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(54) **Handle device for opening and closing the door of the body of trucks, trailers and the like**

Handhabe für das Öffnen und das Schliessen von Lastwagentüren, Anhänger Türen oder ähnliches

Poignée pour l'ouverture et la fermeture d'une porte de camion, d'une porte de remorque ou similaire

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Description

[0001] The present invention relates to a handle device for opening and closing the door of the body of trucks, trailers and the like.

[0002] Devices for opening and closing the doors of trucks are currently made of materials such as steel or cast iron, sized appropriately in order to ensure optimum mechanical strength and maximum durability. Meeting these requirements entails the use of a sufficient amount of raw material, the cost of which affects considerable the total production cost of the items being considered; further, the manufacture of these products entails planning a series of cycles which provide for the production of respective blanks, consequently using various pieces of equipment and machine tools. Substantially, these traditional production technologies currently affect the final cost of the item decisively and to an extent that is no longer acceptable. At the same time, the need is felt to provide opening and closure devices that allow to achieve the maximum assurance of security against any attempted break-in or tampering.

[0003] US 4 134 281 A discloses a cam-type door lock with a recessed handle according to the preamble of claim 1, comprising: a pan-shaped housing 70 stamped from sheet metal and secured to a door portion 26 and an opening 28 formed therein; a handle 60 pivotally housed in the housing 70; and a latch assembly 64 to releasably retain the handle 60 in its nested position in the housing 70; and a key-operated lock cylinder 66 carried by the handle 60 for selectively locking the handle 60 in its nested position. A mounting bracket 110 is secured to the bottom of housing 70 and includes protruding arms 112 to which is pivoted a spring-biased latch member 96 which releasably engages a central slot 92 of the handle, and which latch member 96 includes a padlock hole 150.

[0004] EP 1 531 219 A1 discloses a device for opening and closing truck doors, comprising a handle 3 pivoted to a base 2 rigidly coupled to a door such that handle protrudes from the surface of the door. The base 2 is constituted by a first portion 6 to which the handle 3 is pivoted and a second portion 7, connected to the first portion 6, and accommodating a spring-biased button-operated rocker retention assembly 5 for releasably retaining the handle 3 in the angular position for closing the door. Lateral lugs 19 are rigidly coupled to the second portion 7 opposite the first portion 6 and include slots 20 at which respective lateral slotted openings 32a of the handle 3 are located in its closed position, in order to apply security padlocks.

[0005] The aim of the present invention is to obviate the initially-mentioned drawbacks and meet the mentioned requirements, by providing a handle device for opening and closing the door of the body of trucks, trailers and the like, which although offering excellent characteristics of strength and durability can be manufactured with a smaller amount of raw materials and in a smaller

number of cycles, so as to limit cycle times.

[0006] Within this aim, an object of the present invention is to provide a handle device for opening and closing the door of the body of trucks, trailers and the like that is adapted to provide users with the maximum assurances of safety against attempts to break into, or tamper with, the vehicle.

[0007] Another object of the present invention is to provide a handle device which is simple, relatively easy to provide in practice, safe in use, effective in operation, and has a relatively low cost.

[0008] In accordance with the invention, there is provided a handle device for opening and closing the door of the body of trucks, trailers and the like, as defined in the appended claims.

[0009] Further characteristics and advantages of the invention will become better apparent from the following detailed description of a preferred but not exclusive embodiment of a handle device for opening and closing the door of the body of trucks, trailers and the like, according to the invention, illustrated by way of nonlimiting example in the accompanying drawings, wherein:

Figure 1 is a front view of the handle device according to the invention, with the handle in the closed angular position;

Figure 2 is a partially sectional side elevation view of the device;

Figure 3 is a transverse sectional view of the device, taken along the line III-III of Figure 1;

Figure 4 is a partially sectional perspective view of the device with the grip bar in the closed angular position;

Figure 5 is a front view of the first element of the base of the device according to the invention;

Figure 6 is a front view of the second element of the base of the device;

Figure 7 is a perspective view of said second element;

Figure 8 is a front view of a detail of the grip bar of the device according to the invention;

Figure 9 is a perspective view of said detail of the grip bar.

[0010] In the exemplary embodiments that follow, individual characteristics, given in relation to specific examples, may actually be interchanged with other different characteristics that exist in other exemplary embodiments.

[0011] Moreover, it is noted that anything found to be already known during the patenting process is understood not to be claimed and to be the subject of a disclaimer.

[0012] With reference to the figures, the reference numeral 1 generally designates a handle device for opening and closing the door of the body of trucks, trailers and the like according to the invention.

[0013] The device according to the invention is partic-

ularly of the type adapted to open and close the door of the body of vehicles used to transport goods, for example and preferably vehicles provided with a hermetic body.

[0014] According to the invention, the device comprises advantageously at least one base, generally designated by the reference numeral 2, which is inserted in a respective seat 3 provided in a door 4: the seat 2 is adapted to accommodate at least one grip bar, generally designated by the reference numeral 5, which is articulated, at a first end 6, to at least one rod 7 (Figure 8) for actuating pawl means, not shown for the sake of simplicity in the figures but of a substantially known type, which are adapted to couple the door 4 to the frame of the body. The grip bar 5 forms, at its second end 8, a substantially ergonomic grip wing 9 for the operator.

[0015] The grip bar 5 can be turned conveniently manually between a closed angular position, in which it is accommodated within the base 2 and in which the pawl means are rigidly coupled to the frame of the body so as to close the door 4, and an open angular position, in which the grip bar 5 is substantially spaced from the base 2 and the pawl means are uncoupled from the frame of the body, so as to allow the free opening of the door 4.

[0016] Conveniently, the base 2 comprises a first open box-like element 10 (Figure 5), which has a substantially laminar three-dimensional shape and is locked in the seat 3 by way of fixing means (for example rivets, screws or the like); the base 2 further comprises a second element 11, which also has a substantially laminar three-dimensional shape, is rigidly associated with the first element 10 in the central portion 12, and forms means 13 for the rotary support of a button 14 for manual safety locking and release of the grip bar 5.

[0017] In greater detail, the first element 10 comprises conveniently a bottom 15, four side walls 16, 16a, 17, 17a, which are connected to the bottom 15 and are substantially perpendicular thereto, and a perimetric frame 18, which is connected to the side walls 16, 16a, 17, 17a and is substantially flat and parallel with respect to the bottom 15; the bottom 15 is affected by a respective distribution of first holes 19a, 19b, which are adapted respectively to fix (in the case of the first holes 19a) by means of rivets (or other equivalent elements) the second element 11, and to fix and center the element 11 (in the case of the first holes 19b). The perimetric frame 18 is instead affected by a respective distribution of peripheral holes 20, which are adapted for fixing to the door 4 with the most suitable elements (rivets, screws or others).

[0018] The bottom 15 of the first element 10 forms at least one protrusion 21 (Figure 5), which is adapted to surround the perimeter of the second element 11, so that said second element can be positioned easily and correctly on the first element 10 and be fixed thereto. The protrusion 21 is conveniently adapted to constitute a structural stiffening member for the first element 10.

[0019] The first element 10 is advantageously made of a material such as steel plate or the like (for example other metals); this choice makes its manufacture ex-

tremely convenient, saving materials and resources.

[0020] The second element 11 of the base 2 (Figures 6, 7) is conveniently made of a material such as steel plate and is simple and cheap to manufacture. The second element 11 comprises, as mentioned above, the rotary support means 13 for the button 14 for safety manual release and locking of the grip bar 5; such rotary support means conveniently comprise a first pair of mutually facing eyelets 22a, 22b. In particular, the first eyelets 22a, 22b are formed by portions of the first element 11 which are conveniently blanked along the edges and folded at right angles.

[0021] The second element 11 forms a second pair of eyelets 23a, 23b, on which respective customs seals can be fastened. The eyelets 23a, 23b are obtained from portions of the first element 11 which are conveniently blanked along the edges and folded at right angles.

[0022] The second element 11 comprises a rear eyelet 24 for the engagement of a security padlock (not shown in the figures, but of a conventional type) to be positioned below the safety locking and release button 14: the padlock allows advantageously to prevent, by interference, the actuation of the button 14 and accordingly prevent the rotation of the grip bar 5 in the direction for opening the door 4. This allows to increase the security of the device against any attempts at breaking in or tampering, and the placement of the padlock on the inside prevents it from damaging external parts of the device: moreover, the padlock remains completely recessed within the contour of the device, without protruding parts.

[0023] Further, the second element 11 comprises advantageously a front eyelet 25 for the engagement of a first end of a first spring 26, which is adapted to retain the grip bar in the closed position (Figures 2, 3). The second element 11 forms a distribution of second holes 27 for fixing (for example by means of rivets) to the first element 10, which are provided on respective studs and are arranged substantially at the first holes 19, and a central circular opening 28. The second element 11 forms centrally a sort of ridge 28a, which has a substantially C-shaped geometry and constitutes a stiffening member of the second element 11.

[0024] The grip bar 5 has a substantially laminar three-dimensional shape, so as to form, particularly at the first end 6, a substantially tubular portion 29 for rigid keying along the rod 7: the grip bar 5 is made conveniently of a material such as steel plate. In particular, the tubular portion 29 is obtained advantageously by folding over an end flap of the metal plate.

[0025] The grip bar 5 has the second end 8 which comprises two extensions 30, 31, which are substantially mutually parallel, each having a substantially L-shaped transverse cross-section (Figure 9), the ergonomic grip wing 9 being rigidly coupled thereto and being made for example of synthetic material such as plastics or the like (Figures 2 and 3 in particular). One of the extensions 30 forms a lateral eyelet 32, which is adapted to fix the second tip of the first spring 26 for retaining the grip bar 5 in

the closed angular position of the door 4.

[0026] The grip bar 5 forms a central opening 33, which is substantially circular with parallel bevels and in which a key-operated detent 34 of a substantially traditional type is fixed, allowing to prevent, in its closed configuration, the actuation of the safety locking and release button 14 of the grip bar 5. With the grip bar 5 in the closed angular position, the end of the key-operated detent 34 is accommodated in the central opening 28 of the second element 11.

[0027] The grip bar 5 forms, substantially at the first end 6, a substantially rectangular cutout 35, which forms, along one of the sides, a sort of central tab 36, which is affected by two parallel slots 37, within which the second pair of eyelets 23a, 23b for the application of customs seals are adapted to engage when the grip bar 5 is in the closed angular position.

[0028] The substantially rectangular cutout 35 forms, along one of the sides, a first perforated lateral tab 38, which is substantially perpendicular to the plane of the grip bar 5 and supports rotatably, by way of pivot means, a protective flap 39 for closing at the front the grip bar 5, also preferably made of steel plate.

[0029] The rectangular cutout 35 forms, along another one of the sides, a second lateral tab 40, which is perforated and is substantially flat and parallel with respect to the plane of the grip bar 5 and is intended to engage one of the ends of a second spring 41 for retaining the flap 39 in its closed position (Figure 3). The grip bar 5 further forms conveniently a contoured edge 42, which is comprised between the two extensions 30 and 31.

[0030] The locking and release button 14 comprises a substantially rocker-like body 43, which is provided with a through pivot 44 adapted to engage rotatably, with its opposite ends, in the first pair of eyelets 22a, 22b, a sort of lug 44a, and an end tooth 45, which abuts against the contoured edge 42 of the grip bar 5 so as to retain it in the closed angular position; with the button 14 in the position for locking the grip bar 5, the lug 44a is arranged below the key-operated detent 34 and interferes with it. The rocker-like body 43 is associated with a substantially flat upper surface 46 for manual actuation, which is arranged between the two extensions 30, 31. Advantageously, the center of rotation of the rocker-like body 43 with respect to the first pair of eyelets 23a, 23b is arranged so that when the button 14 is in the position for locking the grip bar 5 any moment applied to the grip bar 5 in the direction for opening it produces, by reaction, a moment on the rocker-like body 43 in the direction for retaining the grip bar 5, thus ensuring maximum closure safety in any operating condition.

[0031] At least one of the two pivot-like tabs 44 is conveniently associated with a respective spiral spring 47, which is adapted to retain elastically the button 14 in the position for locking the grip bar 5 in the closed angular position of the door 4. In greater detail, the device comprises conveniently two mutually opposite spiral springs 47, which are associated respectively with the two pivot-

like tabs 44: this ensures optimum retention of the grip bar 5 even if one of the spiral springs 47 breaks accidentally.

[0032] The grip bar 5 forms conveniently, at the first end 6, a sort of surface camber 48, which is conveniently contoured and sized and is adapted to give strength and rigidity to the grip bar 5; in particular, the surface camber 48 allows to increase the resisting cross-section of the grip bar 5 without increasing weight and increasing the material used, and accordingly the risk of the onset of cracks is reduced. Two longitudinal lateral bevels 49 are provided for this purpose.

[0033] The grip bar 5, in an angular position for closing the door 4, is accommodated completely within the base 2 and does not protrude from it, so as to contain the maximum dimensions of the vehicle.

[0034] It should be noted that the steel plate with which the grip bar 5, the first element 10 and the second element 11 are made is preferably rather thin and appropriately sized so as to minimize the weight and cost of these components without however penalizing thereby the strength characteristics of the grip bar 5. This, moreover, allows to increase the thickness of the door 4 for an equal total thickness of the assembly, giving it greater strength.

[0035] The method of use of the device according to the invention is as follows. When the door 4 is closed, in order to open it, it is necessary, after opening the flap 39, to remove the customs seals engaged in the second pair of eyelets 23a, 23b, remove the security padlock fixed in the rear eyelet 24 and act on the key-operated detent 34. In this manner it is possible to release the button 14 and accordingly turn the grip bar 5 in order to open the door 4.

[0036] It has thus been shown that the invention achieves the intended aim and objects.

[0037] The device according to the invention can be provided advantageously with minimum use of raw materials and further by having a single blank instead of several traditional blanks.

[0038] Further, security against break-ins and tampering is evidently increased thereby.

[0039] The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims.

[0040] The embodiment of the present invention shall be carried out in the most scrupulous compliance with the statutory and regulatory provisions related to the products of the invention or correlated thereto and following any required authorization of the corresponding competent authorities, with particular reference to regulations related to safety, environmental pollution and health.

[0041] In practice, the materials used, as well as the shapes and dimensions, may be any according to requirements without thereby abandoning the scope of the protection of the appended claims.

[0042] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increas-

ing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A handle device for opening and closing the door of the body of trucks, trailers and the like, comprising at least one base (2), which, in use, is inserted in a respective seat (3) provided in the door (4), which is adapted to accommodate at least one grip bar (5) which is articulated, at a first end (6), to at least one rod (7) for actuating pawl means adapted to couple said door (4) to the frame of the body and forms, at the second end (8), at least one substantially ergonomic grip wing (9) for the operator, said grip bar (5) being able to turn manually between at least one closed angular position, in which it is accommodated within said base (2) and in which said pawl means are coupled to the frame of the body, and at least one open angular position, in which said grip bar (5) is substantially spaced from said base (2) and said pawl means are uncoupled from the frame of the body, so as to allow the free opening of the door (4), said base (2) comprising at least one first substantially box-like open element (10), which has a substantially laminar three-dimensional shape and is locked in said seat (3), and at least one second element (11), which has a substantially laminar three-dimensional shape, is associated with said first element (10) and forms rotary support means (13) for a button (14) for manual safety locking and release of said grip bar (5), said grip bar (5) having a substantially laminar three-dimensional shape so as to form, at said first end (6), at least one substantially tubular portion (29) for keying along said rod (7), **characterized in that** said second element (11) comprises at least one rear eyelet (24) for engaging a security padlock arranged, in use, below said security locking and release button (14), adapted to prevent by interference the actuation of said button (14) and accordingly prevent the manual rotation of said grip bar (5), said padlock being able to be arranged so as to not produce external space occupations that protrude from the contour of the device.
2. The handle device according to claim 1, **characterized in that** said first element (10) comprises a bottom (15), four side walls (16, 16a, 17, 17a) connected to said bottom (15) and substantially perpendicular thereto, and a perimetric frame (18) which is connected to said side walls (16, 16a, 17, 17a) and is substantially flat and parallel with respect to said bottom (15), which is affected by a distribution of first holes (19) adapted for fixing said second element (11), said perimetric frame (18) being affected by a distribution of peripheral holes (20) adapted for fixing to the door (4).
3. The handle device according to claims 1 and 2, **characterized in that** said bottom (15) of said first element (10) forms at least one protrusion (21) adapted to surround the perimeter of said second element (11) so as to allow its correct positioning and fixing to said first element (10), said protrusion (21) being adapted to constitute a stiffening member of said first element (10).
4. The handle device according to one or more of the preceding claims, **characterized in that** said first element (10) is made of a material such as steel plate.
5. The handle device according to one or more of the preceding claims, **characterized in that** said rotary support means (13) for said manual safety locking and release button (14) comprise a first pair of eyelets (22a, 22b) formed by said second element (11).
6. The handle device according to one or more of the preceding claims, **characterized in that** said second element (11) forms a second pair of eyelets (23a, 23b) for fastening respective customs seals.
7. The handle device according to one or more of the preceding claims, **characterized in that** said second element (11) comprises at least one front eyelet (25) for the engagement of a first end of a first spring (26) for retaining said grip bar (5) in the closed angular position of the door (4).
8. The handle device according to at least claim 2, **characterized in that** said second element (11) forms a distribution of second holes (27) for fixing to said first element (10), which are arranged at said first holes (19).
9. The device according to one or more of the preceding claims, **characterized in that** said second element (11) is fixed to said first element (10) by means of rivets and/or the like.
10. The handle device according to one or more of the preceding claims, **characterized in that** said second element (11) is made of a material such as steel plate.
11. The handle device according to one or more of the preceding claims, **characterized in that** said grip bar (5) is made of a material such as steel plate.
12. The handle device according to one or more of the preceding claims, **characterized in that** said grip bar (5) has said second end (8) which comprises two

mutually substantially parallel extensions (30, 31), each of which has a substantially L-shaped transverse cross-section, said ergonomic grip wing (9) being rigidly coupled to said extensions.

13. The handle device according to claim 12, **characterized in that** at least one of said extensions (30,31) forms a lateral eyelet (32) which is adapted to fix the second end of said first spring (26) for retaining said grip bar (5) in the closed angular position.
14. The handle device according to one or more of the preceding claims, **characterized in that** said grip bar (5) forms at least one central opening (33) which is substantially circular with parallel bevels and accommodates a respective key-operated detent (34), which is adapted to prevent, in the closed configuration, the actuation of said safety locking and release button (14) of said grip bar (5).
15. The handle device according to one or more of the preceding claims, **characterized in that** said grip bar (5) forms, substantially at said first end (6), a substantially rectangular opening (35), which forms, along one of the sides, a sort of central tab (36), which is affected by two parallel slots (37) within which said second pair of eyelets (23a, 23b) is adapted to engage when said grip bar (5) is in the closed angular position.
16. The handle device according to claim 15, **characterized in that** said substantially rectangular cutout (35) forms, along one of the sides, a first perforated lateral tab (38), which is substantially perpendicular to the plane of said grip bar (5), for supporting rotatably a flap (39) for the front closure of said grip bar (5).
17. The handle device according to claim 16, **characterized in that** said rectangular cutout (35) forms, along one of the sides, a second perforated lateral tab (40), which is substantially flat and parallel with respect to the plane of said grip bar (5) and is adapted to engage one of the ends of a second spring (41) for retaining said flap (39) in the closed position.
18. The handle device according to at least claim 12, **characterized in that** said grip bar (5) forms a contoured edge (42), which is comprised between said two extensions (30, 31) and is adapted for the abutment of an end tooth (45) of said safety locking and release button (14) of said grip bar (5).
19. The handle device according to at least claims 5, 14 and 18, **characterized in that** said locking and release button (14) comprises a substantially cocker-like body (43), which is provided with a through pivot (44), the ends of which are adapted to engage in said first pair of eyelets (22a, 22b), a sort of lug (44a)

and said end tooth (45), said rocker-like body (43) being associated with a substantially flat surface (46) for manual actuation, which is comprised between said extensions (30, 31), said lug (44a) being adapted to engage below said key-operated detent (34) when said button (14) is in the position for locking said grip bar (5).

20. The handle device according to claim 19, **characterized in that** the center of rotation of said rocker-like body (43) with respect to said first pair of eyelets (22a, 22b) is arranged so that when said button (14) is in the position for locking said grip bar (5), any moment applied to said grip bar (5) in the direction for opening it produces, by reaction, a moment on said rocker-like body (43) in the direction for retaining said grip bar (5).
21. The handle device according to claim 19 or 20, **characterized in that** at least one of said two pivot-like tabs (44) is associated with a respective spiral spring (47), which is adapted to retain elastically said button (14) in the position for locking said grip bar (5) in the angular position for closing the door (4).
22. The handle device according to one or more of the claims 19-21, **characterized in that** it comprises two spiral springs (47), which are associated respectively with said pivot-like tabs (44), so as to ensure the retention of the grip bar (5) even of one of said spiral springs (47) breaks.
23. The handle device according to one or more of the preceding claims, **characterized in that** said grip bar (5) forms, at said first end (6), a sort of surface camber (48) which is appropriately sized and is adapted to give strength and rigidity to said grip bar (5).
24. The handle device according to one or more of the preceding claims, **characterized in that** the steel plate with which said grip bar (5), said first element (10) and said second element (11) are made is rather thin and appropriately sized so as to minimize the weight and cost of these components but without thereby penalizing the strength characteristics of said grip bar (5), so as to allow to increase the thickness of the door (4) for an equal total thickness of the assembly, giving it greater strength.

Patentansprüche

1. Handhabevorrichtung zum Öffnen und Schließen der Tür einer Karosserie eines Lastwagens, Aufhängers und dergleichen, aufweisend wenigstens eine Basis (2), welche bei Verwendung in einem jeweiligen Sitz (3) eingesetzt ist, der in der Tür (4) vorge-

sehen ist, welche zum Unterbringen von wenigstens einem Haltebügel (5) geeignet ist, der an einem ersten Ende (6) an wenigstens einer Stange (7) zum Betätigen von Sperrklinkenmitteln angelenkt ist, welche zum Koppeln der Tür (4) mit einem Rahmen der Karosserie geeignet ist, und am zweiten Ende (8) wenigstens einen im Wesentlichen ergonomischen Griff Flügel (9) für den Bediener ausbildet, wobei der Haltebügel (5) zum manuellen Drehen zwischen wenigstens einer geschlossenen Winkelstellung, in der dieser innerhalb der Basis (2) untergebracht und in welcher die Sperrklinkenmittel mit dem Rahmen der Karosserie gekoppelt sind, und wenigstens einer offenen Winkelstellung, in der der Haltebügel (5) im Wesentlichen beabstandet von der Basis (2) ist und die Sperrklinkenmittel vom Rahmen der Karosserie entkoppelt sind, so dass ein ungehindertes Öffnen der Tür (4) möglich ist, wobei die Basis (2) wenigstens ein erstes im Wesentlichen kastenartiges Offenhalteelement (10) aufweist, welches eine im Wesentlichen lamellare dreidimensionale Formgebung aufweist und in dem Sitz (3) verriegelt ist, und wenigstens ein zweites Element (11), das eine im Wesentlichen lamellare dreidimensionale Form aufweist, das mit dem ersten Element (10) verbunden ist und Drehabstützmittel (13) für einen Auslöser (14) zur manuellen Sicherheitsverriegelung und Freigabe des Haltebügels (5) ausbildet, wobei der Haltebügel (5) eine im Wesentlichen lamellare dreidimensionale Form aufweist, um am ersten Ende (6) wenigstens einen im Wesentlichen rohrförmigen Abschnitt (29) zur Verankerung entlang der Stange (7) zu bilden,

dadurch gekennzeichnet, dass das zweite Element (11) wenigstens eine hintere Öse (24) zum Eingreifen eines Vorhängeschlosses aufweist, welches bei Verwendung unterhalb des Sicherheitsverriegelungs- und Freigabeauslösers (14) angeordnet ist, welches durch Interferenz geeignet ist, die Betätigung des Auslösers (14) und dementsprechend die manuelle Drehung des Haltebügels (5) zu verhindern, wobei das Vorhängeschloss in der Form angeordnet ist, um nicht Außenraum-Inanspruchnahmen zu erzeugen, die aus der Kontur der Vorrichtung herausragen.

2. Handhabevorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** das erste Element (10) einen Boden (15), vier Seitenwände (16, 16a, 17, 17a), welche mit dem Boden (15) verbunden und im Wesentlichen rechtwinklig zueinander angeordnet sind, und einen perimetrischen Rahmen (18) aufweisen, welcher mit den Seitenwänden (16, 16a, 17, 17a) verbunden ist und im Wesentlichen flach und parallel in Bezug zu dem Boden (15) ist, welcher durch eine Verteilung von ersten Löchern (19) beeinflusst ist, die zum Befestigen des zweiten Elementes (11) geeignet sind, wobei der perimetrische Rahmen (18)

mit einer Verteilung von peripherischen Bohrungen (20) ausgerüstet ist, die zum Befestigen an der Tür (4) geeignet sind.

3. Handhabevorrichtung nach den Ansprüchen 1 und 2, **dadurch gekennzeichnet, dass** der Boden (15) des ersten Elementes (10) wenigstens einen Vorsprung (21) ausbildet, der zum Umschließen des zweiten Elementes (11) angepasst ist, so dass seine korrekte Positionierung und Befestigung zum ersten Element (10) möglich ist, wobei der Vorsprung (21) angepasst ist, um ein Versteifungselement des ersten Elementes (10) zu bilden.
4. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das erste Element (10) aus einem Material wie einer Stahlplatte ausgebildet ist.
5. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das Drehabstützmittel (13) für den manuellen Sicherheitsverriegelungs- und Freigabeauslöser (14) ein erstes Paar von Ösen (22a, 22b) aufweist, welche vom zweiten Element (11) ausgebildet sind.
6. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das zweite Element (11) ein zweites Paar von Ösen (23a, 23b) zur Befestigung jeweiliger Zollsiegel ausbildet.
7. Handhabevorrichtung gemäß einem oder mehrerer der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das zweite Element (11) wenigstens eine vordere Öse (25) zum Angreifen eines ersten Endes einer ersten Feder (26) zum Sichern des Haltebügels (5) in der geschlossenen Winkelposition der Tür (4) aufweist.
8. Handhabevorrichtung nach wenigstens Anspruch 2, **dadurch gekennzeichnet, dass** das zweite Element (11) eine Verteilung von zweiten Löchern (27) zum Befestigen des ersten Elementes (10) ausbildet, die an den ersten Löchern (19) angeordnet sind.
9. Handhabevorrichtung nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das zweite Element (11) mittels Nieten und/oder dergleichen am ersten Element (10) befestigt ist.
10. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** das zweite Element (11) aus einem Material wie einer Stahlplatte ausgebildet ist.
11. Handhabevorrichtung nach einem oder mehreren

- der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** der Haltebügel (5) aus einem Material wie einer Stahlplatte ausgebildet ist.
12. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** der Haltebügel (5) ein zweites Ende (8) aufweist, welches zwei im Wesentlichen parallel zueinander ausgerichtete Verlängerungen (30, 31) aufweist, wobei jede dieser einen im Wesentlichen L-förmigen Querschnitt aufweist, wobei der ergonomische Griffflügel (9) starr mit den Verlängerungen gekoppelt ist.
13. Handhabevorrichtung nach Anspruch 12, **dadurch gekennzeichnet, dass** wenigstens eine der Verlängerungen (30, 31) eine laterale Öse (32) ausbildet, welche angepasst ist, das zweite Ende der ersten Feder (26) zum Sichern des Haltebügels (5) in der geschlossenen Winkelposition zu befestigen.
14. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** der Haltebügel (5) wenigstens eine zentrale Öffnung (33) ausbildet, welche im Wesentlichen kreisförmig mit parallelen Fasen ist und eine jeweilige schlüsselbetätigte Raste (34) aufnimmt, die angepasst ist, in der geschlossenen Konfiguration die Betätigung des Sicherheitsverriegelungs- und Freigabeauslösers (14) des Haltebügels (5) zu verhindern.
15. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** der Haltebügel (5) im Wesentlichen an seinem ersten Ende (6) eine im Wesentlichen rechteckige Öffnung (35) ausbildet, welche entlang einer ihrer Seiten eine Art zentrale Lasche (36) ausbildet, welche durch zwei parallele Schlitze (37) beeinflusst ist, in die das zweite Paar von Ösen (23a, 23b) angepasst ist einzugreifen, wenn der Haltebügel (5) in seiner geschlossenen Winkelposition ist.
16. Handhabevorrichtung nach Anspruch 15, **dadurch gekennzeichnet, dass** der im Wesentlichen rechteckige Ausschnitt (35) entlang einer der Seiten eine erste perforierte laterale Lasche (38) ausbildet, welche im wesentlichen rechtwinklig zur Ebene des Haltebügels (5) ausgerichtet ist, zum drehbaren Lagern einer Klappe (39) für den vorderen Verschluss des Haltebügels (5).
17. Handhabevorrichtung nach Anspruch 16, **dadurch gekennzeichnet, dass** der rechtwinklige Ausschnitt (35) entlang einer der Seiten eine zweite perforierte laterale Lasche (40) ausbildet, welche im Wesentlichen flach und parallel in Bezug auf die Ebene des Haltebügels (5) ist und angepasst ist, an einem der Enden der zweiten Feder (41) zum Sichern der Klappe (39) in der geschlossenen Position einzugreifen.
18. Handhabevorrichtung nach wenigstens Anspruch 12, **dadurch gekennzeichnet, dass** der Haltebügel (5) eine konturierte Kante (42) ausbildet, welche zwischen den zwei Verlängerungen (30, 31) besteht und zur Anlage eines am Ende befindlichen Zahns (45) des Sicherheitsverriegelungs- und Freigabeauslösers (14) des Haltebügels (5) angepasst ist.
19. Handhabevorrichtung nach wenigstens den Ansprüchen 5, 14 und 18, **dadurch gekennzeichnet, dass** der Verriegelungs- und Freigabeauslöser (14) einen im Wesentlichen wippenartigen Körper (43), welcher mit einem durchgehenden Drehzapfen (44) versehen ist, dessen Enden angepasst sind, in das erste Paar von Ösen (22a, 22b) einzugreifen, einer Art Nase (44a) und den am Ende befindlichen Zahn (45) aufweist, wobei der wippenartige Körper (43) mit einer im Wesentlichen flachen Oberfläche (46) für eine manuelle Betätigung verbunden ist, welche zwischen den Verlängerungen (30, 31) angeordnet ist, wobei die Nase (44a) angepasst ist, unterhalb der schlüsselbetätigten Raste (34) einzugreifen, wenn der Auslöser (14) in einer Position zum Verriegeln des Haltebügels (5) ist.
20. Handhabevorrichtung nach Anspruch 19, **dadurch gekennzeichnet, dass** das Zentrum der Rotation des wippenartigen Körpers (43) in Bezug auf das erste Paar der Ösen (22a, 22b) derart angeordnet ist, dass wenn der Auslöser (14) in einer Position zum Verriegeln des Haltebügels (5) ist, jedes Moment, das auf den Haltebügel (5) in Öffnungsrichtung aufgebracht wird, durch Reaktion, ein Moment auf den wippenartigen Körper (43) in Richtung zum Festhalten des Haltebügels (5) erzeugt.
21. Handhabevorrichtung nach Anspruch 19 oder 20, **dadurch gekennzeichnet, dass** wenigstens eine der zwei gelenkartigen Laschen (44) mit einer jeweiligen Spiralfeder (47) verbunden ist, welche angepasst ist, den Auslöser (14) in der Position zum Verriegeln des Haltebügels (5) in der Winkelposition zum Schließen der Tür (4) elastisch zu halten.
22. Handhabevorrichtung nach einem oder mehreren der Ansprüche 19 - 21, **dadurch gekennzeichnet, dass** diese zwei Spiralfedern (47) aufweist, welche jeweils mit den drehzapfenartigen Vorsprüngen (44) verbunden sind, so dass die Retention des Haltebügels (5) sichergestellt ist, selbst wenn eine der Spiralfedern (47) bricht.
23. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** der Haltebügel (5) an seinem ersten

Ende (6) eine Art Oberflächenüberhöhung (48) ausgebildet, welche entsprechend dimensioniert und angepasst ist, um dem Haltebügel (5) Festigkeit und Steifigkeit zu verleihen.

24. Handhabevorrichtung nach einem oder mehreren der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** die Stahlplatte, aus welcher der Haltebügel (5) das erste Element (10) und das zweite Element (11) ausgebildet sind, ziemlich dünn und entsprechend dimensioniert ist, so dass das Gewicht und die Kosten dieser Komponenten minimiert sind, ohne dabei die Festigkeits-Charakteristiken des Haltebügels (5) zu benachteiligen, so dass eine Erhöhung der Dicke der Tür (4) für eine gleiche Gesamtdicke der Baugruppe ermöglicht wird, um ihr eine größere Festigkeit zu verleihen.

Revendications

1. Dispositif de poignée pour ouvrir et fermer la caisse de camions, remorques et analogues, comportant au moins une embase (2), laquelle, en service, est insérée dans un logement respectif (3) ménagé dans la porte (4), qui est destiné à recevoir au moins une poignée (5) qui, à une première extrémité (6), est articulée avec au moins une tige (7) destinée à actionner des moyens à cliquets servant à appliquer ladite porte (4) sur le châssis de la caisse et forme, à la seconde extrémité (8), au moins une aile de préhension sensiblement ergonomique (9) pour l'utilisateur, ladite poignée (5) pouvant être amenée manuellement à tourner entre au moins une position angulaire fermée, dans laquelle elle est logée dans ladite embase (2) et dans laquelle lesdits moyens à cliquets sont en prise avec le châssis de la caisse, et au moins une position angulaire ouverte, dans laquelle ladite poignée (5) est sensiblement espacée de ladite embase (2), et lesdits moyens formant cliquets ne sont pas en prise avec le châssis de la caisse, de manière à permettre à la porte (4) de s'ouvrir librement, ladite embase (2) comprenant au moins un premier élément ouvert (10) sensiblement analogue à un coffret, doté d'une forme tridimensionnelle sensiblement laminaire et verrouillé dans ledit logement (3), et au moins un deuxième élément (11), doté d'une forme tridimensionnelle sensiblement laminaire et qui est associé audit premier élément (10) et constitue un moyen formant support rotatif (13) pour un bouton (14) servant à un verrouillage et un déverrouillage manuels de sécurité de ladite poignée (5), ladite poignée (5) ayant une forme tridimensionnelle sensiblement laminaire de manière à former, à ladite première extrémité (6), au moins une partie sensiblement tubulaire (29) à caler le long de ladite tige (7), **caractérisé en ce que** ledit deuxième élément (11) comprend au moins un oeillet arrière

(24) pour accrocher un cadenas de sécurité placé, en service, sous ledit bouton de verrouillage et de déverrouillage de sécurité (14), servant à empêcher, par interférence, l'actionnement dudit bouton (14) et donc à empêcher la rotation manuelle de ladite poignée (5), ledit cadenas étant apte à être installé de manière à ne pas produire d'occupations d'espaces extérieurs débordant du profil du dispositif.

- 5
- 10 2. Dispositif de poignée selon la revendication 1, **caractérisé en ce que** ledit premier élément (10) comprend un fond (15), quatre parois latérales (16, 16a, 17, 17a) reliées audit fond (15) et sensiblement perpendiculaires à celui-ci, et un cadre périphérique (18) qui est monté sur lesdites parois latérales (16, 16a, 17, 17a) et est sensiblement plat et parallèle audit fond (15), qui est doté de premiers trous répartis (19) permettant la fixation dudit deuxième élément (11), ledit cadre périphérique (18) étant doté de trous périphériques répartis (20) pour la fixation sur la porte (4).
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- 20
- 25 3. Dispositif de poignée selon les revendications 1 et 2, **caractérisé en ce que** ledit fond (15) dudit premier élément (10) présente au moins une saillie (21) conçue pour entourer le pourtour dudit deuxième élément (11) afin de permettre sa bonne mise en place et sa fixation audit premier élément (10), ladite saillie (21) étant conçue pour constituer un élément de rigidification dudit premier élément (10).
- 30
- 35 4. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ledit premier élément (10) est en matière telle que de la tôle d'acier.
- 40
- 45 5. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ledit moyen de support rotatif (13) pour bouton de verrouillage et de déverrouillage manuels de sécurité (14) comprend une première paire d'oeillets (22a, 22b) présentés par ledit deuxième élément (11).
- 50
- 55 6. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ledit deuxième élément (11) présente une deuxième paire d'oeillets (23a, 23b) pour fixer des scelllements douaniers respectifs.
7. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ledit deuxième élément (11) présente au moins un oeillet avant (25) pour l'accrochage d'une première extrémité d'un premier ressort (26) afin de retenir ladite poignée (5) dans la position angulaire fermée de la porte (4).

8. Dispositif de poignée selon au moins la revendication 2, **caractérisé en ce que** ledit deuxième élément (11) présente des deuxièmes trous répartis (27) de fixation audit premier élément (10), qui sont ménagés au niveau desdits premiers trous (19). 5
9. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ledit deuxième élément (11) est fixé audit premier élément (10) à l'aide de rivets et/ou autres. 10
10. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ledit deuxième élément (11) est en matière telle que de la tôle d'acier. 15
11. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ladite poignée (5) est en matière telle que de la tôle d'acier. 20
12. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ladite poignée (5) a ladite seconde extrémité (8) qui comprend deux prolongements (30, 31) sensiblement parallèles l'un à l'autre, chacun d'eux ayant une section transversale sensiblement en L, ladite aile de préhension ergonomique (9) faisant corps avec lesdits prolongements. 25
13. Dispositif de poignée selon la revendication 12, **caractérisé en ce qu'**au moins un desdits prolongements (30, 31) présente un oeillet latéral (32) destiné à fixer la seconde extrémité dudit premier ressort (26) servant à retenir ladite poignée (5) dans la position angulaire fermée. 30
14. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ladite poignée (5) présente au moins une ouverture centrale (33) sensiblement circulaire avec des biseaux parallèles, qui reçoit un moyen d'arrêt respectif (34) manoeuvré à l'aide d'une clef lequel sert à empêcher, dans la configuration fermée, l'actionnement dudit bouton de verrouillage et de déverrouillage de sécurité (14) de ladite poignée (5). 35
15. Dispositif de poignée selon une ou plusieurs des revendications précédentes, **caractérisé en ce que** ladite poignée (5) présente, sensiblement à ladite première extrémité (6), une ouverture sensiblement rectangulaire (35) qui présente, sur un des côtés, une sorte de languette centrale (36), qui est dotée de deux fentes parallèles (37) dans lesquelles ladite deuxième paire d'oeillets (23a, 23b) est destinée à s'engager quand ladite poignée (5) est dans la position angulaire fermée. 40
16. Dispositif de poignée selon la revendication 15, **caractérisé en ce que** ladite ouverture sensiblement rectangulaire (35) présente, sur un des côtés, une première languette latérale perforée (38), sensiblement perpendiculaire au plan de ladite poignée (5), pour supporter d'une manière rotative un volet (39) pour la fermeture avant de ladite poignée (5). 45
17. Dispositif de poignée selon la revendication 16, **caractérisé en ce que** ladite ouverture rectangulaire (35) présente, sur un des côtés, une seconde languette latérale perforée (40), sensiblement plane et parallèle au plan de ladite poignée (5) et destinée à accrocher l'une des extrémités d'un deuxième ressort (41) pour retenir ledit volet (39) dans la position fermée. 50
18. Dispositif de poignée selon au moins la revendication 12, **caractérisé en ce que** ladite poignée (5) présente un bord profilé (42) compris entre lesdits deux prolongements (30, 31) et destiné à la venue en butée d'une dent d'extrémité (45) dudit bouton de verrouillage et de déverrouillage de sécurité (14) de ladite poignée (5). 55
19. Dispositif de poignée selon au moins les revendications 5, 14 et 18, **caractérisé en ce que** ledit bouton de verrouillage et de déverrouillage (14) comprend un corps (43) sensiblement analogue à un basculeur, pourvu d'un pivot traversant (44) dont les extrémités sont conçues pour s'engager dans ladite première paire d'oeillets (22a, 22b), d'une sorte de languette (44a) et de ladite dent d'extrémité (45), ledit corps (43) analogue à un basculeur étant associé à une surface sensiblement plane (46) pour un actionnement manuel, laquelle est comprise entre lesdits prolongements (30, 31), ladite languette (44a) étant destinée à s'engager sous ledit moyen d'arrêt (34) manoeuvré à l'aide d'une clef quand ledit bouton (14) est dans la position de verrouillage de ladite poignée (5). 60
20. Dispositif de poignée selon au moins la revendication 19, **caractérisé en ce que** le centre de rotation dudit corps (43) analogue à un basculeur par rapport à ladite première paire d'oeillets (22a, 22b) est conçu de façon que, lorsque ledit bouton (14) est dans la position de verrouillage de ladite poignée (5), tout moment appliqué à ladite poignée (5) dans le sens de l'ouverture de celle-ci produise, par réaction, un moment sur ledit corps (43) analogue à un basculeur dans le sens de la retenue de ladite poignée (5). 65
21. Dispositif de poignée selon au moins la revendication 19 ou 20, **caractérisé en ce qu'**au moins une desdites deux pattes (44) analogues à des pivots est associée à un ressort spiral respectif (47), destiné à retenir d'une manière élastique ledit bouton (14) 70

dans la position de verrouillage de ladite poignée (5)
dans la position angulaire de fermeture de la porte
(4).

22. Dispositif de poignée selon une ou plusieurs des re- 5
vendications 19 à 21, **caractérisé en ce qu'il** com-
porte deux ressorts spiraux (47), qui sont respecti-
vement associés auxdites pattes (44) analogues à
des pivots de façon à assurer que la poignée (5) soit 10
retenue même en cas de rupture d'un desdits res-
sorts spiraux (47).
23. Dispositif de poignée selon une ou plusieurs des re-
vendications précédentes, **caractérisé en ce que** 15
ladite poignée (5) présente, à ladite première extré-
mité (6), une sorte de cambrure de surface (48) de
dimensions adéquates, conçue pour donner de la
résistance mécanique et de la rigidité à ladite poi-
gnée (5). 20
24. Dispositif de poignée selon une ou plusieurs des re-
vendications précédentes, **caractérisé en ce que**
la tôle d'acier dont sont faits ladite poignée (5), ledit
premier élément (10) et ledit deuxième élément (11)
est assez mince et a des dimensions appropriées 25
pour limiter le plus possible le poids et le coût de ces
pièces mais sans pour autant nuire aux caractéris-
tiques de résistance mécanique de ladite poignée
(5), afin de permettre une augmentation de l'épais-
seur de la porte (4) pour une épaisseur totale inchan- 30
gée de l'ensemble, ce qui lui donne une plus grande
résistance mécanique.

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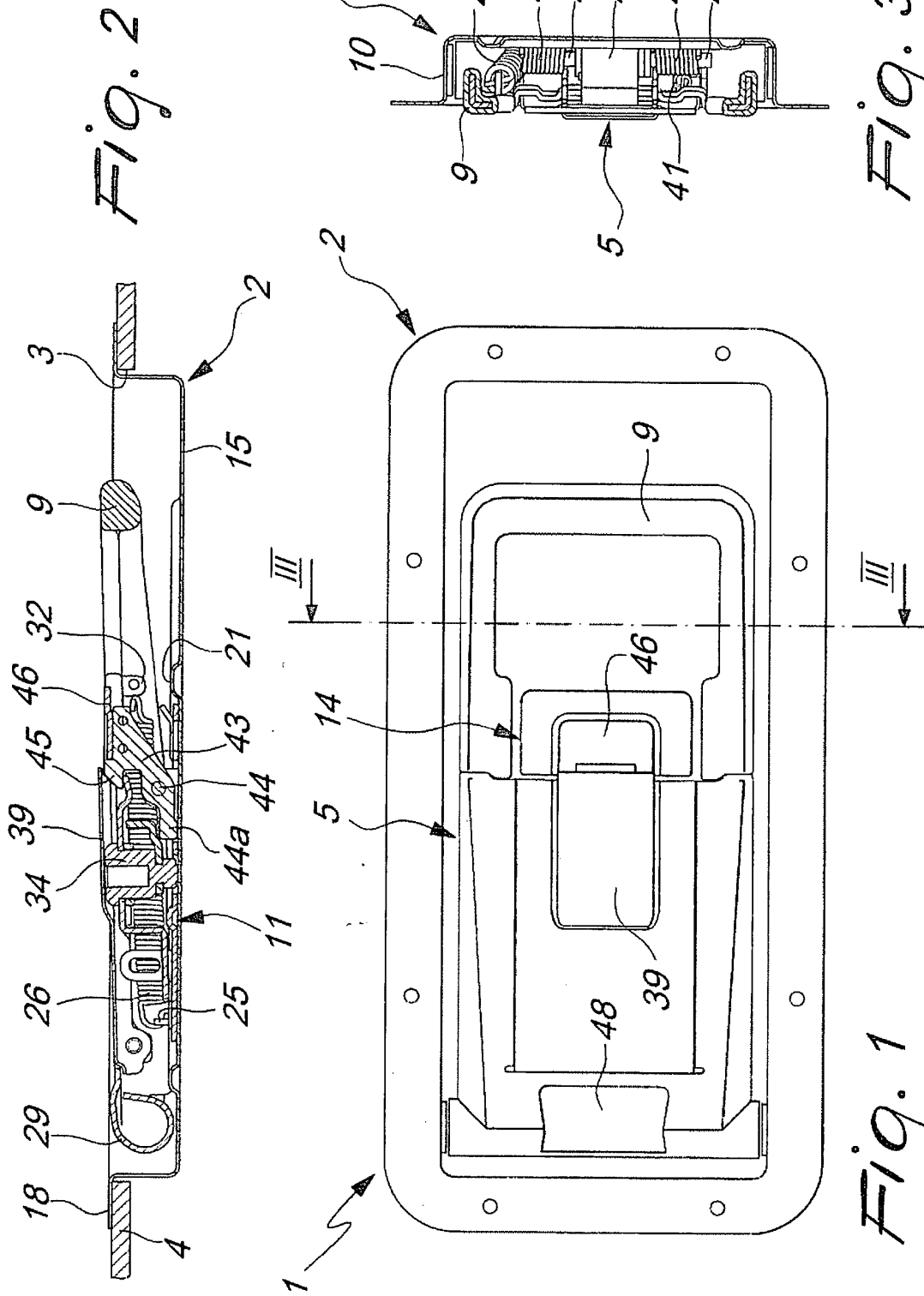


Fig. 2

Fig. 3

Fig. 1

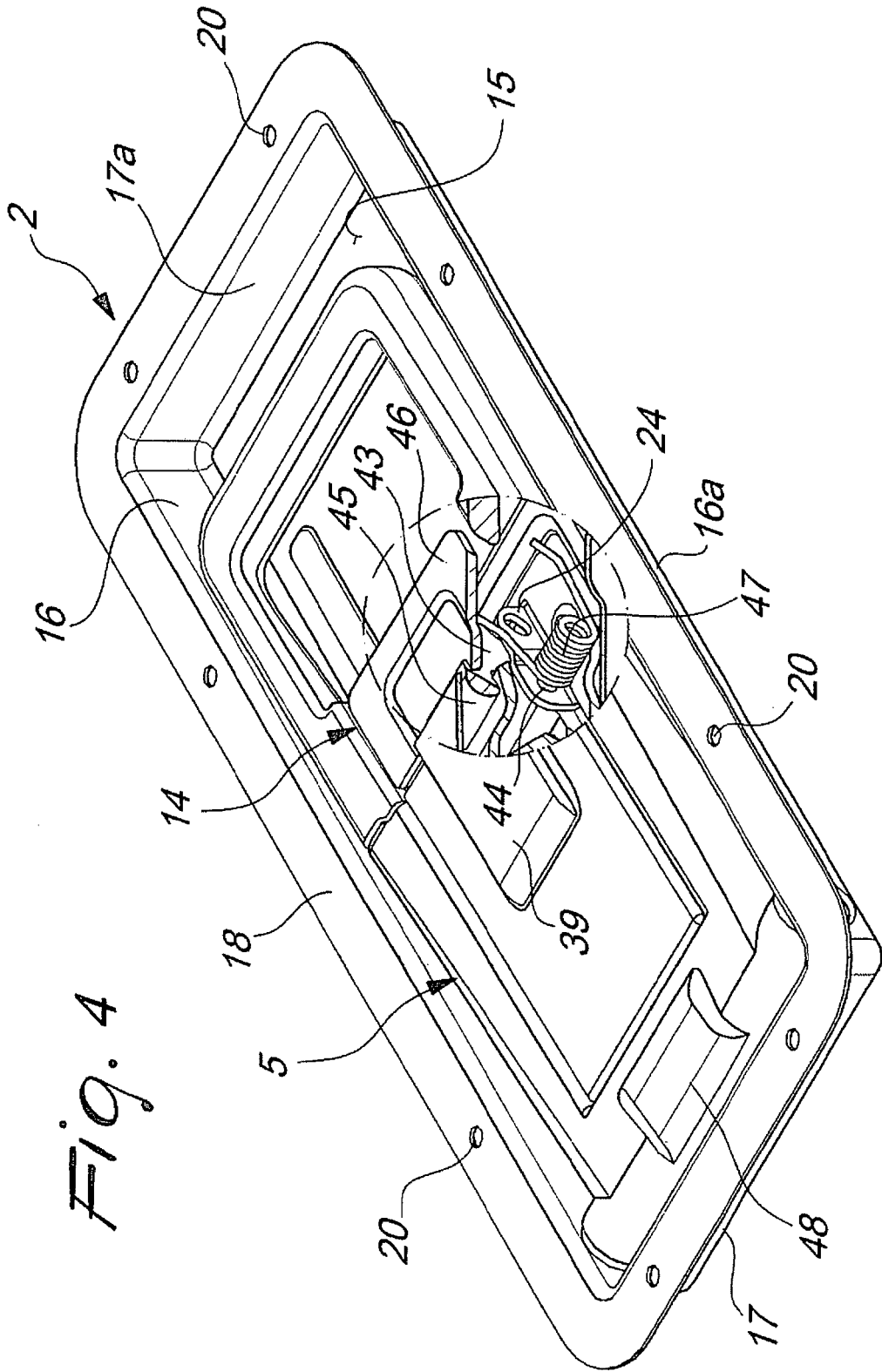


Fig. 4

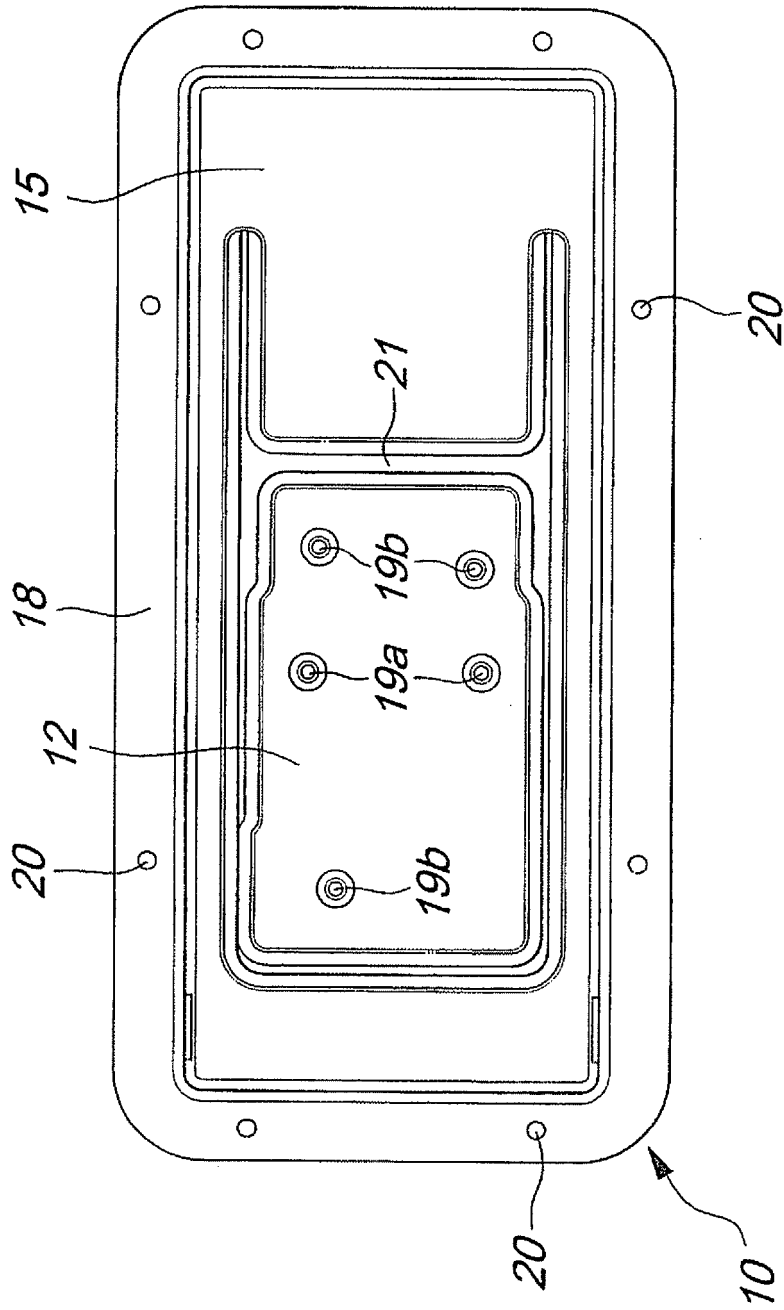


Fig. 5

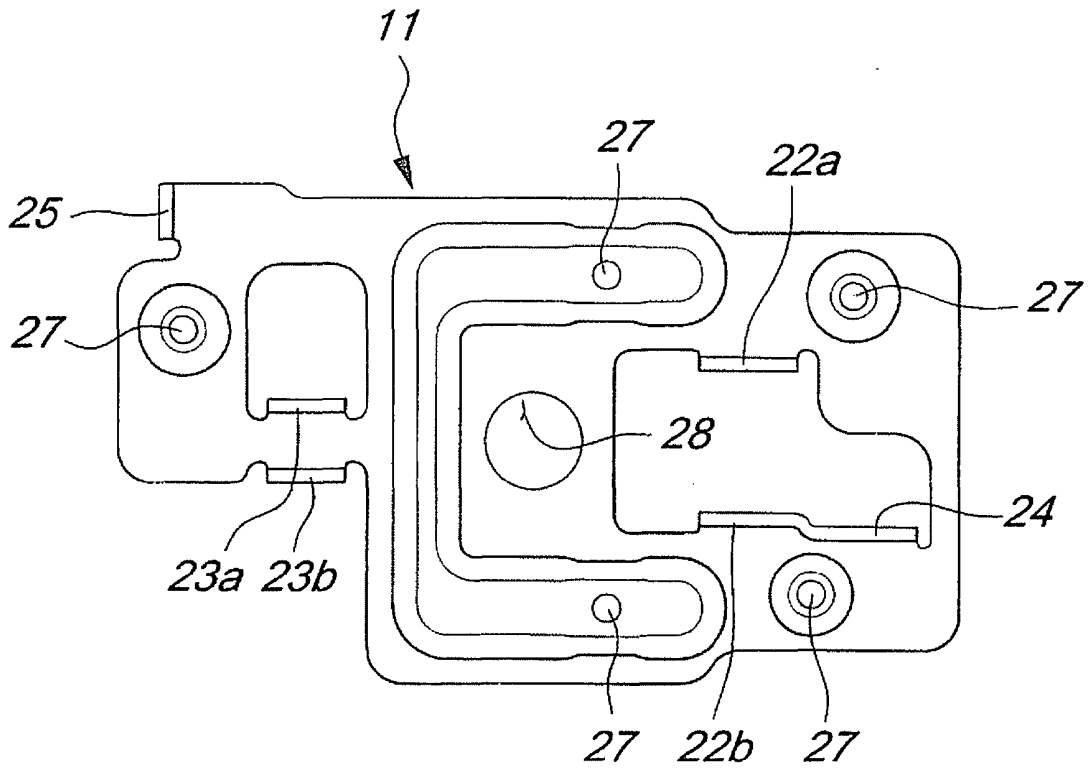


Fig. 6

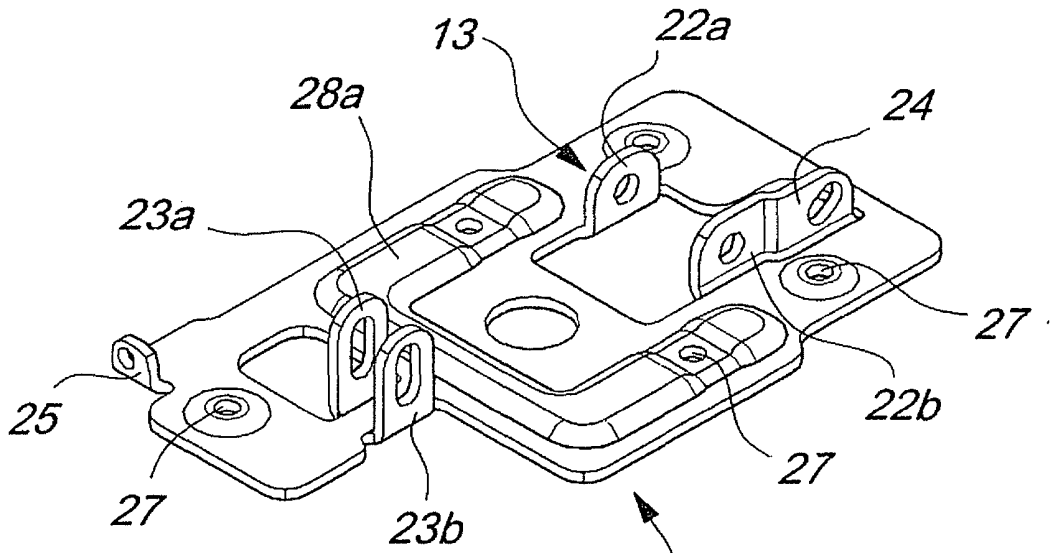


Fig. 7

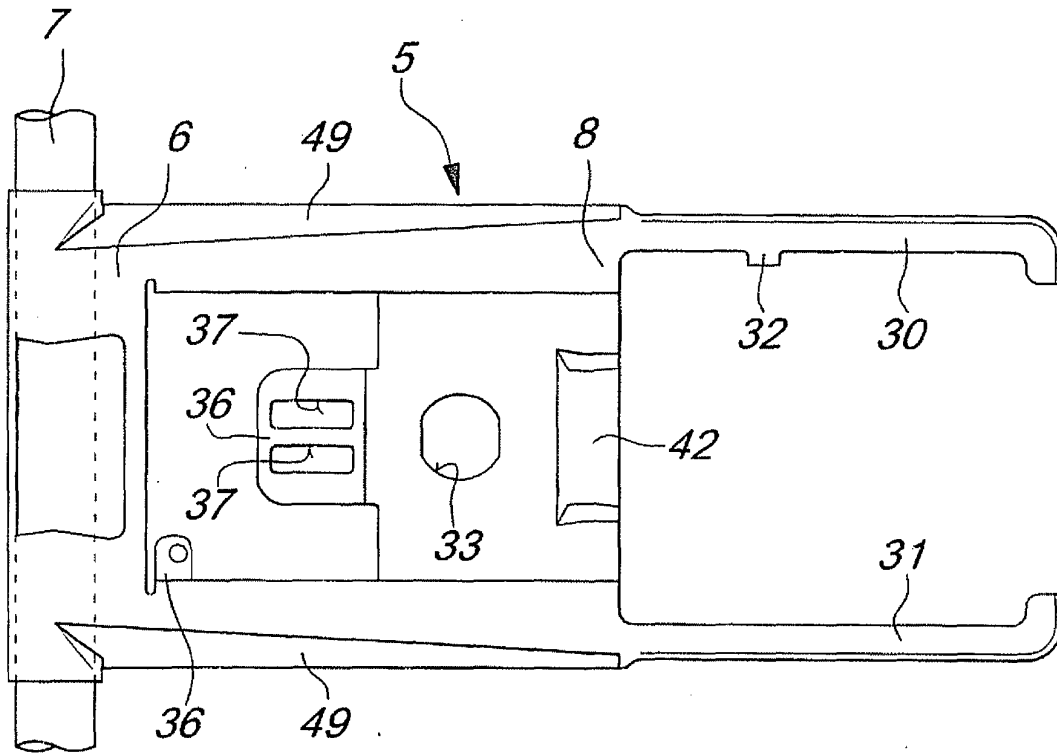


Fig. 8

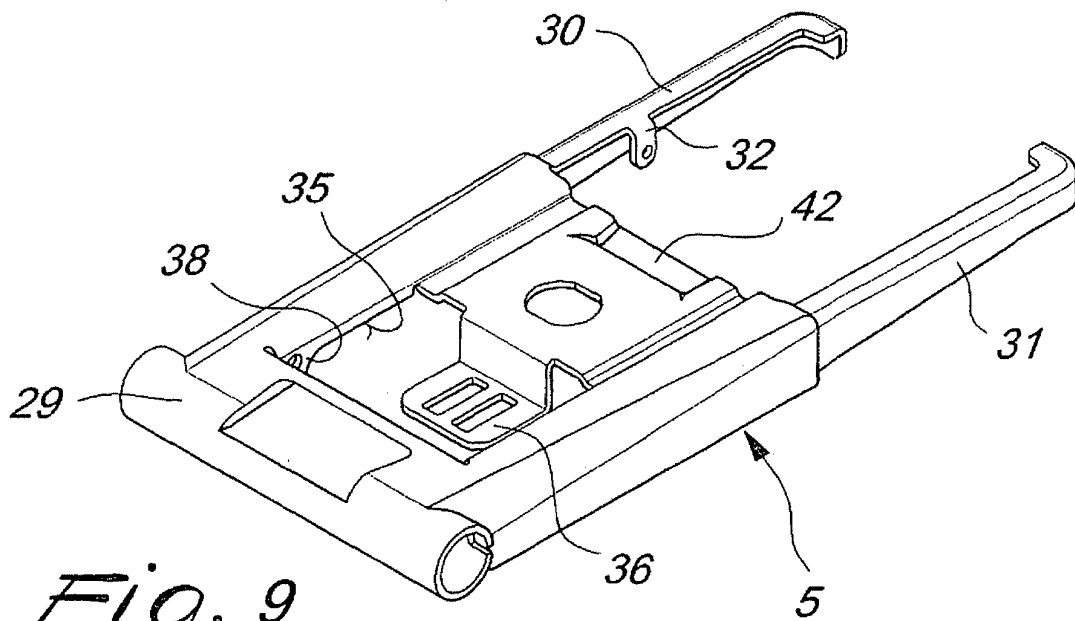


Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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