(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 4 159 962 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
05.04.2023 Bulletin 2023/14

(21) Application number: **22199283.7**

(22) Date of filing: **30.09.2022**

(51) International Patent Classification (IPC):
E05B 65/00 *(2006.01)* ***E05B 15/02*** *(2006.01)*
E05B 65/02 *(2006.01)* ***E05C 7/04*** *(2006.01)*
E05B 9/08 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
E05B 65/0007; E05B 9/08; E05B 15/0205; E05B 65/02; E05C 7/04

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(30) Priority: **01.10.2021 EP 21200493**

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(54) A DOUBLE WING GATE AND A METHOD FOR CONSTRUCTING THE SAME

(57) A double wing gate comprising: a lock gate wing and a striker gate wing which are identical to one another. Each gate wing comprises an elongated opening (20) through which a lock (14) can be inserted. The elongated opening is covered either by a faceplate (15) of the lock or by a striker assembly (24, 25). Each gate wing further comprises sets of mutually opposing openings (21, 22) through which the lock handle assembly extends through which the lock key cylinder extends. These sets of openings are covered either by the lock handle assembly (17, 19) or the lock key cylinder (10) or by additional coverings (16, 27, 28). By using identical gate wings, the manufacturing process is simplified and the stock of parts is reduced, while the various covering elements avoid uncovered openings.

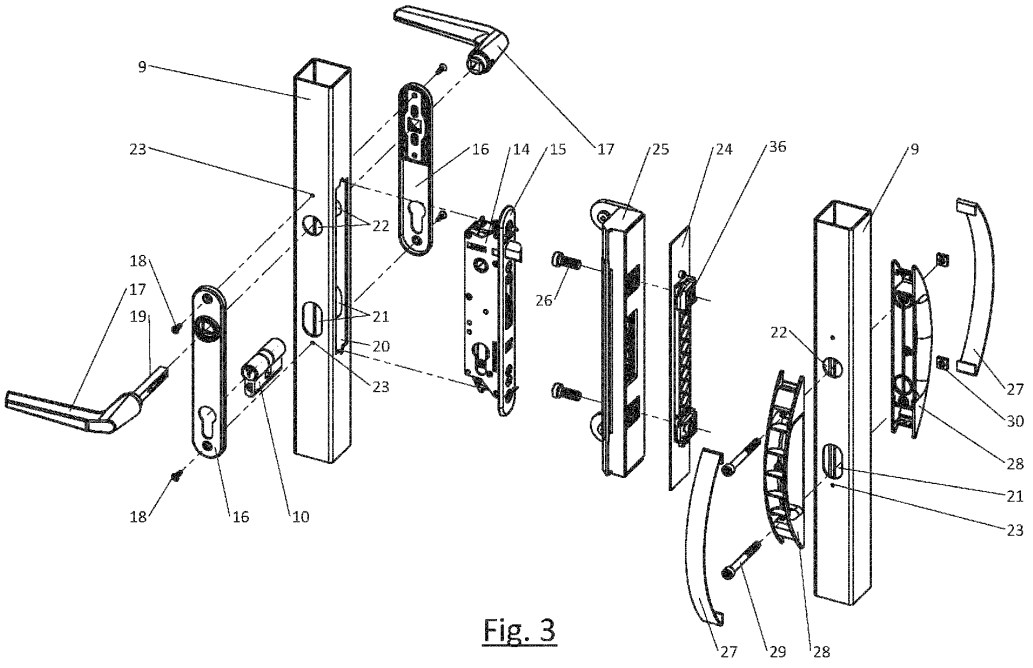

Fig. 3

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Description

Technical field

[0001] The present invention relates to a double wing gate. The present invention further relates to a method for constructing the double wing gate.

Background art

[0002] A double wing gate is known and usually comprises: a lock gate wing and a striker gate wing, each gate wing having an outer rectangular frame which is constructed from a plurality of tubular members including an upper member, a lower member, a post member, and a latch member; a lock inserted in the latch member of the lock gate wing, the latch member of the lock gate comprising an elongated opening through which the lock can be inserted, the lock comprising a face plate which covers said elongated opening; a lock handle assembly and lock key cylinder inserted through the latch member of the lock gate and the lock, the latch member of the lock gate comprising a first set of mutually opposing openings through which the lock handle assembly extends and a second set of mutually opposing openings through which the lock key cylinder extends; and a striker assembly mounted on the latch member of the striker gate wing.

[0003] A downside of such a double wing gate is the amount of different parts required to assemble such a double wing gate. More specifically, in the lock gate wing (or leaf), an elongated opening is provided for inserting the lock together with openings allowing the placement of the lock handle assembly and lock key cylinder. However, in the striker gate wing (or leaf), such openings are not present and typically there are only two bolt openings for attaching the striker assembly. In other words, there are different drill patterns in the latch members of both gate wings. Therefore, a supplier of double wing gates has to have a double stock of wings, one set suitable for inserting the lock and one set suitable for the striker assembly. This also requires doubled manufacture lines as different latch members have to be manufactured.

Disclosure of the invention

[0004] It is an object of the present invention to provide a double wing gate which addresses the above mentioned downsides.

[0005] This object is achieved according to the invention in that the latch member of the striker gate wing comprises an elongated opening, a first set of mutually opposing openings and a second set of mutually opposing openings which are identical to respective ones in the latch member of the lock gate wing with the striker assembly covering the elongated opening of the latch member of the striker gate wing and in that the double wing gate further comprises: a first covering mounted on the latch member of the striker gate wing and covering one opening of said first set of mutually opposing openings and one opening of said second set of mutually opposing openings; and a second covering mounted on the latch member of the striker gate wing and covering the other opening of said first set of mutually opposing openings and the other opening of said second set of mutually opposing openings.

[0006] The present invention is based on the realization that the manufacturing process could be simplified and the stock of parts could be reduced by using gate wings having latch members with the same drill pattern. In order to achieve this goal, the present inventors modified the striker assembly to cover the elongated opening and they included additional coverings to cover the lock handle assembly and key cylinder openings. By these modifications, all openings present in the latch member (which openings are essential to allow placement of a functioning lock) are covered in the striker gate wing. As such, there are no uncovered openings which are very undesirable as the double gate wing is designed for outdoor use. In other words, by having a striker assembly which covers the elongated opening and by having a first and second covering to cover respective openings in the first and second set of openings, latch members with the same drill pattern may be used for the lock gate wing and the striker gate wing. There is thus no longer any need or requirement to have different manufacturing processes and/or maintain a double stock, one for each gate wing.

[0007] In an embodiment of the present invention, the latch members of the lock gate wing and the striker gate wing are identical. Preferably, the lock gate wing and the striker gate wing are identical. This further reduces the stock required and/or further reduces the number of different manufacturing processes as not only the drill patterns in the latch members are identical, but rather the entire latch members, preferably the entire gate wings, are identical.

[0008] In an embodiment of the present invention, the striker assembly comprises: a striker mounting plate which engages an outer surface of the latch member of the striker gate wing, the striker mounting plate including at least one fixation lever which is located inside the latch member of the striker gate wing and which is movably mounted on the striker mounting plate between a retracted position and an extended position, the fixation lever being able to be inserted through said elongated opening when in its retracted position and the fixation lever engaging an inner surface of the latch member of the striker gate wing when in its extended position to fix the striker mounting plate to the latch member of the striker gate wing; and a striker fixed to the striker mounting plate. Preferably, the at least one fixation lever is rotatable or slideable between its retracted position and its extended position. Preferably, the striker mounting plate completely covers the elongated opening. Using a moveable fixation lever is a convenient way to fix a mounting plate to

a tubular member as described in EP 3 153 645 A1. Providing a rotatable (or pivotable) or a slideable fixation lever offers flexible design choices. Using the striker mounting plate to completely cover the elongated opening is an easy way to cover this opening in a leak-tight manner as the mounting plate is directly fixed to the latch member.

[0009] In a preferred embodiment of the present invention, in case of a rotatable fixation lever, the striker mounting plate comprises, per fixation lever: a stop for limiting a rotational movement of the fixation lever, the stop defining the extended position of the fixation lever; and a fixation opening which extends through the striker mounting plate and through the fixation lever, the striker being fixed to the striker mounting plate by a rotatable fixation element, in particular a bolt, extending through the striker and the fixation opening, wherein the fixation lever is configured to be rotated from its retracted position to its extended position by rotating said rotatable fixation element in the fixation opening. In this preferred embodiment, the striker is mounted to the striker mounting plate by at least one bolt. During the mounting, the striker mounting plate is also fixed to the latch member as the fixation lever is rotated to its extended position. Multiple assembly steps are thus performed by a single operation thereby saving time on constructing the double gate wing.

[0010] In an alternative embodiment of the present invention, the striker assembly comprises a striker having: a body which is inserted through the elongated opening into the latch member of the striker gate wing; a front plate attached to the body, the front plate preferably completely covering the elongated opening; and at least one fixation lever on said body which is located inside the latch member of the striker gate wing and which is movably mounted on said body between a retracted position and an extended position, the fixation lever being able to be inserted through said elongated opening when in its retracted position and the fixation lever engaging an inner surface of the latch member of the striker gate wing when in its extended position to fix the striker to the latch member of the striker gate wing. Preferably, the at least one fixation lever is rotatable or slideable between its retracted position and its extended position. In this alternative embodiment a mortised striker assembly is provided where part of the striker (i.e. its body) is inserted into the latch member. This reduces space between the gate wings when compared to a surface mounted striker assembly. Providing a rotatable (or pivotable) or a slideable fixation lever offers flexible design choices. Using the striker front plate to completely cover the elongated opening is an easy way to cover this opening in a leak-tight manner.

[0011] In an embodiment of the present invention, the first covering and the second covering are connected with one another by at least one fixation element extending through the latch member of the striker gate wing, the at least one fixation element preferably extending through said first or said second set of mutually opposing openings. Connecting the coverings together forms a simple way of mounting the coverings to the latch member without requiring other moving parts (e.g. fixation levers).

[0012] In an embodiment of the present invention, the first covering is formed by a first dummy handle and/or the second covering is formed by a second dummy handle. Dummy handles improve the functionality of the double wing gate as the striker gate wing can now also be moved (e.g. opened or closed) easily with appropriate handholds which is not the case for a generic covering (e.g. a flat plate).

[0013] In an embodiment of the present invention, the lock further comprises: a body attached to the face plate and which is inserted in the latch member of the lock gate wing; at least one fixation lever which is located inside the latch member of the lock gate wing and which is movably mounted on said body between a retracted position and an extended position, the fixation lever being able to be inserted through said elongated opening when in its retracted position and the fixation lever engaging an inner surface of the latch member of the lock gate wing when in its extended position to fix the lock to the latch member of the lock gate wing. Using a moveable fixation lever is a convenient way to fix a mounting plate to a tubular member as described in EP 3 153 645 A1.

[0014] In an embodiment of the present invention, the lock handle assembly comprises: a spindle extending through the latch member of the lock gate wing and through the lock; a first handle mounted on one end of the spindle; and a second handle mounted on the other end of the spindle. This is a usual construction of a lock handle assembly and can be readily applied by the skilled person.

[0015] In an embodiment of the present invention, the lock handle assembly further comprises: at least one first escutcheon covering said one opening of the first set of mutually opposing openings and said one opening of the second set of mutually opposing openings; and at least one second escutcheon covering said other one opening of the first set of mutually opposing openings and said other one opening of the second set of mutually opposing openings. Preferably, the latch member of each gate wing comprises at least one further set of mutually opposing openings, the at least one first escutcheon being fixed to the latch member of the lock gate wing by fixation means extending inside one of said at least one further set of mutually opposing openings and the at least one second escutcheon being fixed to the latch member of the lock gate wing by fixation means extending inside the other one of said at least one further set of mutually opposing openings. More preferably, the first covering further covers said one of said at least one further set of mutually opposing openings and the second covering further covers said other one of said at least one further set of mutually opposing openings. Escutcheons allow to finish the lock gate wing in an aesthetically pleasing manner. Moreover, escutcheons ensure that the sets of openings are sealed in a leak-tight manner. Providing addi-

tional escutcheon mounting openings allows for an easy placement of each escutcheon. Modifying the coverings to also cover the escutcheon mounting openings avoids uncovered openings in the latch member of the striker gate wing.

[0016] In an embodiment of the present invention, each latch member has a rectangular cross section, wherein, preferably, each rectangular cross section has a first side, a second side, a third side, and a fourth side, the first side of the latch member of the lock gate wing facing the first side of the latch member of the striker gate wing, the second side of each latch member being opposite to its first side, the elongated openings being located in the first side of a respective latch member, said one opening of the first set of mutually opposing openings and said one opening of the second set of mutually opposing openings being located in the third side of a respective latch member, and said other one opening of the first set of mutually opposing openings and said other one opening of the second set of mutually opposing openings being located in the fourth side of a respective latch member. Rectangular (incl. square) latch members are a common practice in double wing gate and are more suited to insert a lock and/or to mount a striker assembly and/or to mount covering plates when compared to circular, elliptical, or other kinds of latch members.

[0017] In an embodiment of the present invention, the first covering and the second covering are part of a single integral covering. The single integral covering may also include the striker mounting plate or the striker front plate. However, separate coverings are preferred since these can be used for latch members having a different size, while a single integral covering requires a different covering for each different latch member design.

[0018] The advantages described above and the object according to the present invention are also achieved with a method of constructing the double wing gate described above, the method comprising: inserting the lock in the latch member of the lock gate wing through the elongated opening and afterwards fixing the lock to the latch member of the lock gate wing; placing at least a part of the lock handle assembly through the first set of mutually opposing openings and through the lock; placing at least a part of the lock key cylinder through the second set of mutually opposing openings and through the lock; and mounting the striker assembly, the first dummy handle and the second dummy handle to the latch member of the striker gate wing.

Brief description of the drawings

[0019] The invention will be further explained by means of the following description and the appended figures.

Figure 1 shows a perspective view of a double wing gate according to the present invention.

Figure 2 shows a detail of figure 1.

Figure 3 shows an exploded view of the detail of figure 2.

Figure 4 shows an exploded view of the lock assembly of the double wing gate of figure 1.

Figure 5 shows an exploded view of the striker assembly of the double wing gate of figure 1.

Figures 6A and 6B show the fixation lever of the striker mounting plate in the retracted, respectively extended, state.

Figures 7A to 7D show various stages of mounting an alternative striker mounting plate to the latch member.

Figure 8A to 8B show an alternative striker assembly.

Description of the invention

[0020] The present invention will be described with respect to particular embodiments and with reference to certain drawings but the invention is not limited thereto but only by the claims. The drawings described are only schematic and are non-limiting. In the drawings, the size of some of the elements may be exaggerated and not drawn on scale for illustrative purposes. The dimensions and the relative dimensions do not necessarily correspond to actual reductions to practice of the invention.

[0021] Furthermore, the terms first, second, third and the like in the description and in the claims, are used for distinguishing between similar elements and not necessarily for describing a sequential or chronological order. The terms are interchangeable under appropriate circumstances and the embodiments of the invention can operate in other sequences than described or illustrated herein.

[0022] Moreover, the terms top, bottom, over, under and the like in the description and the claims are used for descriptive purposes. The terms so used are interchangeable under appropriate circumstances and the embodiments of the invention described herein can operate in other orientations than described or illustrated herein.

[0023] Furthermore, the various embodiments, although referred to as "preferred" are to be construed as exemplary manners in which the invention may be implemented rather than as limiting the scope of the invention.

[0024] Figure 1 shows a perspective view of a double wing gate 1 according to the present invention. The double wing gate 1 comprises a lock gate wing 2 and a striker gate wing 3. The lock gate wing 2 is provided with a lock assembly and the striker gate wing 3 is provided with a striker assembly 12 as better shown in figure 2. Each wing (also known as a leaf) 2, 3 is hingedly connected to a support 4 and comprises an outer rectangular frame which is constructed from a plurality of tubular members including an upper member 6, a lower member 7, a post member 8, and a latch member 9. The lock assembly and the striker assembly are both mounted on and/or in a respective latch member. According to the invention, as will become more apparent below, each wing 2, 3 (or

at least the latch members 9 thereof) are identical to one another.

[0025] Figure 3 shows an exploded view of the various components mounted to the latch members 9 with details of the exploded view focussing on the lock assembly being shown in figure 4 and on the striker assembly in figure 5.

[0026] As shown in figures 3 to 5, each latch member 9 comprises an elongated opening 20 in the sides facing one another and two sets of mutually opposing openings 21, 22 in the sides adjacent the facing side. Additionally, in the illustrated embodiments, there are a further two sets of mutually opposing openings 23 in the sides adjacent the facing side. As the double wing gate 1 is meant for outdoors use, all openings 20, 21, 22, 23 have to be covered in order to avoid water and/or dirt from entering the interior of the gate wings 2, 3. It will be readily appreciated that the two openings in each adjacent side (i.e. one opening of the first set 21 and one opening of the second set 22) may form part of a single elongated opening (or slot) or that such an elongated opening is present just in one of both adjacent sides.

[0027] As illustrated in figure 4, the lock assembly comprises a lock having a body 14 and a faceplate 15. The body 14 of the lock is inserted into the elongated opening 20 and is located inside the latch member 9. In other words, the lock is a mortised lock and its faceplate 15 fully covers the elongated opening 20. On the body 14, there are provided two fixation levers 34 that are moveable between a retracted position in which the body 14 can be inserted into the elongated opening 20 and an extended position in which each fixation lever 34 engages an inner surface of the latch member 9. The fixation levers 34 are identical to those described in EP 3 153 645 A1 which is incorporated herein by reference.

[0028] The lock assembly further includes a key cylinder 10 which is inserted through the latch member 9, in particular through the set of opposing openings 21, and through the lock body 14. Any conventional key cylinder 10 may be used, e.g. a single-barrel euro-profile cylinder as in the illustrated embodiment. The lock assembly also includes a lock handle assembly 11 which comprises two handles 17 and a spindle 19. The spindle 19 is placed through the latch member 9, in particular through the set of opposing openings 22, and through the lock body 14. Each handle 17 is mounted on an opposing end of the spindle 19.

[0029] In the illustrated embodiment, the lock assembly is also provided with two escutcheons 16 that are fixed to the latch member 9 by means of screws or bolts 18 that are fastened in one of the openings 23. The escutcheons 16 provide a finish to the latch member 9 of the lock gate wing 2 and aid in ensuring that the openings 21, 22, 23 are completely covered. It will be readily appreciated that each of the escutcheons can be replaced by two distinct escutcheons on each side of the latch member 9, i.e. one escutcheon surrounding the lock handle assembly 11 and one escutcheon surrounding the key cylinder 10.

[0030] As illustrated in figure 5, the striker assembly comprises a striker mounting plate 24 and a striker 25 which is mounted on the striker mounting plate 24 by bolts or screws 26 that fit into openings 35. The striker mounting plate 24 is mounted on/in the elongated opening 20 by use of a fixation mechanism 36 which is best illustrated in figures 6A and 6B and which is described in more detail below. In the illustrated embodiment, the striker mounting plate 24 fully covers the elongated opening 20. However, the complete covering of the elongated opening 20 could also be achieved only once the striker 25 is mounted in case the striker mounting plate 24 does not fully cover the elongated opening 20 and the striker 25 then covers the remaining portion. A striker 25 is known in the prior art (e.g. from EP 3 239 440 A1) and will not be described further.

[0031] In order to cover the openings 21, 22, 23 on the latch member 9 of the striker gate wing 3, the invention provides for a first covering 13 and a second covering 13. In the illustrated embodiments, these coverings 13 are done in the form of dummy handles comprising a base part 28 and a finishing part 27 that is fastened to the base part 28, e.g. by means of bent sides which latch onto the base part as in the illustrated embodiments, although other fastening means are naturally possible (e. g. glue). The base parts 28 are connected to one another by bolts of screws 29 extending through each base part 28 and through the latch member 9 (i.e. by virtue of the openings 21, 22) to engage in nut elements 30. Alternatively, in a non-illustrated embodiment, one or both of the dummy handles 27, 28 can be replaced by a simple plate to cover the openings. The shape and/or additional functionality of the coverings is not key to the present invention as long as all openings 21, 22, 23 in the latch member 9 are covered by them.

[0032] Figures 6A and 6B illustrate a first means 36 to fix the striker mounting plate 24 to the latch member 9 of the striker gate wing 3. The striker mounting plate 24 is provided with a rotatable fixation lever 37 on its rear side. In the orientation shown in figure 6A the fixation lever 37 is less wide than the elongated opening 20 and can thus be inserted into the elongated opening 20, i.e. the fixation lever 37 is in its retracted state. In the centre of the fixation lever 37 there is provided an opening 35, i.e. the bolt or screw opening used to mount the striker 25 to the striker mounting plate 24. When fastening the bolt or screw 26, the fixation lever 37 will be engaged by the bolt or screw 26 and will be rotated until it abuts against a stop 38 as shown in figure 6B. In this orientation the fixation lever 37 is in its extended state and is wider than the elongated opening 20 and thus engages with the inner wall of the latch member 9 in order to fix the striker mounting plate 24 to the latch member 9.

[0033] Figures 7A to 7D illustrate an alternative second means 39 to fix the striker mounting plate 24 to the latch member 9. In this embodiment, instead of a rotatable fixation lever 37, use is made of a slideable fixation lever

42. In figure 7A, the fixation lever 42 is in its retracted position and can be inserted into the elongated opening 20. After insertion, a tool (e.g. a screw driver) is inserted into an opening 41 in the striker mounting plate 24 (see figure 7B) to slide the fixation lever 42 into its extended position as shown in figure 7C. The fixation lever 42 now engages the inner wall of the latch member 9. A protruding wall element 43 avoids that the fixation lever 42 is pushed backwards into the latch member and away from the inner wall. In order to secure the fixation lever 42, a bolt or screw 46 is inserted through opening 44 in the latch member into opening 45 provided in the fixation lever 42 as shown in figure 4D. After placing the bolt or screw 46, the fixation lever 42 is held in its extended position and the striker mounting plate 24 is fixed to the latch member 9.

[0034] In still other embodiments, the striker mounting plate 24 is mounted to the latch member by a fixation lever as in EP 3 153 645 A1. Moreover, other fixation means (e.g. welding) are also possible.

[0035] Figures 8A and 8B illustrate an alternative striker assembly for use in the double wing gate 1 described above, i.e. for use with the latch gate wing 2 thereof. The alternative striker assembly comprises a striker 47 having a body and a front plate, the body being inserted into the elongated opening 20 of the latch member 9. The body comprises fixation levers 49 which are slideable between a retracted position and an extended position similar to the fixation lever 42 described above. When the fixation levers 49 are in their retracted position, the body can be inserted into the elongated opening 20 and, afterwards, a tool (not shown) is used to slide each fixation lever 49 to its extended position as shown in figure 8A. Bolts or screws 48 are then placed through an opening (not shown) in the striker front plate into the opening provided in the fixation lever 49 to fix the fixation levers 49 in their extended position in which they engage an inner surface of the latch member 9. An assembled view of the alternative striker assembly is shown in figure 8B. In figure 8B, the openings 21, 22, 23 still have to be covered which may be achieved as described above with dummy handles 27, 28 or other coverings. Naturally, other types (e. g. rotatable) of fixation levers are possible.

[0036] The main advantage of the alternative striker assembly is that the striker 47 is mostly located inside the latch member 9, while, in the previous embodiments, the striker assembly was constructed on the outside of the latch member 9. The distance between the latch members 9 of the gate wings 2, 3 is thus decreased thereby improving safety.

[0037] Although aspects of the present disclosure have been described with respect to specific embodiments, it will be readily appreciated that these aspects may be implemented in other forms within the scope of the invention as defined by the claims.

Claims

1. A double wing gate (1) comprising:

- a lock gate wing (2) and a striker gate wing (3), each gate wing having an outer rectangular frame which is constructed from a plurality of tubular members including an upper member (6), a lower member (7), a post member (8), and a latch member (9);
- a lock inserted in the latch member of the lock gate wing, the latch member of the lock gate comprising an elongated opening (20) through which the lock can be inserted, the lock comprising a face plate (15) which covers said elongated opening;
- a lock handle assembly (11) and lock key cylinder (10) inserted through the latch member of the lock gate and the lock, the latch member of the lock gate comprising a first set of mutually opposing openings (22) through which the lock handle assembly extends and a second set of mutually opposing openings (21) through which the lock key cylinder extends; and
- a striker assembly (12) mounted to the latch member of the striker gate wing,

characterized in that the latch member of the striker gate wing comprises an elongated opening (20), a first set of mutually opposing openings (22) and a second set of mutually opposing openings (21) which are identical to respective ones in the latch member of the lock gate wing with the striker assembly covering the elongated opening of the latch member of the striker gate wing and **in that** the double wing gate further comprises:

- a first covering (13) mounted on the latch member of the striker gate wing and covering one opening of said first set of mutually opposing openings and one opening of said second set of mutually opposing openings; and
- a second covering (13) mounted on the latch member of the striker gate wing and covering the other opening of said first set of mutually opposing openings and the other opening of said second set of mutually opposing openings.

2. The double wing gate according to claim 1, **characterized in that** the striker assembly comprises:

- a striker mounting plate (24) which engages an outer surface of the latch member of the striker gate wing, the striker mounting plate including at least one fixation lever (37; 42) which is located inside the latch member of the striker gate wing and which is movably mounted on the striker mounting plate between a retracted position

and an extended position, the fixation lever being able to be inserted through said elongated opening when in its retracted position and the fixation lever engaging an inner surface of the latch member of the striker gate wing when in its extended position to fix the striker mounting plate to the latch member of the striker gate wing, the striker mounting plate preferably completely covering the elongated opening; and
- a striker (25) fixed to the striker mounting plate.

3. The double wing gate according to claim 2, **characterized in that** the at least one fixation lever (37) is rotatable between its retracted position and its extended position.

4. The double wing gate according to claim 3, **characterized in that** the striker mounting plate comprises, per fixation lever:

- a stop (38) for limiting a rotational movement of the fixation lever, the stop defining the extended position of the fixation lever; and
- a fixation opening (35) which extends through the striker mounting plate and through the fixation lever, the striker being fixed to the striker mounting plate by a rotatable fixation element (26), in particular a bolt, extending through the striker and the fixation opening,

wherein the fixation lever is configured to be rotated from its retracted position to its extended position by rotating said rotatable fixation element in the fixation opening.

5. The double wing gate according to claim 1, **characterized in that** the striker assembly comprises a striker (47) having:

- a body which is inserted through the elongated opening (20) into the latch member of the striker gate wing;
- a front plate attached to the body, the front plate preferably completely covering the elongated opening; and
- at least one fixation lever (49) on said body which is located inside the latch member of the striker gate wing and which is movably mounted on said body between a retracted position and an extended position, the fixation lever being able to be inserted through said elongated opening when in its retracted position and the fixation lever engaging an inner surface of the latch member of the striker gate wing when in its extended position to fix the striker to the latch member of the striker gate wing.

6. The double wing gate according to claim 5, **characterized in that** the at least one fixation lever (49) is slideable between its retracted position and its extended position.

7. The double wing gate according to any one of the preceding claims, **characterized in that** the first covering and the second covering are connected with one another by at least one fixation element (29) extending through the latch member of the striker gate wing, the at least one fixation element preferably extending through said first or said second set of mutually opposing openings.

8. The double wing gate according to any one of the preceding claims, **characterized in that** the first covering is formed by a first dummy handle (27, 28) and/or the second covering is formed by a second dummy handle (27, 28).

9. The double wing gate according to any one of the preceding claims, **characterized in that** the lock further comprises:

- a body (14) attached to the face plate and which is inserted in the latch member of the lock gate wing;
- at least one fixation lever (34) which is located inside the latch member of the lock gate wing and which is movably mounted on said body between a retracted position and an extended position, the fixation lever being able to be inserted through said elongated opening when in its retracted position and the fixation lever engaging an inner surface of the latch member of the lock gate wing when in its extended position to fix the lock to the latch member of the lock gate wing.

10. The double wing gate according to any one of the preceding claims, **characterized in that** the lock handle assembly comprises:

- a spindle (19) extending through the latch member of the lock gate wing and through the lock;
- a first handle (17) mounted on one end of the spindle; and
- a second handle (17) mounted on the other end of the spindle.

11. The double wing gate according to any one of the preceding claims, **characterized in that** the latch member of the striker gate wing is identical to the latch member of the lock gate wing.

12. The double wing gate according to any one of the preceding claims, **characterized in that** the lock handle assembly further comprises:

- at least one first escutcheon (16) covering said one opening of the first set of mutually opposing openings and said one opening of the second set of mutually opposing openings; and
- at least one second escutcheon (16) covering said other one opening of the first set of mutually opposing openings and said other one opening of the second set of mutually opposing openings,

wherein, preferably, the latch member of each gate wing comprises at least one further set of mutually opposing openings (23), the at least one first escutcheon being fixed to the latch member of the lock gate wing by fixation means extending inside one of said at least one further set of mutually opposing openings and the at least one second escutcheon being fixed to the latch member of the lock gate wing by fixation means extending inside the other one of said at least one further set of mutually opposing openings, and
wherein, more preferably, the first covering further covers said one of said at least one further set of mutually opposing openings and the second covering further covers said other one of said at least one further set of mutually opposing openings.

13. The double wing gate according to any one of the preceding claims, **characterized in that** each latch member has a rectangular cross section, wherein, preferably, each rectangular cross section has a first side, a second side, a third side, and a fourth side, the first side of the latch member of the lock gate wing facing the first side of the latch member of the striker gate wing, the second side of each latch member being opposite to its first side, the elongated openings being located in the first side of a respective latch member, said one opening of the first set of mutually opposing openings and said one opening of the second set of mutually opposing openings being located in the third side of a respective latch member, and said other one opening of the first set of mutually opposing openings and said other one opening of the second set of mutually opposing openings being located in the fourth side of a respective latch member.

14. A method of constructing a double wing gate (1) according to any one of the preceding claims, the method comprising:

- inserting the lock (14) in the latch member (9) of the lock gate wing (2) through the elongated opening (20) and afterwards fixing the lock to the latch member of the lock gate wing;
- placing at least a part (19) of the lock handle assembly (11) through the first set of mutually opposing openings (22) and through the lock;
- placing at least a part of the lock key cylinder (10) through the second set of mutually opposing openings (21) and through the lock; and
- mounting the striker assembly (12), the first covering (13) and the second covering (13) to the latch member (9) of the striker gate wing (3).

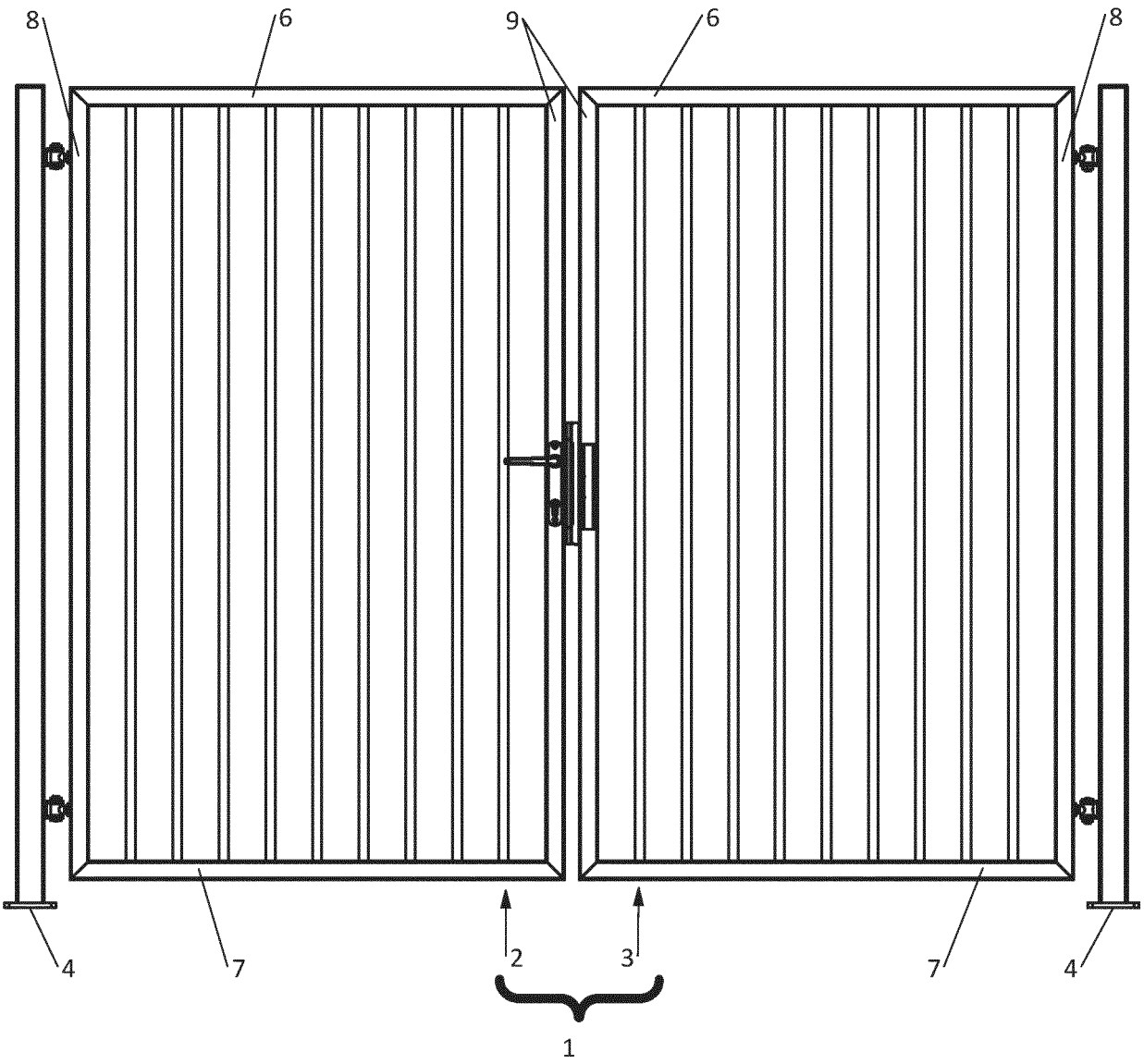

Fig. 1

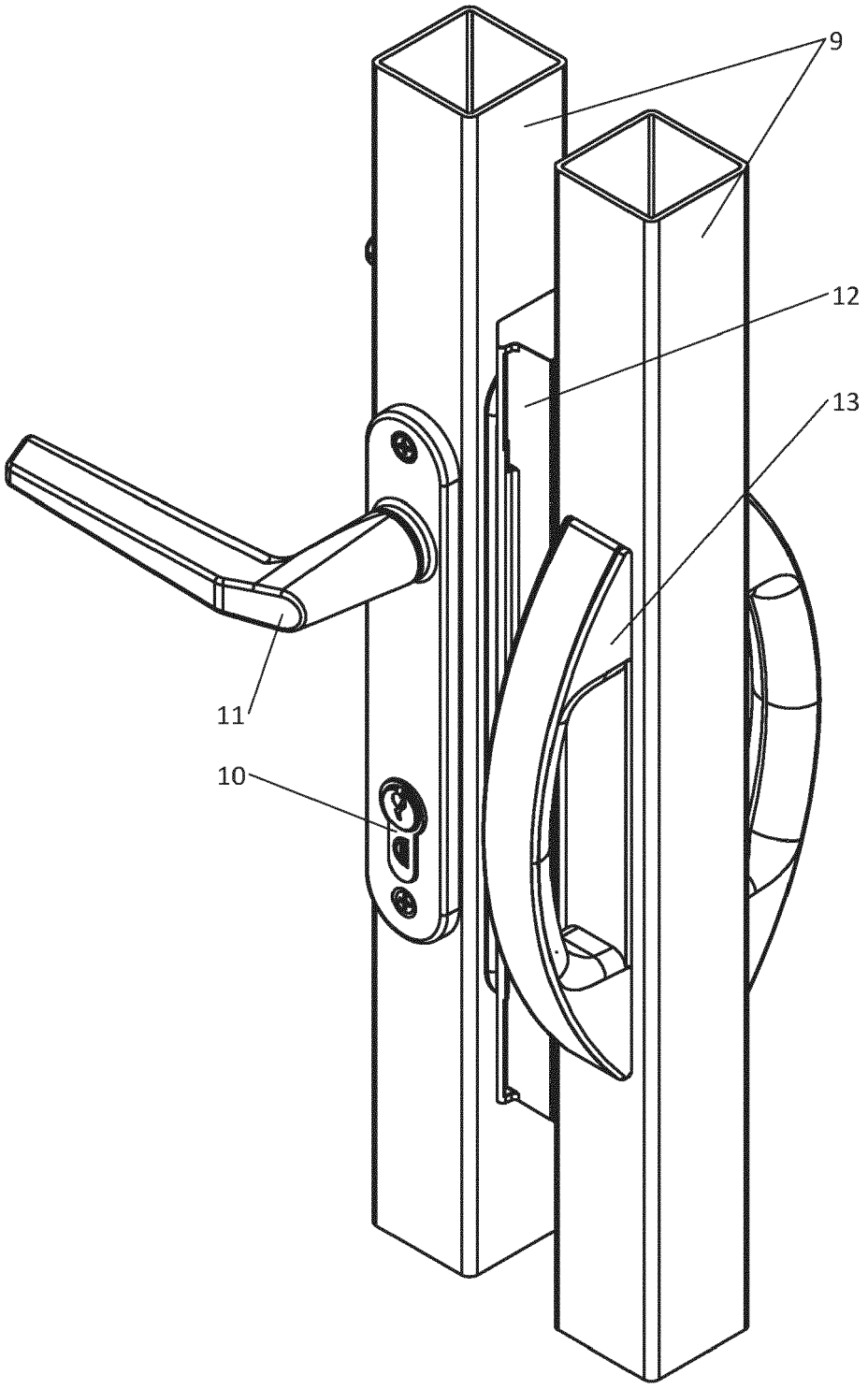

Fig. 2

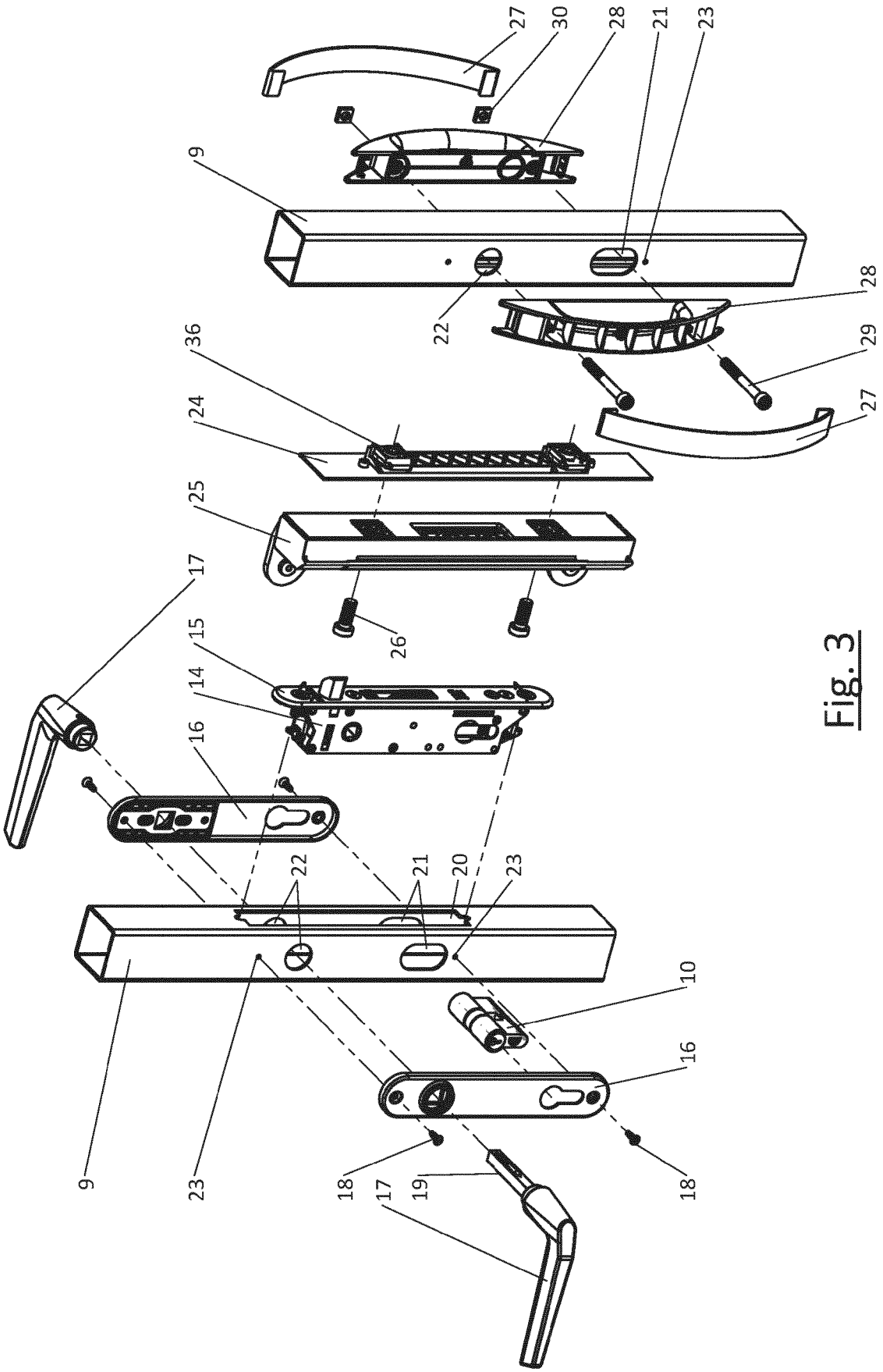
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Fig. 3

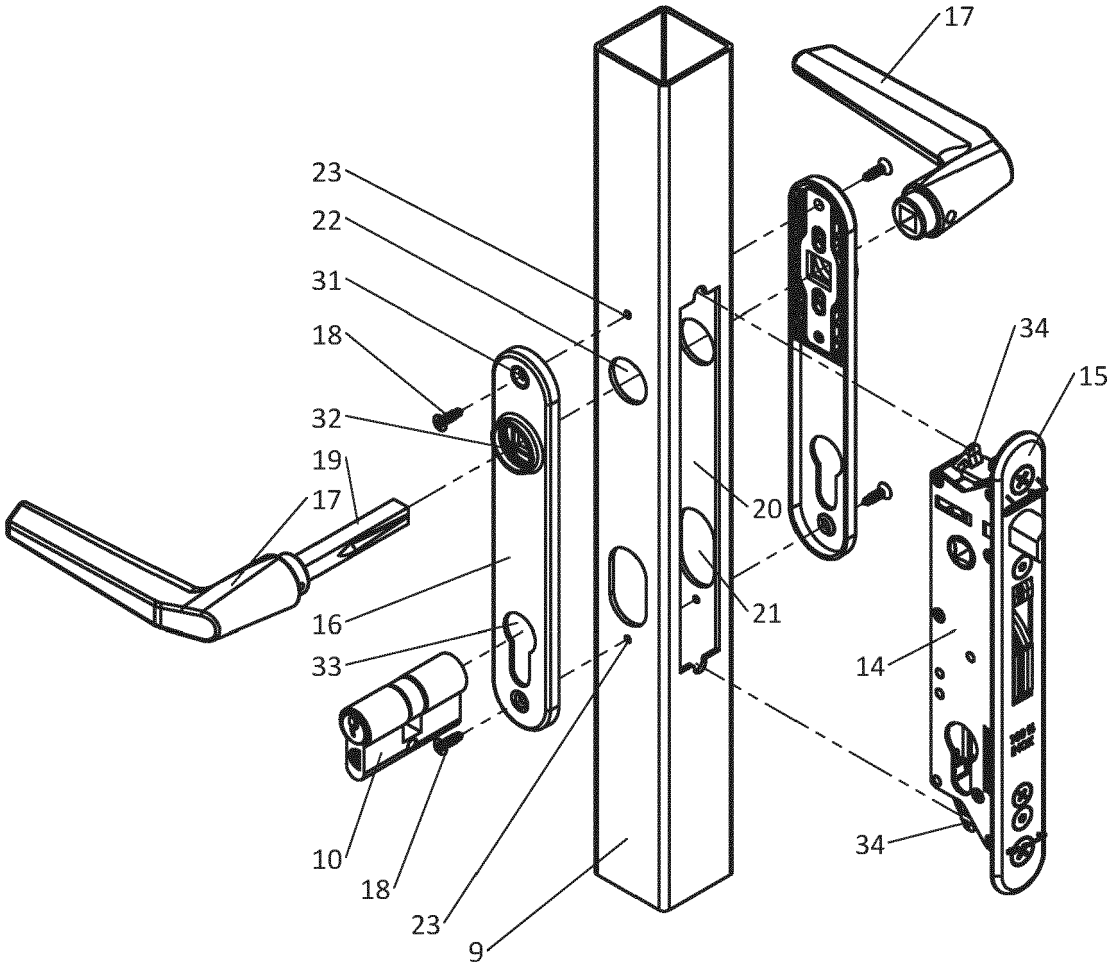

Fig. 4

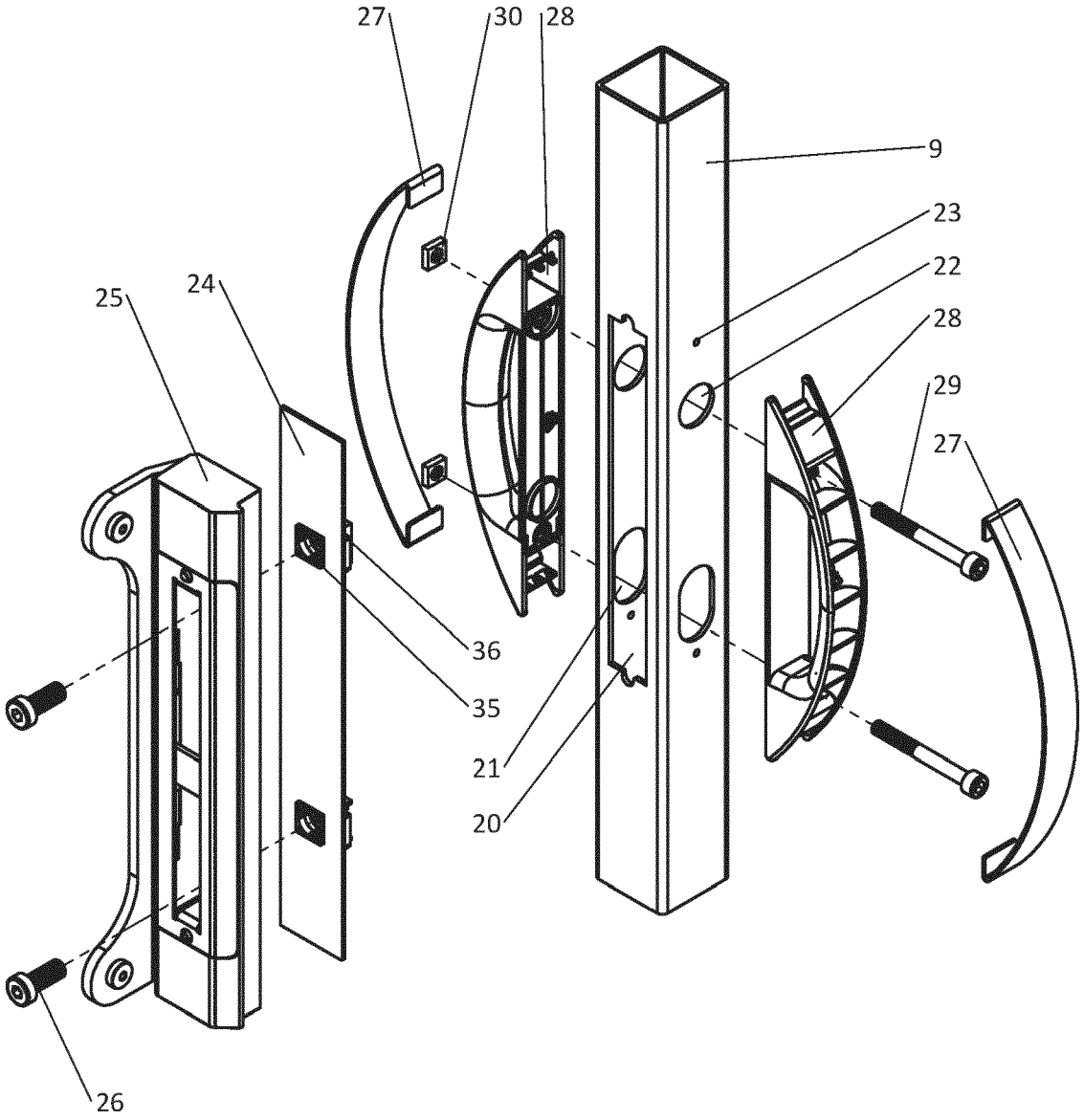

Fig. 5

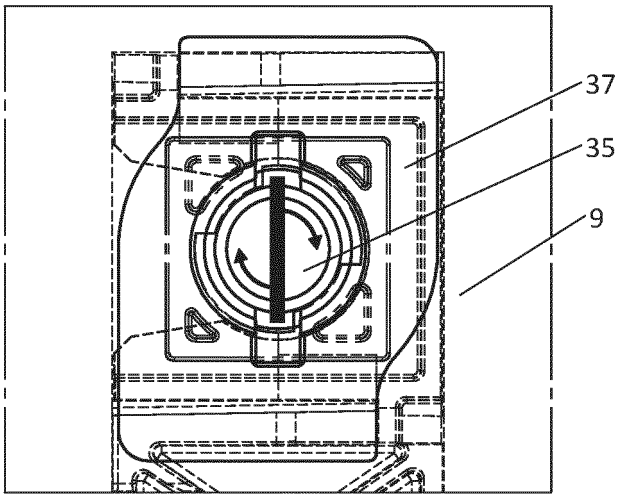

Fig. 6A

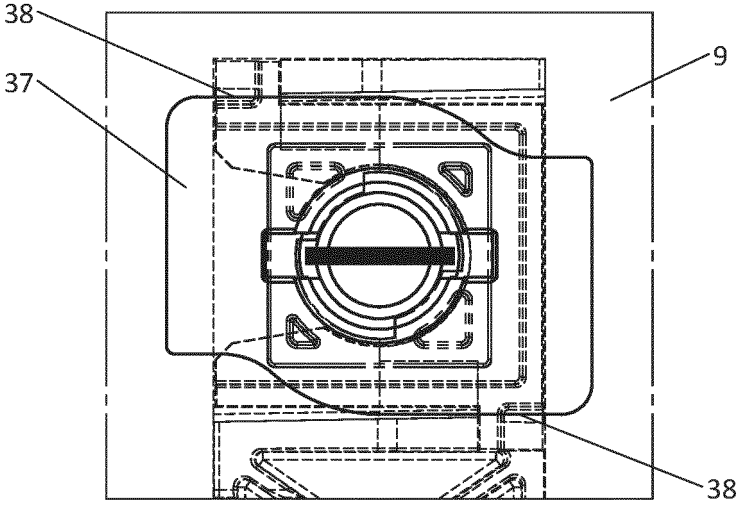

Fig. 6B

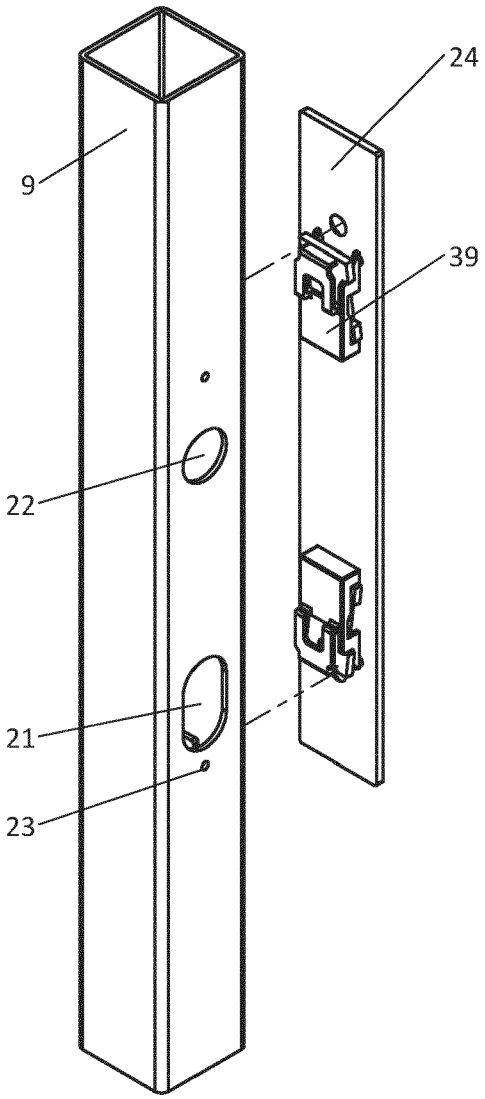

Fig. 7A

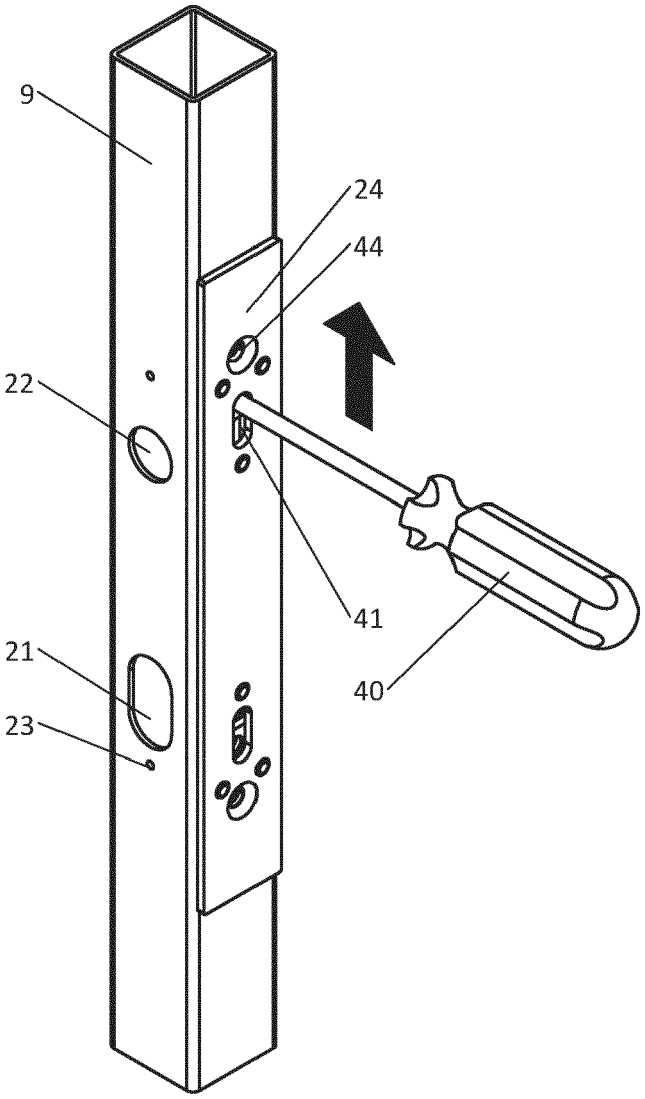

Fig. 7B

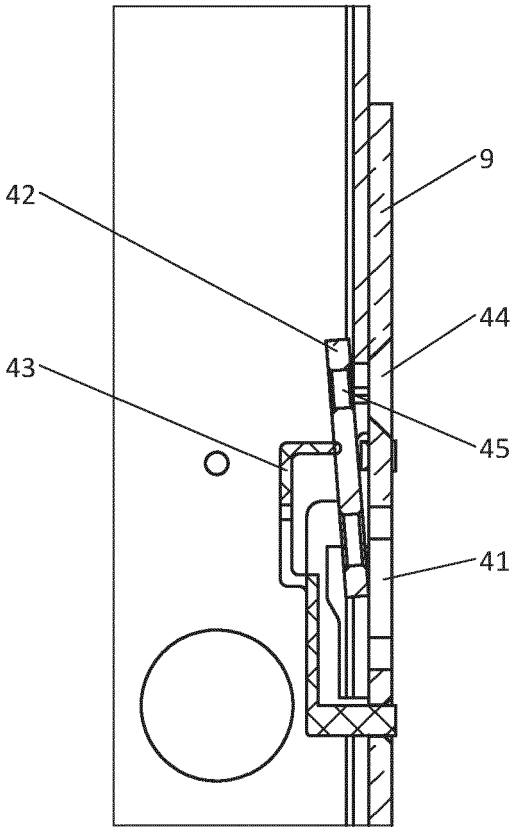

Fig. 7C

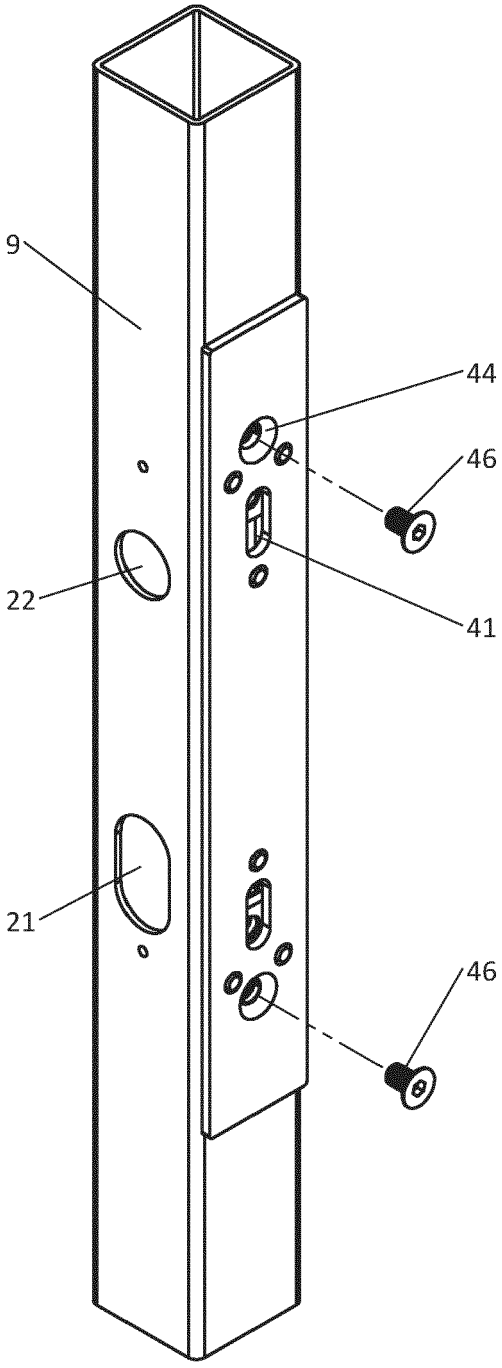

Fig. 7D

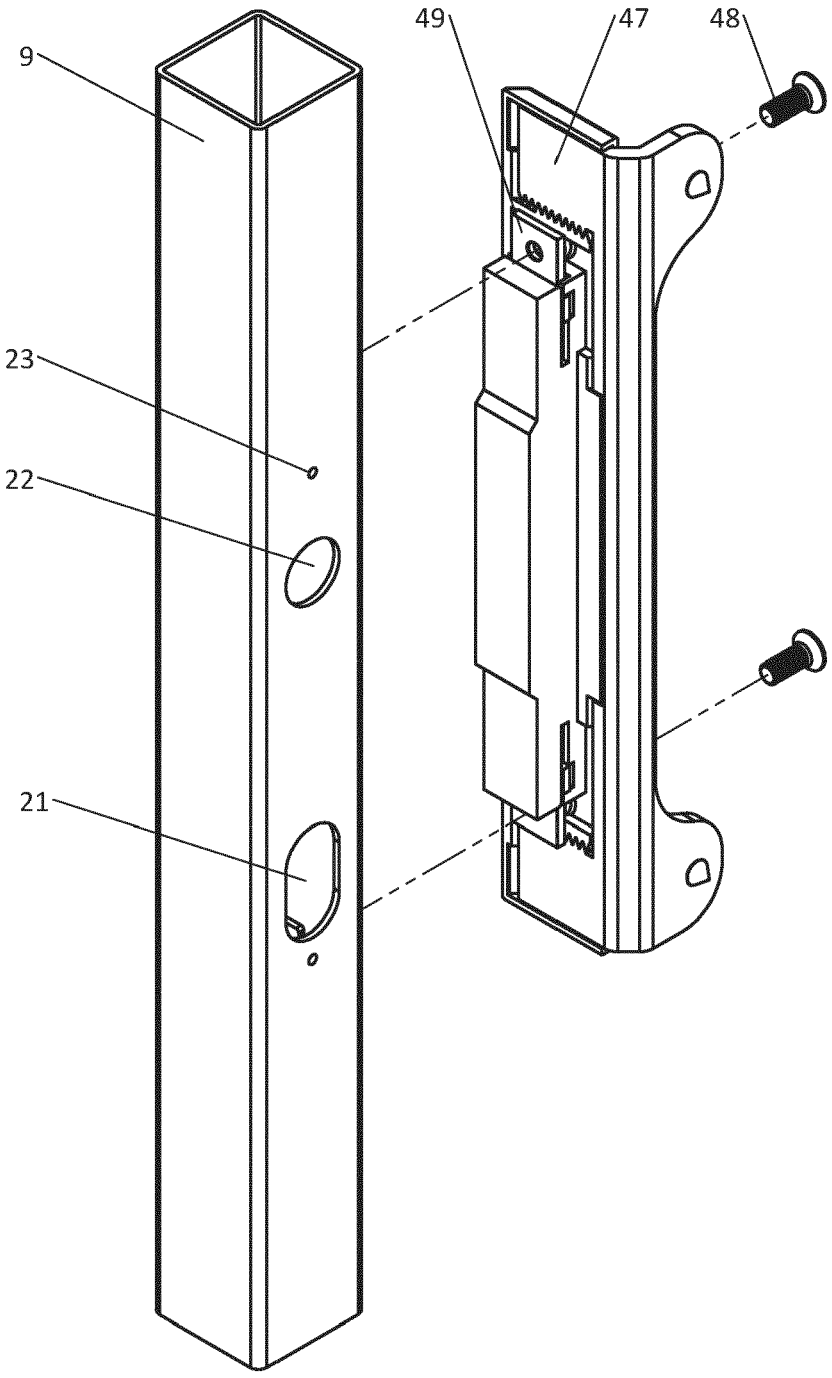

Fig. 8A

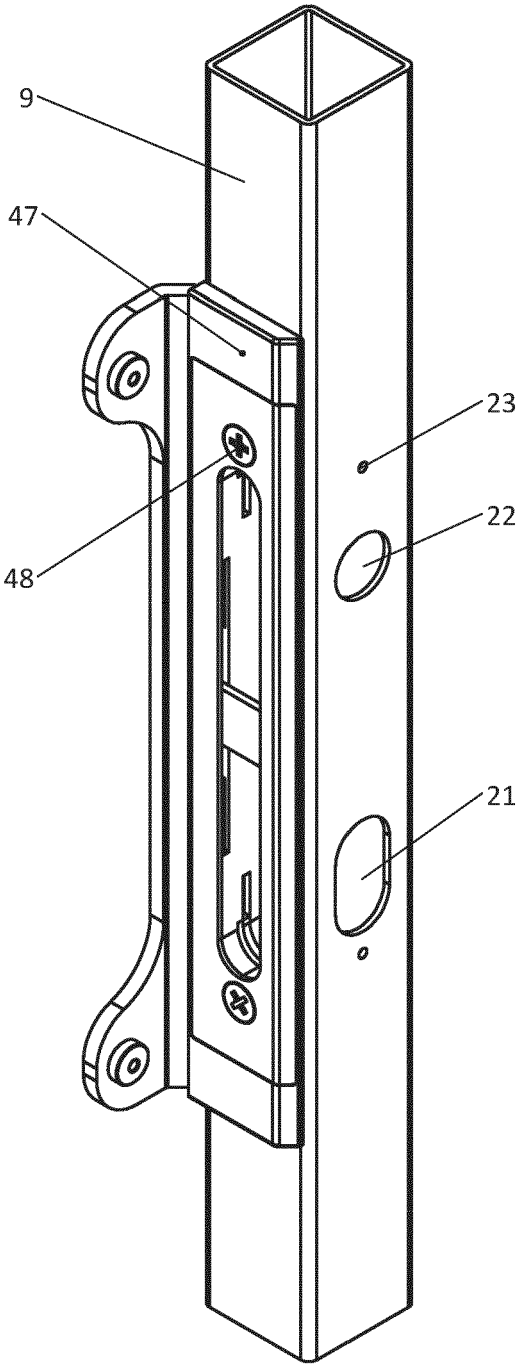

Fig. 8B

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EUROPEAN SEARCH REPORT

Application Number
EP 22 19 9283

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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E05B
E05C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	13 February 2023	Ansel, Yannick

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