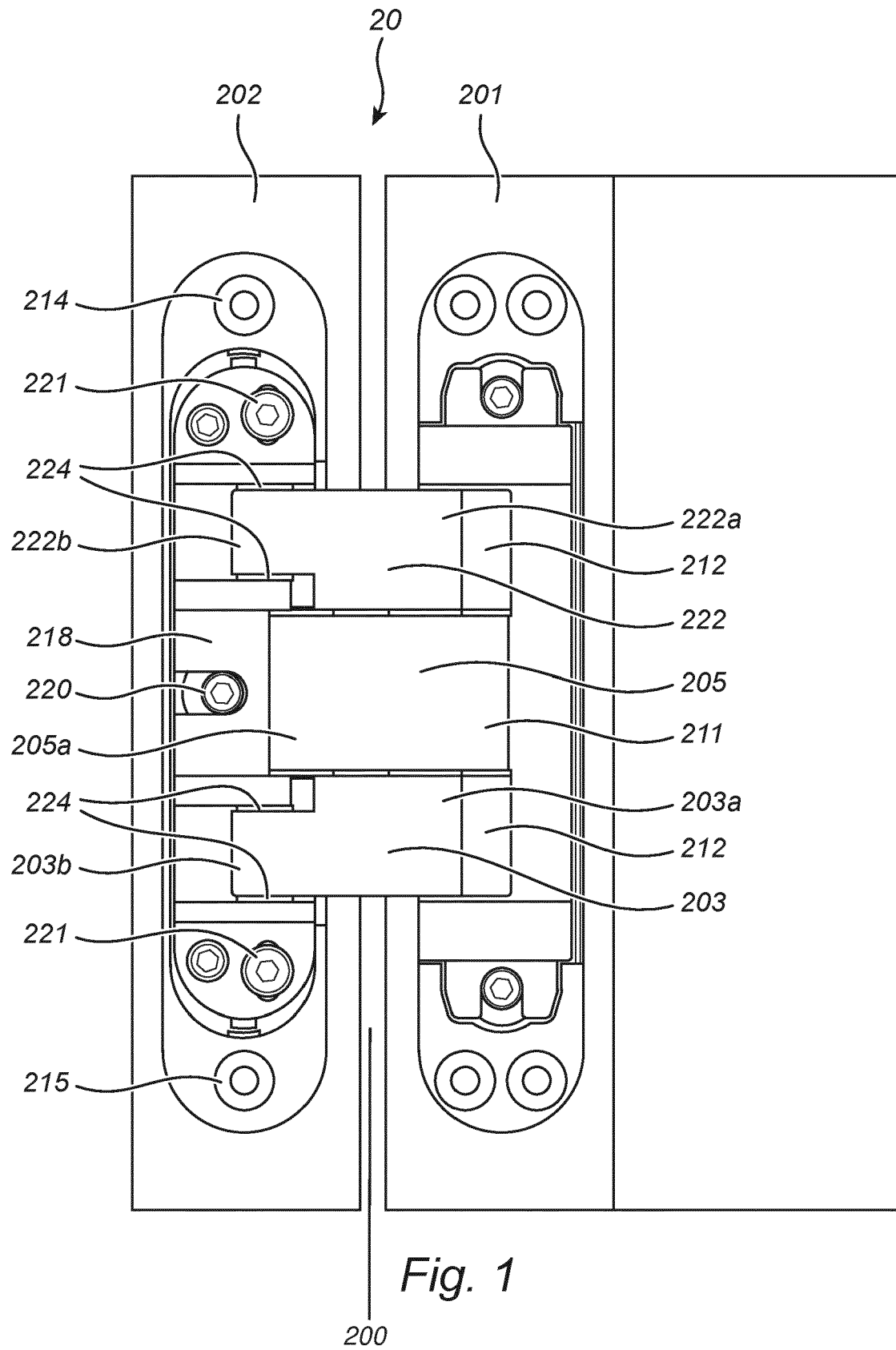
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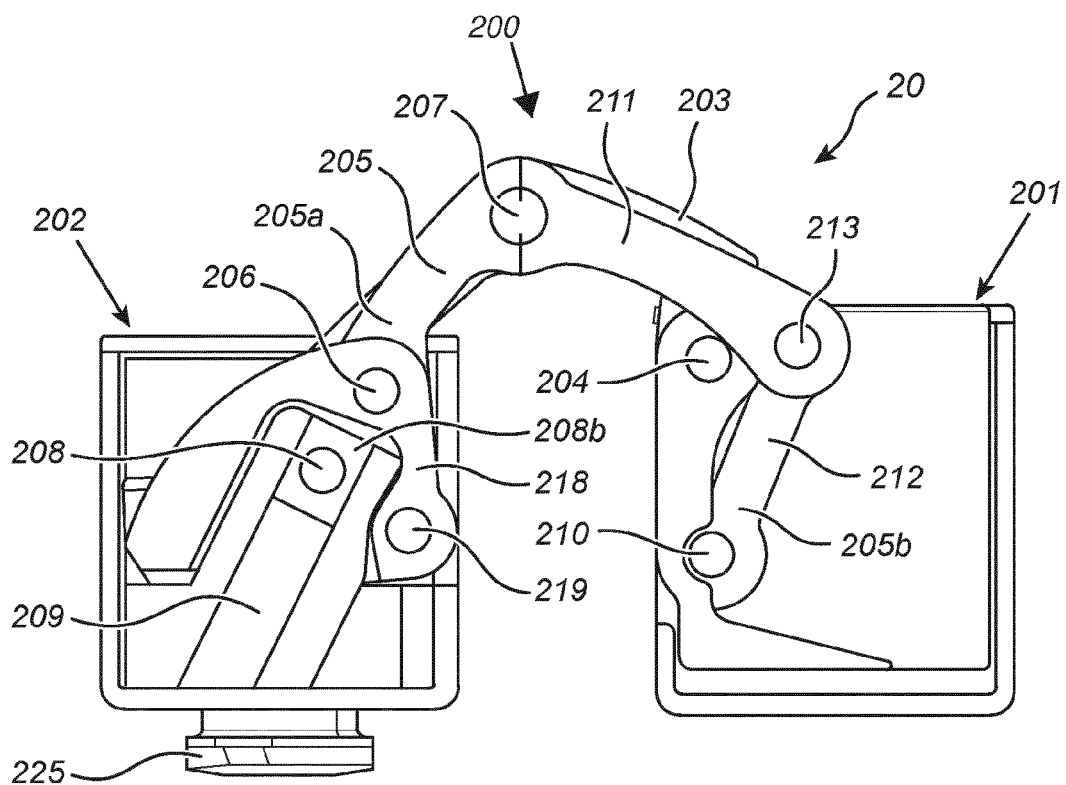


Fig. 2a

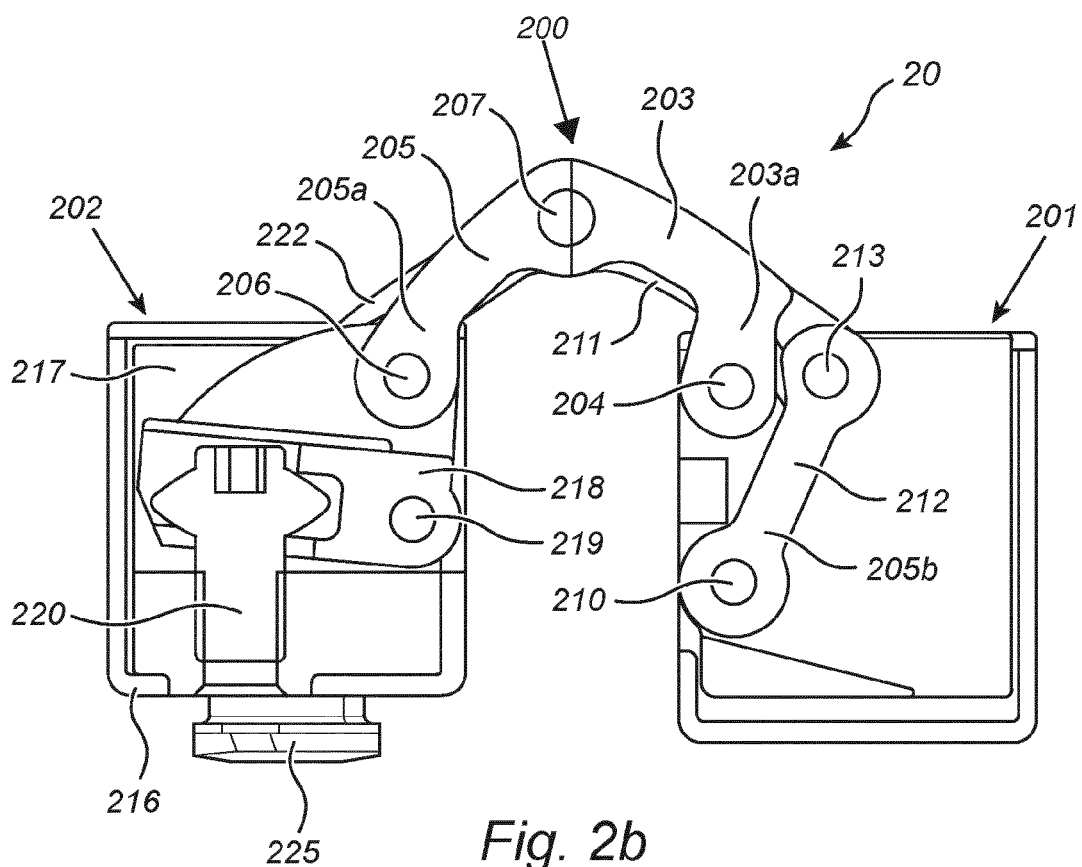


Fig. 2b

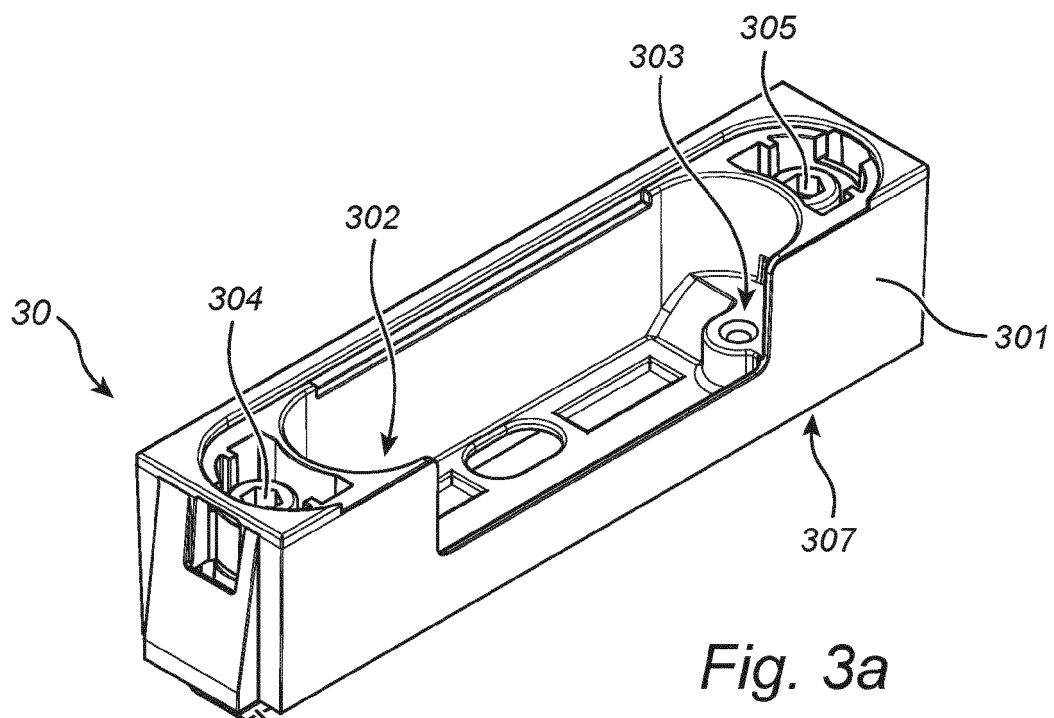


Fig. 3a

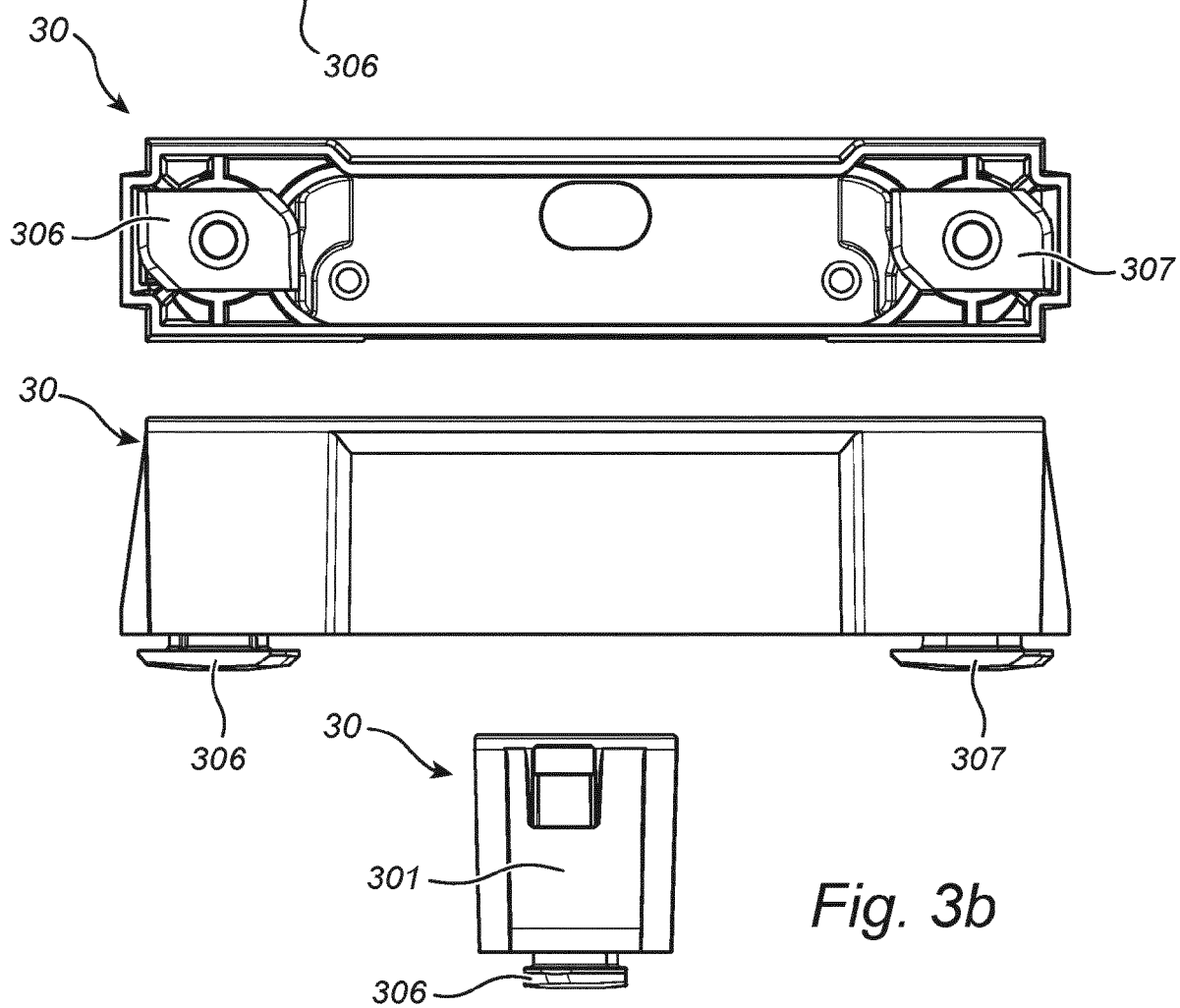


Fig. 3b

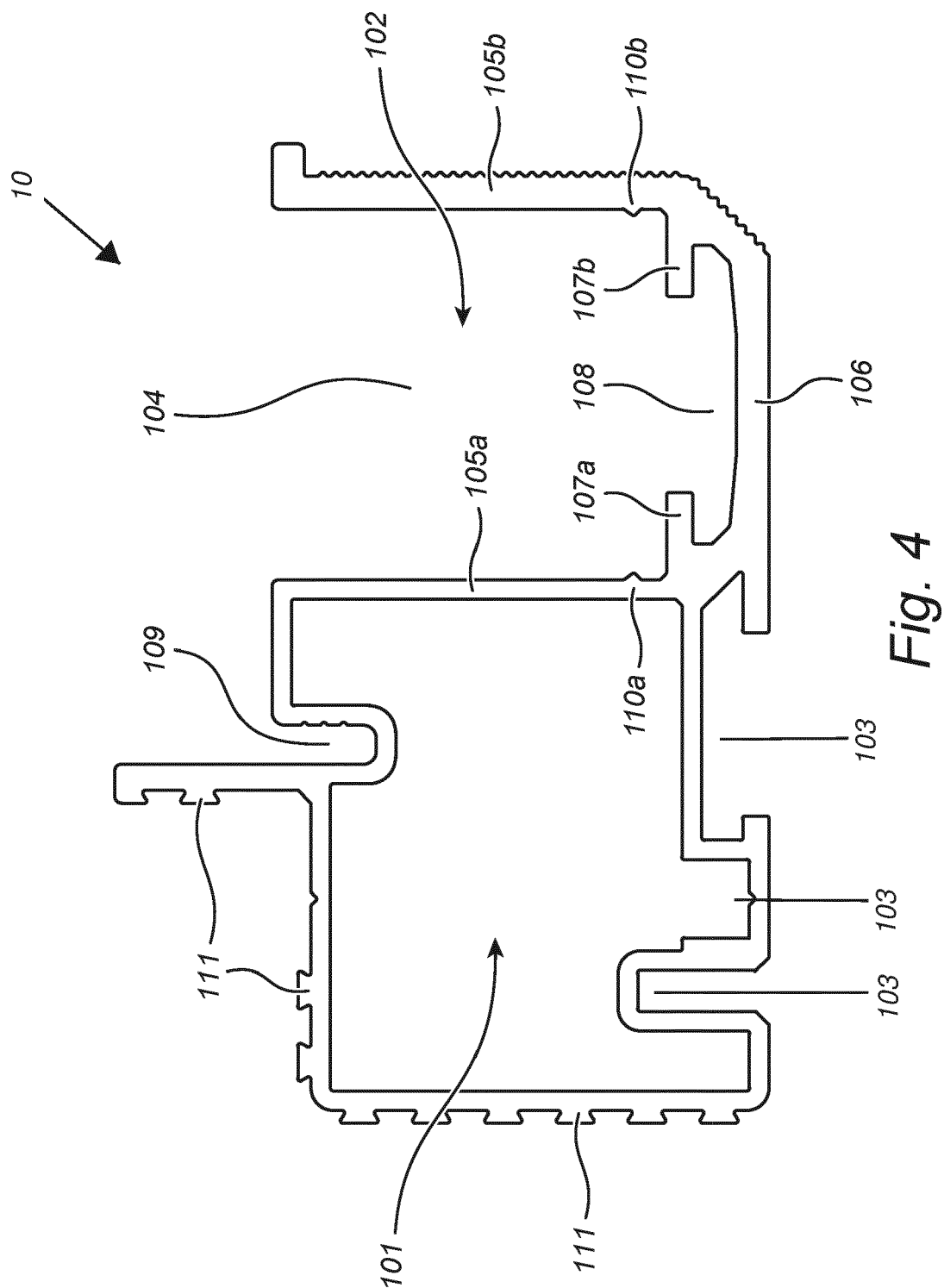
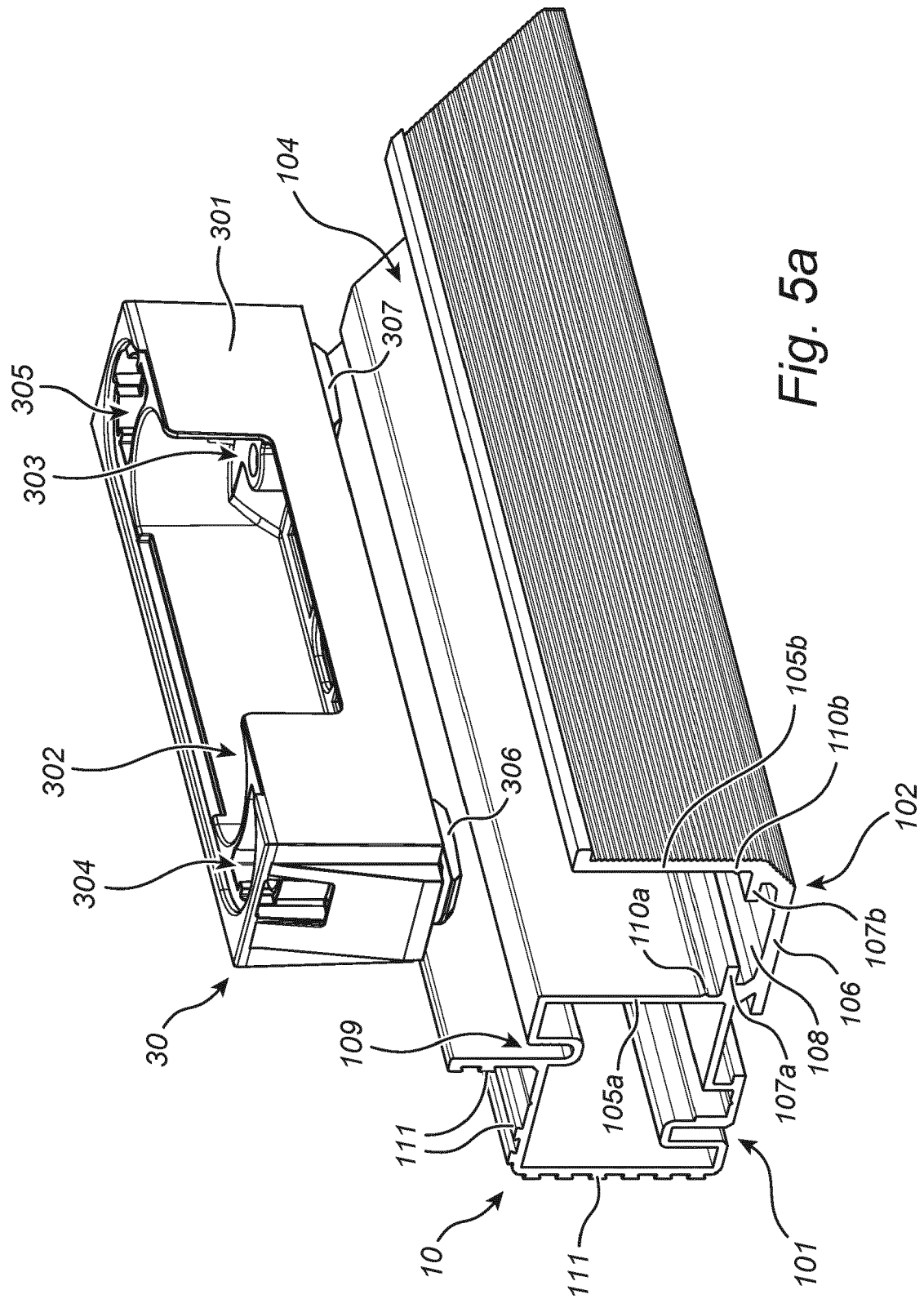
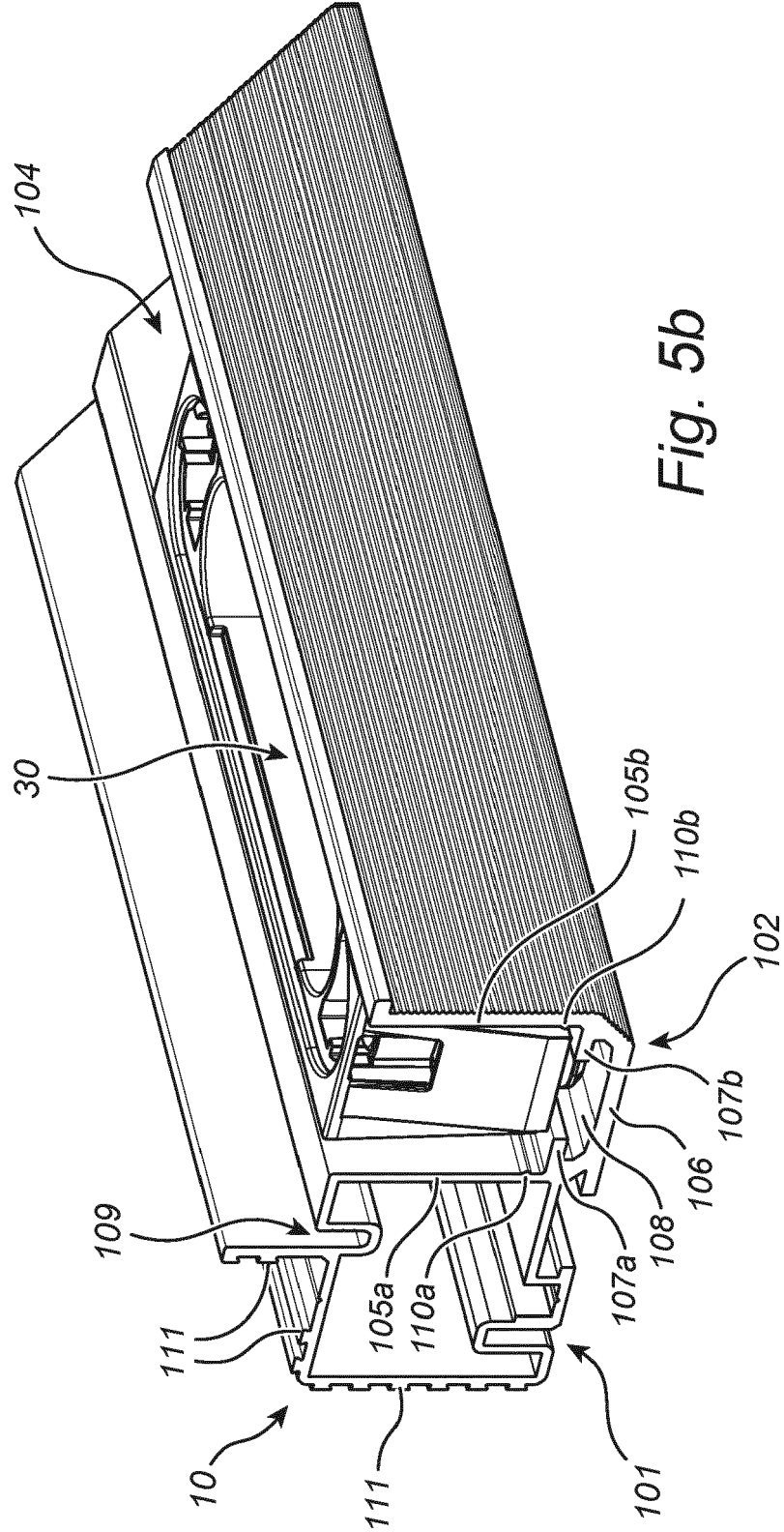


Fig. 4





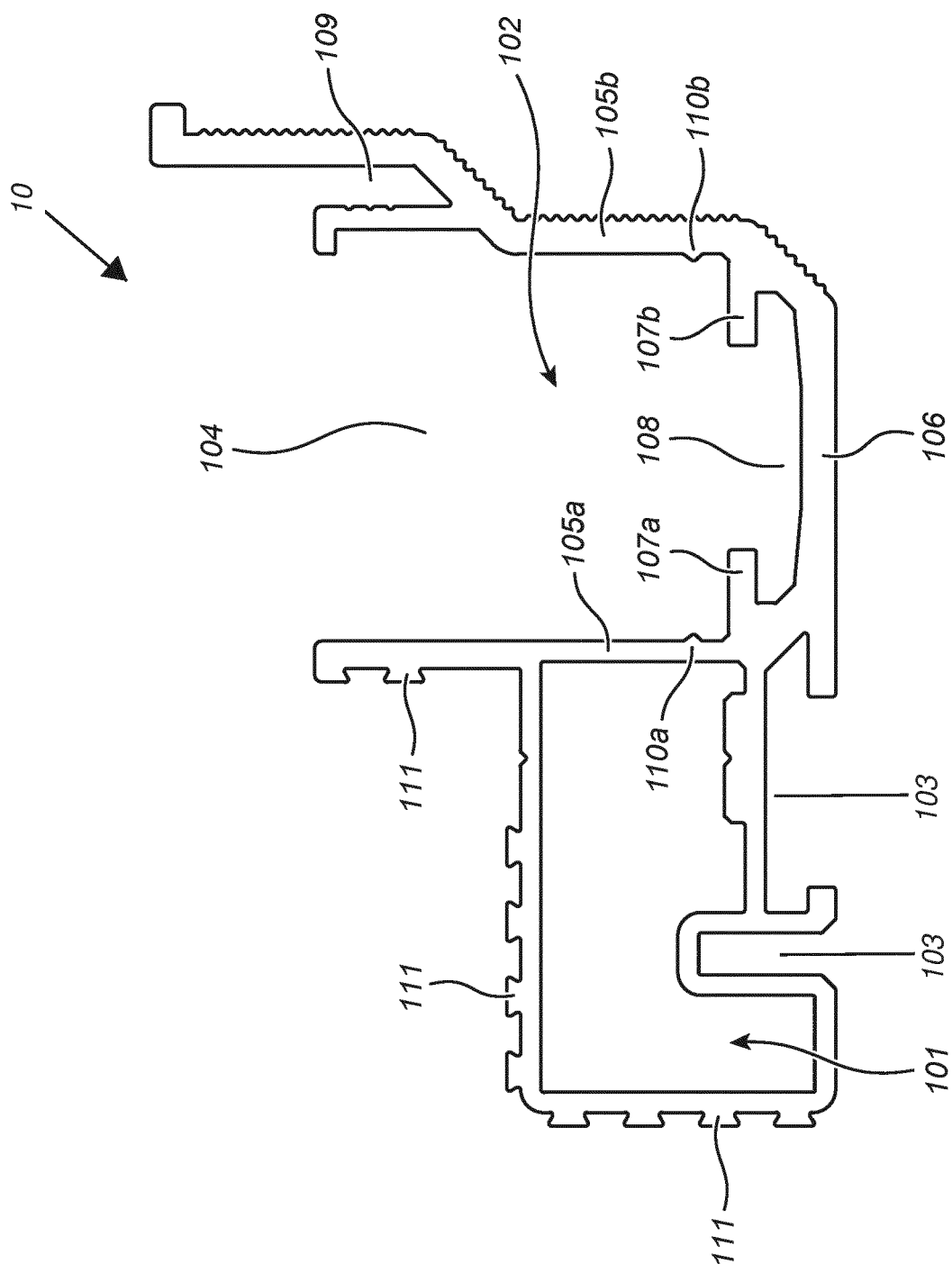


Fig. 6

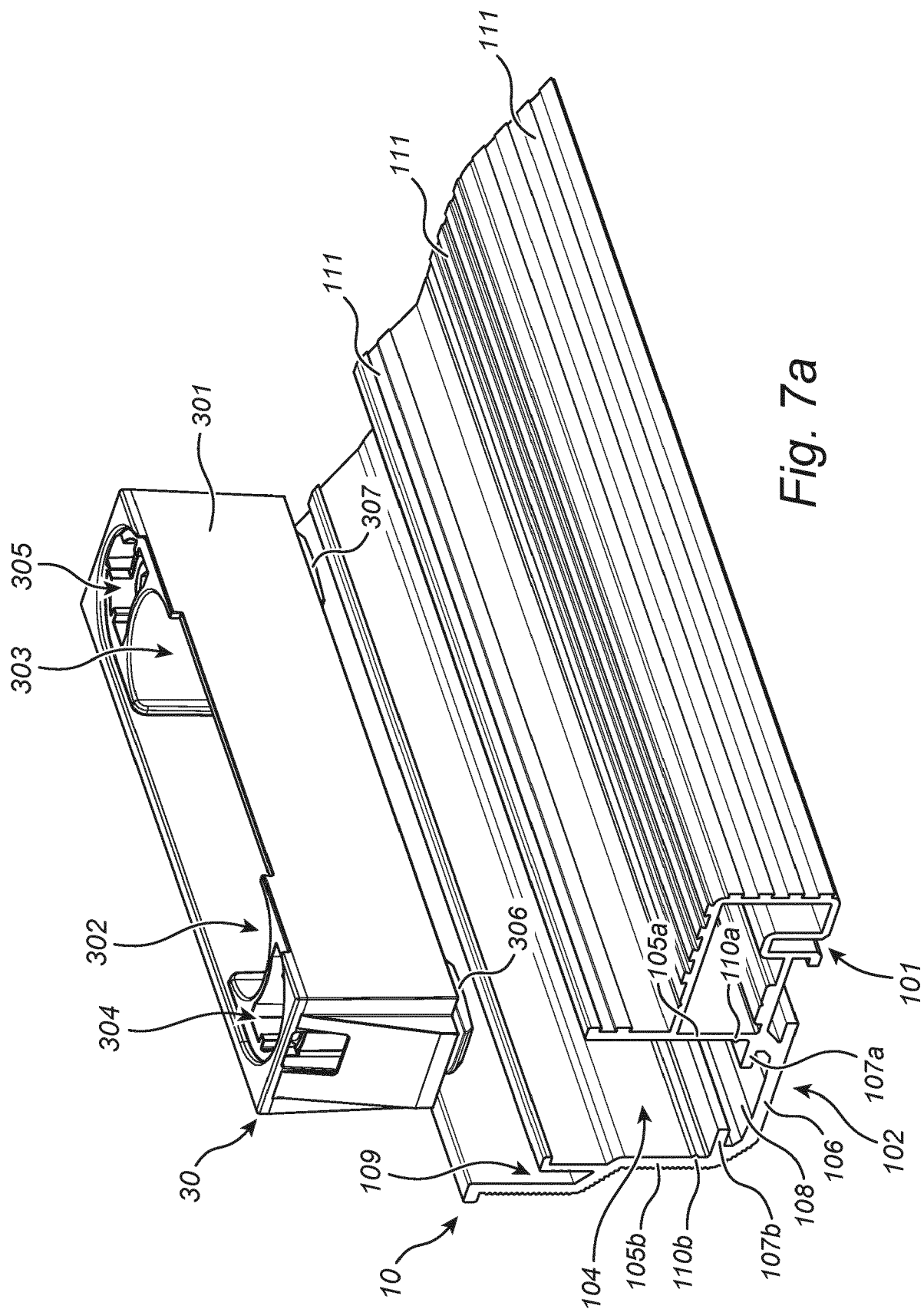


Fig. 7a

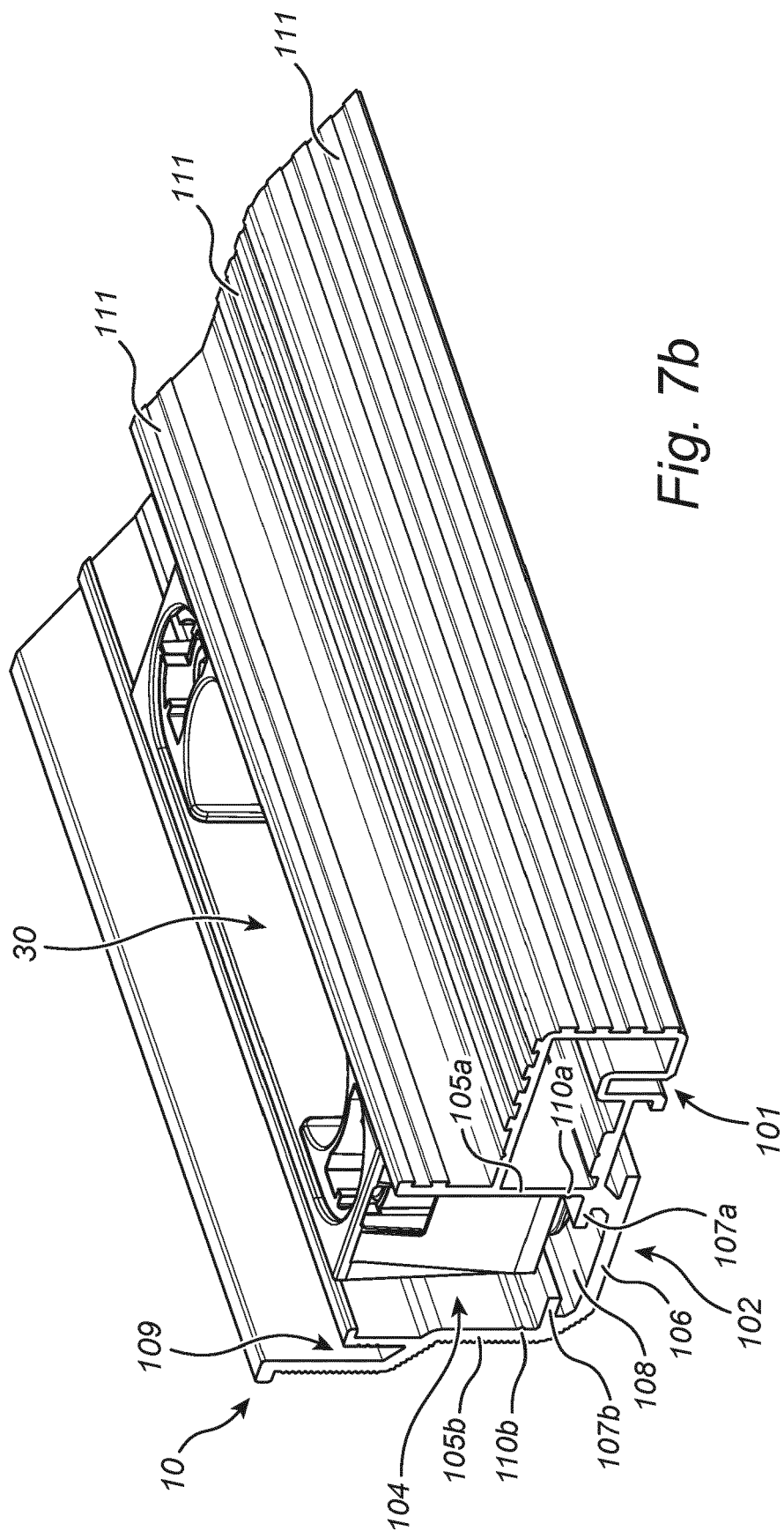


Fig. 7b

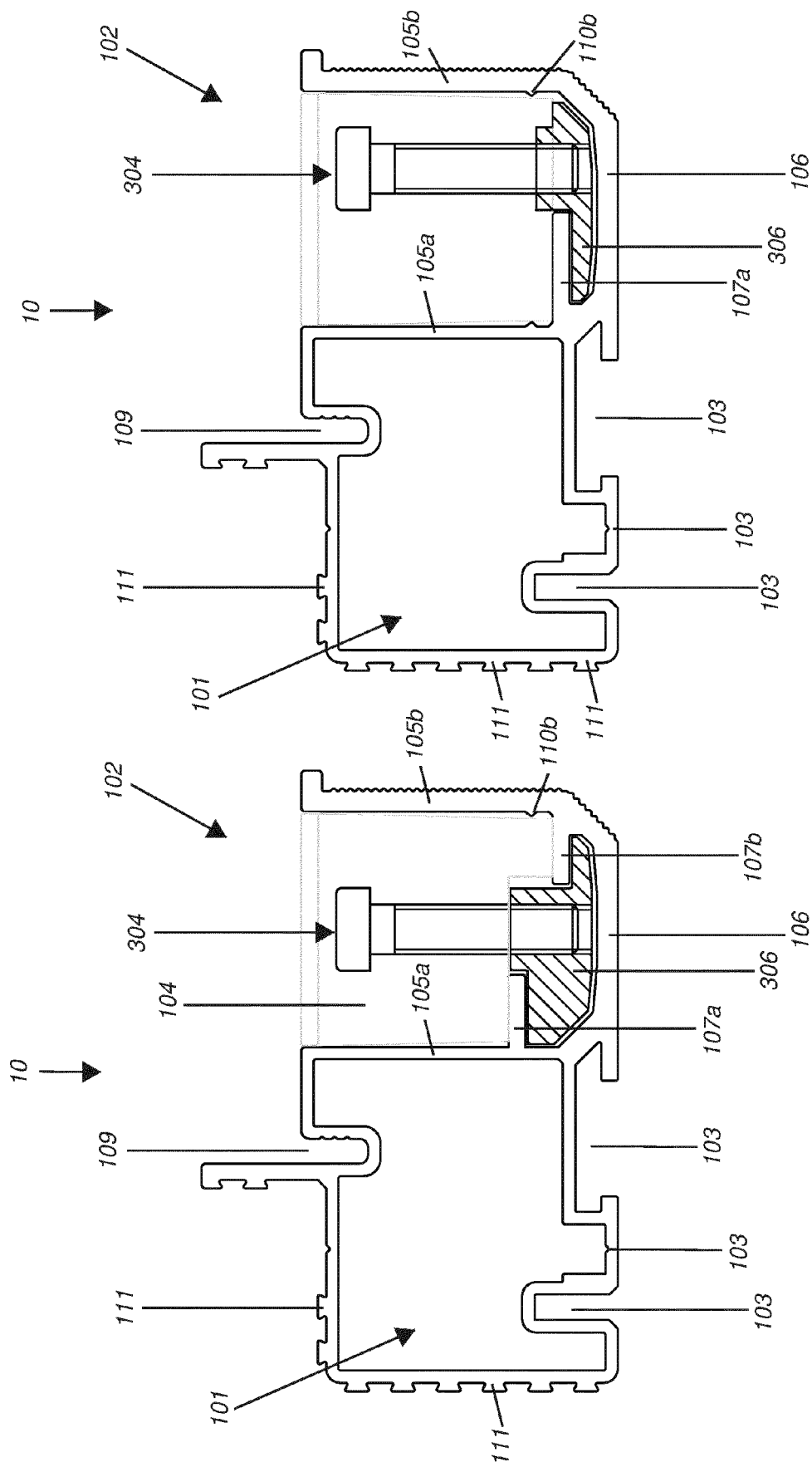


Fig. 9

Fig. 8



EUROPEAN SEARCH REPORT

Application Number
EP 20 15 0159

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 April 2020	Examiner Blancquaert, Katleen
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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REFERENCES CITED IN THE DESCRIPTION

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