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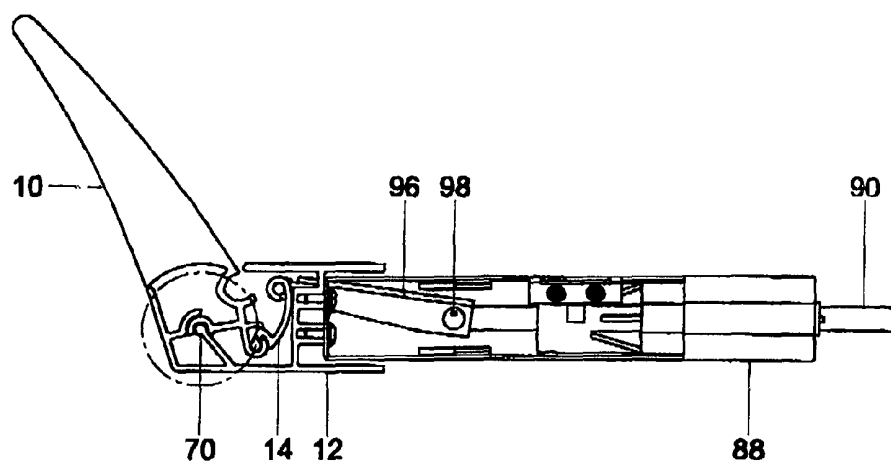
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(54) Title: PLATFORM WITH RAMP



(57) Abstract: A platform with ramp, which ramp, in a first position, can function as a riding surface for moving objects on and off the platform and, in a second position, can function as a protection against riding off or otherwise moving off of objects from the platform, which ramp comprises a first profile substantially comprising the riding surface, which first profile (10) is pivotally connected to a second profile (12) which is connected to the platform, while a third profile (14) is provided which is connected near a first side to the first profile and, at a distance therefrom, is connected with an operating device for the ramp, while with the aid of the operating device the third profile can be brought in a first, blocking position in which at least pivotal movement of the first profile from the second position to the first position is prevented and in a second, pivoting position in which the first profile with the aid of the operating device can be moved between the first and second position.



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Title: Platform with ramp

The invention relates to a platform with ramp. More in particular, the invention relates to a platform with a ramp which can be blocked in a position pivoted upwards relative to the platform. Such a platform is known from practice.

5 With the known platform, a ramp is pivotally connected to the platform, while next to or above the platform an operating device is arranged which is connected, via a pivotal arm, to an edge of the ramp remote from the platform. Through operation of the operating device, the ramp can be moved by the arm from a lowered position to a raised position. In the raised position, the ramp is
10 retained by the operating device, thereby preventing the possibility of pivoting the ramp back from the blocking position. In this position, the ramp serves as a boundary of the platform, to prevent, for instance, a user from unintentionally riding off the platform.

Such a platform offers the advantage that, in principle, during use,
15 persons and goods are prevented from moving off the platform. However, a drawback of such a platform is that the ramp is operated and held in the blocking position only adjacent one end. Hence, there is the risk that, during use, loading of the ramp occurs at a distance from the operating device, thus causing the ramp, for instance, to twist and still allow an object or a person to
20 pass. Moreover, as a consequence, deformation of the ramp can arise. It has already been proposed to provide an operating device at both ends of the ramp. In this manner, however, the above-mentioned problem is only partially solved as deformation remains possible, whilst a platform according to the state of the art is thus rendered relatively costly as well as susceptible to failure and
25 relatively difficult to operate. A further drawback of this known platform is that the or each operating device needs to be mounted at a distance from the ramp above the platform, which may adversely affect normal use of the

platform. Furthermore, such an operating device is relatively vulnerable and esthetically disadvantageous.

The invention contemplates a platform, in particular a lifting platform, of the type described in the preamble, in which the above-mentioned drawbacks
5 are avoided, while maintaining the advantages thereof. To that end, a platform according to the invention is characterized by the features of claim 1.

With such a platform, the advantage is achieved that the cooperating profiles can ensure that the ramp can be brought in a first position in which, for instance, trolleys and objects can be brought via the ramp onto the
10 platform, while the ramp can moreover be brought into a second position in which it is pivoted upwards and is blocked by the third profile. Certainly with the first profile in the first position, the profiles can extend at least substantially completely under a plane defined by the upper surface of the platform, and so can the operating device. The operating device can, for
15 instance, be incorporated under the platform. As the operating device accordingly engages at a relatively low point, i.e. can engage under the riding surface, the or each point of engagement for the or each operating device can be provided at a distance from the two lateral ends of the ramp. This means that a considerably more favorable loading of the operating device can be
20 obtained.

Preferably, the profiles extend over substantially the full width of the ramp and/or the platform, so that an even better distribution of the forces is obtained, especially upon loading of the first profile in the raised second position.

25 In a first advantageous embodiment, a platform according to the invention is characterized by the features of claim 2.

In such an embodiment, the ramp is blocked in the second position by the third profile which is locked against a flange of the second profile or another part of the platform, such that, when a force is exerted on the first profile in
30 the direction of the first position, the third profile is pressed down against the

flange mentioned or the like, so that further pivoting of the first profile is simply prevented. This offers the advantage that at least substantially no forces are exerted on the operating device for blocking pivotal movement of the first profile from the second position. Preferably, the platform is designed such that the third profile can be pivoted relative to the first profile, from the position abutting against the flange mentioned to a position in which it is brought at least outside the reach of the above flange, and is preferably located approximately parallel to the riding surface of the first profile such that upon further movement of the operating device, the first profile together with the third profile is pivoted to the first position. Especially when the third profile extends over at least substantially the full width of the ramp, a particularly good lock is obtained, while a good distribution of the forces is achieved. The first profile can then simply be designed to be torsion rigid, so that deformations thereof can readily be prevented still better.

In further elaboration, a platform according to the invention is further characterized by the features of claim 4.

In such an embodiment, with the aid of the operating device the third profile can be pulled when the first profile has been brought into the first position, such that with the aid of the operating device the first profile can be pivoted to the second position. Only when the second position of the first profile has at least substantially been reached can the first coupling means be pulled from the recess, such that the third profile can be pivoted to the blocking position. Thus, a particularly favorable coupling is obtained between the operating means and the ramp, especially when, as discussed hereinabove, the third profile extends over substantially the full width of the ramp.

Control means can be provided for the operating device, with which the position of the ramp relative to the platform can be determined and with which movement of the platform can be prevented as long as the ramp has not been brought into the second position.

In an especially advantageous embodiment, a platform according to the invention is further characterized by the features of claim 10.

The use of extruded sections for the first, second and/or third profile offers the advantage that these can be manufactured relatively simply and economically, that they can be made of torsion rigid and bending stiff design,
5 while moreover ramps can be manufactured having any desired length.

To the skilled person, for that matter, it will be immediately clear that at least the second profile can be an integral part of the platform.

The invention further relates to a ramp for use with a platform,
10 characterized by the features of claim 11.

In the further subclaims, further advantageous embodiments of a platform according to the invention are set forth.

In clarification of the invention, exemplary embodiments of a platform and ramp according to the invention will be further elucidated with reference
15 to the drawing. In the drawing:

Figs. 1A-1C show in partly sectional side view along the line I-I in Figs. 4 and 3, respectively, a platform according to the invention in a first embodiment;

Fig. 1D shows a first, second and third profile for a ramp according to the
20 invention;

Fig. 2A-C show, in partly sectional side view along the line II-II in Figs. 4 and 3, respectively, a part of a platform according to Fig. 1;

Fig. 3 shows in perspective view a ramp for a platform according to the invention, in an upwardly pivoted second position;

25 Fig. 4 shows in perspective view a ramp according to Fig. 3 in a downwardly pivoted first position;

Fig. 5 shows in perspective view the ramp according to Fig. 4 viewed from the opposite side; and

30 Fig. 6 shows, schematically in side view, a part of a platform with a ramp according to the invention, in first and second position.

In this description, identical or corresponding parts have identical or corresponding reference numerals.

Fig. 1A shows a part of a platform 1 of a lift (not further shown) of a type known per se, for instance a stairlift or like platform lift. A platform 1 according to the invention can also be used as a lifting platform for other devices. Of the platform 1, a longitudinal edge is shown on which a ramp 2 is mounted which will hereinafter be described further. The platform 1 comprises a standing surface 4 and, extending approximately parallel thereto, an undersurface 6 with intermediate space, designed, for instance, as a sandwich panel. Confined between the standing surface 4 and the undersurface 6 is an operating device 8 for operating the ramp 2, in a manner to be further discussed hereinafter. As a consequence, the standing surface 4 can be designed to be substantially completely flat.

The ramp 2 comprises a first profile 10, a second profile 12 and a third profile 14, which profiles are preferably manufactured by extrusion from, for instance, aluminum or an aluminum alloy. However, also other materials or manufacturing techniques can be used. In Fig. 1D, from top to bottom, in side view, the first profile 10, the second profile 12 and the third profile 14 are shown individually.

The first profile 10 comprises a nose part 16 with an undersurface 18, an upper surface 20 defining the riding surface 22 and a number of cross partitions 24 connecting the undersurface 18 and the upper surface 20. The first profile 10 gradually widens in a substantially triangular manner from a point 26 in the direction of a bent end wall 28. From the top end of the end wall 28, there where it meets the upper surface 20, a first coupling profile part 30 extends in the direction away from the point 26. The first coupling profile part 30 comprises a first channel-shaped part 32, which is open at the top and which comprises a circular segment-shaped wall part 34, which internally includes an angle α preferably greater than 180° . The thus formed cavity 36 in the first channel-shaped part 32 forms a recess which can cooperate with a

first coupling part 38 of the third profile, as will be further elucidated. From the side of the first channel shaped part 32 remote from the end wall 28 extends a second wall part 40, which is bent upwards at the free end over an angle of more than 180° , thereby forming a profile part 42 having a circular segment-shaped cross section and a second cavity 44 which is open in the direction of the first channel-shaped part 32. In this second cavity 44, a rod-shaped part 46 of the third profile can be fittingly received in a manner to be described hereinafter. Between the first channel-shaped part 32 and the profile part 42, a lip 48 extends upwards from the second wall part 40, such that the lip 48 is situated at some distance from the free end 50 of the profile part 42. From the side of the second wall part 40 located opposite the lip 48, a second lip 52 extends, approximately at right angles to the second wall part 40, which second lip is provided at the free end with a second profile part 54 with a circular segment-shaped cross section which bounds a third cavity 56 open at the side remote from the end wall 28, which cavity includes an internal angle preferably greater than 180° , for instance 270° . The first coupling profile part 30 is dimensioned such that the center C of the second profile part 54 is also the center of the bending radius of the end wall 28, while the center of the first channel-shaped part 32 and the center of the second cavity 44 are located at the same distance from the center C of the third cavity 56, which distance is somewhat smaller than the bending radius of the end wall 28. The reason for this will be explained later.

The second profile 12 comprises a lower flange 58 and an upper flange 60 extending approximately parallel thereto. The lower flange 58 and the upper flange 60 are interconnected by an end wall 62 extending substantially at right angles to the flanges. On a first side of the end wall 62, a number of ribs 64 are provided, extending parallel to the lower flange 58, such that, in each case, between two adjacently extending ribs 64, screws can be fitted for attachment of the operating device 8, as is apparent from, for instance, Figs. 1A – C and 2A – C. From the side of the end wall 62 remote from the first side 63, the

lower flange 58 extends further than the upper flange 60 and is provided at the free end located on the side mentioned with a second end wall 66, extending in an inclining manner. From the lower flange 58 extends a support wall 68, likewise inclined, in the direction of the second end wall 66, which support wall 5 68 is provided at the free end with a second rod-shaped part 70 having a circular segment-shaped cross section which can be fittingly received in the third cavity 56 of the second profile part 54, such that the rod-shaped part 70 can rotate therewithin. This rotation can be limited, on the one hand, by the thickness of the support wall 68 and, on the other, by the angle included by the 10 second profile part 54. This enables a rotation of the first profile 10 relative to the second profile 12 over an angle of, for instance, 70°, 90° or 110°. In coupled condition, in a first position of the first profile 10 relative to the second profile 12, as is shown in Fig. 1A, the free end 72 of the second end wall 66 will abut against the transition from the end wall 28 to the first channel-shaped part 32 15 of the first profile 10, thereby preventing further pivoting of the first profile part 10. In a second position of the first profile 10, as shown in Fig. 1B and Fig. 1C, the second end wall 66 is approximately in alignment with the undersurface 18.

From the second end wall 66 of the second profile 12, a rib 74 extends in 20 the direction of the rod-shaped part 70, which merges into a bent profile part 76 extending at a distance parallel to the outer surface of the second rod-shaped part 70 and which, in a coupled position of the first and second profile 10, 12, abuts against the outer side of the second profile part 54. What is thus prevented, in a simple manner, is that the first profile part 10 can be detached 25 from the second profile 12 in a direction at right angles to its longitudinal direction. The length of the bent profile part 76 is then chosen such that, with the first profile 10 in the first position as shown in Fig. 1A, the free end of the bent profile part 76 abuts against the second lip 52 of the first profile 10. The distance between the second rod-shaped part 70 and the free end 78 of the

upper flange 60 is chosen such that the bent profile part 52 of the second wall part 40 can pass this at a small distance.

The third profile 14 comprises a bent middle part 80 which, at a first end, is bent downwards and inwards for forming a tubular profile part 82 which forms the first coupling element 38 mentioned and is fittingly received in the first channel-shaped part 32, the first coupling element 38 and the first channel-shaped part 32 being dimensioned such that the first coupling element 38, via the open upper side, can be moved into the first cavity 36 or can be pulled out of it, possibly with slight elastic deformation. On the side opposite the tubular profile part 82, the middle part 80 is provided with a downwardly extending profile part 84 which comprises the rod-shaped part 46, while between the middle part 80 and the rod-shaped part 46 a somewhat bent groove 86 is provided, such that the rod-shaped part 46 can be fittingly slid into the second cavity 44 of the profile part 42 and can be rotated therein about the center of the rod-shaped part 46 over a relatively small angle which is limited on the one hand in that the profile part 84 comes to abut against the second wall part 40 and, on the other hand, in that the free end 50 of the profile part 42 comes to abut against the end wall of the groove 86. The rod-shaped part 46 therefore forms the pivoting pin for the third profile 14 relative to the first profile 10.

The operating device 8 comprises a preferably linear motor 88, with which an operating rod 90 can be moved. With the aid of a frame 92, the linear motor is mounted against the end wall 62 of the second profile 12 by means of screws 94, such that the operating rod 90 extends parallel to the upper and lower flange 60, 58 of the second profile 12. As appears clearly from Figs. 3 – 5, the operating device 8 is mounted at a distance from the two ends of the second profile 12. At that location, an opening (not shown) is provided in the second profile, through which extends an arm 96, which is connected by a first side, via a coupling pin 98 to the free end of the operating rod 90 and, by the opposite end, via a second coupling pin 100 to the tubular profile part 82 of the

third profile 14. To that end, the second coupling pin 100 is received within this tubular profile part 82. In the first profile 10 and third profile 14, at the location of the arm 96, a slotted recess is provided (not shown) through which the arm 96 can move, so that it can be brought in the position shown in particular in Fig. 1A.

A platform 1, at least a ramp 2 according to the invention can be assembled as follows.

From one of the ends of the second profile 12, the first profile 10 is slid by the second profile part 54 thereof, over the second rod-shaped part 70 between the second rod-shaped part 70 and the bent profile part 76. Next, the third profile 14 is slid into the first profile 10 by sliding the rod-shaped part 46 into the second cavity 44, while the first coupling element 38 is slid into the first channel-shaped part 32. The third profile 14 is then preferably dimensioned such that in this position the upper side of the middle part 80 substantially links up with the upper surface 20 of the first profile 10. Next, the arm 96 can be inserted through the second profile 12 and the first profile 10, from the first side 63 of the end wall 62, after which the second coupling pin 100 can be inserted through the tubular profile part 82 and a fitting opening in the arm 96, for coupling same.

A ramp according to Figs. 1 – 5 can be used as follows.

In the position shown in Fig. 1A, the ramp 2 is brought in the first position, in which, via the riding surface 22, for instance a wheelchair can be brought onto the standing surface 4 of the platform 1 or can be ridden off it, thereby passing the third profile 14. When the platform 1 is to be moved, the linear motor 88 is energized, so that the operating rod 90 is pulled away in a direction away from the second profile 12, thereby taking along the arm 96. As a result, the arm 90 is pulled in a direction F, its line of force K extending such that the first coupling means 38 is pulled against the wall 34 of the first channel-shaped part 32. As a result, the first profile 10 will be pivoted about the second rod-shaped part 70 serving as a pivoting pin, primarily to the

intermediate position shown in Fig. 1B. In this intermediate position, the undersurface 18 of the first profile 10 is approximately parallel to the second end wall 66 of the second profile 12, while the first channel-shaped part 32 is moved substantially against the free end 78 of the upper flange 60. Upon
5 further movement of the operating rod 90 and the arm 96 in the above-mentioned direction, the first coupling element 38 will be pulled from the first cavity 36, the first profile being arrested at least by the upper flange 60. As a result, upon further movement of the operating rod 90, the third profile 14 will be pivoted about the rod-shaped part 46 relative to the first profile 10. The
10 third profile 14 is then pivoted to such an extent that the middle part 80 abuts against the end wall 62. This position is shown in Fig. 1C. In this position, pivotal movement of the first profile 10 is virtually impossible. The fact is that further upward pivoting is at least prevented by the upper flange 60, while pivotal movement of the first profile 10 from the second position shown in
15 Fig. 1C, back in the direction of the first position as shown in Fig. 1A is prevented by the third profile 14. In fact, if the first profile 10 were to be pivoted about the second rod-shaped part 2, the second cavity 44 would be moved upward in the direction of the upper flange 60. The third profile 14 would then be moved along upwards, which is prevented in that the tubular
20 profile part 82 abuts against the end wall 62 and would be pressed against the upper flange 60. In this manner, movement of the third profile 14, and hence of the first profile 10, is uniformly prevented. As pivotal movement of the third profile 14 by the operating device is prevented, in this condition, the ramp 2 is effectively blocked against pivoting without the motor having to be loaded. For
25 pivoting the ramp 2 from the second position, as is shown, for instance, in Figs. 1C, 2C and 3, to the first position, as shown, for instance, in Figs. 1A, 2A, 4 and 5, the linear motor 88 is once again energized such that the operating rod 90 is moved in the direction of the second profile 12. As a result, the first coupling part 38 is moved back into the first cavity 36 of the first channel-
30 shaped part 32, such that this comes clear of the upper flange 60, whereafter,

upon further movement of the operating rod 90, the first profile 10 will be pivoted about the second rod-shaped part 70, into the first position. The lip 48, for that matter, also assists in locking the rod-shaped part 46 in the profile part 42.

5 An operating device 8 according to the invention is preferably provided with control means 102 with which the position of the ramp 2 can be determined. With the aid of the control means 102, platform control and driving means (not shown) can be controlled, such that movement of the platform when the ramp 2 has (not yet) been brought into the second position
10 shown in Figs. 1C, 2C and 3 can be prevented. The control means 102 comprise an optocoupler 104 or like sensor, arranged such that a plate part 106 can be moved therebetween. In the embodiment shown, the plate part 106 extends vertically during use, next to the operating rod 90. By a first end, the plate part 106 extends through the above-mentioned opening in the end wall 62 of
15 the second profile 12, and is provided with a somewhat wedge-shaped part 108 with a recess 110. With the aid of a spring 112, the plate part 106 is biased such that the wedge-shaped part 108 is pushed against the first profile 10. The control means 102 function as follows.

In the first position of the ramp 2, shown in Fig. 2A, the wedge-shaped
20 part 108 abuts against the outer side of the profile part 42 of the second wall part 40. As a result, the spring 112 is somewhat stretched and the free end 114 of the plate part 106 is moved between the light source and the sensor of the optocoupler 104, such that the sensor does not receive light from the light source. Therefore, this position is recognized by the control means as a position
25 in which the platform 1 should not yet be moved, as the ramp 2 has not yet been brought into the second position, the blocking position. When the first profile is pivoted upwards from the first position, successively, the profile part 42 and the lip 48 will pass the recess 110, whereupon the wall 34 of the first channel-shaped part 32 will enter the recess. As a result, the plate part 106
30 can be moved somewhat by the spring 112, such that the free end 114 of the

plate part 106 is moved out from between the sensor and the light source of the optocoupler 104. Thus, the control means 102 will recognize that the ramp 2 has been brought into the second position and release the platform 1 for movement. When the ramp 2 is pivoted back to the first position again,
5 movement of the platform 1 will be blocked again.

In Fig. 6, an alternative embodiment of a platform according to the invention is shown, in which the first profile 10, the second profile 12 and the third profile 14 together with the platform form a four-bar mechanism. At its underside, the first profile 10 is provided with two pivotal points 120, 122, in
10 which the third profile 14 and the second profile 12, respectively, are pivotally bearing-mounted. The end of the second profile 12 located opposite the pivotal point 122 is pivotally bearing-mounted in a third pivotal point 124; the end of the third profile 14 opposite the pivotal point 120 is bearing-mounted in a
5 fourth pivotal point 126. In this context, pivotal points are herein to be
15 understood to comprise at least pivoting pins extending over a part or substantially the full length of the respective profiles 10 - 14. Near the fourth pivotal point 126, an elevation 128 is arranged on the third profile 14, which is engaged by the arm 96 of the operating device 8 (not further shown).

Therefore, the arm 96 extends at a distance above the fourth pivotal point 126.
20 In Fig. 6, on the left-hand side, the first position of the ramp 2 is shown, with the first profile 10 and the second profile 12 extending approximately parallel to and in line with each other, thereby forming the riding surface 22. As the pivotal point 122 is located at a distance from the free ends of the first profile, and the third pivotal point 124 is located at a distance from the edge of the
25 platform 1, the ramp 2 will simply remain in this position. When presently the operating device 8 is operated, such that the arm 96 is pulled away, the third profile 14 is pivoted about the fourth pivotal point 126, whereby the first profile 10 is forced into a vertical position, as is shown in Fig. 6 on the right-hand side. In this second position, the third profile is retained by the operating
30 device 8. When a force is exerted on the first profile 10 or on the second profile

12 in the direction away from the platform, the first profile 10 will not pivot, as the - then lower - longitudinal edge 9 will be pushed against the third profile 14 and will prevent pivoting. Only when the operating device 8 is activated can the ramp 2 be brought back in the first position with the aid of the arm 96. It is preferred, for that matter, that the ramp 2 be arranged along a longitudinal edge of the platform 1, allowing, for instance, a wheelchair to be arranged on the platform 1 with the wheels parallel to the ramp 2, as is schematically shown by a part of a sectioned wheel 111 and associated hoop 113 of a wheelchair.

10 The invention is not in any way limited to the exemplary embodiments represented in the description and the drawing. Many variations thereon are possible within the scope of the invention as outlined by the claims.

Thus, the first, second and third profile can be formed in a different manner than by extrusion, while the profiles can have a different shape. For instance, the first profile may only comprise an upper surface and no undersurface and/or cross partitions, while, moreover, it can be made of solid design. In principle, the second end wall 66 can be omitted from the second profile, while moreover, the standing surface 4 of the platform 1 may extend so far that the upper flange 60 can be omitted. Also, the second profile may be partly or wholly integrated into the platform 1, while the first profile 1 and the third profile 3 may also be pivotally connected to each other through, for instance, an integrated hinge. Other types of operating devices can be used for initiating pivotal movement of the ramp 2, for instance at more than one position. Also, the operating device may at least partly be included in or above the standing surface. Also, other types of control device may be provided for detection of the position of the ramp, for instance angle measurement devices, force measurement devices and the like. The profiles and pivoting pins preferably extend over the full width of the ramp. It will be clear, however, that shorter profiles may also be used.

Claims

1. A platform with ramp, which ramp in a first position can function as a riding surface for moving objects on and off the platform, and in a second position can function as a protection against riding off or otherwise moving off of objects from the platform, which ramp comprises a first profile substantially
5 comprising the riding surface, which first profile is pivotally connected to a second profile which is connected to the platform, while a third profile is provided which is connected near a first side to the first profile and at a distance therefrom is connected with an operating device for the ramp, while with the aid of the operating device the third profile can be brought in a first,
10 blocking position in which at least pivotal movement of the first profile from the second position to the first position is prevented and in a second, pivoting position in which the first profile with the aid of the operating device can be moved between the first and second position.
2. A platform according to claim 1, wherein the third profile in the
15 pivoting position is disposed virtually parallel to, and is preferably received at least partly in, the riding surface, at least an upper surface of the first profile, and in the blocking position is pivoted relative to the first profile, such that the third profile is pivoted away out of the riding surface and is moved under a flange part of the second profile or the platform, such that the third profile is
20 locked between the first profile and said flange and upon slight pivotal movement of the first profile is pressed down against said flange part.
3. A platform according to claim 1 or 2, wherein the third profile in the
pivoting position has the first and the second end located substantially on a circle whose center is defined by a pivoting pin which pivotally connects the
25 first and second profile and which virtually abuts against a free longitudinal edge of a flange extending from the platform and/or a wall located near the

platform, wherein the second end of the third profile in the blocking position is moved away from said circle under said flange and/or against said wall.

4. A platform according to any one of the preceding claims, wherein the third profile is provided near the second end with a first coupling means which
5 can be received in a recess in the first profile when the first profile is in the lowered first position, an arm of the operating device being coupled therewith and having a direction of pull which then intersects a wall part of the recess facing the operating device, while in a raised, second position of the first
10 profile the first coupling means can be pulled out of the recess with the aid of the operating device and can be moved into the blocking position.

5. A platform according to any one of the preceding claims, wherein the operating device is provided with control means with which the position of the ramp, in particular of the first profile relative to the platform, can be
15 determined, which control means are connected with platform control means and driving means, the arrangement being such that when the ramp is in the first position, at least not in the blocked second position, movement of the platform is prevented.

6. A platform according to claim 5, wherein the operating means comprise light sensitive means, in particular at least an optocoupler for
20 determining the position of the first profile.

7. A platform according to any one of the preceding claims, wherein at least the third profile extends over at least substantially the full length of the first profile and/or the respective side of the platform.

8. A platform according to any one of the preceding claims, wherein the
25 operating device comprises a linear motor.

9. A platform, comprising a ramp and a blocking profile, wherein the blocking profile can be brought in a position of use in which it is virtually incorporated in an upper surface of the ramp, at least links up therewith,
30 while it can be pivoted to a blocking position, wherein the ramp extends approximately at right angles to the upper surface of the platform and a

pivotal movement of the ramp is blocked by the blocking profile, while the blocking profile extends over virtually the full width of the ramp and can block it.

10. A platform according to any one of the preceding claims, wherein the
5 profiles are extruded sections.
11. A ramp for use in a platform for forming a platform according to any
one of the preceding claims.

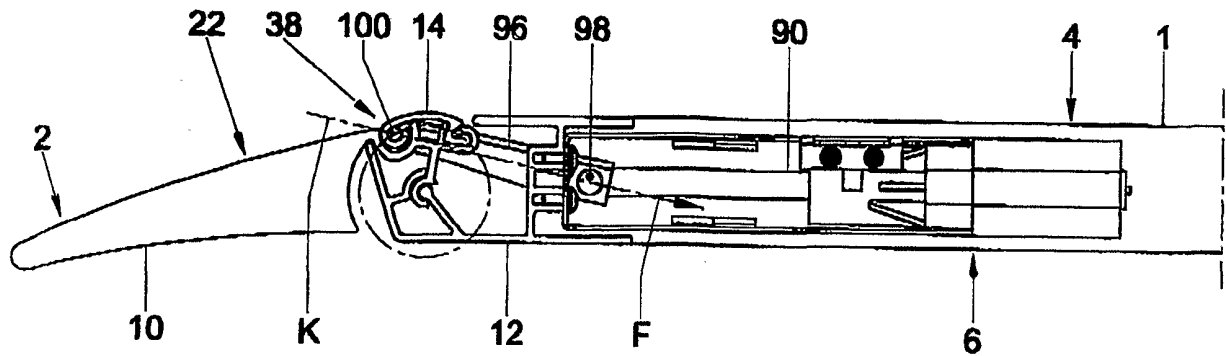


Fig. 1A

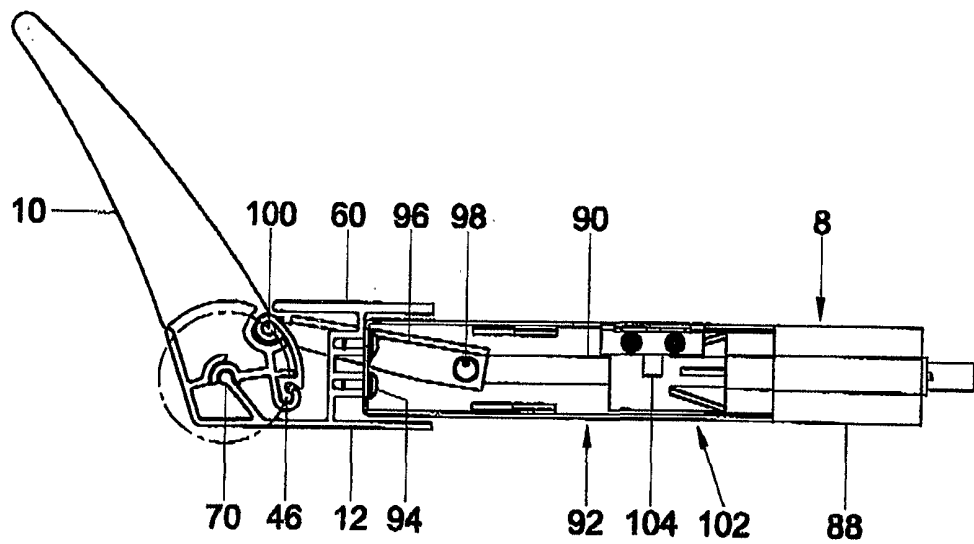


Fig. 1B

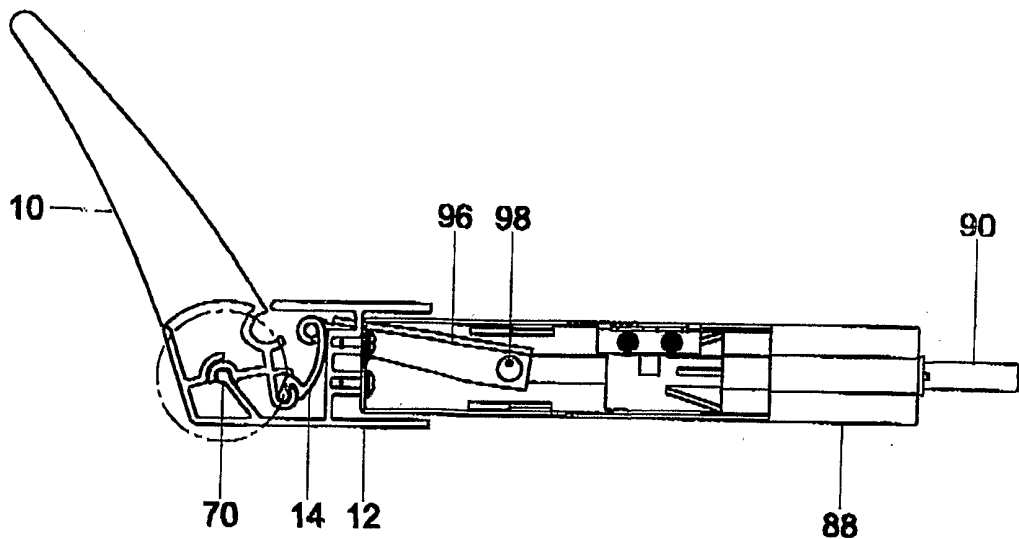


Fig. 1C

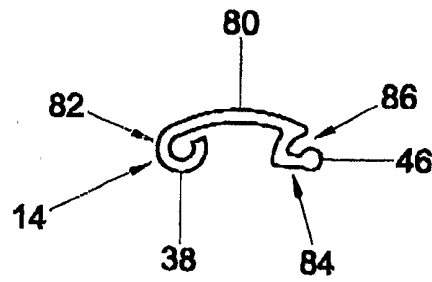
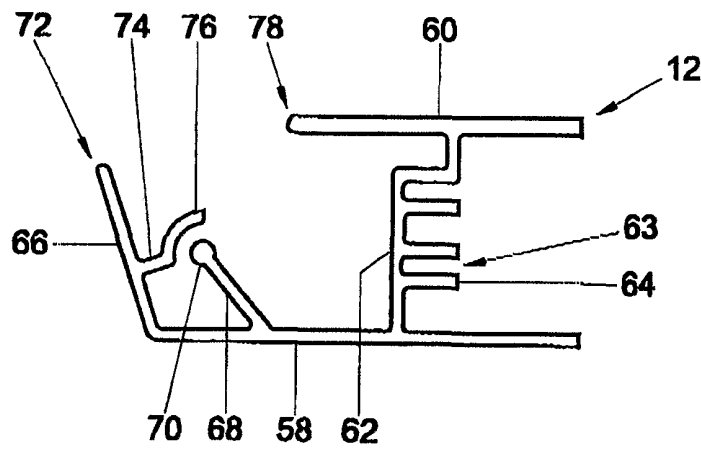
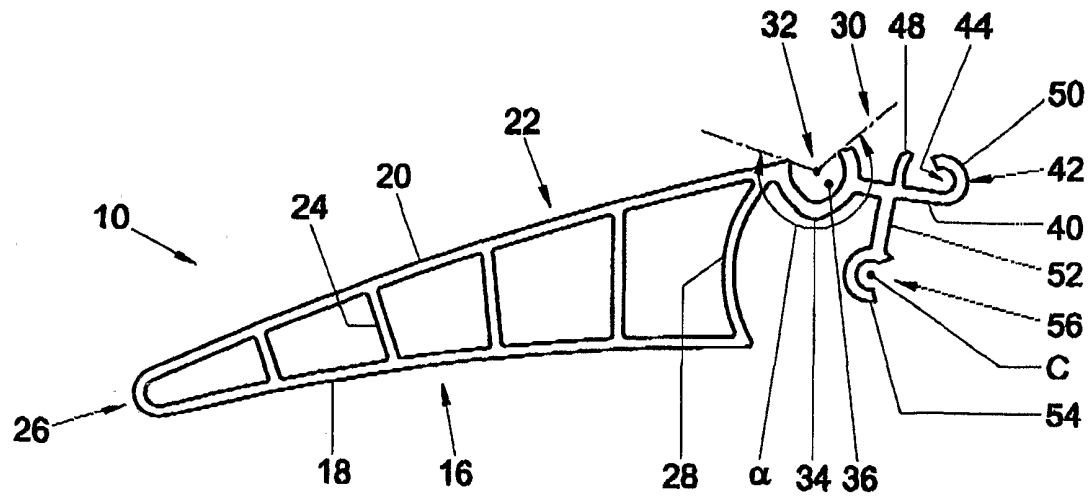


Fig. 1D

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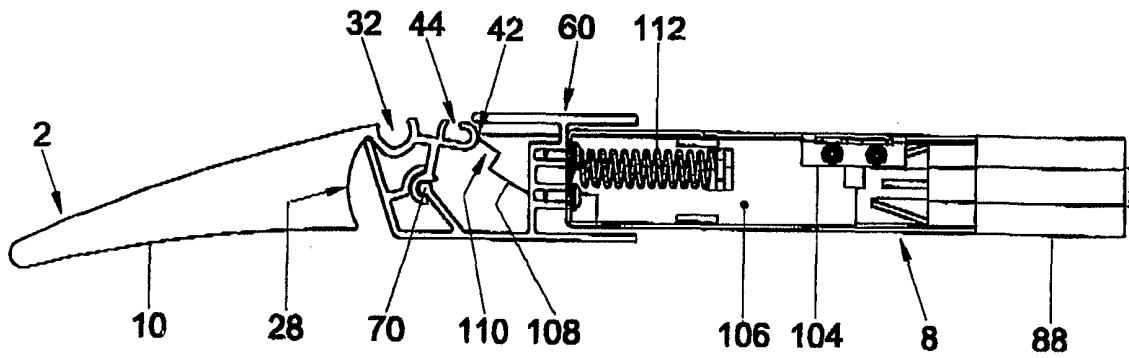


Fig. 2A

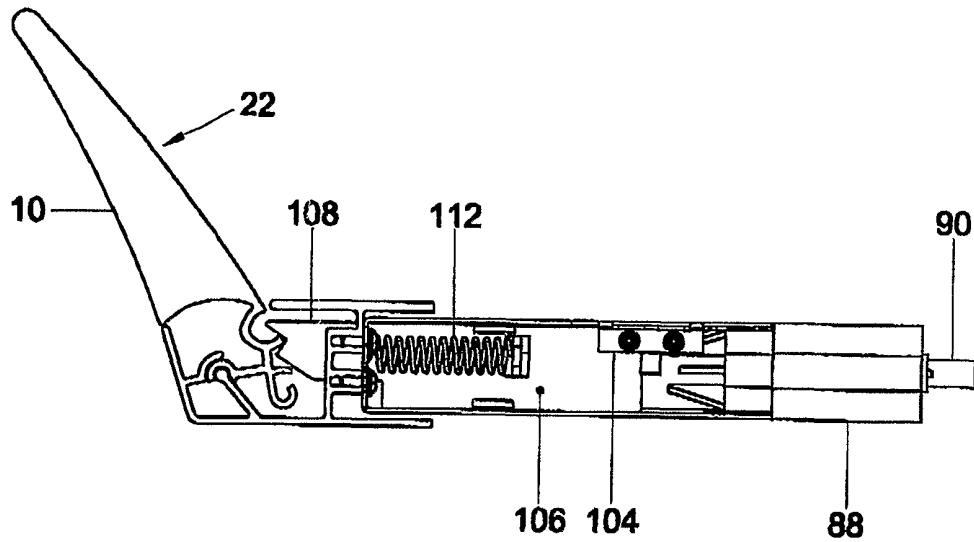


Fig. 2B

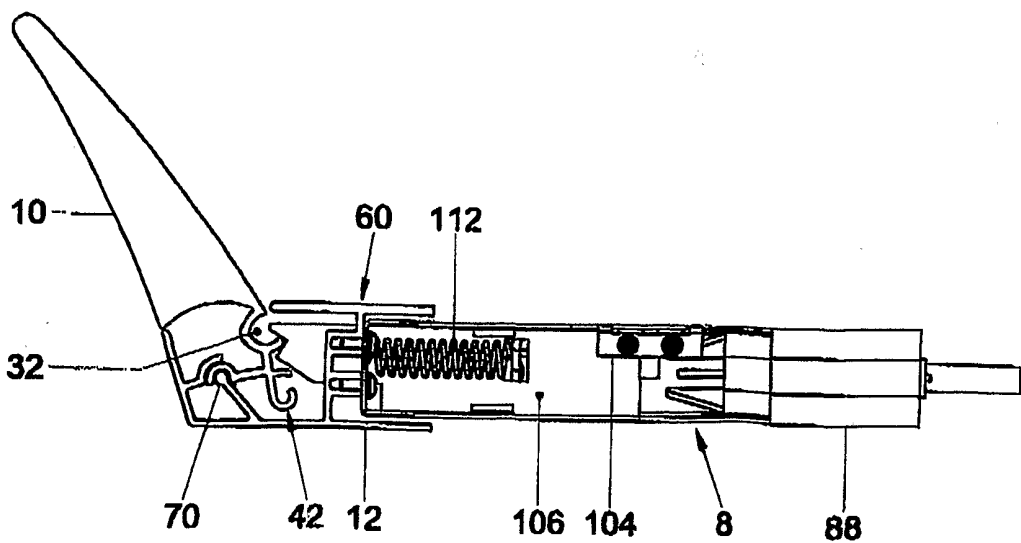


Fig. 2C

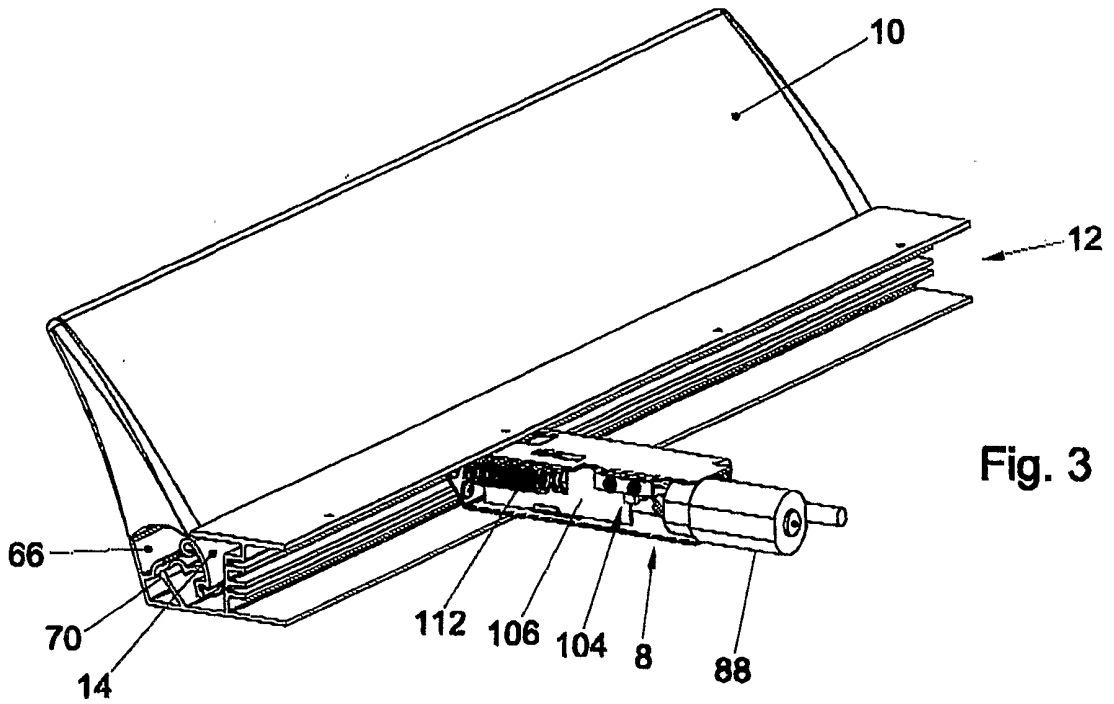


Fig. 3

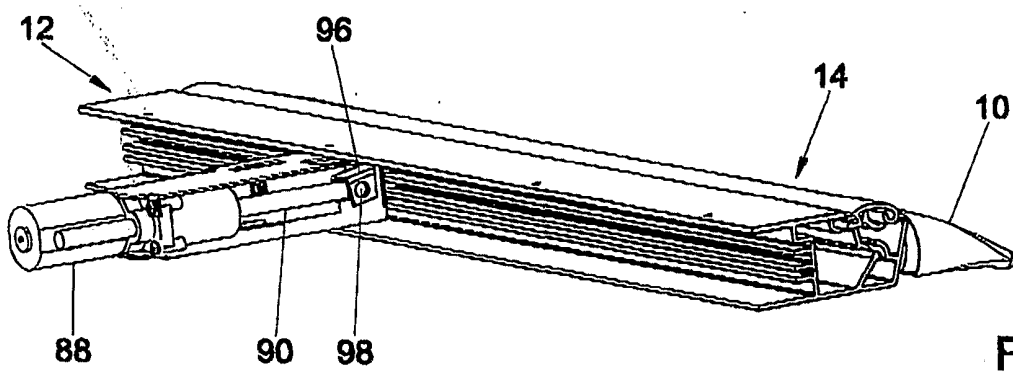


Fig. 4

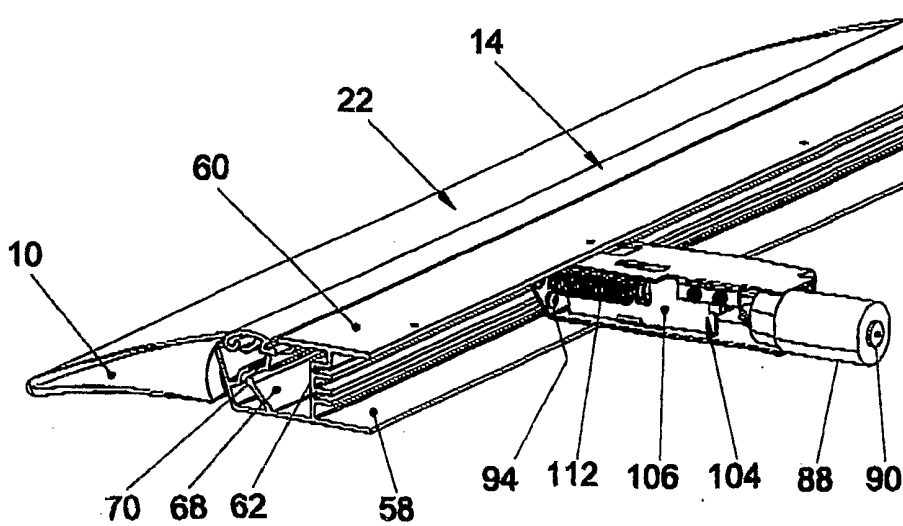


Fig. 5

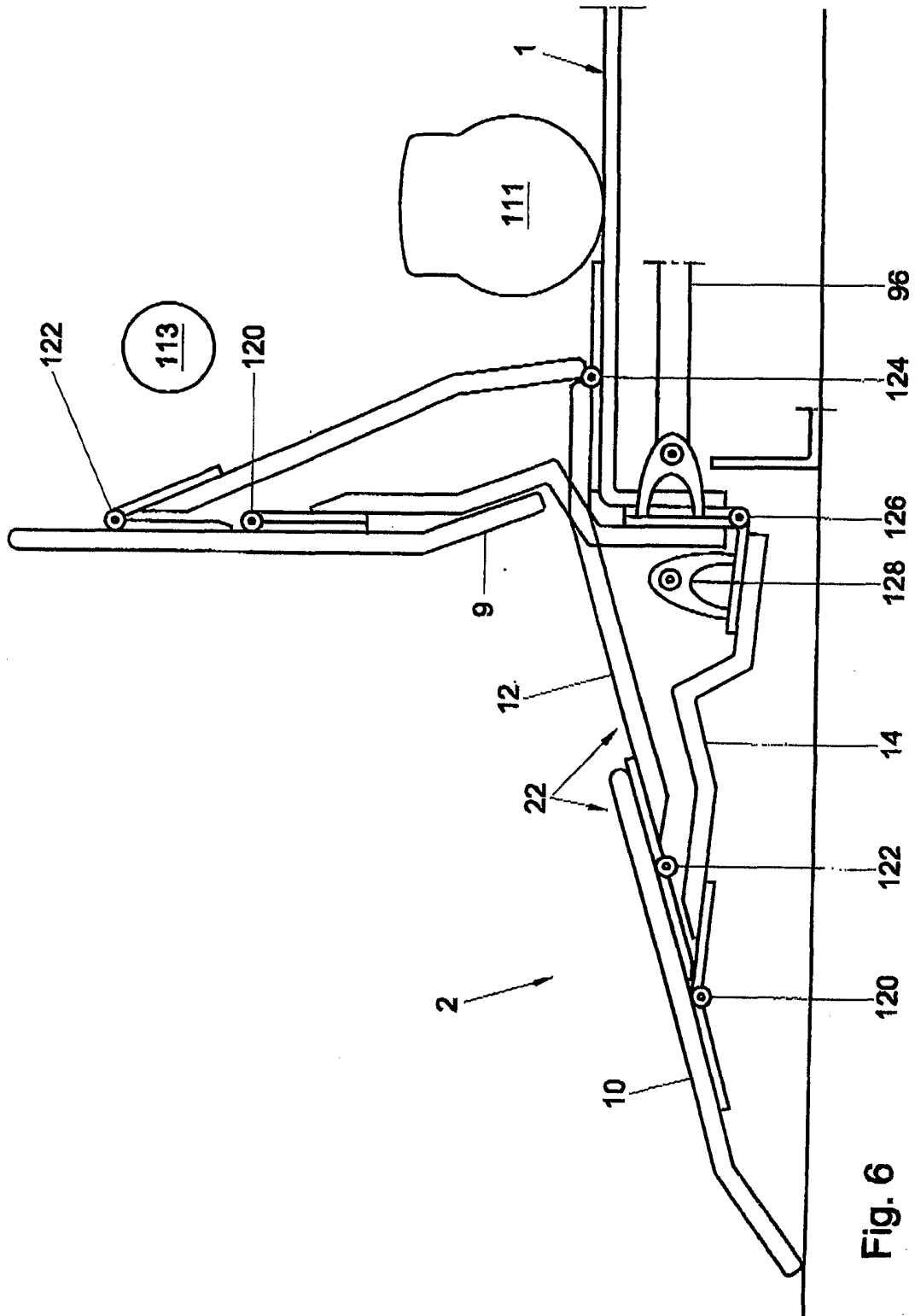


Fig. 6

INTERNATIONAL SEARCH REPORT

International Application No

PCT/...L 01/00581

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B60P1/44 A61G3/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 B60P A61G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 180 366 A (ROTH ET AL) 25 December 1979 (1979-12-25) column 2, line 9 - line 14 column 5, line 51 - column 6, line 34; figures 6A,7-9	1,5,8,11
P,A	US 6 203 266 B1 (SAVARIA ET AL) 20 March 2001 (2001-03-20) figures 7,8	1

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- *O* document referring to an oral disclosure, use, exhibition or other means
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Date of the actual completion of the international search

17 December 2001

Date of mailing of the international search report

02/01/2002

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Nordlund, J

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No	PC . 01/00581
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