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(54) **A DOUBLE WING GATE AND A METHOD FOR CONSTRUCTING THE SAME**
DOPPELFLÜGELTOR UND VERFAHREN ZUR KONSTRUKTION DAVON
PORTAIL À DOUBLE BATTANT ET SON PROCÉDÉ DE CONSTRUCTION

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(73) Proprietor: **Locinox**
8790 Waregem (BE)

(72) Inventor: **TALPE, Joseph**
8551 Heestert-Zwevegem (BE)

(74) Representative: **Gevers Patents**
De Kleetlaan 7A
1831 Diegem (BE)

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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.

[0004] US 6,684,669 B1 discloses a lock assembly for a double wing gate. The lock assembly comprises a lock and a striker. The lock is mounted on the outside of a lock gate wing with the latch bolt and the dead bolt extending through the latch member. The striker is provided on the striker gate wing as a separate unit mounted on the exterior surface of the latch member.

[0005] EP 3 153 645 A1 discloses a lock assembly for a double wing gate. The latch member of both gate wings is provided with an elongated rectangular opening to allow mounting a morticed lock assembly and a morticed striker assembly inside a respective latch member. The latch member of the striker gate wing has no further openings, whereas the latch member of the lock gate wing has openings for the lock handle assembly and the key

cylinder.

[0006] DE 298 16 593 U1 discloses a double wing gate with infill panels for fire protection. Each gate wing is provided with a handle assembly. The wings open in a mutually opposite direction and abut against one another in the closed position. A latch bolt is provided on each gate wing to engage a striker assembly on the other gate wing. A first pair of latch bolt and striker assembly is provided on the front side of the double wing gate and a second pair of latch bolt and striker assembly is provided on the rear side of the double wing gate.

Disclosure of the invention

[0007] It is an object of the present invention to provide a double wing gate which addresses the above mentioned downsides.

[0008] 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.

[0009] 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.

[0010] 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.

[0011] 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.

[0012] 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.

[0013] 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.

[0014] 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).

[0015] 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).

[0016] 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.

[0017] 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.

[0018] 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 additional 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.

[0019] 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.

[0020] 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.

[0021] 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

[0022] 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

[0023] 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.

[0024] 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.

[0025] 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.

[0026] 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.

[0027] 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.

[0028] 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.

[0029] 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.

[0030] 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 engag-

es an inner surface of the latch member 9. The fixation levers 34 are identical to those described in EP 3 153 645 A1.

[0031] 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 in one of the openings 23. The spindle 19.

[0032] 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.

[0033] 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.

[0034] 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.

[0035] 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.

[0036] 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.

[0037] 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.

[0038] 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.

[0039] 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.

[0040] Although aspects of the present invention 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 cov-

ering 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).

Patentansprüche

1. Ein Doppelflügeltor (1), welches Folgendes umfasst:

- einen Schlosstorflügel (2) und einen Türöffnerflügel (3), wobei jeder Torflügel einen rechteckigen Außenrahmen hat, welcher aus einer Vielzahl rohrförmiger Bauteile aufgebaut ist, einschließlich eines oberen Bauteils (6), eines unteren Bauteils (7), eines Pfostenbauteils (8), und eines Riegelbauteils (9);
- ein Schloss, eingeführt in das Riegelbauteil des Schlosstorflügels, wobei das Riegelbauteil des Schlossstores eine längliche Öffnung (20) umfasst, durch die das Schloss eingeführt werden kann, wobei das Schloss eine Stirnplatte (15) umfasst, welche die erwähnte längliche Öffnung bedeckt;
- eine Schlossgriffanordnung (11) und einen Schlossschließzylinder (10), eingeführt durch das Riegelbauteil des Schlossstores und das Schloss, wobei das Riegelbauteil des Schlossstores einen ersten Satz einander gegenüberliegender Öffnungen (22) umfasst, durch die sich

die Schlossgriffanordnung erstreckt, und einen zweiten Satz einander gegenüberliegender Öffnungen (21), durch die sich der Schlossschließzylinder erstreckt; und
 - eine Türöffneranordnung (12), montiert an dem Riegelbauteil des Türöffnertorflügels,

dadurch gekennzeichnet, dass das Riegelbauteil des Türöffnertorflügels eine längliche Öffnung (20), einen ersten Satz einander gegenüberliegender Öffnungen (22) und einen zweiten Satz einander gegenüberliegender Öffnung (21) umfasst, die identisch mit Zugehörigen im Riegelbauteil des Schlossflügels sind, wobei die Türöffneranordnung die längliche Öffnung des Riegelbauteils des Türöffnertorflügels bedeckt, und dadurch, dass das Doppelflügeltor ferner Folgendes umfasst:

- eine erste Abdeckung (13), montiert auf dem Riegelbauteil des Türöffnertorflügels, die eine Öffnung des erwähnten ersten Satzes einander gegenüberliegender Öffnungen und eine Öffnung des erwähnten zweiten Satzes einander gegenüberliegender Öffnungen bedeckt; und
- eine zweite Abdeckung (13), montiert auf dem Riegelbauteil des Türöffnertorflügels, die die andere Öffnung des erwähnten ersten Satzes einander gegenüberliegender Öffnungen und die andere Öffnung des erwähnten zweiten Satzes einander gegenüberliegender Öffnungen bedeckt.

2. Das Doppelflügeltor nach Anspruch 1, dadurch gekennzeichnet, dass die Türöffneranordnung Folgendes umfasst:

- eine Türöffner-Montageplatte (24), welche in eine Außenfläche des Riegelbauteils des Türöffnertorflügels eingreift, wobei die Türöffner-Montageplatte zumindest einen Befestigungshebelarm (37; 42) umfasst, der sich innerhalb des Riegelbauteils des Türöffnertorflügels befindet und der auf der Türöffner-Montageplatte beweglich zwischen einer zurückgezogenen Position und einer ausgestreckten Position montiert ist, wobei der Befestigungshebelarm durch die erwähnte längliche Öffnung eingeführt werden kann, wenn er sich in seiner zurückgezogenen Position befindet, und der Befestigungshebelarm in eine Innenfläche des Riegelbauteils des Türöffnertorflügels eingreift, wenn er sich in seiner ausgestreckten Position befindet, um die Türöffner-Montageplatte am Riegelbauteil des Türöffnertorflügels zu befestigen, wobei die Türöffner-Montageplatte die längliche Öffnung bevorzugt völlig bedeckt; und
- einen an der Türöffner-Montageplatte befestigten Türöffner (25).

3. Das Doppelflügeltor nach Anspruch 2, dadurch gekennzeichnet, dass der zumindest eine Befestigungshebelarm (37) zwischen seiner zurückgezogenen Position und seiner ausgestreckten Position drehbar ist.

4. Das Doppelflügeltor nach Anspruch 3, dadurch gekennzeichnet, dass die Türöffner-Montageplatte je Befestigungshebelarm Folgendes umfasst:

- einen Stopper (38) zur Begrenzung der Drehbewegung des Befestigungshebelarms, wobei der Stopper die ausgestreckte Position des Befestigungshebelarms definiert; und
- eine Befestigungsöffnung (35), welche sich durch die Türöffner-Montageplatte und durch den Befestigungshebelarm erstreckt, wobei der Türöffner durch ein drehbares Befestigungselement (26), insbesondere einen Bolzen, der sich durch den Türöffner und die Befestigungsöffnung erstreckt, an der Türöffner-Montageplatte befestigt ist, wobei der Befestigungshebelarm konfiguriert ist, um aus seiner zurückgezogenen Position in seine ausgestreckte Position gedreht zu werden, indem das erwähnte drehbare Befestigungselement in der Befestigungsöffnung gedreht wird.

5. Das Doppelflügeltor nach Anspruch 1, dadurch gekennzeichnet, dass die Türöffneranordnung einen Türöffner umfasst, der Folgendes hat:

- einen Körper, der durch die längliche Öffnung (20) in das Riegelbauteil des Türöffnertorflügels eingeführt ist;
- eine am Körper befestigte Frontplatte, wobei die Frontplatte die längliche Öffnung bevorzugt völlig bedeckt; und
- zumindest einen Befestigungshebelarm (49) auf dem erwähnten Körper, der sich innerhalb des Riegelbauteils des Türöffnertorflügels befindet und der auf dem erwähnten Körper beweglich zwischen einer zurückgezogenen Position und einer ausgestreckten Position montiert ist, wobei der Befestigungshebelarm durch die erwähnte längliche Öffnung eingeführt werden kann, wenn er sich in seiner zurückgezogenen Position befindet, und der Befestigungshebelarm in eine Innenfläche des Riegelbauteils des Türöffnertorflügels eingreift, wenn er sich in seiner ausgestreckten Position befindet, um den Türöffner am Riegelbauteil des Türöffnertorflügels zu befestigen.

6. Das Doppelflügeltor nach Anspruch 5, dadurch gekennzeichnet, dass der zumindest eine Befestigungshebelarm (49) zwischen seiner zurückgezogenen Position und seiner ausgestreckten Position

verschiebbar ist.

7. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** die erste Abdeckung und die zweite Abdeckung durch zumindest ein Befestigungselement (29), welches sich durch das Riegelbauteil des Türöffnertorflügels erstreckt, miteinander verbunden sind, wobei sich das zumindest eine Befestigungselement bevorzugt durch den erwähnten ersten oder den erwähnten zweiten Satz einander gegenüberliegender Öffnungen erstreckt. 5

8. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** die erste Abdeckung durch einen ersten Dummy-Griff (27, 28) gebildet ist und/oder die zweite Abdeckung durch einen zweiten Dummy-Griff (27, 28) gebildet ist. 10

9. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** das Schloss ferner Folgendes umfasst: 15
 - einen Körper (14), befestigt an der Stirnplatte, der in das Riegelbauteil des Schlosstorflügels eingeführt ist; 20
 - zumindest einen Befestigungshebelarm (34), der sich innerhalb des Riegelbauteils des Schlosstorflügels befindet und der auf dem erwähnten Körper beweglich zwischen einer zurückgezogenen Position und einer ausgestreckten Position montiert ist, wobei der Befestigungshebelarm durch die erwähnte längliche Öffnung eingeführt werden kann, wenn er sich in seiner zurückgezogenen Position befindet, und der Befestigungshebelarm in eine Innenfläche des Riegelbauteils des Schlosstorflügels eingreift, wenn er sich in seiner ausgestreckten Position befindet, um das Schloss am Riegelbauteil des Schlosstorflügels zu befestigen. 25

10. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** die Schlossgriffanordnung Folgendes umfasst: 30
 - eine Spindel (19), die sich durch das Riegelbauteil des Schlosstorflügels und durch das Schloss erstreckt; 35
 - einen ersten Griff (17), montiert an einem Ende der Spindel; und 40
 - einen zweiten Griff (17), montiert am anderen Ende der Spindel. 45

11. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** das Riegelbauteil des Türöffnertorflügels identisch mit dem Riegelbauteil des Schlosstorflügels ist. 50

12. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** die Schlossgriffanordnung ferner Folgendes umfasst:

- zumindest eine erste Abdeckblende (16), die die erwähnte eine Öffnung des ersten Satzes einander gegenüberliegender Öffnungen und die erwähnte eine Öffnung des zweiten Satzes einander gegenüberliegender Öffnungen bedeckt; und 5
- zumindest eine zweite Abdeckblende (16), die die erwähnte andere Öffnung des ersten Satzes einander gegenüberliegender Öffnungen und die erwähnte andere Öffnung des zweiten Satzes einander gegenüberliegender Öffnungen bedeckt, wobei, bevorzugt, das Riegelbauteil jedes Torflügels zumindest einen weiteren Satz einander gegenüberliegender Öffnungen (23) umfasst, wobei die zumindest eine erste Abdeckblende mittels Befestigungsmitteln, die sich innerhalb eines des erwähnten zumindest einen weiteren Satzes einander gegenüberliegender Öffnungen erstrecken, am Riegelbauteil des Schlosstorflügels befestigt ist, und die zumindest eine zweite Abdeckblende mittels Befestigungsmitteln, die sich innerhalb des anderen des erwähnten zumindest einen weiteren Satzes einander gegenüberliegender Öffnungen erstrecken, am Riegelbauteil des Schlosstorflügels befestigt ist, und 10

wobei, noch besser, die erste Abdeckung ferner die erwähnte eine Öffnung des erwähnten zumindest einen weiteren Satzes einander gegenüberliegender Öffnungen abdeckt und die zweite Abdeckung ferner die erwähnte andere Öffnung des erwähnten zumindest einen weiteren Satzes einander gegenüberliegender Öffnungen abdeckt. 15

13. Das Doppelflügeltor nach irgendeinem der vorigen Ansprüche, **dadurch gekennzeichnet, dass** jedes Riegelbauteil einen rechteckigen Querschnitt hat, wobei, bevorzugt, jeder rechteckige Querschnitt eine erste Seite, eine zweite Seite, eine dritte Seite, und eine vierte Seite hat, wobei die erste Seite des Riegelbauteils des Schlosstorflügels zur ersten Seite des Riegelbauteils des Türöffnertorflügels gerichtet ist, die zweite Seite jedes Riegelbauteils ihrer ersten Seite gegenüberliegt, wobei die länglichen Öffnungen in der ersten Seite eines zugehörigen Riegelbauteils liegen, wobei die erwähnte eine Öffnung des ersten Satzes einander gegenüberliegender Öffnungen und die erwähnte eine Öffnung des zweiten Satzes einander gegenüberliegender Öffnungen in der dritten Seite eines zugehörigen Riegelbauteils liegen, und wobei die erwähnte andere Öffnung des ersten Satzes einander gegenüberliegender Öffnungen und die erwähnte andere Öffnung des zweiten 20

Satzes einander gegenüberliegender Öffnung in der vierten Seite eines zugehörigen Riegelbauteils liegen.

14. Ein Verfahren zur Konstruktion eines Doppelflügeltores (1) nach irgendeinem der vorigen Ansprüche, wobei das Verfahren umfasst:
- Einführen des Schlosses (14) in das Riegelbauteil (9) des Schlosstorflügels (2) durch die längliche Öffnung (20) und anschließend Befestigen des Schlosses am Riegelbauteil des Schlosstorflügels;
 - Platzieren von zumindest einem Teil (19) der Schlossgriffanordnung (11) durch den ersten Satz einander gegenüberliegender Öffnungen (22) und durch das Schloss;
 - Platzieren von zumindest einem Teil (19) des Schlossschließzylinders (10) durch den zweiten Satz einander gegenüberliegender Öffnungen (21) und durch das Schloss; und
 - Montieren der Türöffneranordnung (12), der ersten Abdeckung (13) und der zweiten Abdeckung (13) am Riegelbauteil (9) des Türöffnerstorflügels (3).

Revendications

1. Portail à double battant (1) comprenant :
- un battant de portail de serrure (2) et un battant de portail de gâche (3), chaque battant de portail ayant un cadre extérieur rectangulaire qui est construit à partir d'une pluralité d'éléments tubulaires comprenant un élément supérieur (6), un élément inférieur (7), un élément de poteau (8) et un organe de verrouillage (9) ;
 - une serrure insérée dans l'organe de verrouillage du battant de portail de serrure, l'organe de verrouillage du portail de serrure comprenant une ouverture allongée (20) à travers laquelle la serrure peut être insérée, la serrure comprenant une plaque frontale (15) qui recouvre ladite ouverture allongée ;
 - un ensemble de poignée de serrure (11) et un cylindre de clé de serrure (10) insérés à travers l'organe de verrouillage du portail de serrure et la serrure, l'organe de verrouillage du portail de serrure comprenant une première série d'ouvertures (22) mutuellement opposées à travers lesquelles l'ensemble de poignée de serrure s'étend et une deuxième série d'ouvertures (21) mutuellement opposées à travers lesquelles le cylindre de clé de serrure s'étend ; et
 - un ensemble de gâche (12) monté sur l'organe de verrouillage du battant de portail de gâche,

caractérisé en ce que l'organe de verrouillage du battant de portail de gâche comprend une ouverture allongée (20), un premier ensemble d'ouvertures mutuellement opposées (22) et un deuxième ensemble d'ouvertures mutuellement opposées (21) qui sont identiques aux ouvertures respectives de l'organe de verrouillage du battant de portail de serrure, l'ensemble de gâche recouvrant l'ouverture allongée de l'organe de verrouillage du battant de portail de gâche, et **en ce que** le portail à double battant comprend en outre :

- une première couverture (13) montée sur l'organe de verrouillage du battant de portail de gâche et recouvrant une ouverture de ladite première série d'ouvertures mutuellement opposées et une ouverture de ladite deuxième série d'ouvertures mutuellement opposées ; et
- une deuxième couverture (13) montée sur l'organe de verrouillage du battant de portail de gâche et recouvrant l'autre ouverture de ladite première série d'ouvertures mutuellement opposées et l'autre ouverture de ladite deuxième série d'ouvertures mutuellement opposées.

2. Portail à double battant selon la revendication 1, **caractérisé en ce que** l'ensemble de gâche comprend :

- une plaque de montage de gâche (24) qui s'engage dans une surface extérieure de l'organe de verrouillage du battant de portail de gâche, la plaque de montage de gâche comprenant au moins un levier de fixation (37 ; 42) situé à l'intérieur de l'organe de verrouillage du battant de portail de gâche et monté mobile sur la plaque de montage de gâche entre une position rétractée et une position étendue, le levier de fixation pouvant être inséré à travers ladite ouverture allongée lorsqu'il est en position rétractée et le levier de fixation s'engageant sur une surface intérieure de l'organe de verrouillage du battant de portail de gâche lorsqu'il est en position étendue pour fixer la plaque de montage de gâche à l'organe de verrouillage du battant de portail de gâche, la plaque de montage de gâche recouvrant de préférence complètement l'ouverture allongée ; et
- une gâche (25) fixée à la plaque de montage de gâche.

3. Portail à double battant selon la revendication 2, **caractérisé en ce que** ledit au moins un levier de fixation (37) est rotatif entre sa position rétractée et sa position déployée.

4. Portail à double battant selon la revendication 3, **caractérisé en ce que** la plaque de montage de gâche

comprend, pour chaque levier de fixation :

- une butée (38) pour limiter un mouvement de rotation du levier de fixation, la butée définissant la position étendue du levier de fixation ; et
- une ouverture de fixation (35) qui s'étend à travers la plaque de montage de gâche et à travers le levier de fixation, la gâche étant fixée à la plaque de montage de gâche par un élément de fixation rotatif (26), en particulier un boulon, s'étendant à travers la gâche et l'ouverture de fixation,

dans lequel le levier de fixation est configuré pour être tourné de sa position rétractée à sa position étendue en tournant ledit élément de fixation rotatif dans l'ouverture de fixation.

5. Portail à double battant selon la revendication 1, **caractérisé en ce que** l'ensemble de gâche comprend une gâche (47) ayant :

- un corps qui est inséré à travers l'ouverture allongée (20) dans l'organe de verrouillage du battant de portail de gâche ;
- une plaque frontale fixée au corps, la plaque frontale couvrant de préférence complètement l'ouverture allongée ; et
- au moins un levier de fixation (49) sur ledit corps qui est situé à l'intérieur de l'organe de verrouillage du battant de portail de gâche et qui est monté mobile sur ledit corps entre une position rétractée et une position étendue, le levier de fixation pouvant être inséré à travers ladite ouverture allongée lorsqu'il est dans sa position rétractée et le levier de fixation s'engageant sur une surface intérieure de l'organe de verrouillage du battant de portail de gâche lorsqu'il est dans sa position étendue pour fixer la gâche à l'organe de verrouillage du battant de portail de gâche.

6. Portail à double battant selon la revendication 5, **caractérisé en ce que** ledit au moins un levier de fixation (49) est coulissant entre sa position rétractée et sa position étendue.

7. Portail à double battant selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la première couverture et la deuxième couverture sont reliés l'un à l'autre par au moins un élément de fixation (29) s'étendant à travers l'organe de verrouillage du battant de portail de gâche, ledit au moins un élément de fixation s'étendant de préférence à travers ladite première ou ladite deuxième série d'ouvertures mutuellement opposées.

8. Portail à double battant selon l'une quelconque des

revendications précédentes, **caractérisé en ce que** la première couverture est formée par une première fausse poignée (27, 28) et/ou la couverture est formée par une deuxième fausse poignée (27, 28).

9. Portail à double battant selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la serrure comprend en outre :

- un corps (14) fixé à la plaque frontale et qui est inséré dans l'organe de verrouillage du battant de portail de serrure ;
- au moins un levier de fixation (34) situé à l'intérieur de l'organe de verrouillage du battant de portail de serrure et monté mobile sur ledit corps entre une position rétractée et une position déployée, le levier de fixation pouvant être inséré à travers ladite ouverture allongée lorsqu'il est en position rétractée et le levier de fixation s'engageant sur une surface intérieure de l'organe de verrouillage du battant de portail de serrure lorsqu'il est en position déployée afin de fixer la serrure à l'organe de verrouillage du battant de portail de serrure.

10. Portail à double battant selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'ensemble de poignée de serrure comprend :

- une broche (19) s'étendant à travers l'organe de verrouillage du battant de portail de serrure et à travers la serrure ;
- une première poignée (17) montée sur une extrémité de la broche ; et
- une deuxième poignée (17) montée à l'autre extrémité de la broche.

11. Portail à double battant selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'organe de verrouillage du battant de portail de gâche est identique à l'organe de verrouillage du battant de portail de serrure.

12. Portail à double battant selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'ensemble de poignée de serrure comprend en outre :

- au moins un premier écusson (16) recouvrant ladite une ouverture de la première série d'ouvertures mutuellement opposées et ladite une ouverture de la deuxième série d'ouvertures mutuellement opposées ; et
- au moins un deuxième écusson (16) recouvrant ladite autre ouverture de la première série d'ouvertures mutuellement opposées et ladite autre ouverture de la deuxième série d'ouvertures mutuellement opposées,

dans lequel, de préférence, l'organe de verrouillage de chaque battant de portail comprend au moins une autre série d'ouvertures mutuellement opposées (23), ledit au moins un premier écusson étant fixé à l'organe de verrouillage du battant de portail de serrure par des moyens de fixation s'étendant à l'intérieur de l'un desdits au moins une autre série d'ouvertures mutuellement opposées et ledit au moins un deuxième écusson étant fixé à l'organe de verrouillage du battant de portail de serrure par des moyens de fixation s'étendant à l'intérieur de l'autre dudit au moins une autre série d'ouvertures mutuellement opposées, et dans lequel, de préférence même, la première couverture recouvre en outre ladite une desdites au moins une autre série d'ouvertures mutuellement opposées et la deuxième couverture recouvre en outre ladite autre de ladite au moins une autre série d'ouvertures mutuellement opposées.

et à travers la serrure ;

- placer au moins une partie du cylindre de clé de serrure (10) à travers la deuxième série d'ouvertures (21) qui se font face et à travers la serrure ; et
- monter l'ensemble de gâche (12), la première couverture (13) et la deuxième couverture (13) sur l'organe de verrouillage (9) du battant de portail de gâche (3).

13. Portail à double battant selon l'une quelconque des revendications précédentes, **caractérisé en ce que** chaque organe de verrouillage présente une section transversale rectangulaire, dans lequel, de préférence, chaque section transversale rectangulaire présente un premier côté, un deuxième côté, un troisième côté et un quatrième côté, le premier côté de l'organe de verrouillage du battant de portail de serrure faisant face au premier côté de l'organe de verrouillage du battant de portail de gâche, le deuxième côté de chaque organe de verrouillage étant opposé à son premier côté, les ouvertures allongées sont situées sur le premier côté d'un organe de verrouillage respectif, ladite une ouverture de la première série d'ouvertures mutuellement opposées et ladite une ouverture de la deuxième série d'ouvertures mutuellement opposées étant situées sur le troisième côté d'un organe de verrouillage respectif, et ladite autre ouverture de la première série d'ouvertures mutuellement opposées et ladite autre ouverture de la deuxième série d'ouvertures mutuellement opposées étant situées sur le quatrième côté d'un organe de verrouillage respectif.
14. Procédé de construction d'un portail à double battant (1) selon l'une quelconque des revendications précédentes, le procédé comprenant:

- insérer la serrure (14) dans l'organe de verrouillage (9) du battant de portail de serrure (2) à travers l'ouverture allongée (20) et fixer ensuite la serrure à l'organe de verrouillage du battant de portail de serrure ;
- placer au moins une partie (19) de l'ensemble de poignée de serrure (11) à travers la première série d'ouvertures (22) mutuellement opposées

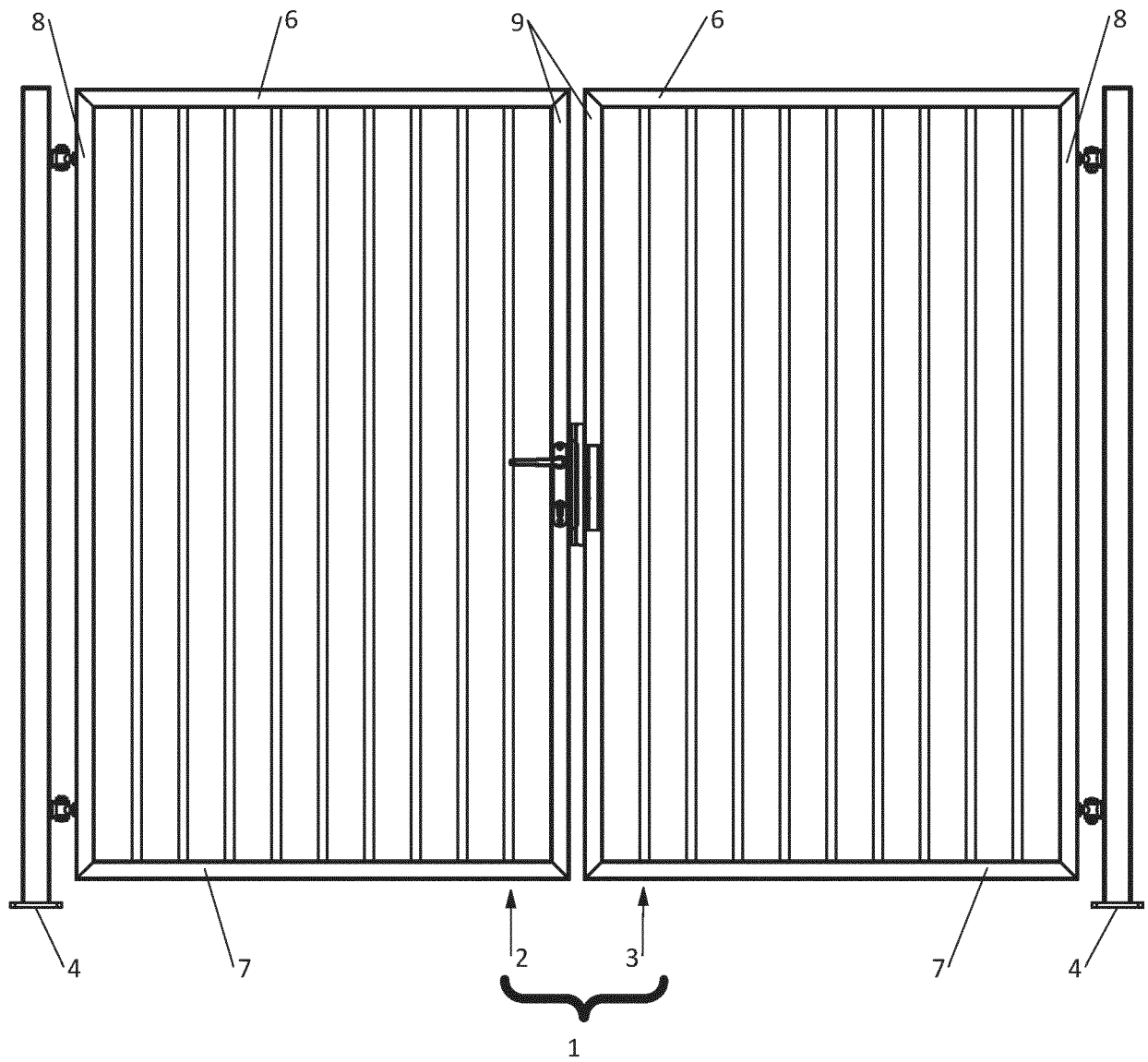


Fig. 1

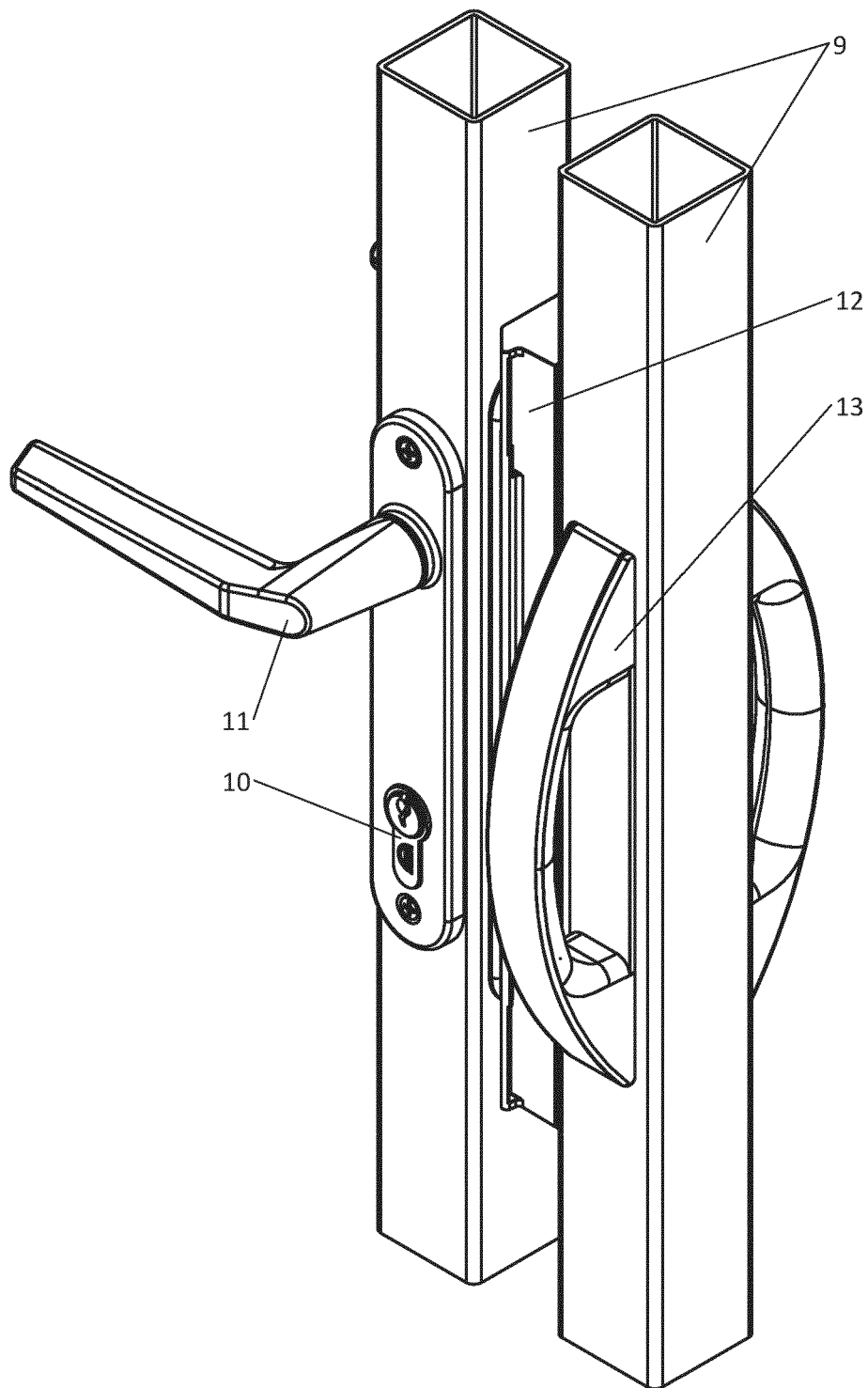


Fig. 2

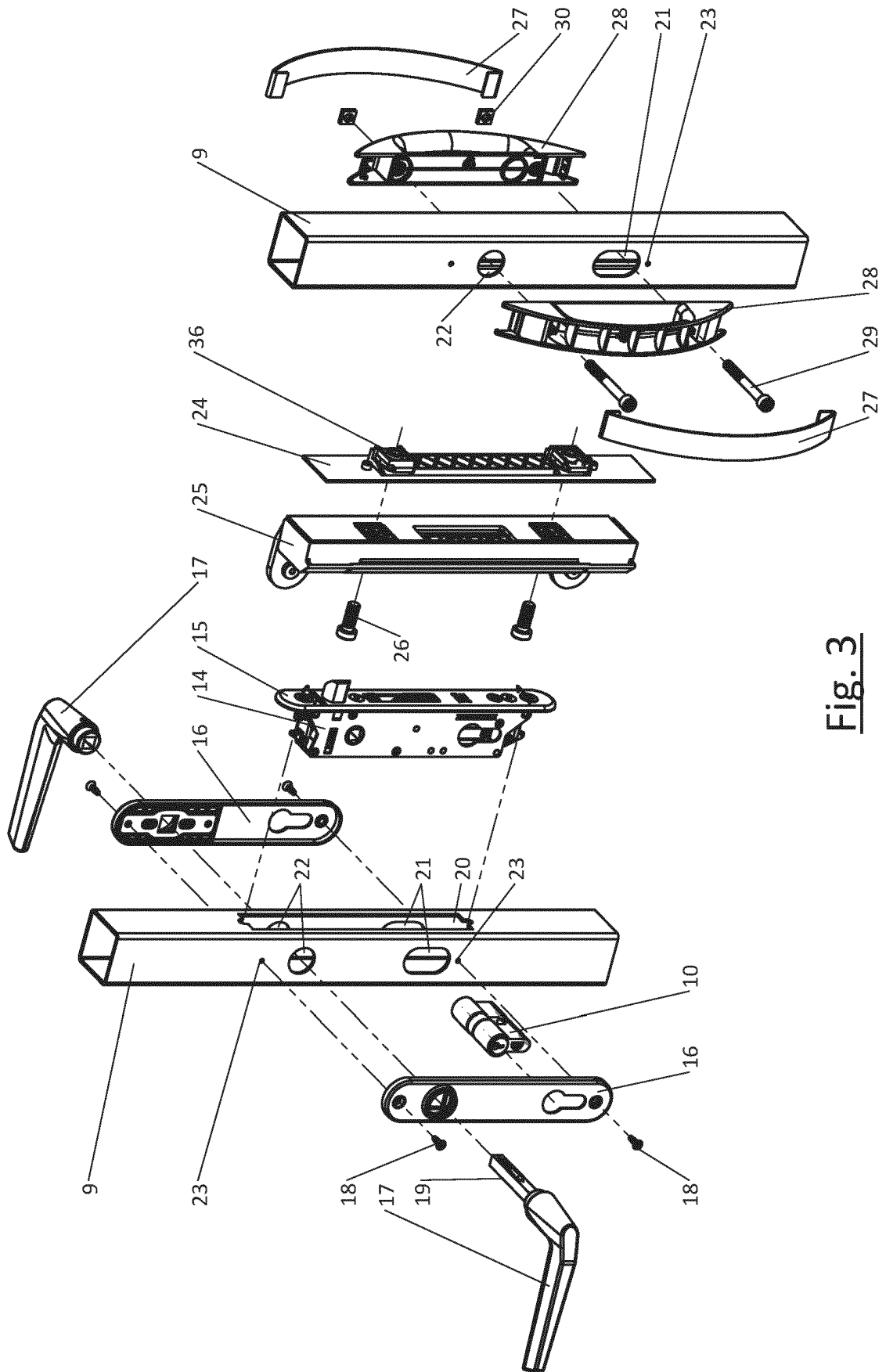


Fig. 3

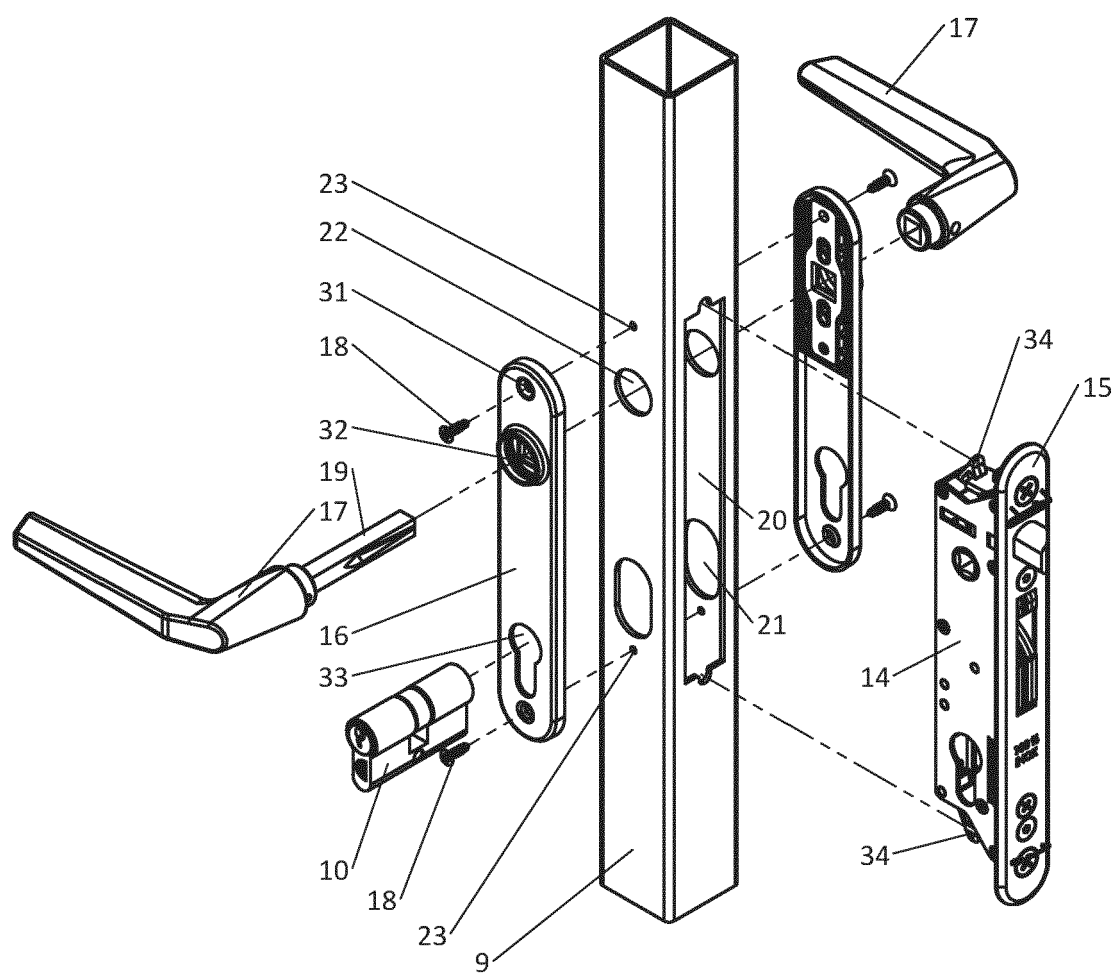


Fig. 4

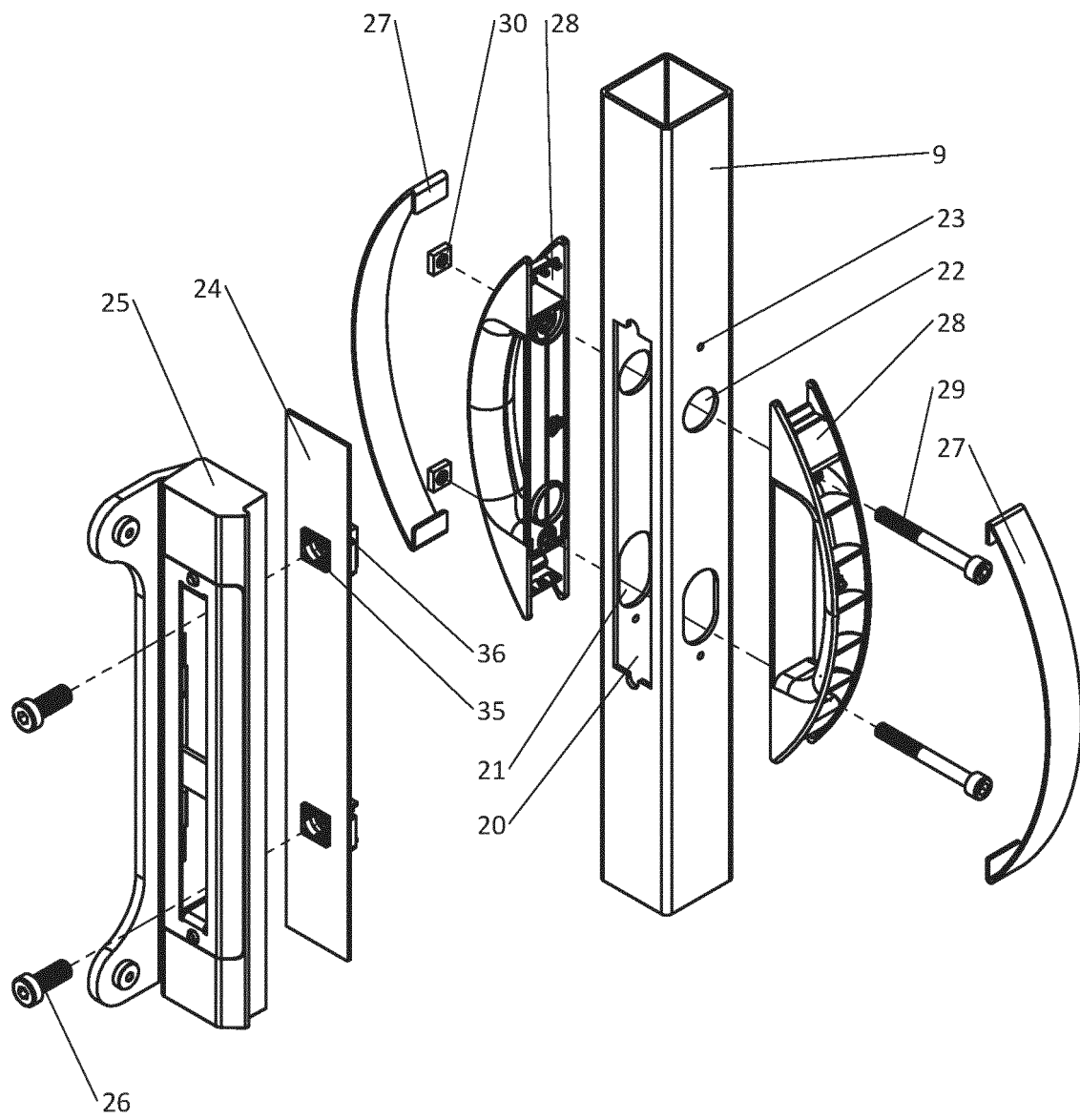


Fig. 5

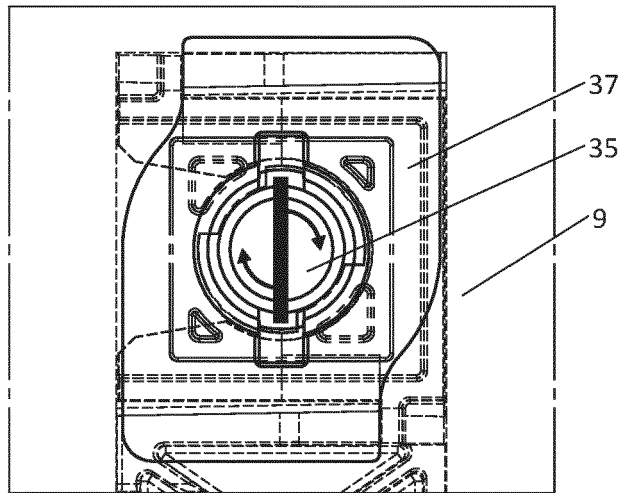


Fig. 6A

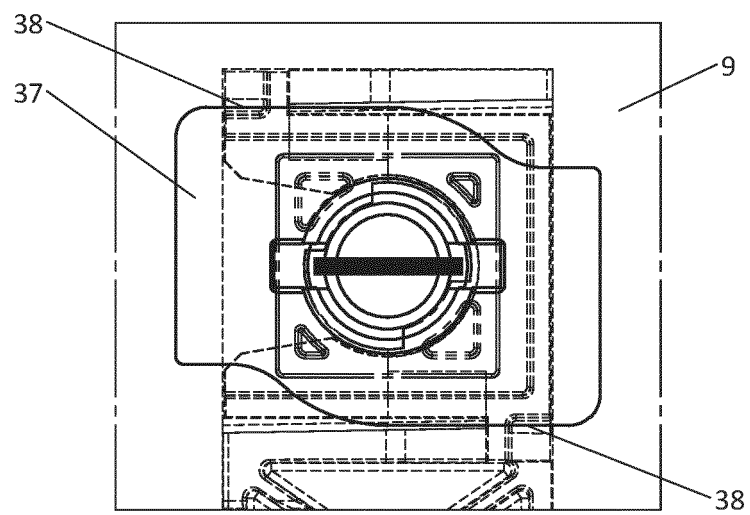


Fig. 6B

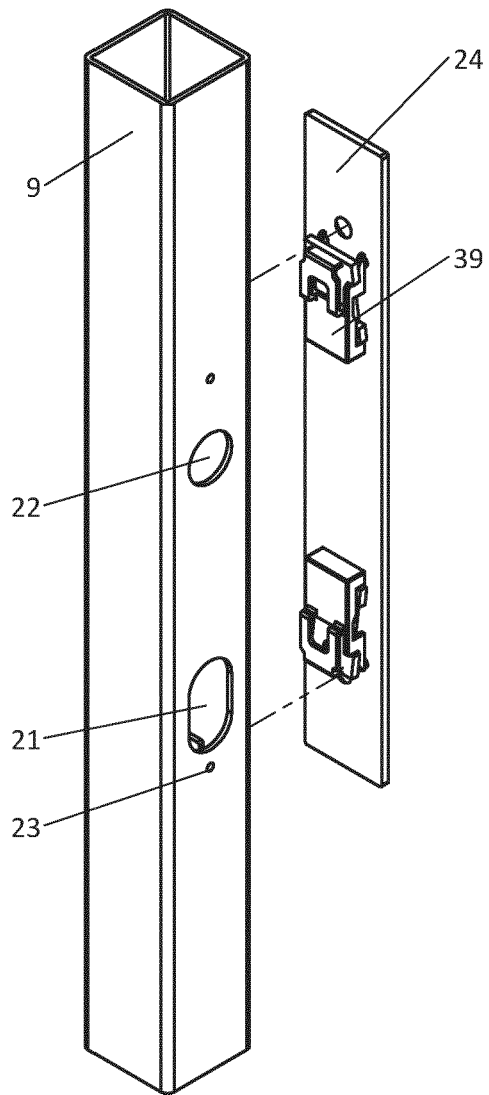


Fig. 7A

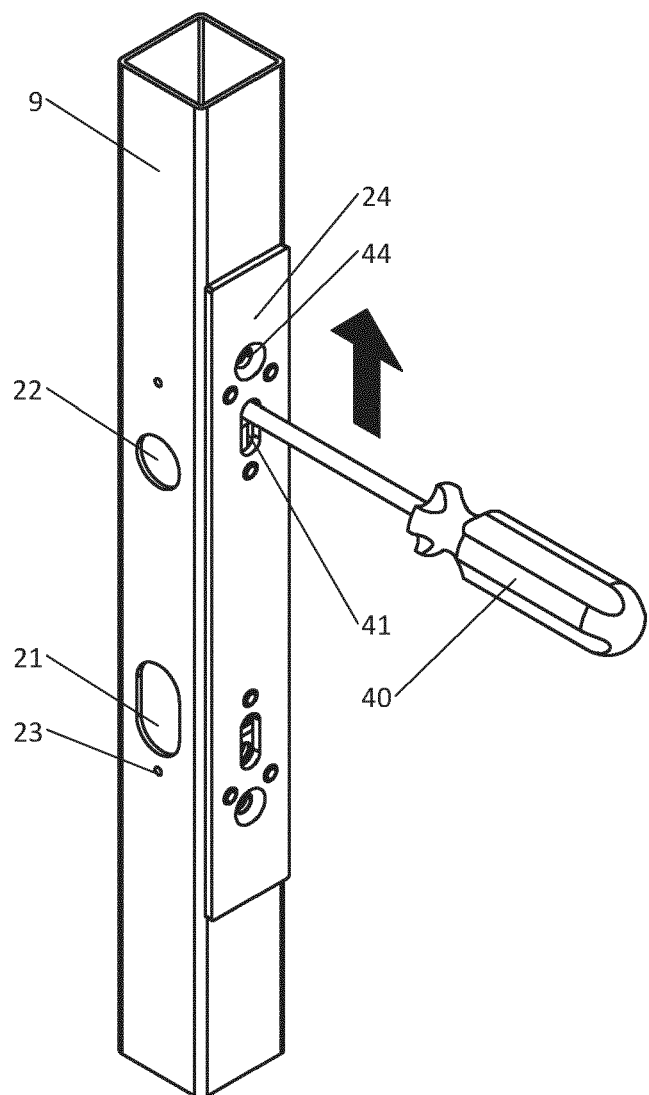


Fig. 7B

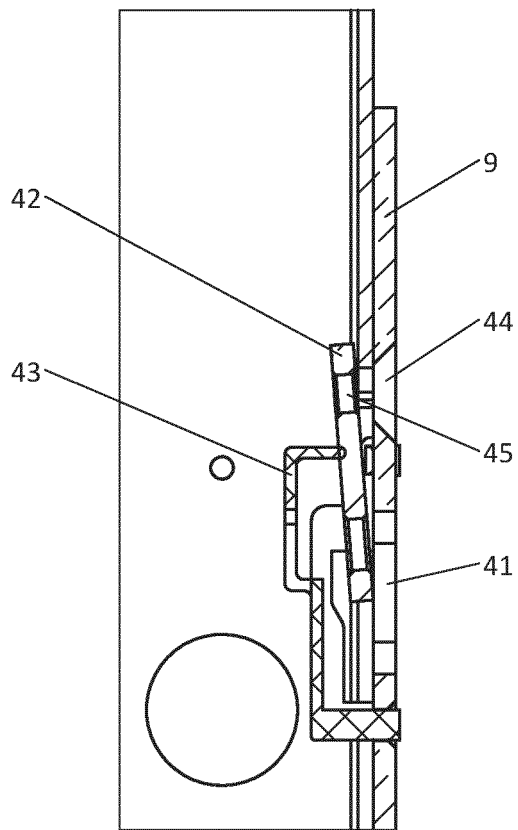


Fig. 7C

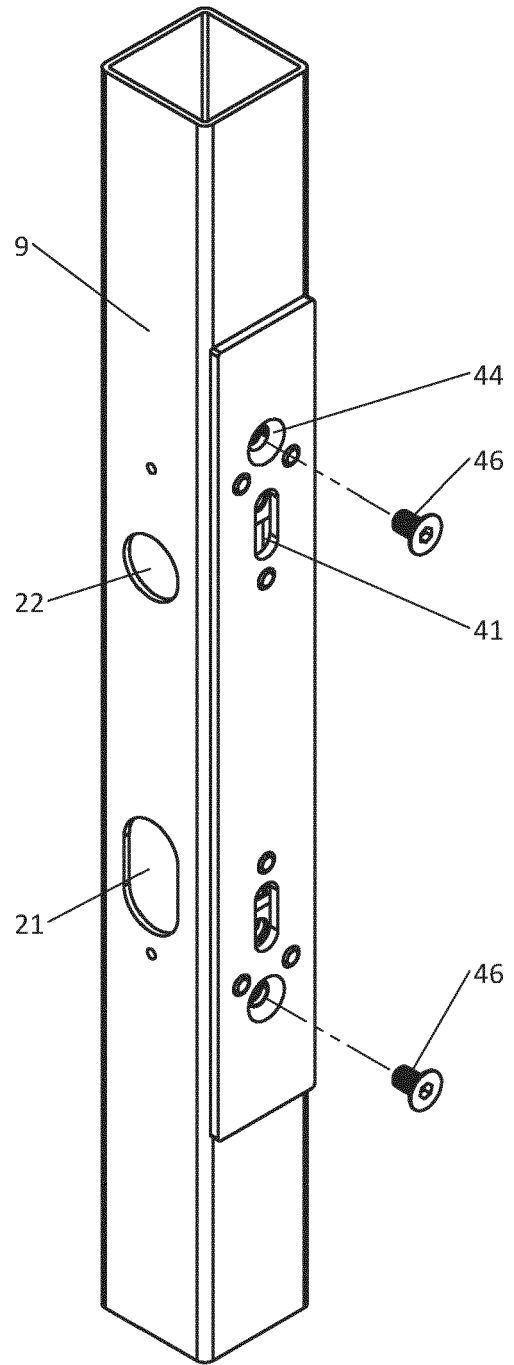


Fig. 7D

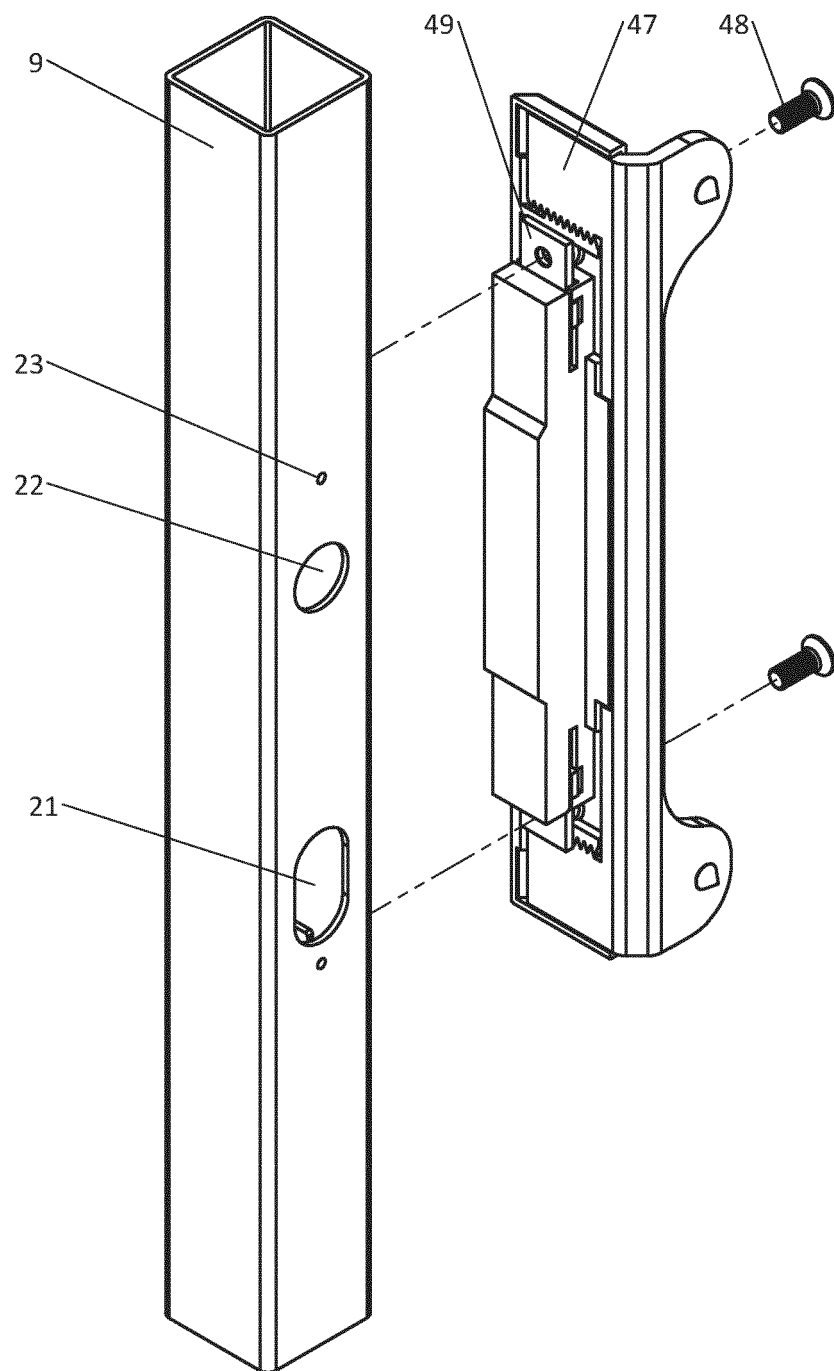


Fig. 8A

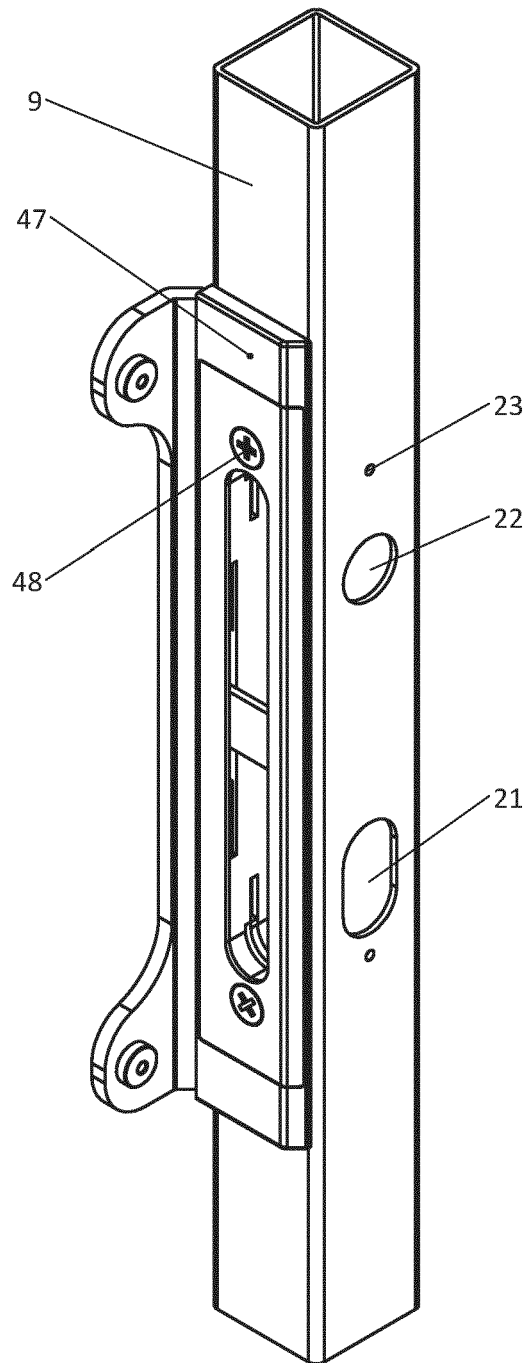


Fig. 8B

REFERENCES CITED IN THE DESCRIPTION

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