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(54) LOCK COMPRISING A BOLT

(57) Lock (1) comprising a first lock part (2) with a bolt (4) and a second lock part with a fixation element (5), comprising a passage (6) through which the bolt (4) is slidably, wherein the first and the second lock part (2, 3) are configured to be secured to a first and a second gate member (9, 10), respectively, of a gate device, at least the second gate member (10) being positioned so as to be rotatable, wherein the first or the second lock part (2, 3) comprises a first retaining element (7a) with a first holding part (8a) in order to counteract the rotation

of the second gate member (10), wherein, for each said position of the fixation element (5), the first retaining element (7a) can adopt at least one first and one second position with respect to the gate device, wherein the distance between the passage (6) and the first holding part (8a) is different in the first and the second position, so that the position of the first retaining element (7a) determines the direction of rotation (C) of the second gate member (10), and assembly comprising a gate device and such a lock (1).

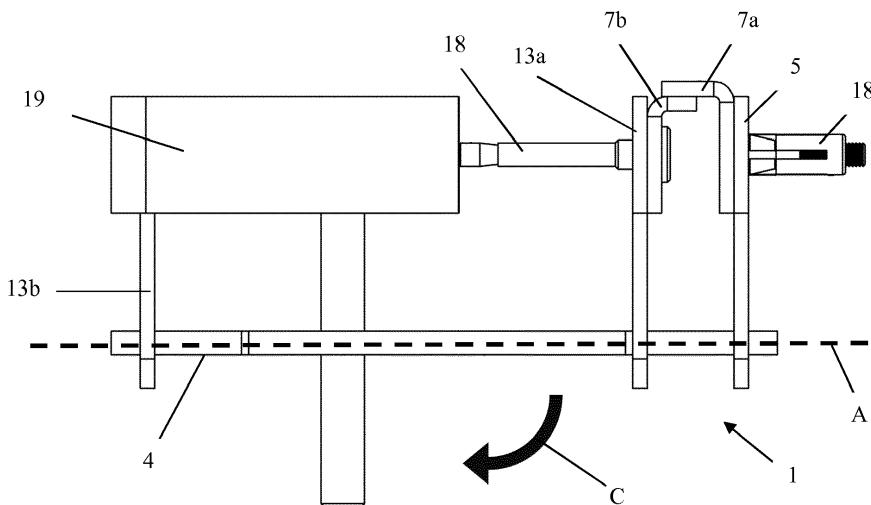


Fig. 3

Description

[0001] This invention relates on the one hand to a lock comprising a first and a second lock part, wherein the second lock part comprises a slidable bolt, the first lock part comprises a fixation element having a passage extending in a first direction, through which the bolt is slideable, and the first or the second lock part comprises a first retaining element with a first holding part, and the first and second lock part are configured to be respectively secured to a first and a second gate member of a gate device, at least the second gate member being positioned so as to be rotatable about an upright axle between an open and a closed state of the gate device, in the closed state of the gate device the first holding part extends past the gate member to which it is secured, viewed in the first direction, to limit the rotation of the second gate member about the upright axle, and the position of the bolt with respect to the second gate member and the position of the fixation element with respect to the first gate member allows a sliding of the bolt in essentially the first direction towards the first gate member and through the passage in order to bolt the gate device.

[0002] This invention relates on the other hand to an assembly comprising such a lock and a gate device and also to a method of connecting such a lock to a gate device.

[0003] Such locks are used for bolting gate devices. These gate devices may be for example single or double gate devices, which are used to create a closable entrance in a fence, between walls, between buildings, etc. Gate devices are thus used in order to be able to close an entrance between two spaces.

[0004] In the case of single gate devices, the first gate member is then a post, for example, which is part of a fence and/or is fastened to a wall, while the second gate member is then a gate, for example, which is rotatably connected to a post which is part of the fence and/or is fastened to a wall. The gate here can then rotate between a closed state, in which the gate closes the entrance, and an open state, in which the gate enables entry. In the case of double gate devices, the first and the second gate member are then each rotatably connected to a post which is part of a fence and/or is fastened to a wall, for example. The lock is used for both a single and a double gate device to bolt the gate members with respect to each other in the closed position, so that the gate device cannot be opened unless desired.

[0005] Locks comprising a slidable bolt are considered by many to be user-friendly locks. This bolt is then usually configured to be slideable in a horizontal direction. The upright axle is then usually an approximately vertical axle. It is easy to slide the bolt horizontally in the direction of the first gate member and thus through the passage in order to bolt the gate device. Additionally such locks often comprise a bolting mechanism to hold the bolt in the passage. This bolting mechanism may for example comprise a padlock and a bolting passage which is part of the bolt

and in which the padlock is fittable.

[0006] The problem with such existing locks is that these locks afford little freedom of choice with regard to the placement of the locks, the direction of rotation of the gate device and the type of gate device. Placing the second lock part on the second gate member in fact determines the position of the bolt. Since the positions of the bolt and the passage must correspond to each other in order for the bolt to also be able to be slid effectively through the passage in the closed state of the gate device, the position of the second lock part with respect to the second gate member also establishes the position of the first lock part with respect to the first gate member. Each lock then also has its specific direction of rotation in this case. There is therefore not a single standard lock among the existing locks which makes all desired directions of rotation and/or positions on the gate devices possible.

[0007] Such existing locks are often welded onto the gate device. This also means that the person ordering the gate device already needs to know where he/she wants the bolt and/or which direction of rotation he/she wants, and that he/she cannot simply change the direction of rotation of the gate (turning inwards or turning outwards). But when one purchases a gate, it is not always clear which direction of rotation will be the best. Additionally, this also means that it is difficult to replace the lock when it becomes broken or worn down. The used gate devices are also often adapted to this type of lock, so that often one cannot use standard gate devices which can also be used for other types of locks not comprising any bolt.

[0008] Therefore, the object of this invention is to provide a lock comprising a slidable bolt, this lock allowing a greater freedom of choice in regard to direction of rotation, placement on the gate device, and type of gate device.

[0009] The object of the invention is achieved by providing a lock comprising the characteristics given in the first paragraph, wherein, for each said position of the fixation element with respect to the first gate member, the first retaining element can adopt at least one first position and one second position with respect to the gate device, wherein the distance between the passage and the first holding part is different in the first and the second position, viewed in a direction perpendicular to the plane formed by the first direction and the upright axle in the closed state of the gate device, so that the position of the retaining element determines the direction of rotation of the second gate member.

[0010] With this lock, it is possible to select the desired position to be adopted by the first retaining element, even when the position of the fixation element is fixed. This means that it is possible to at least choose between said first and second position of the retaining element, regardless of the positions of the bolt and the fixation element. As said distance between the passage and the holding element, in said first position and the second position,

differs and this viewed in a plane perpendicular to the first direction and the upright axle in the closed state of the gate device, this means that the holding part will adopt a different position with respect to the second gate member in the closed state of the gate device. Since the second gate member rotates about the upright axle, this position of the retaining element will then also partly determine the direction of rotation for the second gate member. For example, when a person is located at the front side of a gate device and the bolt is also located at this front side, then, for example in the first position of the first holding part, the first holding part will be closer to this person than in the second position of the first holding part. This will then ensure, for example, that, in the first position of the first holding part, the second gate member can only be turned inwards, and thus away from the person, while in the second position of the first holding part the second gate member can only be turned outwards and thus towards the person, or vice versa. In other words, in this case one has the freedom of choice between an inwardly turning or an outwardly turning second gate member, and this independently of the position of the bolt. Such a lock may be fastened to the gate device with the aid of, *inter alia*, welding, fastening elements, glue, etc. Thanks to this large freedom of choice, this lock may then also be fastened to many types of gate devices.

[0011] A gate device is usually employed to be able to close the entrance between two spaces when so desired. The second lock part is then fastenable for example to the second gate member in such a manner that the bolt can only assume two slidable positions with respect to the second gate member, namely, a first position in which the bolt extends into the one space at a certain distance from the second gate member in the closed state of the gate device and a second position in which the bolt extends into the other space at a certain distance from the second gate member in the closed state of the gate device. Here, the position of the bolt will therefore determine the space into which the passage has to extend in the closed state of the gate device and the distance from the first gate member. However, as indicated above, there is a freedom of choice here with regard to the position of the retaining element, so that the position of the bolt does not determine the direction of rotation.

[0012] Preferably, the first lock part comprises the first retaining element. For each said position of the fixation element with respect to the first gate member, the retaining element here may then adopt at least a first and a second position with respect to the first gate member, wherein the distance between the passage and the holding part is different in the first and the second position, viewed in a direction perpendicular to the plane formed by the first direction and the upright axle, so that the position of the first retaining element determines the direction of rotation of the second gate member. The first lock part is then configured to be fastened to the first gate member in such a manner that the first holding part extends past the first gate member, viewed in the first di-

rection. This is so as to counteract the rotation of the second gate member about the upright axle past this first holding part.

[0013] Preferably, the first position of the first retaining element is almost the mirror image of the second position of the first retaining element, viewed in the plane formed by the first direction and the upright axle in the closed state of the gate device. In both positions, the first holding part can then perform its function in a satisfactory manner. Furthermore preferably, said upright axle is the vertical axle and said first direction is a horizontal direction during use of the lock.

[0014] In a highly preferable embodiment, in the closed state of the gate device, the bolt and the passage are configured to extend at a distance from the respective gate members, viewed in a direction perpendicular to the plane formed by the first direction and the upright axle in the closed state of the gate device. In this case, it is possible to choose on which side of the gate device the bolt is situated. Furthermore, the bolt is situated at a distance from the gate device in the closed state of the gate device so that the bolt is easy to handle. In this case, one has the freedom of choice between an inwardly turning or an outwardly turning second gate member, regardless of the position of the bolt with respect to the gate members.

[0015] In a preferable embodiment, the first retaining element comprises a first and a second plate-shaped leg which together form an angle, wherein this first leg is the first holding part and wherein the first retaining element is configured to be fastened, and in both the first and the second position of the first retaining element, in such a manner that the first holding part extends almost parallel with the plane formed by the first direction and the upright axle in the closed state of the gate device. In this case, the first holding part is very capable of limiting the rotation of the second gate member about the upright axle. It is then also readily possible to choose the distance of the first holding part from the passage by making the retaining element a mirror image of said plane. Furthermore preferably, said angle is around 90°. The second leg is then configured to extend almost perpendicular to the first direction.

[0016] In a highly preferable embodiment, the first or the second lock part comprises the first retaining element and respectively the second or the first lock part comprises a second retaining element, wherein this second retaining element comprises a second holding part which is configured to interact with the first holding part. This serves to limit the rotation of the second gate member. Preferably, the first holding part and the second holding part lie almost against each other in the closed state of the gate device to this end.

[0017] In the existing locks comprising the features described in paragraph 1, the first lock part comprises the retaining element and the holding part of this retaining element will prevent rotation of the second gate member past this holding part by making direct contact with the second gate member. Thus, for example, one edge of

the second gate member will then make contact with the holding part in the closed state of the gate device, so that the second gate member cannot rotate past this holding part. If the second lock part is connected to the second gate member, the bolt assumes a specific position with respect to the second gate member and often further elements of the second lock part, such as guide elements for the guiding of the bolt, will also assume a given position with respect to the second gate member. As a result thereof, the holding part cannot assume any arbitrary position, but can only assume a position not presenting an obstacle to the second lock part. In many cases, the bolt is located in one of the two spaces which are separated from each other by the gate device in the closed state, and that the edge of the second gate member bordering this space is therefore no longer reachable for the holding part. In other words, the position of the bolt will in this case therefore determine the position of the holding part and thus determine the direction of rotation. Therefore, a different type of lock has to be provided in order to be able to obtain a different direction of rotation.

[0018] In the above highly preferable embodiment, this problem is solved by providing a further retaining element so that both the first lock part and the second lock part comprise a retaining element, where these retaining elements interact. In other words, in order to counteract said rotation, a said retaining element no longer has to make any direct contact with the second gate member, but it may interact with the retaining element of the other lock part. In this case, the position of the bolt or other components of the lock then form no obstacles limiting the possible positions of the retaining elements, so that the retaining elements are easily able to determine the direction of rotation of the second gate member. Furthermore preferably, when a person is standing in front of the gate device in the closed state of the gate device, the first holding part will be situated in front of the second holding part in the first position of the first retaining element, while the first holding part will be situated behind the second holding part in the second position of the first retaining element, or vice versa. In this way, the direction of rotation can be easily determined. Since the second retaining element and the first retaining element are in this case configured to interact, the position of the second retaining element will preferably be determined by the position of the first retaining element. However, embodiments are also possible in which the second retaining element will occupy only one position with respect to the gate device in the closed state of the gate device.

[0019] Furthermore preferably, the first lock part comprises the first retaining element and the second lock part comprises the second retaining element and, during use of the lock, the second retaining element can adopt a first position and a second position with respect to the bolt, wherein the distance between the bolt and the second holding part is different in the first and the second position, viewed in a direction perpendicular to the plane formed by the first direction and the upright axle in the

closed state of the gate device. Since at least two said positions are possible for the second holding part in this case as well, the second retaining element is always able to interact well with the first retaining element here. As

5 has been described above, the choice of the first or the second position is then preferably determined by the choice of the position of the first retaining element.

[0020] Furthermore preferably, the first position of the second retaining element forms almost the mirror image 10 of the second position of the second retaining element, viewed in the plane formed by the first direction and the upright axle in the closed state of the gate device. The second holding part can then perform its function in a satisfactory manner in both positions.

[0021] Furthermore preferably, the second retaining 15 element also comprises a first and a second plate-shaped leg which together form an angle, wherein this first leg is the second holding part and the second retaining element is configured to be fastened to the second

20 gate member in such a manner that the second holding part extends almost parallel with the plane formed by the first direction and the upright axle in the closed state of the gate device. In this case, the second holding part is readily able to interact with the first holding part. In this 25 case, it is then readily possible to choose the distance of the second holding part from the bolt by making the second retaining element a mirror image of said plane. This is certainly the case if the first retaining element comprises said first and second plate-shaped legs.

[0022] Furthermore preferably, said angle between the 30 first and the second leg of the second retaining element is essentially 90°. The second leg is then configured to extend almost perpendicular to the first direction in the closed state of the gate device.

[0023] Preferably, the first lock part comprises the first 35 retaining element and the first retaining element is configured to be connected to the first gate member with the aid of the fixation element. In this case, it is easy to connect the first retaining element to the first gate member

40 in such a way that the first retaining element occupies the desired position with respect to the fixation element and thus with respect to the gate device. Here, the fixation element may be for example a plate-shaped element comprising said passage. If the first retaining element is 45 composed of said legs, the first lock part is then fastened to the first gate member in such a manner, for example, that the second leg extends parallel to the fixation element.

[0024] Furthermore preferably, the first retaining 50 element is configured to be connected to and joined against the fixation element in the connected state of the first lock part to the first gate member, wherein the first retaining element is connectable to the fixation element in two positions, so that the first retaining element can adopt said first and second position with respect to the gate device.

[0025] Still further preferably, in a connected state of the lock to the gate device, the first retaining element and the fixation element extend substantially next to the first

gate member viewed in a direction perpendicular to the plane of the first direction and the upright axle. In this case, the first holding part will then extend past the first gate member viewed in the first direction and thus will certainly be able to prevent the rotation of the second gate member past this first holding part. The first lock part is then configured, for example, to be connected to an outer edge of the first gate member. For example, if the first gate member comprises a post, the first lock part is then configured to be connected to the edge of the post which is oriented towards the second gate member in the closed state of the gate device.

[0026] In a preferable embodiment, the second lock part comprises one or more guiding passages through which the bolt is configured to extend in order to retain the bolt and guide the bolt during the sliding of the bolt. In this way, it is easy to slide the bolt in the direction of the first gate member, in the closed state of the gate device, and through the passage and this preferably in the first direction. In the closed state, these one or more guiding passages and the passage of the fixation element will preferably all extend essentially in the first direction.

[0027] Furthermore preferably, the first lock part comprises the first retaining element and the second lock part comprises the second retaining element, wherein the second lock part comprises at least one first guide element comprising a said guiding passage and wherein the second retaining element is configured to be connected to the second gate member with the aid of this first guide element.

[0028] Still furthermore preferably, the second retaining element is configured to be connected to and joined against the first guide element in the connected state of the second lock part to the second gate member, wherein the second retaining element is connectable to the first guide element in two positions so that the second retaining element can adopt said first and second position with respect to the bolt. The first guide element here may be a plate-shaped element comprising the guiding passage. If the second retaining element is composed of said legs, the second lock part is then fastened to the second gate member, for example, so that the second leg extends parallel to the first guide element.

[0029] Also furthermore preferably, in a connected state of the lock to the gate device, the second retaining element and the first guide element extend substantially next to the second gate member viewed in a direction perpendicular to the plane of the first direction and the upright axle. In this case, the second holding part will then extend past the second gate member viewed in the first direction and thus be well able to interact with the first holding part.

[0030] Furthermore very preferably, in a connected state of the lock to the gate device, the first retaining element, the second retaining element, the fixation element and the first guide element extend substantially between the first and the second gate member. In this way, one can easily determine the direction of rotation and

such a lock is connectable to several types of gates. If the first and second retaining element are configured such that each of them comprises a said first and second leg and, if the fixation element and the first guide element

5 are additionally configured as said plate-shaped elements, the first retaining element, the second retaining element, the fixation element and the first guide element will occupy little space, so that the necessary space between the first gate member and the second gate member

10 in the closed state of the gate device is limited and the gate device is readily able to separate two spaces from each other.

[0031] The object is also achieved by providing an assembly of a gate device and a lock for bolting the gate device, wherein the gate device comprises a first gate member and a second gate member, at least the second gate member being positioned so as to be rotatable about an upright axle for the opening and closing of the gate device, and wherein the lock is a lock as described above.

15 All the advantages and preferred embodiments of this lock thus also apply to this assembly.

[0032] Preferably, the gate device is configured to separate two spaces from each other in its closed state, wherein the first and the second lock part are configured 20 to be connected respectively to the first and the second gate member so that the bolt and the passage extend into the same said space in the closed state of the gate device, wherein, for one position of the fixation element with respect to the first gate member where the passage

25 is situated in the desired space in the closed state of the gate device, the first retaining element can adopt said first and second position, so that the position of the retaining element determines the direction of rotation of the second gate member. The positions of the bolt and the

30 passage must correspond to each other so that in the closed state the bolt is easily slidable through this passage. The bolt is preferably more or less slidable in one direction. It is then also intended that, in the closed state, this latter direction essentially coincides with the first direction and that the bolt and the passage are in line with each other in such a manner that the bolt is easily slidable through the passage. By placing the bolt in a said space here, this bolt is situated next to the gate members in the

35 closed state of the gate device, and these gate members 40 form no obstacle that might hinder the sliding of the bolt, and also no openings have to be provided in the gate members to make the sliding of the bolt possible. This means that the gate device does not need any specific adaptations to make a connection to the lock possible.

[0033] Furthermore preferably, in the closed state of the gate device, the bolt and the passage extend at a 45 distance from the respective gate members, viewed in a direction perpendicular to the plane formed by the first direction and the upright axle in the closed state of the gate device.

[0034] Also preferably the fixation element is configured to extend, viewed in the first direction, between the first retaining element and the first gate member in the

connected state of the lock to the gate device.

[0035] In one preferable embodiment, viewed in the first direction, the fixation element is configured to extend between the first and the second gate member.

[0036] In a very preferable embodiment in which the lock also comprises a said second retaining element, the first and the second retaining element viewed in the first direction are configured to extend substantially between the first and the second gate member. In this way, the first and the second retaining element can interact well and the bolt and/or other components of the second lock part and/or the first lock part present no obstacle to the first and the second holding part, so that it is possible to choose the direction of rotation obtained with the holding parts, and this with the same lock.

[0037] Preferably, in the closed state of the gate device, the first holding part lies virtually against the second holding part.

[0038] In one preferable embodiment, the second gate member comprises a surrounding frame enclosing a filling, wherein this filling, in the area of the edge of the surrounding frame extending next to the first gate member in the closed state of the gate device, comprises an opening, and the second lock part is fastenable to the second gate member in the area of this opening such that at least a portion of the first lock part extends into this opening and the bolt is slidable past this edge viewed in the first direction. This is a standard gate member. Other types of locks are also connectable to gate devices comprising such a gate member. This means that one does not have to provide special gate members here for the lock according to the invention.

[0039] Furthermore preferably, if the lock also comprises a said second retaining element, the second retaining element is fastenable to the edge and configured to extend between the second gate member and the first gate member. In this case, the second retaining element is then optionally directly connectable to this edge. For example, if the second lock part also comprises a said first guide element, the second retaining element may be fastenable to the edge with the help of the first guide element. The first guide element then extends between the edge and the second retaining element in the connected state of the second lock part to the second gate member.

[0040] In one specific embodiment, the first gate member comprises a post. The first gate member may then simply comprise a post. This will then be a single gate. However, the first gate member may also be constructed like the above-described preferred embodiment of the second gate member in which this post is then part of the surrounding frame. This post may then be referred to by the term profile. If the post has for example a rectangular cross section, the first lock part is preferably fastened to the edge of this post that is oriented towards the second gate member in the closed state of the gate device.

[0041] In a very preferable embodiment, the first and the second gate member comprise securing passages

through which fastening elements are fittable, so that the first and the second lock part are connectable to the first and the second gate member, respectively, with the aid of fastening elements. In this case, not only professionals will be able to attach the lock to a gate device.

[0042] This invention also relates to a method for connecting a lock to a gate device in which the lock and the gate device form an assembly as described above, wherein the first lock part is secured to the first gate member with the aid of fastening elements and wherein the second lock part is secured to the second gate member with the aid of fastening elements. This is a method which is very quick and easy to perform.

[0043] This invention will now be explained in more detail by means of the following detailed description of a preferred embodiment of a lock and assembly according to this invention. The sole purpose of this description is to give illustrative examples and to point out further advantages and features, and may thus not be interpreted as a limitation of the area of application of the invention or of the patent rights asserted in the claims.

[0044] In this detailed description, reference numerals are used to refer to the attached drawings, in which:

- 25 - **figure 1** is a top view of a second lock part of a lock according to the invention;
- **figure 2** is a top view of a first lock part of the lock according to the invention;
- **figure 3** is a top view of the lock according to the invention, where this lock comprises a first lock part as shown in figure 1, a second lock part as shown in figure 2 and fastening elements, the bolt being arranged in the passage;
- **figures 4 to 6** show top views of the lock according to the invention, where the lock is fastened to a gate device in a first, second and third manner, respectively;
- **figures 7 to 9** show a first, second and third step, respectively, for fastening the second lock part, as represented in figure 1, to a second gate member of a gate device;
- **figure 10** shows how the first lock part as shown in figure 2 is fastened to a first gate member of a gate device;
- 45 - **figure 11** shows a perspective view of the lock according to the invention fastened to a gate device;
- **figure 12** shows an exploded view of the front side of the lock according to the invention;
- **figure 13** shows an exploded view of the rear of the lock according to the invention;
- **figure 14** shows a top view of the mutual position of the first guide element, the second retaining element, the first retaining element and the fixation element in a first possible position of the lock;
- 50 - **figure 15** shows a top view of the mutual position of the first guide element, the second retaining element, the first retaining element and the fixation element in a second possible position of the lock.

[0045] In this case, one possible embodiment of a lock (1) according to the invention is shown. Of course, other embodiments are also possible. In this case, this lock (1) is fastened to one type of gate device. Of course, this lock (1) is also fastenable to other types of gate devices.

[0046] In this case, the lock (1) comprises a first and a second lock part (2, 3) as well as fastening elements (18) in order to be able to fasten the lock (1) to a gate device. These fastening elements (18) may be supplied together with the first and the second lock part (2, 3) and then form part of the lock (1). However, these fastening elements (18) may also be bought separately, so that these fastening elements (18) do not always have to form part of the lock (1) itself.

[0047] In this case, the first lock part (2) comprises a plate-shaped fixation element (5) and a first retaining element (7a). The fixation element (5) comprises a passage (6) which extends along the thickness of the fixation element (5) and in a first direction (A). Since the fixation element (5) is plate-shaped, the thickness is small, as is the dimension of the passage (6), viewed in the first direction (A). The first retaining element (7a) consists of two right-angled plate-shaped legs (8a, 8b), being a first holding part (8a) and a fastening part (8b), wherein the first holding part (8a) and the fastening part (8b) are fastened to each other at their edge and form an angle of 90°. In this case, the first retaining element (7a) has a V-shaped cross section.

[0048] The second lock part (3) comprises four components, namely a frame element, consisting of a frame (19) and a plate-shaped frame guide element (13b) with a guiding passage (12), where this frame guide element (13b) is welded to the frame (19), a bolt (4), a plate-shaped first guide element (13a) having a guiding passage (12) and a second retaining element (7b). The second retaining element (7b) consists of two right-angled plate-shaped legs (11a, 11b), being a second holding part (11a) and a fastening part (11b), where the second holding part (11a) and the fastening part (11b) are fastened to each other at their edge and form an angle of 90°. In this case, the second retaining element (7b) has a V-shaped cross section.

[0049] The gate device partly represented in the figures always comprises a first gate member (9) and a second gate member (10). Here, the first gate member (9) is a post (9) which is secured in a fixed position in the ground or against a wall. This post (9) is fastened in such a manner that it extends in a vertical direction (B). Here, the second gate member (10) is a gate (10) comprising a surrounding rectangular frame (19) consisting of a top profile, two side profiles, and a bottom profile, and having a filling (14) consisting of wires which fill up the frame (19) almost completely. This gate (10) is rotatably connected to an upright post (not shown). This upright post extends in the vertical direction (B) in such a manner that the gate (10) rotates about a vertical axle. These gate members (9, 10) are positioned in such a manner that, in the closed state of the gate device, one side profile of

the gate (10) is situated opposite the post (9) and the gate (10) closes an entrance extending between said posts (9). In an open state, the gate (10) is rotated away from the post (9) so that the gate (10) allows entry.

[0050] In this case, the connection of the lock (1) to the gate device is effected as follows: the first lock part (2) is fastened to the post (9) with the aid of two fastening elements (18), each comprising a bolt and a nut. To this end, the post (9) is provided with two securing passages (17) through which each fastening element (18) is fittable. The second lock part (3) is fastened to the gate (10) by means of two fastening elements (18), each comprising a bolt and a nut. To this end, the gate (10) is provided with two securing passages (17) through which each fastening element (18) is fittable.

[0051] The gate (10) itself comprises a rectangular opening (16) in the filling (14) which extends next to the side profile that is configured to extend next to the post (9) in the closed state of the gate device. At the location of this opening (16), said side profile comprises the two securing passages (17). The side profile has a rectangular cross section and has a first edge (15) which extends perpendicular to the plane formed by the vertical direction (B) and the first direction (A), and which is directed towards the post (9) in the closed state of the gate device. This first direction (A) corresponds to a horizontal direction (A). Said two securing passages (17) extend through this first edge (15) and the second edge situated opposite this first edge (15). The frame (19) of the frame element also has two mounting passages which correspond to the two securing passages (17) and one fits the bolts of the fastening elements (18) through these said mounting passages of the frame element and the securing passages (17) in order to position the frame element such that the frame (19) extends into the opening (16) and the guiding passage (12) extends next to the gate (10) viewed in the first direction (A). This is visible in figure 7. Subsequently, the bolt (4) is fitted in the guiding passage (12) of the frame guide element (13b) (see figure 8). Thereafter, the first guide element (13a) is placed against the first edge (15) and also the second retaining element (7b), with its fastening part (11b), against the first guide element (13a), and then secures the nuts of the fastening elements (18) on said bolts so that the second lock part (3) is fastened to the gate (10). In this case, there is the option of placing the second retaining element (7b) against the first guide element (13a) in two possible positions which are mirror images of each other in a plane formed by the vertical direction (B) and the first direction (A) in the closed state of the gate device. This is important in determining the direction of rotation (C) of the gate (10) (see below).

[0052] The post (9) comprises two securing passages (17) in the area of the opening (16) of the gate (10). The post (9) has a rectangular cross section and has a first edge which extends perpendicular to the plane formed by the vertical direction (B) and the first direction (A) and which is directed towards the gate (10) in the closed state

of the gate device. Said two securing passages (17) extend through this first edge and the second edge situated opposite this first edge. The bolts of the fastening elements (18) are fitted through the said securing passages (17). Thereafter, the fixation element (5) is placed against the first edge and also the first retaining element (7a) against the fixation element (5), with its fastening part (8b) against the fixation element (5) and then the nuts of the fastening elements (18) are secured on said bolts in order to fasten the first lock part (2) to the post (9). In this case, there is the option of placing the first retaining element (7a) against the fixation element (5) in two possible positions which are mirror images of each other in a plane formed by the vertical direction (B) and the first direction (A) in the closed state of the gate device.

[0053] As is clearly visible in figures 3 to 6 and 14 and 15, the chosen position of the first and the second retaining element (7a, 7b) determines the direction of rotation (C) of the gate (10). The position of the first retaining element (7a) establishes the position of the second retaining element (7b) and vice versa. Thus, two positions are possible for the retaining elements (7a, 7b) with respect to each other. These two positions are clearly indicated respectively in figure 13 and figure 14. In the closed state, the retaining elements (7a, 7b) touch each other so that the closed state of the gate device is a limit position of the gate device.

[0054] Furthermore, the gate device is configured to separate two spaces from each other, and the lock parts (2, 3) need to be fastened on the post (9) and the gate (10) in such a manner that the bolt (4), the passage (6) and the guiding passages (12) all extend in a straight line in the closed state of the gate device in the first direction (A), so that the bolt (4) is fittable in such a manner so as to be slidable through the passage (6) in order to latch the gate device. In the closed state of the gate device, the bolt (4) and the passage (6) are situated at the same distance from the gate device, viewed in a direction perpendicular to the plane formed by the vertical direction (B) and the first direction (A) in the closed state of the gate device.

Claims

1. Lock (1) comprising a first and a second lock part (2, 3), wherein the second lock part (3) comprises a slidable bolt (4), the first lock part (2) comprises a fixation element (5) having a passage (6) extending in a first direction (A), through which the bolt (4) is slidable, and the first or the second lock part (2, 3) comprises a first retaining element (7a) with a first holding part (8a), and the first and second lock part (2, 3) are configured to be respectively secured to a first and a second gate member (9, 10) of a gate device, at least the second gate member (10) being positioned so as to be rotatable about an upright axle between an open and a closed state of the gate de-

vice, in the closed state of the gate device the first holding part (8a) extends past the gate member (9, 10) to which it is secured, viewed in the first direction (A), to limit the rotation of the second gate member (10) about the upright axle, and the position of the bolt (4) with respect to the second gate member (10) and the position of the fixation element (5) with respect to the first gate member (9) allows a sliding of the bolt (4) in essentially the first direction (A) towards the first gate member (9) and through the passage (6) in order to bolt the gate device, **characterized in that**, for each said position of the fixation element (5) with respect to the first gate member (9), the first retaining element (7a) can adopt at least one first and one second position with respect to the gate device, wherein the distance between the passage (6) and the first holding part (8a) is different in the first and the second position, viewed in a direction perpendicular to the plane formed by the first direction (A) and the upright axle in the closed state of the gate device, so that the position of the first retaining element (7a) determines the direction of rotation (C) of the second gate member (10).

25. 2. Lock according to Claim 1, **characterized in that**, in the closed state of the gate device, the bolt (4) and the passage (6) are configured to extend at a distance from the respective gate members (9, 10), viewed in a direction perpendicular to the plane formed by the first direction (A) and the upright axle in the closed state of the gate device.
30. 3. Lock (1) according to Claim 1 or 2, **characterized in that** the first or the second lock part (2, 3) comprises the first retaining element (7a), and **in that** the second or the first lock part (3, 2), respectively, comprises a second retaining element (7b), wherein this second retaining element (7b) comprises a second holding part (11a) which is configured to interact with the first holding part (8a).
35. 4. Lock (1) according to Claim 3, **characterized in that** the first lock part (2) comprises the first retaining element (7a) and the second lock part (3) comprises the second retaining element (7b), and **in that**, during use of the lock (1), the second retaining element (7b) can adopt a first and a second position with respect to the bolt (4), wherein the distance between the bolt (4) and the second holding part (11a) is different in the first and the second position, viewed in a direction perpendicular to the plane formed by the first direction (A) and the upright axle in the closed state of the gate device.
40. 5. Lock (1) according to one of the preceding claims, **characterized in that** the first lock part (2) comprises the first retaining element (7a) and the first retaining element (7a) is configured to be connected to the

first gate member (9) with the aid of the fixation element (5).

6. Lock (1) according to Claim 5, **characterized in that** the first retaining element (7a) is configured to be connected to and joined against the fixation element (5) in the connected state of the first lock part (2) to the first gate member (9), wherein the first retaining element (7a) is connectable to the fixation element (5) in two positions, so that the first retaining element (7a) can adopt said first and second position with respect to the gate device.

7. Lock (1) according to Claim 5 or 6, **characterized in that**, in a connected state of the lock (1) to the gate device, the first retaining element (7a) and the fixation element (5) extend substantially next to the first gate member (9), viewed in a direction perpendicular to the plane of the first direction (A) and the upright axle.

8. Lock (1) according to one of the preceding claims, **characterized in that** the second lock part (3) comprises one or more guiding passages (12) through which the bolt (4) is configured to extend for the retaining of the bolt (4) and the guiding of the bolt (4) during the sliding of the bolt (4), wherein the first lock part (2) comprises the first retaining element (7a) and the second lock part (3) comprises the second retaining element (7b), wherein the second lock part (3) comprises at least one first guide element (13a), having a said guiding passage (12) wherein the second retaining element (7b) is configured to be connected to the second gate member (10) with the aid of this first guide element (13a).

9. Lock (1) according to Claim 8, **characterized in that** the second retaining element (7b) is configured to be connected to and joined against the first guide element (13a) in the connected state of the second lock part (3) to the second gate member (10), wherein the second retaining element (7b) is connectable to the first guide element (13a) in two positions, so that the second retaining element (7b) can adopt said first and second position with respect to the bolt (4).

10. Lock (1) according to Claim 8 or 9, **characterized in that**, in a connected state of the lock (1) to the gate device and in the closed state of the gate device, the second retaining element (7b) and the first guide element (13a) extend substantially next to the second gate member (10), viewed in a direction perpendicular to the plane of the first direction (A) and the upright axle.

11. Lock (1) according to Claim 10, **characterized in that**, in a connected state of the lock (1) to the gate device, the first retaining element (7a), the second retaining element (7b), the fixation element (5) and the first guide element (13a) extend substantially between the first and the second gate member (9, 10).

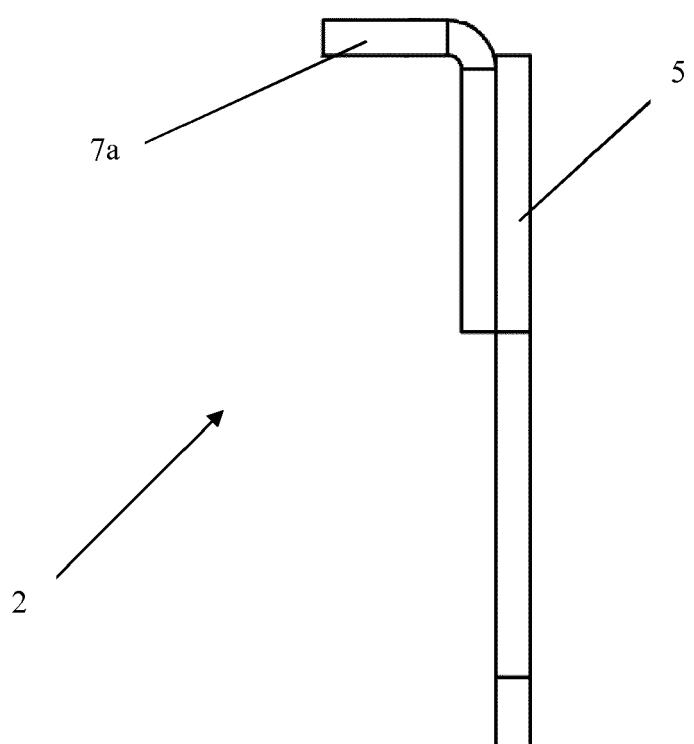
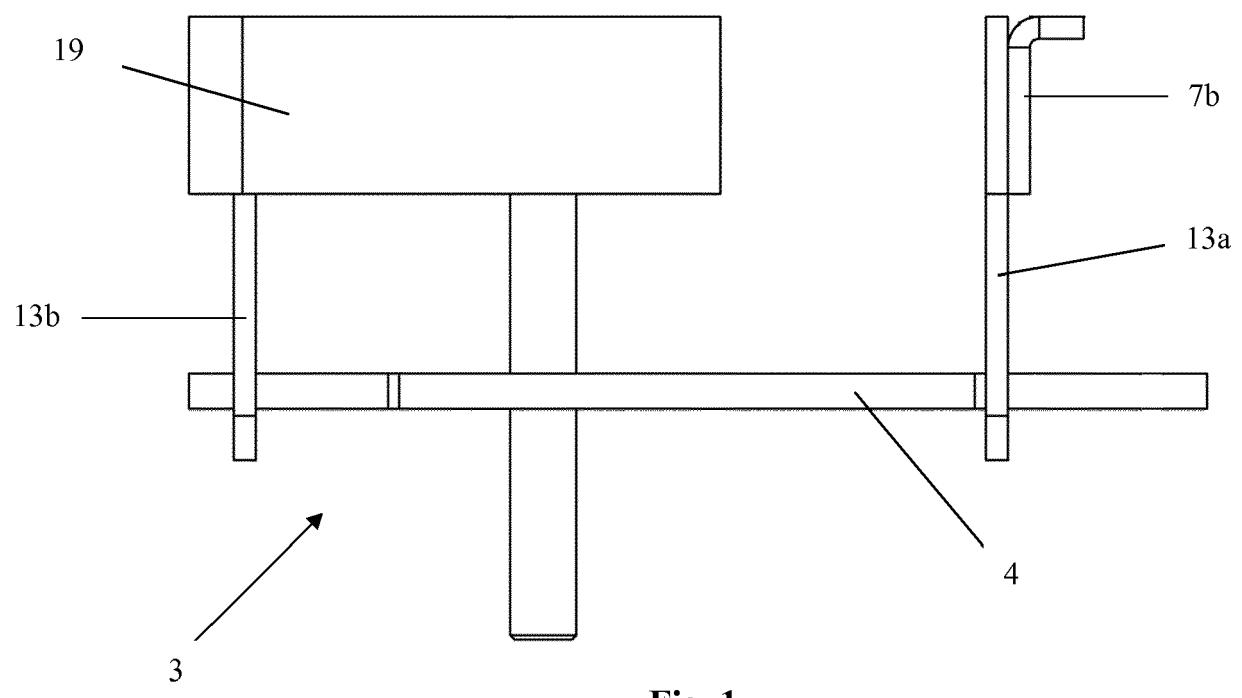
5 12. Assembly of a gate device and a lock (1) for the bolting of the gate device, wherein the gate device comprises a first gate member (9) and a second gate member (10), at least the second gate member (10) being positioned so as to be rotatable about an upright axle for opening and closing the gate device, wherein the lock (1) is a lock (1) according to one of Claims 1 to 11.

15 13. Assembly according to Claim 12, **characterized in that** the gate device is configured to separate two spaces from each other in its closed state, wherein the first and the second lock part (2, 3) are configured to be connected to the first and the second gate member (9, 10), respectively, so that the bolt (4) and the passage (6) extend into the same said space in the closed state of the gate device, wherein, for one position of the fixation element (5) with respect to the first gate member (9), where the passage (6) is situated in the desired space in the closed state of the gate device, the first retaining element (7a) can adopt said first and second position, so that the position of the first retaining element (7a) determines the direction of rotation (C) of the second gate member (10).

20 14. Assembly according to Claim 13, **characterized in that**, in the closed state of the gate device, the bolt (4) and the passage (6) extend at a distance from the respective gate members, viewed in a direction perpendicular to the plane formed by the first direction (A) and the upright axle in the closed state of the gate device.

25 15. Assembly according to Claim 13 or 14, **characterized in that** the fixation element (5) is configured to extend, viewed in the first direction (A) and in the closed state of the gate device, between the first retaining element (7a) and the first gate member (9) in the connected state of the lock (1) to the gate device.

30 40 45 50 55



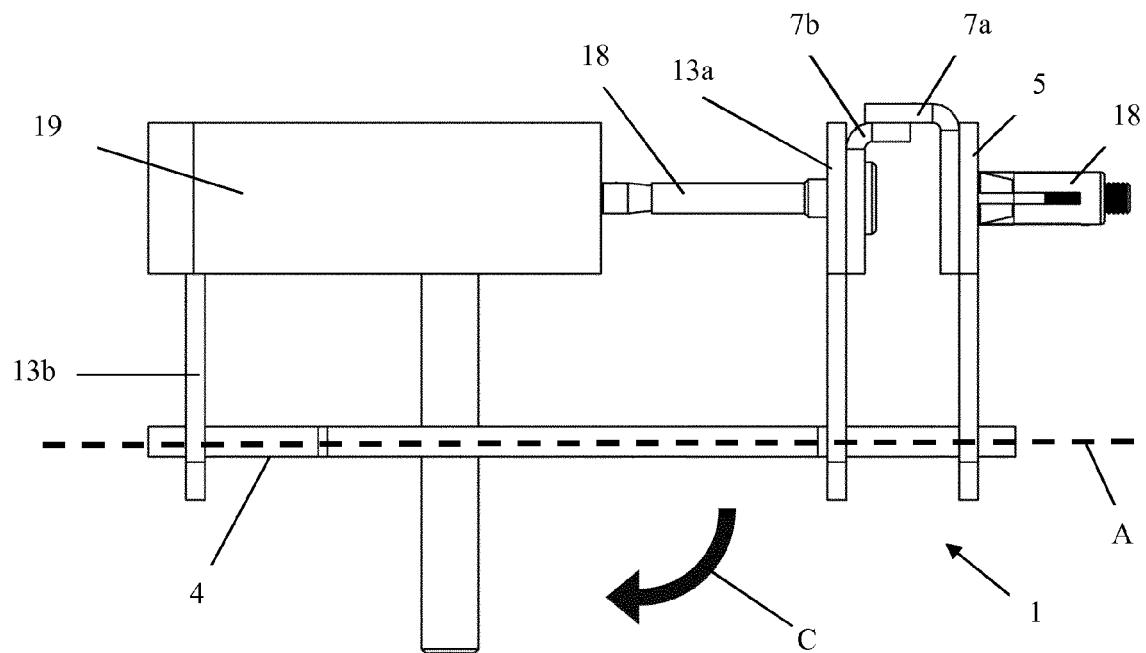


Fig. 3

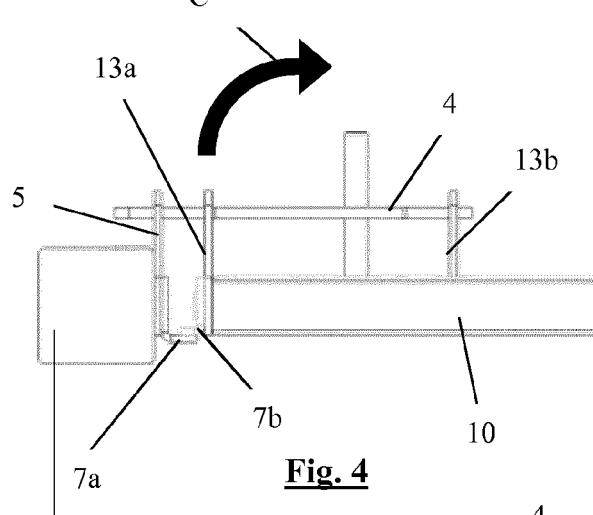


Fig. 4

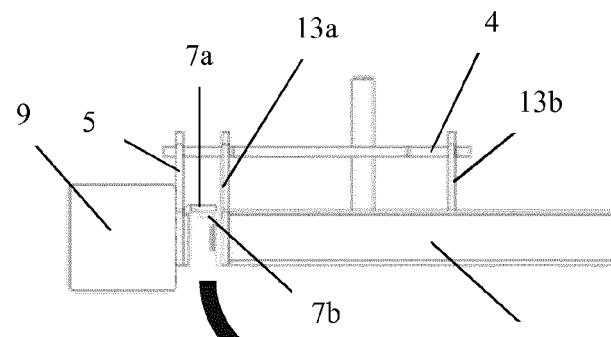


Fig. 5

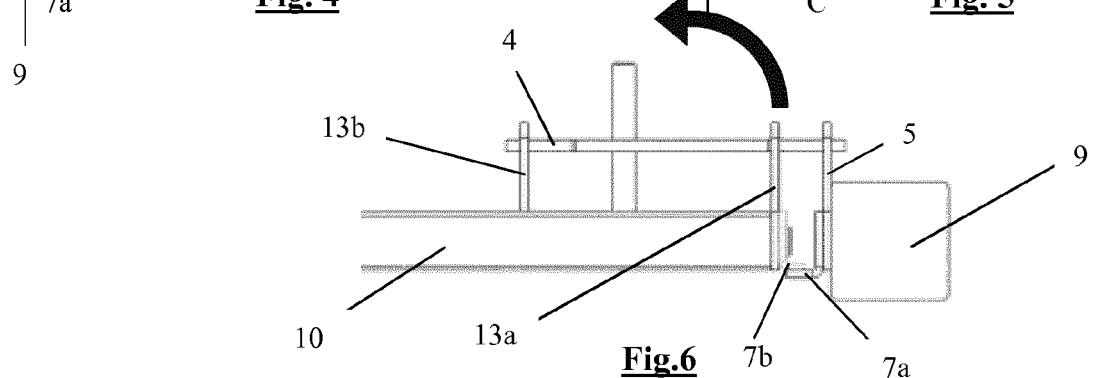


Fig. 6

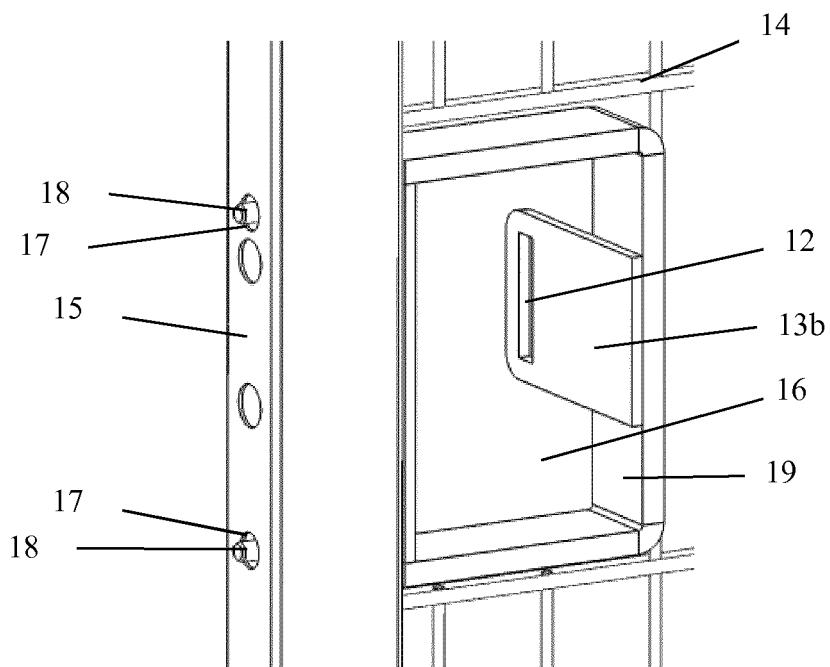


Fig. 7

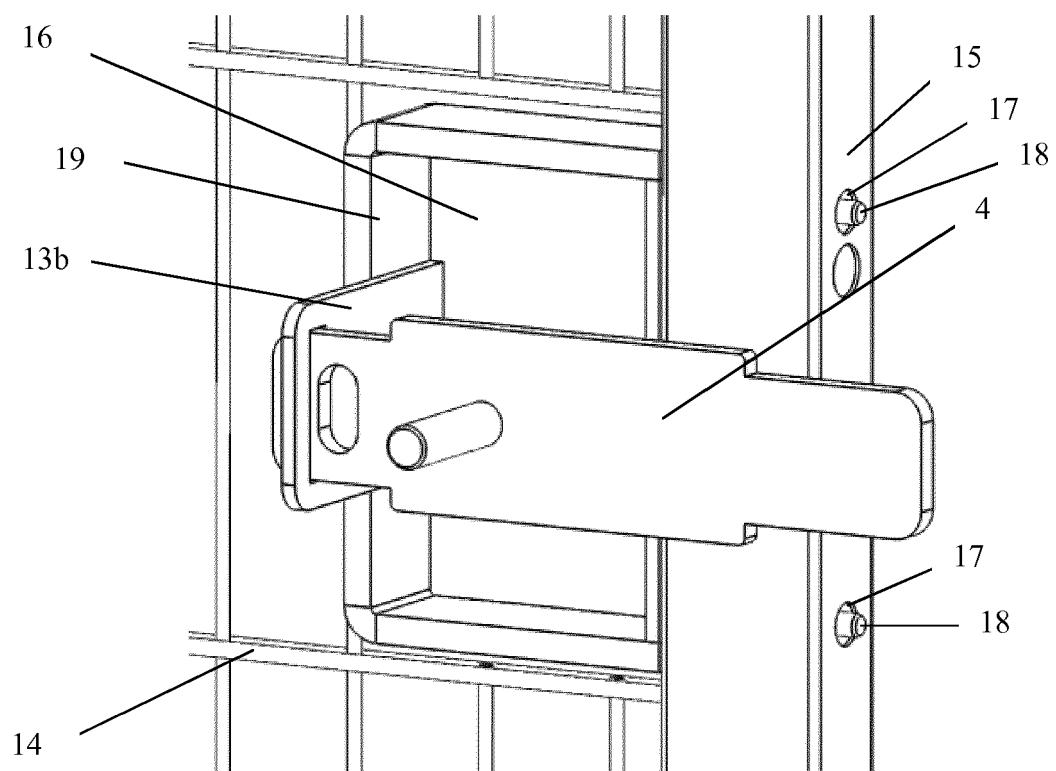


Fig. 8

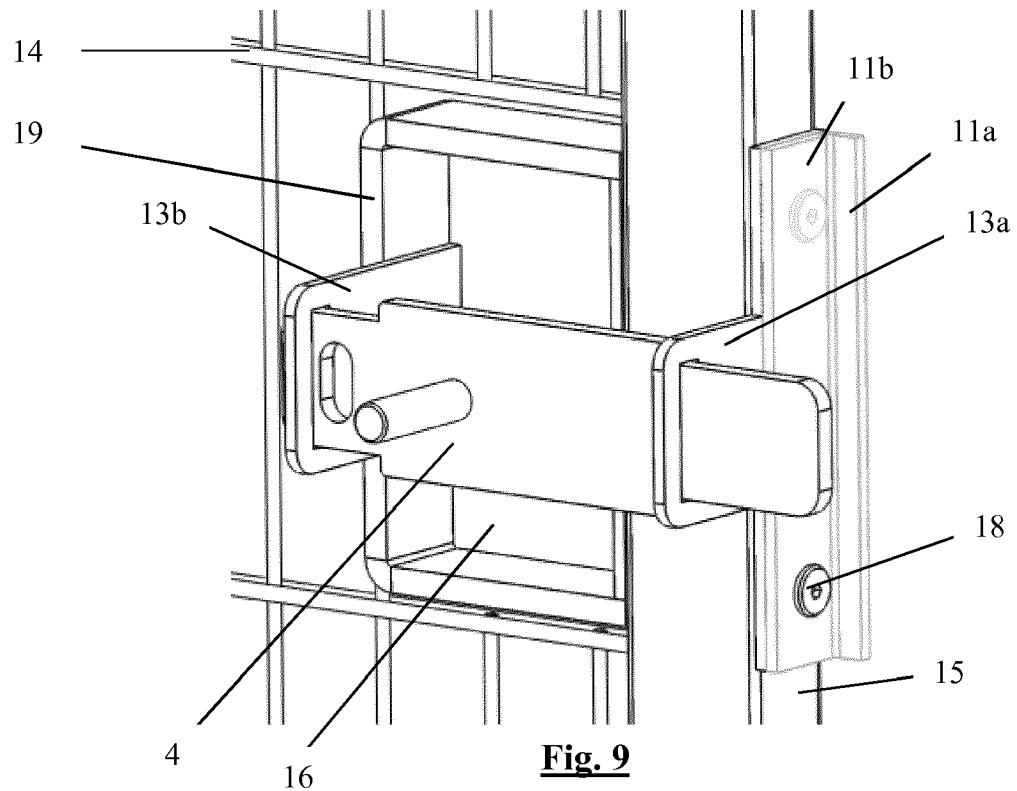


Fig. 9

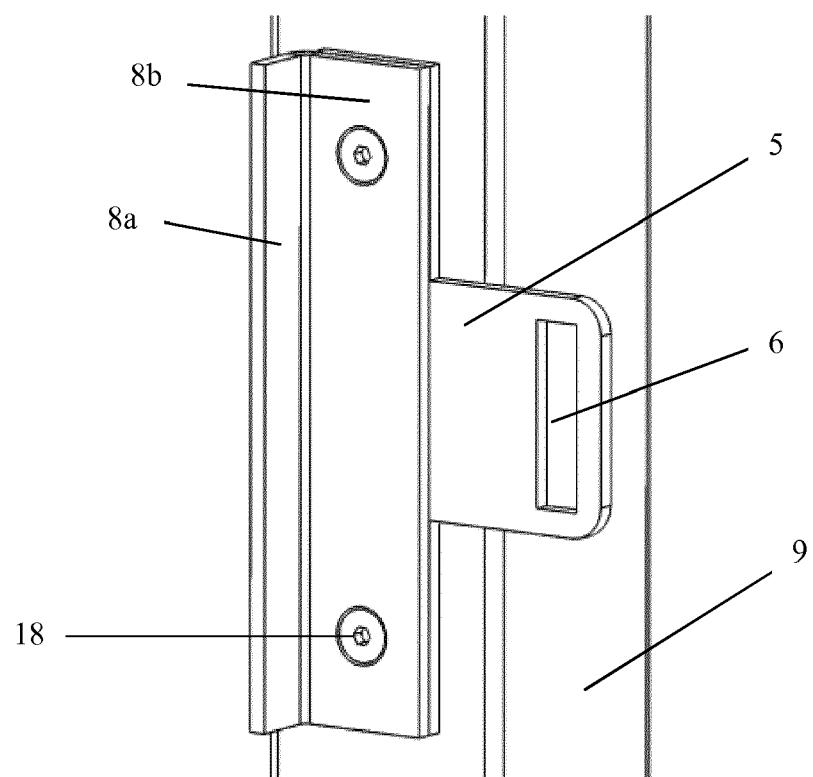
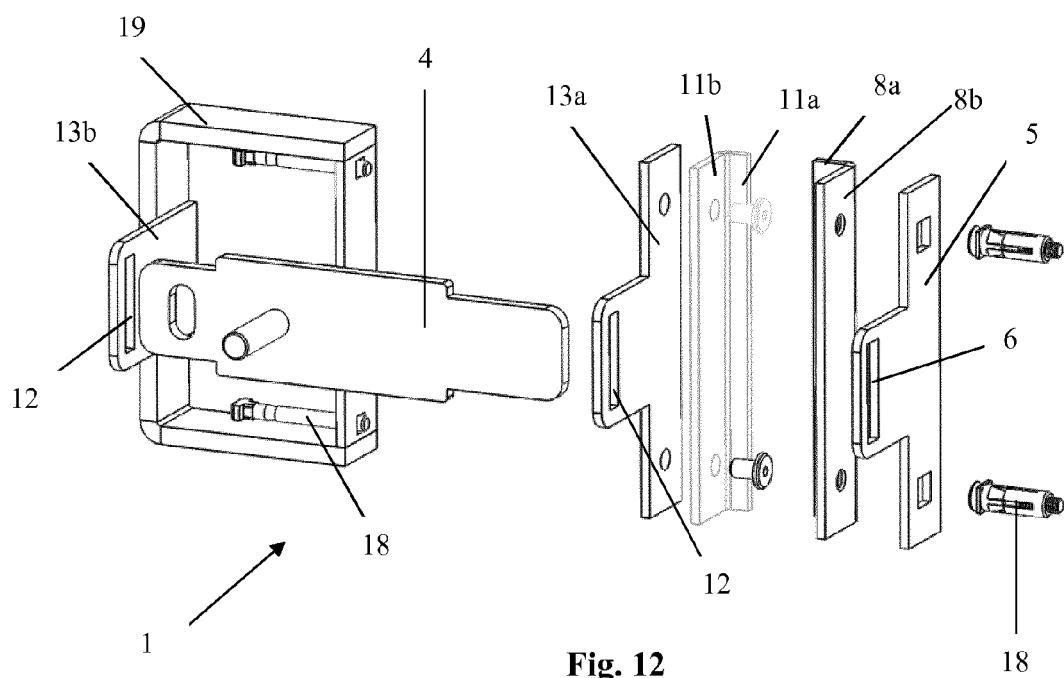
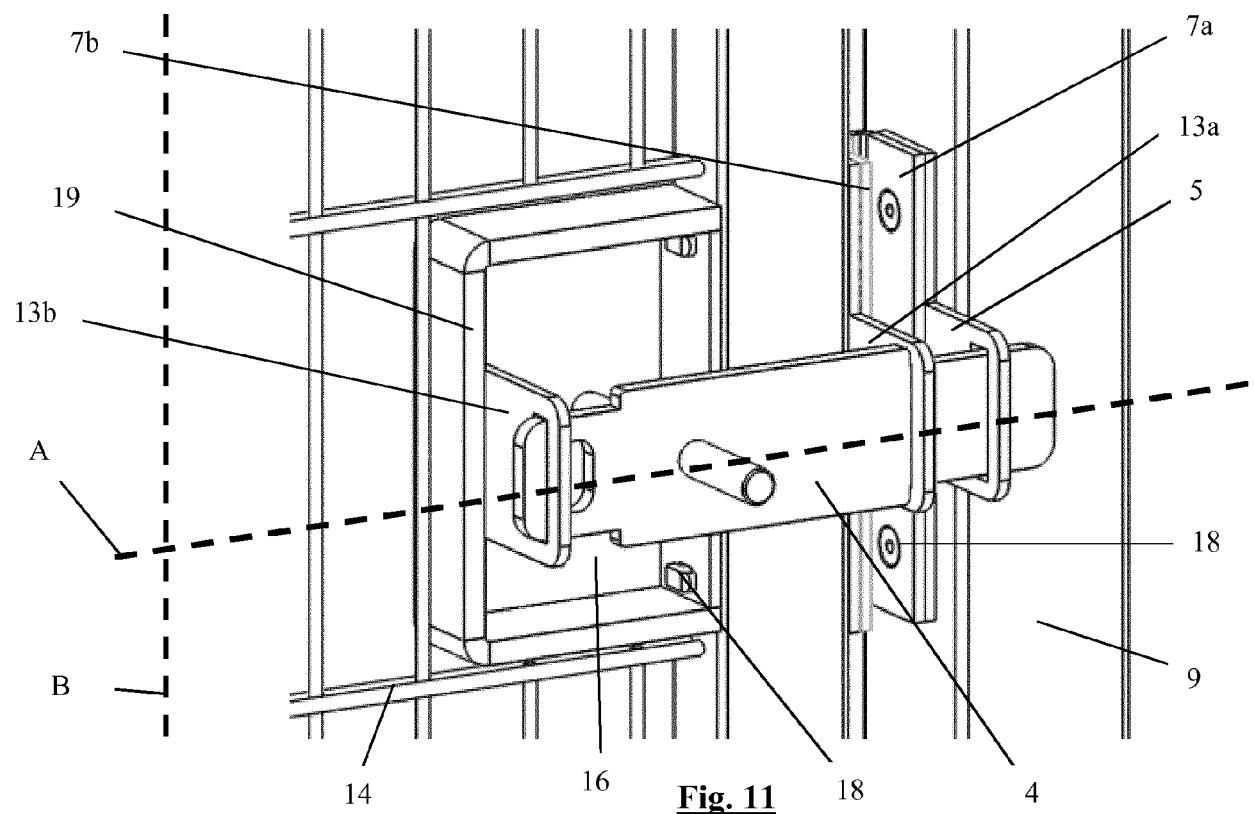


Fig. 10



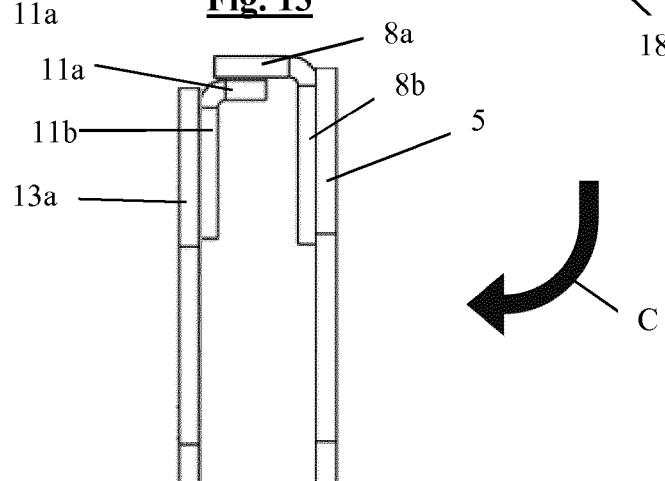
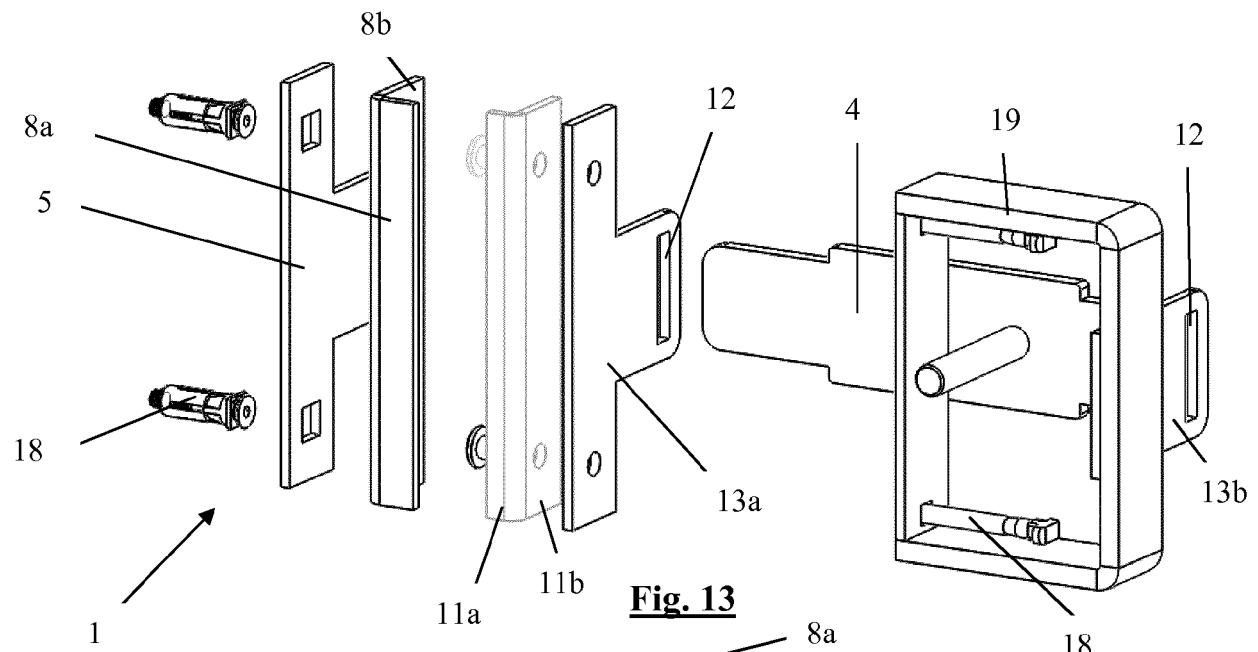


Fig. 14

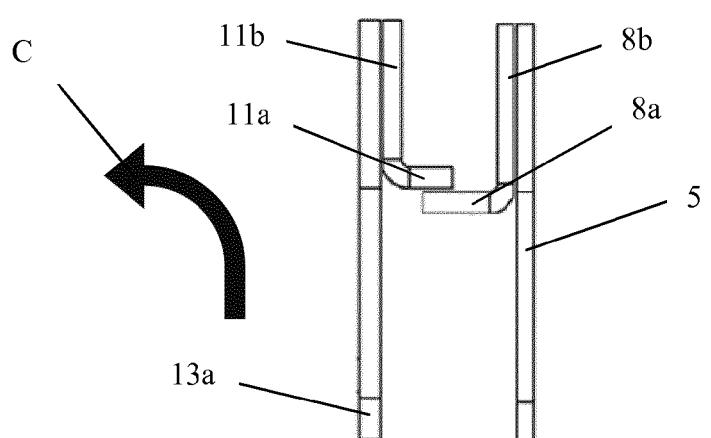


Fig. 15



EUROPEAN SEARCH REPORT

Application Number

EP 18 20 4778

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
10	X DE 295 12 995 U1 (KETTLING FRIEDRICH [DE]) 19 October 1995 (1995-10-19) * the whole document * -----	1-15	INV. E05B63/04 E05B65/00 E05C1/00 E05C1/04 E05B15/02
15	X WO 98/37295 A1 (TALPE JOSEPH [BE]) 27 August 1998 (1998-08-27) * page 10, line 15 - page 21, line 4; figures 10-18 * -----	1-15	
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1	The present search report has been drawn up for all claims		
	Place of search	Date of completion of the search	Examiner
	The Hague	28 February 2019	Cruyplant, Lieve
	CATEGORY OF CITED DOCUMENTS		
	X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		
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	EPO FORM 1503 03-82 (P04C01)		

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 20 4778

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-02-2019

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