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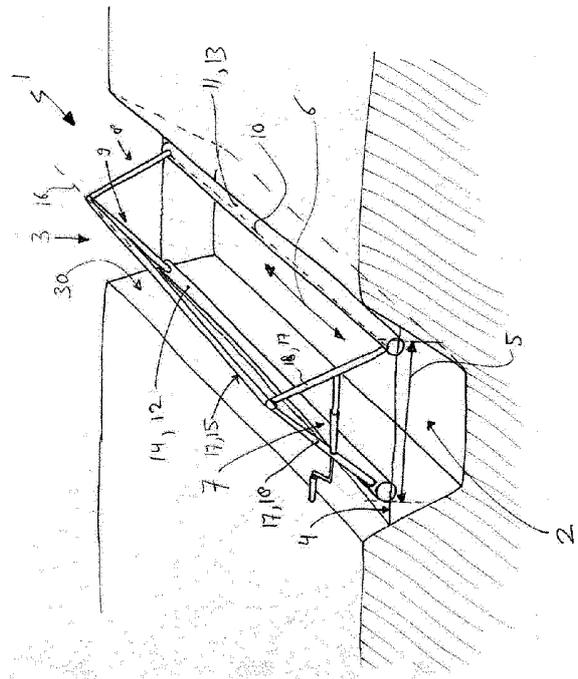
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54 **Bird obstructing device, water body and method.**

57 The invention relates to a bird obstructing device for hindering pest birds to land onto a water body, for example located at or in the proximity of an airport or in the proximity of a runway. The bird obstructing device comprises an elongated bird obstructing covering. Said covering is arranged for floating on the surface of a water body. The device has a width substantially transverse to a longitudinal direction of its covering. In the inventive device, at least a part of the width of the covering is adjustable. In order to enable adjustment of the width of the covering, the covering may for instance comprise a bendable and/or pivotable frame.



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Dit octrooi is verleend ongeacht het bijgevoegde resultaat van het onderzoek naar de stand van de techniek en schriftelijke opinie. Het octrooischrift komt overeen met de oorspronkelijk ingediende stukken.

Title: Bird obstructing device, water body and method

The invention relates to a bird obstructing device for hindering pest birds to land onto a water body. In particular, the invention relates to a device for hindering pest birds to land onto channels or other surface water bodies.

5 Often, water bodies are present at airports and/or in the vicinity of runways. The water bodies can be highly desired, for instance for dampening noise and/or for draining purposes. However, surface water attracts birds, which can cause potentially dangerous situations, because collisions or so-called bird strikes can damage airplanes and can even make  
10 them crash.

Therefore, it is proposed to drain as much water bodies in the vicinity of an airport as possible and to cover the remaining, necessary water bodies with wires or netting to inhibit birds from landing, see for instance the Airport Services Manual, Part 3, Bird Control and Reduction,  
15 Third Edition – 1991, published by the International Civil Aviation Organization. However, such netting or wires can impede mowing grass and other vegetation of the banks of water bodies, which is often highly desirable, for instance to counteract flourishing of pest insects. Therefore, said Manual advises to further improve the situation by replacing ditches  
20 covered with wires or netting with buried drain pipes, such that water can be drained, while pest insects can be counteracted. A disadvantage of replacing surface water by buried drain pipes is that the noise dampening effect of the surface water goes lost. Besides, it is noted, that from an environmental point of view it can be apparently unwanted to drain water  
25 bodies or to replace them with buried channels, for example because it can be unwanted to exclude water plants and/or some animals other than pest birds.

Besides, a bird obstructing device for hindering pest birds to land onto a water body may not only be desirable in the vicinity of runways

and/or airports, but can alternatively or additionally be desirable at other places. For example, such device can be used to prevent pest birds from landing onto and/or entering other water bodies, such as water bodies of swimming pools, hatcheries or water treatment facilities.

5           The invention contemplates a device and/or a method suitable for hindering pest birds to land onto a water body such as a channel, wherein at least one of the above-mentioned drawbacks has been counteracted, at least partly, while maintaining, at least partly, an or multiple advantages of water bodies, such as for instance water storing, water draining, noise  
10 dampening and/or one or more environmental capacities of water bodies.

          Therefore, a bird obstructing device for hindering pest birds to land onto a water body is provided, which comprises an elongated bird obstructing covering arranged for floating on a surface of a water body, wherein the device has a width substantially transverse to a longitudinal  
15 direction of the covering, and wherein at least a part of the width of the covering is adjustable. By providing an elongated bird obstructing covering, birds can be inhibit from landing on the water body, without needing drastic measures such as draining or burying the water body. Hence, advantages of the water body, such as for instance water storage, water draining  
20 capacities, noise dampening and/or environmental capacities, can be maintained at least partly. Further, by arranging the bird obstructing covering of the device such that it can float on the surface of the water body, it is counteracted that banks of the water body are poorly or not accessible. It is noted that this can be in strong contrast to some conventional covering,  
25 such as netting or wires. Besides, by enabling that the width of the covering is adjustable, the covering may be offset temporarily from the respective bank or banks, such that a respective bank may be mowed or maintained in other ways.

          A further advantage of enabling that the width of the covering is  
30 adjustable may be that the device can be easily adapted for use on a certain

water body, such as a channel, having a certain width. Moreover, since banks of channels and the like are often sloping, the width of a water body can change due to water levels changing over time. As a consequence of the width adjustability of the covering, after placement of the device on a water  
5 body, the width can be adapted to correspond to a changed width of the water body.

In an advantageous embodiment, the covering may comprise an at least partly bendable and/or pivotable frame to enable adjustment of the width of at least part of the covering. For example, the frame may be  
10 pivotable around one or more pivot axes, preferably extending substantially in a longitudinal direction of the device. Advantageously, a pivot axis may be located at or near a top of the frame. Additionally or alternatively, a pivot axis can be arranged at or near a lower end of a lateral side of the frame.

In further elaborations, the covering can be arranged at least  
15 partly for allowing the passage of air, light, precipitation and/or animals having a predetermined maximum size. By allowing passage of air, the water body can for instance still be used for noise dampening. By allowing precipitation to pass, draining capacities of water bodies can be maintained. Additionally or alternatively, for example by allowing light, air and/or  
20 certain animals to pass, environmental capacities of the water body may be retained, at least partly.

The invention further relates to a water body, preferably an elongated water body or a so-called channel, such as a canal, ditch, brook or creek, wherein the water body is provided with a bird obstructing device  
25 floating on its surface.

In an advantageous embodiment of the water body and/or during normal use of the device, a distance between a bank of the water body and the device floating on the surface of the water body is at most 50 cm, preferably 20, more preferably 10 cm. As a consequence, pest birds, such as  
30 water birds, have little to no space to land on a part of the water surface

between said bank and the device. A certain distance between the bank and the water body can be left uncovered by the covering, for instance in order to provide for tolerance, which may be desirable, for example when the water level of the water body is subject to change. However, it is noted that the  
5 bank of the water body and the device floating on its surface may alternatively abut substantially, preferably at least partly by abutment of the bank to the respective floating element of said device. As a consequence, the accessibility of the water body can be denied substantially completely to the relevant pest birds.

10           Furthermore, the invention relates to a method for maintaining a water body.

Advantageous embodiments according to the invention are described in the appended claims.

By way of non-limiting example only, embodiments of the present  
15 invention will now be described with reference to the accompanying figures in which:

Figure 1 shows a schematic perspective view of a bird obstructing device according to the invention;

Figure 2 shows a schematic perspective view of second embodiment  
20 of a bird obstructing device according to the invention;

Figure 2a shows a schematic cross section of an alternative embodiment of a bird obstructing device according to the invention in a first position;

Figure 2b shows a schematic cross section of the device of fig. 2a in  
25 a second position;

Figure 3 shows a schematic detail of the device of fig. 2;

Figure 4 shows a schematic cross section of the device of fig. 2;

Figure 5 shows a schematic cross section of a further embodiment of a bird obstructing device according to the invention; and

Figure 6 shows a schematic cross section of yet a further embodiment of a bird obstructing device 1 according to the invention.

The embodiments disclosed herein are shown as examples only and should by no means be understood as limiting the scope of the claimed invention in any way. Many variations are possible within the scope of the present disclosure, which variations, for example parts of or combinations of parts of the embodiments shown and/or described, also are considered to have been disclosed. In this description the same or similar elements have the same or similar reference signs.

In this description wording like about and substantially should be understood as meaning at least that variations of a given value it refers to are allowable within the given definition, which variations can at least be 5%, preferably at least 10% and more preferably at least 15% of the given value. However, it is apparent that such wording as about and substantially should be understood as meaning at least including the given value it refers to itself, thus without such variation.

In this description pest birds can be understood as including, but not necessary being limited to, birds that are unwanted at a certain location and/or birds detrimental to human concerns such as detrimental to aviation, aquaculture, agriculture and/or livestock production. A distinction between pest birds and other birds may for instance lie in certain bird characteristics. For instance, a distinction can lie in whether or not birds have a certain minimum or maximum size. For example, birds with a relative large size, weight and/or wingspan can be considered pest birds, especially in case of aviation. Therefore, pest birds may include for instance ducks, swans and/or geese. As another example of a characteristic which may be used to distinguish pest birds from other birds can lie in whether or not birds do often fly in swarms and/or relative big formations. For instance, starlings and/or geese can be considered pest birds. Alternatively or additionally, birds that are attracted to water, fish, certain crops and/or

certain cattle may be considered pest birds. For instance, pest birds can include waterfowl and/or fish eating birds, such as seagulls. Figure 1 shows a schematic perspective view of a bird obstructing device 1 according to the invention. The device 1, which is for hindering pest birds to land onto a water body 2, comprises an elongated bird obstructing covering 3 arranged for floating on a surface 4 of a water body 2.

It is noted that, in embodiments, the bird obstructing device 1 can be or can consist of the bird obstructing covering 3. However, alternatively, said device 1 can comprise additional elements, such as for instance anchor means for keeping the bird obstructing covering 3 substantially in place.

Further, the covering 3 of the device 1 according to the invention has a width 5 substantially transverse to a longitudinal direction 6 of the covering 3. At least a part of the width 5 of the covering 3 is adjustable. Like in fig. 1, the width 5 of the whole covering 3 can be adjusted, preferably at once. Hereto, the device 1 may comprise one or a multiple number of width adjusting mechanisms 7 such as for example a jack 7 or a jack type mechanism 7, for instance employing a screw thread or a, preferably hydraulic, cylinder. The adjusting mechanism 7 may be a manual operable mechanism 7 and/or can be motorized at least partly, preferably arranged such that it can be operated from ashore.

It is noted that the covering 3, here comprising two wall parts 8, 9, is arranged for obstructing pest birds. For ease of understanding the drawing, fig. 1 does not show such an arrangement. However, in a bird obstructing device 1 according to the invention, the covering 3 may comprise means for hindering the passage of birds, preferably waterfowl, pest birds and/or birds having a predetermined maximum size, such as a maximum body width of at least 10 cm, preferably at least 8 cm, more preferably at least 5 cm. The means for hindering can for instance comprise netting, gauze, wires, wire mesh, perforated sheets, bars, screens, cloth, canvas or the like, and/or any combination of such means. It is noted that the covering

3 can preferably be arranged for substantially hindering all birds to pass through. The presence of any birds may namely be undesirable, for instance because the presence of birds may attract other birds, including pest birds.

The device 1 comprises at least one first floating element 11 at a  
5 first lateral side and at least one second floating element 12 at a second lateral side of the device 1 and/or the covering 3. Here, said second floating element 12 is laterally offset with respect to the first floating element 11. Advantageously, the floating elements 11, 12 may be substantially elongated and/or may extend substantially parallel with each other. Here,  
10 the floating element 11, 12 consists of a single float 13, 14 having a substantially tubular shape. However, a floating element 11, 12 can comprise multiple floats, preferably interconnect to each other, such as for instance shown in the embodiment of fig. 2 below. Alternatively or additionally, the float 13, 14 can have any suitable shape other than  
15 tubular, for instance a block shape.

In embodiments, for example in the embodiment shown here in fig. 1, the covering 3 comprises a frame 17, which can be at least partly pivotable, such as to enable said adjustment of the width 5 of at least part of the covering 3. It is noted that the covering 3 can for instance be pivotable  
20 along a pivot axis 16, preferably an axis 16 extending substantially in the longitudinal direction 6 of the covering 3. The frame 17 may be provided for adjusting a part of the width of the covering 3 and/or for supporting at least partly the means for hindering the passage of birds.

Here, the covering 3 is substantially shaped as a substantially  
25 triangular prism. However, it is noted that the covering 3 can have any other suitable shape, preferably a shape having a cross section being substantially mirror symmetric along a substantially vertical axes of symmetry. For example, the covering 3 can be prism-shaped, for instance shaped like a mansard roof, or archway-shaped. Besides, the pivot axis 16

may for example be located near and/or substantially at the top of the covering, such as substantially along an upper edge 15.

In the embodiment of fig. 1, the covering 3 comprises two wall parts 8, 9; a first wall part 8 at the first lateral side and a second wall part 9 at the second lateral side. The first and second wall part 8, 9 both extend substantially in the longitudinal direction 6 of the covering 3 and each wall part 8, 9 comprises a lower edge 10 substantially extending in said longitudinal direction 6. The first floating element 11 is positioned at the lower edge 10 of the first wall part 8 and the second floating element 12 is positioned at the lower edge of the second wall part 14. The wall parts 8, 9 further comprise an upper edge 15, the upper edges 15 being hingedly connected to each other, along a pivot axis 16 such as to adjust the lateral distance 5 between two lower edges of the covering 3. Here, the first and second floating elements 11, 12 are connected to each other by means of connecting elements 18. For instance by connecting respective connecting elements 18 hingedly with respect to each other, the upper edges 15 of the wall parts 8, 9 may be hingedly connected to each other.

Figure 2 shows a schematic perspective view of second embodiment of a bird obstructing device 1 according to the invention. Also here, the bird obstructing device 1 has an elongated bird obstructing covering 3 arranged for floating on a surface of a water body. Further, said device also has a width 5 substantially transverse to a longitudinal direction 6 of the covering 3, wherein at least a part of said width 5 is adjustable.

Here, the covering 3 is substantially archway-shaped, but said covering may have another shape, preferably being substantially tunnel-shaped as the embodiments of fig. 2 and fig. 1. As a consequence, inside the covering a tunnel-shaped room may be provided, for instance to allow space to water animals and/or water plants, and/or to provide a passage to vessels, for instance used for maintenance to the bird obstructing device 1 and/or the

water body 2. Besides, a tunnel-shape can counteract accumulation of debris such as leaves, preferably due to lateral descending sides of the covering 3.

The bird obstructing covering 3 can comprise a frame 17, which may be at least partly bendable. Additionally or alternatively, the frame  
5 may be at least partly pivotable, such that adjustment of the width 5 of at least part of the covering 3 can be enabled. Here, the frame 17 comprises connecting elements 18 being arc-shaped and bendable. In order to be bendable, the connecting element 18 can for instance be or comprise a resilient or springy element, such as but not limited to a resilient, flexible  
10 pipe or tube, for instance a polyethylene (PE) pipe, a PVC pipe and/or a plumbing pipe such as a PE or PVC pipe conventionally used as a rain pipe. In embodiments, the resilient pipe or tube has a substantially round cross section with a diameter in the range of about 19-90 mm, preferably about 32-75 mm, in particularly about 32-50 mm, especially about 40 or about 44  
15 mm.

It is apparent that the covering 3 may narrow when the arc-shaped connecting element 18 becomes stronger bent, and that, in turn, the covering 3 may widen when the arc-shaped connecting element 18 becomes less bent.

20 Like here in the embodiment of fig. 2, the first floating element 11 and the second floating element 12 may each be a ladder-shaped, truss-shaped floating element. A ladder-shaped and/or truss-shaped floating element can comprises two or more substantially elongated, substantially parallel floats 13a, 13b; 14a, 14b, interconnected to each other by connecting  
25 means 19, 20, which are preferably substantially straight and substantially rigid, especially being a beam. The connecting means 19, 20 may be or comprise cross-beams 19, for instance traverse or diagonally positioned with respect to the floats 13a, 13b. Although the floating elements 11, 12 are here shaped as planar trusses, a floating element may be shaped differently, for

example it may be shaped as a three dimensional or so-called space frame truss.

Furthermore, it is noted that although the floats 13, 14 can be formed by any suitable means, and may for instance be made of or comprise foam and/or one or more substantially hollow bodies, the floats are here formed by substantially watertight hollow tubes 21, 22. Preferably, the connecting elements 18 are pivotably connected to the floating element 11, 12. As can be seen in figure 3, which shows a schematic detail III of the device 1 of fig. 2, a pivotable connection may for instance be formed by a pivot means 24 such as a T-piece 24, especially a conventional PE or PVC T-piece. The T-piece 24 or other pivot means may be fitted loosely to, preferably at least partly around, a pipe or tube of a float 13, such that it can rotate relative to said pipe or tube, in particular while its axial movement is restrained. The T-piece 24 may for instance comprise a tube-portion to be fitted around said pipe or tube. However, the T-piece 24 may comprise an alternative part to be fitted to said pipe or tube, such as click-on part 24b, for instance one as shown in figure 3. Since the float 13 can have a larger diameter than the, preferably resilient, connecting element 18, for example because said float 13 is preferably rigid and/or is relatively big in order to provide for the floating of the covering 3, a sleeve 23 and/or other attachment means 23 can be employed to attach the connecting element 18 to the pivot means 24.

It is noted that, for instance in case the floating element 11, 12 (fig. 1) consists of a tubular float 13, 14 and/or in certain cases wherein the frame 17 or its connection element 18 is pivotable at multiple places, the connection between the connecting element 18 and the floating element 13, 14 can be fixed, i.e. does not need to be pivotable. For example, when the floating element 11, 12 consists of a tubular float 13, 14, the floating element 11, 12 itself can rotate axially, likely without substantially changing the floating capacity of the covering 3. Contrary, axially rotation of

a ladder-shaped floating element 11, 12 (fig. 2) can change the floating capacity, for instance because tilting of said element can cause one float 13b to move up or down relative to another float 13a. Thereto, axially rotation of the floating element 11, 12 may be counteracted, for instance by making  
5 said element pivotable with respect to the frame 17 as noted above.

As can be seen in figure 1 and 2, the first floating element 11 and/or the second floating element 12 can extend substantially in the longitudinal direction 6 of the covering 3. Referring to fig. 2 now, the lateral offset distance 5a between the two floating elements 11, 12 is adjustable.  
10 For example when the frame 17 of the covering 3 comprises at least one resilient connecting element 18, the frame 17 and/or one or more of its resilient connecting elements 18 may be biased, preferably in an outward direction and/or a substantially lateral direction 25, or alternatively in an inward direction. Alternatively or additionally, the covering may comprise  
15 biasing means, such as springs. Additionally to providing a biased covering, the covering 3 may comprise, restraining means 26 for counteracting undesired change in the width 5 of the covering 3. The restraining means 26 are preferably arranged for restraining the covering 3, the frame 17 and/or one or more of the resilient connecting elements 18 at least from  
20 substantially expanding and/or contracting in the respective biasing direction. Preferably, the restraining means 26, such as cables, chains or beams, have a length which is adjustable, such that the width of the covering 3 can be adjusted relatively easily. In embodiments, the bird obstructing device 1 may comprise multiple restraining means 26, for  
25 instance at least one at or near a distal end of the device 1 and one at or near a proximal end of the device 1. Alternatively or additionally, one or more restraining means 26 can be provided at other positions, for instance between said ends. In preferred embodiments, said multiple restraining means 26 are coupled or linked such that they can be controlled together in  
30 order to provide for respective adjustments of the local width of the device 1

at or near the respective restraining means 26, said adjustments substantially corresponding to each other.

The device 1 can comprise a rolling means for rolling up the restraining means 26 at least partly, such as a winch and/or a spindle. In  
5 case multiple restraining means 26 are provided of which each is rollable to its own means, the multiple rolling means can be interconnected, for example by a connection element, such as a common axis on which the rolling means can be mounted such that when said axis is rotated said rolling means may rotate together. Besides, the or at least one of the rolling  
10 means and/or a connection element interconnecting them can be provided with a handle and/or an actuator for driving them and/or a coupling means for coupling to an actuator, such as a cordless drill or other power tool.

Alternatively or additionally to the above described restraining means 26, the – for instance outward – movement of the covering may be  
15 restrained in another way. For example, by means of a mechanism for counteracting undesired shortening and/or lengthening of a support 27, such as a mechanism and/or a stopper as described below in the context of fig. 5.

Here in figure 4, as well as in figure 2, the restraining means 26 are provided between the floating elements 11, 12, but additionally or  
20 alternatively restraining means 26 may be located at a different place, for instance not at or near the water level 4, but at a higher level. This is for instance shown schematically in fig. 1, wherein adjustable restraining means 7, 26 are shown above the water level 4. It is noted that the restraining means 26 can extend substantially in the lateral direction 25, such as in the  
25 embodiment of fig. 4, but may alternatively extend in another direction. For example, in fig. 2 two diagonal restraining means 7, 26 traverse each other, thereby counteracting twisting of the covering 3.

However, it is noted that in alternative embodiments, the covering 3 may be arranged for twisting. That is, the covering may be arranged such  
30 that movement of the first and second floating element 11, 12 relative to

each other in axial direction 6 can cause that the width 5a between said floating elements 11, 12 changes. Thereto, the covering 3 may for instance comprise one or multiple four-bar linkages shaped as an adaptable parallelogram, preferably extending substantially in a horizontal plane 53.

5 An example of such alternative embodiment is shown in figures 2a and 2b. In figure 2a, the bird obstructing device 1 is shown in a broadest position corresponding to a maximum width 5a of the covering 3. The first and second floating elements 11, 12 form two sides of a four-bar linkage of which the other two sides are formed by traversing connecting elements 54. In

10 order to narrow the covering 3, the sides of the four-bar linkage are pivotable connected to each other. In figure 2b is shown that the connecting elements 54 are pivoted relative to the floating elements 11, 12, substantially in the horizontal plane 53. As a result, the covering 3 is narrowed to a width 5b smaller than the initial maximum width 5a. Here,

15 the first and second floating elements 11, 12 each comprises two floats 13a, 13b; 14a, 14b which are also part of an adaptable parallelogram themselves. As a result, multiple connection points 54 initially positioned in one substantially vertical plane, which plane is substantially extending in the width direction of the covering 3 in figure 2a, are still positioned in

20 substantially one single substantially vertical plane after twisting of the covering 3, as can be seen in figure 2b. Hence, for instance supports 27 and/or connecting elements 18 present in such substantially vertical plane can be maintained in said plane when the covering 3 is twisted. Such a support 27 and such a connecting element 18 may thus be connected to each

25 other at a connection point 54, preferably connected pivotably. However, for instance when two floats 13a, 13b of one floating element 11 are not part of an adaptable parallelogram themselves, two supports 27 initially in a substantially single vertical plane with a corresponding connecting element 18, may during twisting of the covering 3 move out of the vertical plane in

30 which said corresponding connecting element 18 is located. This may for

example happen if a lower end of the support 27 is connected to one float 13b, whereas a lower end of the connecting element 18 is connected to the corresponding float 13a of the respective floating element 11. For instance thereto, the support 27 and the connection element 18 may be slidable  
5 connected to each other. In an elaboration of embodiments of the bird obstructing device 1 of the invention, the frame 17 may thus comprise one or more supports 27. Said supports 27 can for instance be for at least partly supporting a connecting element 18 and/or other parts of the frame 17, such as a frame part 17a connecting two or more connecting elements 18, and/or  
10 the means for hindering the passage of birds. It is noted that the support 27 does thus not need to, but may nevertheless, support a connecting element 18. The frame part 17a connecting two or more connecting elements 18, as shown in Fig. 2, can for instance extend substantially horizontally, preferably in substantially in the longitudinal direction 6 of the covering 3.  
15 Additionally or alternatively, especially when supported by one or more of the supports 27, said frame part 17a can be arranged substantially above one of the floating elements 11, 12, preferably substantially above a float 13b, 14b placed inwardly of the covering 1 with respect to a float 13a, 14a placed more outwardly. It is noted that the support 27 may, preferably at an  
20 upper side and/or upper end of said support 27, be connected to the frame 17, especially to said frame part 17a, by means of a pivot means 24, such as a T-piece 24, especially a conventional PE or PVC T-piece.

As can be seen in figure 4, showing a schematic cross section of the device 1 of fig. 2, the support 27 may extend substantially in vertical  
25 direction and/or can be arranged for lengthening and/or shortening, for instance by constructing it telescopic. Here, the support 27 is fixedly connected to the floating body 11, 12 and hingedly connected to the resilient arc-shaped connecting element 18. Due to the pivotable connection 28 and due to an arrangement enabling shortening of the support 27, such as a  
30 telescopic, retractable and/or collapsible arrangement of the support 27, the

bend of the connecting element 18 may be adjusted. As a consequence, the covering 23 can widen when the restraining means 26 are lengthened or loosened. Additionally, the arrangement enabling this, such as the telescopic arrangement, may include a mechanism, such as a spring-loaded  
5 mechanism, a mechanism comprising a gas damper and/or a ratchet mechanism (not shown) or the like, in particularly said mechanism can be provided, at least partly, in the support 27. Due to said mechanism, it can be enabled that although the support 27 can be of a telescopic type, the support can actually support the connection element 18 and/or other parts of the  
10 frame 17 in intermediate positions instead of collapse and/or shorten, for instance up to an end position.

Preferably, said mechanism included in the support 27, such as the ratchet mechanism, can be temporarily released in order to lengthen or extend said support 27, in particular during and/or in order to narrow the  
15 covering 3. Advantageously, the release of said mechanism can be coupled with the operation of adjusting the restraining means 26.

Alternatively or additionally to said mechanism, the support 27 may be provided with a stopper. For instance in the embodiment shown in figure 4, the stopper can be provided in an outer member 27a of a telescopic  
20 support 27 in which an inner member 27b may be movable upwards and downwards. When the support 27 retracts, a stop portion of the inner member 27b can abut to the stopper of the outer member 27a. Hence, said stop portion and corresponding stopper can limit the retracting and can thus provide that the support 27 can support at least partly a connecting element  
25 18 and/or other parts of the frame 17 and/or the means for hindering the passage of birds. It is noted that the stop portion of the inner member 27b may for instance be formed by an end face of the inner member 27b, but may be formed in alternative ways, for instance it may be formed by means of a protruding portion.

It is noted that although the outer member 27a is here shown as a lower member whereas the inner member 27b is shown as an upper member, the outer member 27a may be formed alternatively, for instance it may be formed as an upper member. One such embodiment is shown in  
5 figure 5. In such embodiments, the lower member can be formed by an inner member 27b, around which the upper member 27a may move up or down. Here, an end face 27b' of the inner member 27b' forms a stopper for limiting downward movement of the outer member 27a by cooperating with a stop portion formed by an end of a blind bore in the outer member 27a. However,  
10 the stopper and/or stop portion may be formed alternatively. For example, the stopper may be formed by the respective float 13b, 14b.

As for instance in embodiments of the device 1 wherein the support 27 comprises a stopper such as described above in the context of figures 4 and 5, the support members 27a, 27b may be in their most retracted  
15 positions during rest, when the support 27 supports parts of the frame 17. Hence, in such embodiments, the width of the covering may not be broadenable relative to such rest position, but only narrowable relative to said rest position. For instance therefore, the bird obstructing covering 3 may be arranged to have a certain maximum width, preferably  
20 corresponding to a certain water body width.

Furthermore, for example when the covering is in its widest position in which it cannot widen any further, for instance due to supports 27 which cannot shorten any further, the restraining means 26 such as cables, chains or beams 26 may be unused. In such a position, said  
25 restraining means 26 may be at least partly lifted by a lifting device 50, preferably a spring-loaded lifting device. By at least partly lifting the restraining means 26 when not in use, said means 26 can temporarily be kept away from a surface area of the water body 2, for example in order to provide space 51 to a vessel for maintenance of the bird obstructing device 1  
30 and/or the water body 2. Here, one lifting device 50 is provided near a top

part 29 of the covering 3. However, in embodiments, multiple lifting devices 50 may be provided for lifting one or multiple restraining means.

Alternatively or additionally, the lifting device 50 may be placed at a different place.

5           Moreover, the support 27 can additionally or alternatively comprise a further stopper and/or stop portion for counteracting that telescopic parts, preferably the support member 27a, 27b, disengage.

          It is noted that not only the supports 27 or substantially vertical supports 27 may be extendable and/or retractable, preferably while  
10 including a mechanism such as the ratchet mechanism, gas damper, spring-loaded mechanism or the like. Additionally or alternatively, other parts of the device 1, preferably parts of the frame 17, may be extendable and/or retractable, such as for instance diagonal connection beams 31, as shown in fig. 2, which can connect parts extendable themselves, such as the vertical  
15 supports 27. Therefore, such additional extendable parts or beams as the diagonal connection beams 31 are preferably hingedly connected at two ends. It is noted, however, that even when the vertical supports 27 are extendable, the diagonal connection beams 31 do not need to be extendable. For example, the diagonal connection beams 31 can with both ends be  
20 fixedly attached to immovable parts, such as the cylinders of the vertical supports 27 in which pistons are movable.

          In the embodiments shown schematically in figs.1-4, the covering 3 comprises a first wall part 8 at a first lateral side and a second wall part 9 at a second lateral side. Besides, the covering may comprise a top part 29, as  
25 for instance can be seen in fig. 4. As noted before, the covering 3 may comprise means for hindering the passage of birds, preferably waterfowl, pest birds and/or birds having a predetermined maximum size. Said hindering means may substantially cover the frame 17 of the covering 3, preferably forming an outer wall 8, 29, 9, in particular a substantially  
30 continuous outer wall, of said covering 3 or of a part of said covering 3.

Said hindering means may, among others, comprise netting, gauze, wires, wire mesh, perforated sheets, bars, screens, cloth, canvas or the like, and/or combinations thereof.

Although the hindering means are intended for inhibiting pest  
 5 birds to land on the surface 4 of the water body 2, the covering 3 may in  
 advantageous embodiments be arranged for allowing at least partly the  
 passage of air, light, precipitation and/or animals having a body width of at  
 most 15 cm, preferably at most 10 cm, more preferably at most 8 cm, for  
 instance by providing a corresponding mesh size. Preferably, the hindering  
 10 means are arranged to counteract any bird to pass through. Additionally or  
 alternatively, the covering 3, in particular its wall parts 8, 9 at the sides,  
 more in particular the lower parts 8a, 9a thereof, can be arranged at least  
 partly for substantially blocking light, preferably by means of solar blocking  
 fabric or the like means. As a result, unwanted growth of plants in the  
 15 vicinity of the wall parts 8, 9 can be counteracted. Since, the wall parts 8, 9  
 can be positioned near a bank 30, undesired growth of both water plants  
 near the bank 30 and plants growing at the bank 30 can be counteracted.  
 Hence, maintenance of the device 1 and/or water body including its bank 30,  
 such as mowing and/or removing plants from the covering 3, can be limited.

20 Moreover, the covering 3 may be provided with prints, for example  
 prints designed for scaring off birds, in particular pest birds, and/or for  
 advertising purposes.

The bird obstructing device 1 and/or its covering 3 can have a  
 predetermined maximum and/or minimum width 5, for instance  
 25 corresponding to a minimum length and a maximum length of a length-  
 adjustable support 27. Depending on desires and/or circumstances such as  
 dimensions of water bodies, a maximum, minimum and/or median width of  
 the device 1 and/or its covering may for instance be substantially in the  
 range of 2-30 meter, preferably between 5 and 25 meter, more preferably  
 30 between 8 and 22 meter. The median width can for instance be about 5,

about 8, about 10, about 15 or about 20 meter. It is noted that the degree of adjustability of the width 5, i.e. the difference between the maximum width and the minimum width, may for instance be in the range of 5-80%, preferably 10-60%, especially 15-40% of the maximum width. Additionally  
5 or alternatively, the difference between the maximum width and the minimum width can for instance be in the range of 0.2-10 meter, preferably in the range of 2-5 meter, for instance about 2, 3 or 5 meter.

In embodiments, the bird obstructing device 1 is floating on the surface 4 of said water body 2, preferably an elongated water body 2 or a so-called channel 2, which may be a canal, ditch, brook, creek or the like. The  
10 device 1 can be positioned such that a bank 30 of the water body 2 is substantially abutting the device 1 floating on its surface 4, preferably abutting the respective floating element 11, 12 of said device 1, in order to leave substantially no water surface substantially uncovered between the  
15 device and the respective bank 30. The width 5 of the covering 3 may during use be substantially equal to the width 37 of the water body 2.

However, in embodiments, a certain distance 36 may be kept open on purpose, for instance to provide for some play when the width 37 of the water body 2 is subject to change, for instance due to a change in water  
20 level. The distance 36 between a respective bank 30 of the water body 2 and the device 1 floating on the surface 4 of the water body 2 can for instance be at most 50 cm, preferably 20, more preferably 10 cm. Preferably, said distance 36 is measured in a lateral direction of an elongated water body.

In order to inhibit pest birds and/or other birds from an airport  
25 and/or runway, the device 1 can be located on a water body being located at or in the proximity of an airport and/or in the proximity of a runway. In the proximity of a runway can be understood at least to include but not limit to being within at most 1000 meter, preferably within at most 700 meter, more preferably within at most 300 m.

The width of the surface 4 of the water body may for instance be substantially in the range of 2-30 meter, preferably between 5 and 25 meter, preferably between 8 and 22 meter, such as for instance about 8, about 10, about 15 or about 20 meter. Preferably, the maximum width and/or the  
5 median width of the covering 3 corresponds to the width 37 of the water surface 4. Then, the covering 3 can be widened to some extent, for instance when the water level rises and the width of the water surface 2 increased, and can be narrowed to some extent as well, for instance in order to move the lower sides of the covering 3 away from a bank 30 in order to maintain  
10 said bank or to adapt the covering the width 37 of the water body.

Alternatively or additionally, the device 1 can alternatively be used with water bodies being substantially wider than the maximum width of the covering 3. For example, multiple devices 1 can be placed along each other in order to cover all or most of the width of the water surface of such a  
15 relatively broad water body. When the shape of the coverings 3 placed along each other is not adapted to such an arrangement, for example when two tunnel-shaped coverings 3 are used such as shown in fig. 1 or fig. 2, a substantially funnel-shaped space can be formed between two neighboring coverings 3. Such funnel-shaped space can be undesirable, because debris,  
20 such as for instance leaves, can accumulate in said space. Thereto, the device 1 may be specially designed for such an arrangement. For example, the covering 3 can have a cross section having one substantially vertical side, preferably for placement next to a corresponding substantially vertical side of a neighboring covering 3, and an opposite, substantially descending side facing the respective bank. It will be understood that in such case the  
25 descending sides can be provided with bird hindering means, whereas the neighboring substantially vertical sides, which are preferably attached to each other, may be kept substantially free from such means.

Figure 6 shows a schematic cross section of a further embodiment  
30 of a bird obstructing device 1 according to the invention. This embodiment

can be an adaptation of the embodiment of fig. 2, which can be specially arranged for covering a relatively broad water body 2. In stead of providing two devices 1 or coverings 3 next to each other as described above, this covering 3 of fig. 6 comprises two lateral extensions 32. It is apparent that  
5 another number of lateral extensions, for instance one or three, is possible as well. Here, additional connecting elements 18b, which can be hinging elements and/or bendable elements 18b, are provided for structurally broadening the covering 3 with an additional width 34. In the shown embodiment, a base structure 33, for instance a central structure,  
10 corresponds substantially to the covering 3 of the device 1 of fig. 1, and at least a part of the width 35 of said base structure 33 itself is adjustable. Besides, the additional connecting elements 18b may be arranged for adapting said additional width 34, for instance in a similar way as one of the devices described above. It is noted, however, that although the in the  
15 shown embodiment the width of the central structure 33 and both additional widths 34 of the lateral extensions 32 are adaptable, not all said widths 5a, 34 need to be adaptable. In embodiments, at least one, for instance one, two or three, of said widths are adaptable, in order to adapt the total width 5 of the covering 3 of the device 1. Moreover, it will be understood that in an  
20 embodiment comprising one or more lateral extensions 32, walls 38 of the base structure facing an additional connecting elements 18b may be kept substantially free of bird hindering means, whereas said additional connecting element 18b is preferably provided with bird hindering means.

Besides, the disclosure relates to a method for inhibiting birds,  
25 preferably pest birds, from a water body, such as a channel, for instance in the vicinity of a runway and/or an airport. It is apparent that such method can comprise the use of any bird obstructing device 1 as disclosed herein.

As noted, the invention also relates to a method for maintaining a water body 2. The method comprises increasing the distance 36 between a  
30 bank 30 of the water body 2 and at least a part of the device 1 temporarily

by increasing at least a part of the width of the covering 3. It is noted that the width does not need to be adjusted over the total length of the covering 3. For example, if only a certain part of the bank 30 is going to be maintained, only one or multiple corresponding parts, i.e. parts of the covering 3 neighboring the respective part of the bank 30, may be narrowed in order to increase the width of the respective part of the covering 3.

The method further comprises maintaining at least a part of the water body 2, for instance by mowing at least a part of the respective bank 30 and/or by removing water plants and/or debris. It is noted that in this disclosure the bank 30 thus forms a part of the water body 2.

Additionally, the method comprises the step of decreasing the distance between the bank 30 and said at least part of the device 1 by decreasing said at least part of the width 5 of the covering 3.

It is noted that the invention is not restricted to the embodiments described above. It will be understood that many variants are possible.

As an example, the bird obstructing device and/or the bird obstructing covering may be inflatable, at least partly. For instance, the frame 17, its connecting elements 18, the floating elements 11, 12 and/or the floats 13, 14 can be or can comprise inflatable elements.

As another example, the device 1 and/or the covering 3 may comprise, may form or may be part of an advertisement structure or object. For instance, the device 1 and/or the covering 3 can be designed to have the shape of a relatively large banana or beer bottle, which may be visible from a runway and/or from the air.

Alternatively or additionally, the covering, for instance its bird hindering means, can comprise or can be made of dirt repellent material and/or can comprise means for hindering birds to land on the covering.

Furthermore, in preferred embodiments, a proximal and/or a distal end of the covering can be substantially closed off and/or can be provided with further bird hindering means. Said further bird hindering means can

be arranged for at least partly closing of a proximal and/or a distal end of the covering. Said further hindering means can comprise the same and/or different means as the hindering means and may comprise netting, gauze, wires, wire mesh, perforated sheets, bars, screens, cloth, canvas or the like, and/or any combination of such means. Preferably, said further hindering means are arranged to have a width which is adjustable, especially being adjustable so as to be able to at least partly follow an adjustment of the width of at least a part of the covering. For example, the further hindering means can be collapsible, retractable, flexible, resilient and/or foldable.

Moreover, it is noted that, for example when multiple devices are placed in a sequence in longitudinal direction, for instance only the proximal end of a proximal device and/or the distal end of a distal device can be substantially closed off and/or can be provided with said further bird hindering means.

These and other embodiments will be apparent to the person skilled in the art and are considered to lie within the scope of the invention as formulated by the appended claims.

## Conclusies

1. Vogelbelemmeringsinrichting voor het schadelijke vogels verhinderen om op een waterlichaam te landen, omvattende een langgerekte vogelbelemmeringsafdekking die is ingericht om op een oppervlak van een waterlichaam te drijven, waarbij de inrichting een breedte heeft die in  
5 hoofdzaak dwars is op een lengterichting van de afdekking, waarbij ten minste een deel van de breedte van de afdekking aanpasbaar is.
2. Inrichting volgens conclusie 1, waarbij de afdekking een ten minste gedeeltelijk buigbaar en/of scharnierbaar frame omvat om aanpassing van de breedte van ten minste een deel van de afdekking mogelijk te maken.
- 10 3. Inrichting volgens conclusie 1 of 2, waarbij de afdekking aan een eerste laterale zijde een eerste drijfelement omvat en aan tweede laterale zijde een tweede drijfelement omvat, waarbij het tweede drijfelement zijwaarts op afstand is gezet ten opzichte van het eerste drijfelement.
- 15 4. Inrichting volgens conclusie 3, waarbij de afdekking aan een eerste laterale zijde een eerste wanddeel omvat en aan een tweede laterale zijde een tweede wanddeel omvat, waarbij het eerste en het tweede wanddeel zich in hoofdzaak uitstrekken in de lengterichting van de afdekking en elk een onderrand hebben die zich in hoofdzaak uitstrekt in genoemde lengterichting, waarbij het eerste drijfelement aan de onderrand van het  
20 eerste wanddeel is gepositioneerd en het tweede drijfelement aan de onderrand van het tweede wanddeel is gepositioneerd.
5. Inrichting volgens conclusie 3 of 4, waarbij de zijwaarts op afstandzetafstand tussen het eerste drijfelement en het tweede drijfelement aanpasbaar is.
- 25 6. Inrichting volgens conclusie 3, 4 of 5, waarbij het eerste drijfelement en/of het tweede drijfelement zich in hoofdzaak uitstrekt in de lengterichting van de afdekking.

7. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking in hoofdzaak tunnelvormig is.
8. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking in hoofdzaak gevormd is als een in hoofdzaak driehoekige prisma.
- 5 9. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking aan een eerste laterale zijde een eerste wanddeel omvat en aan een tweede laterale zijde een tweede wanddeel omvat, waarbij het eerste en het tweede wanddeel zich in hoofdzaak uitstrekken in de lengterichting van de afdekking en elk een onderrand omvatten die zich in hoofdzaak in  
10 genoemde lengterichting uitstrekt, waarbij ten minste één, en bij voorkeur beide, van de wanddelen ingericht is om te scharnieren ten opzichte van een scharnieras teneinde zo de laterale afstand tussen de twee onderranden van de afdekking aan te passen.
- 15 10. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking is ingericht voor het de doorgang beletten aan vogels die een vooraf bepaalde maximale grootte hebben, zoals een maximale lichaamsbreedte van ten minste 10 cm, bij voorkeur ten minste 8 cm, bij grotere voorkeur ten minste 5 cm.
- 20 11. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking gaas omvat.
- 25 12. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking is ingericht om ten minste gedeeltelijk de doorgang toe te staan van lucht, licht, neerslag en/of dieren die een maximale lichaamsbreedte hebben van hoogstens 15 cm, bij voorkeur hoogstens 10 cm, bij grotere voorkeur hoogstens 8 cm.
13. Inrichting volgens een van de voorgaande conclusies, waarbij de afdekking ten minste gedeeltelijk ingericht is om licht in hoofdzaak tegen te houden, bij voorkeur door middel van zonwerende stof, bij voorkeur verschaft aan laaggelegen delen van genoemde afdekking.

14. Waterlichaam, bij voorkeur een langgerekt waterlichaam of een zogenaamde waterweg, zoals een kanaal, sloot, beek of kreek, waarbij het waterlichaam is voorzien van een vogelbelemmeringsinrichting volgens een van de voorgaande conclusies die op het oppervlak van genoemd  
5 waterlichaam drijft.
15. Waterlichaam volgens conclusie 14, waarbij een afstand tussen een oever van het waterlichaam en de op het oppervlak van het waterlichaam drijvende inrichting niet groter is dan 50 cm, bij voorkeur 20 cm, bij grotere voorkeur 10 cm, bij voorkeur gemeten in een laterale richting van een  
10 langgerekt waterlichaam.
16. Waterlichaam volgens conclusie 14 of 15, waarbij een oever van het waterlichaam in hoofdzaak aanligt tegen de op zijn oppervlak drijvende inrichting, bij voorkeur aanligt tegen het respectievelijke drijfelement van genoemde inrichting.
- 15 17. Waterlichaam volgens een van de conclusies 14-16, waarbij het waterlichaam zich bevindt op of in de nabijheid van een luchthaven en/of in de nabijheid van een landingsbaan, waarbij de afstand tussen de landingsbaan en de op het oppervlak van het waterlichaam drijvende inrichting bij voorkeur hoogstens 700 m is, bij grotere voorkeur hoogstens  
20 300 m.
18. Werkwijze voor het onderhouden van een waterlichaam volgens een van de conclusies 14-17, omvattende de stappen van:
- het tijdelijk vergroten van de afstand tussen een oever van het waterlichaam en ten minste een deel van de inrichting door ten minste een  
25 deel van de breedte van de afdekking te vergroten;
  - het onderhouden van ten minste een deel van het waterlichaam, bij voorkeur omvattende het maaien van ten minste een deel van de respectievelijke oever; en

het verkleinen van de afstand tussen de oever en genoemde ten minste deel van de inrichting door genoemde ten minste deel van de breedte van de afdekking te verkleinen.





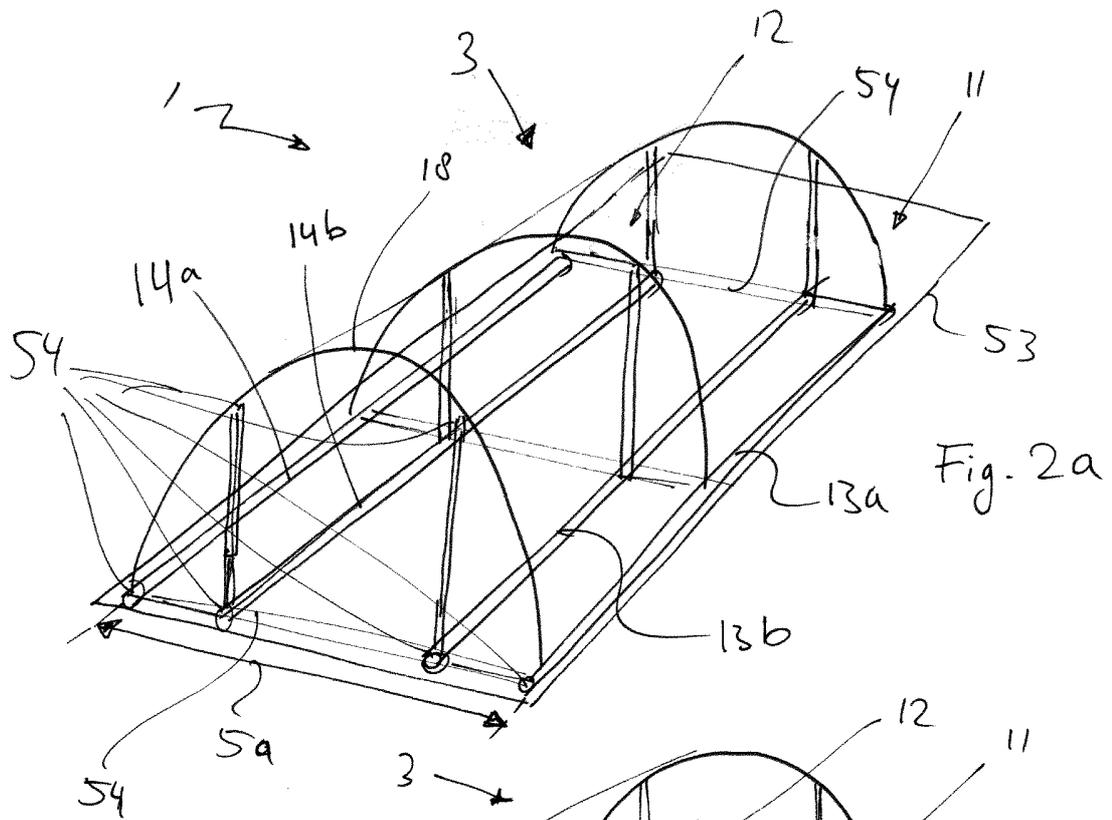


Fig. 2a

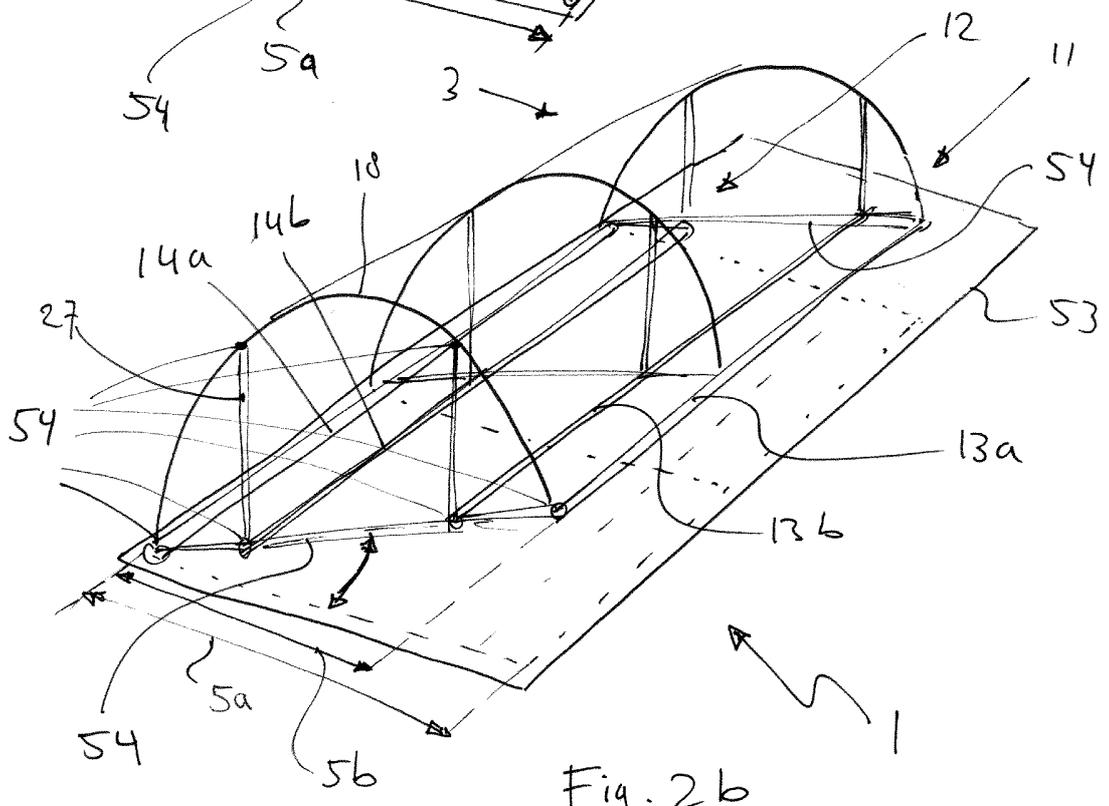
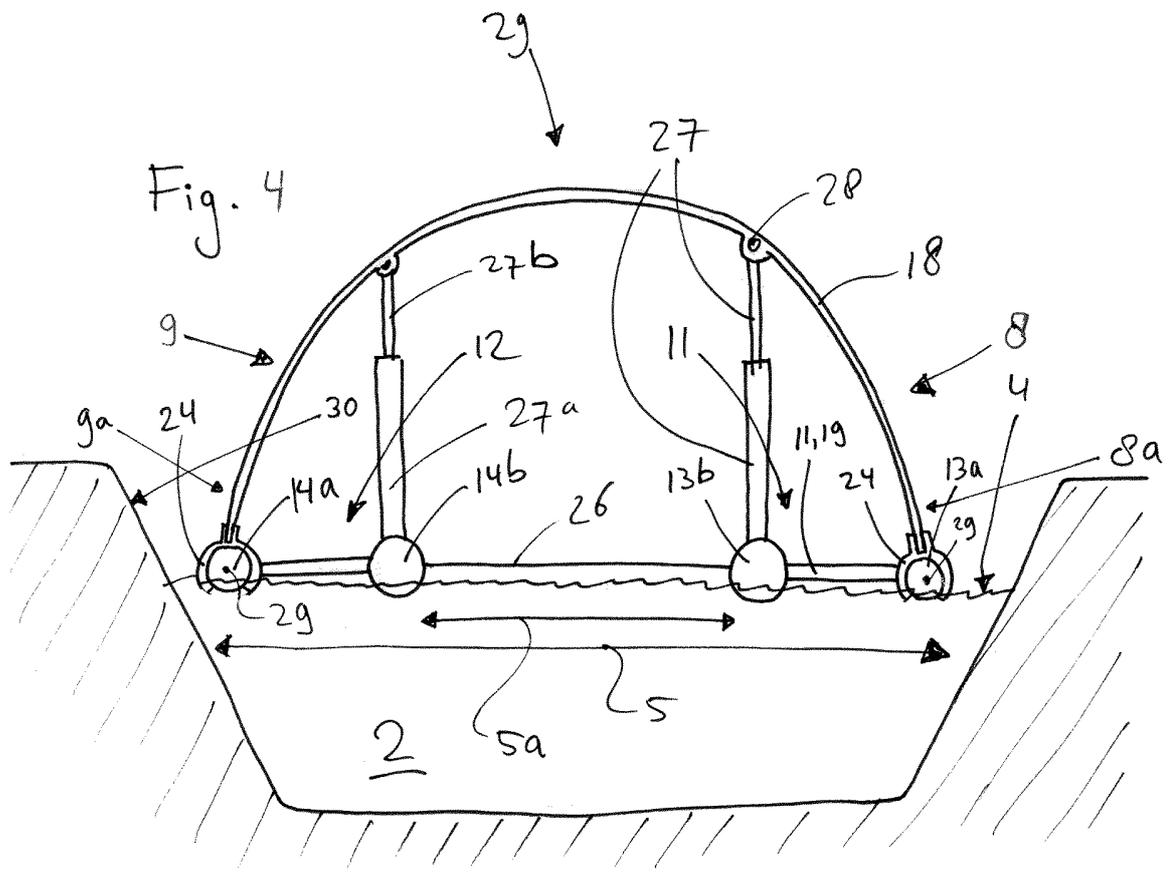
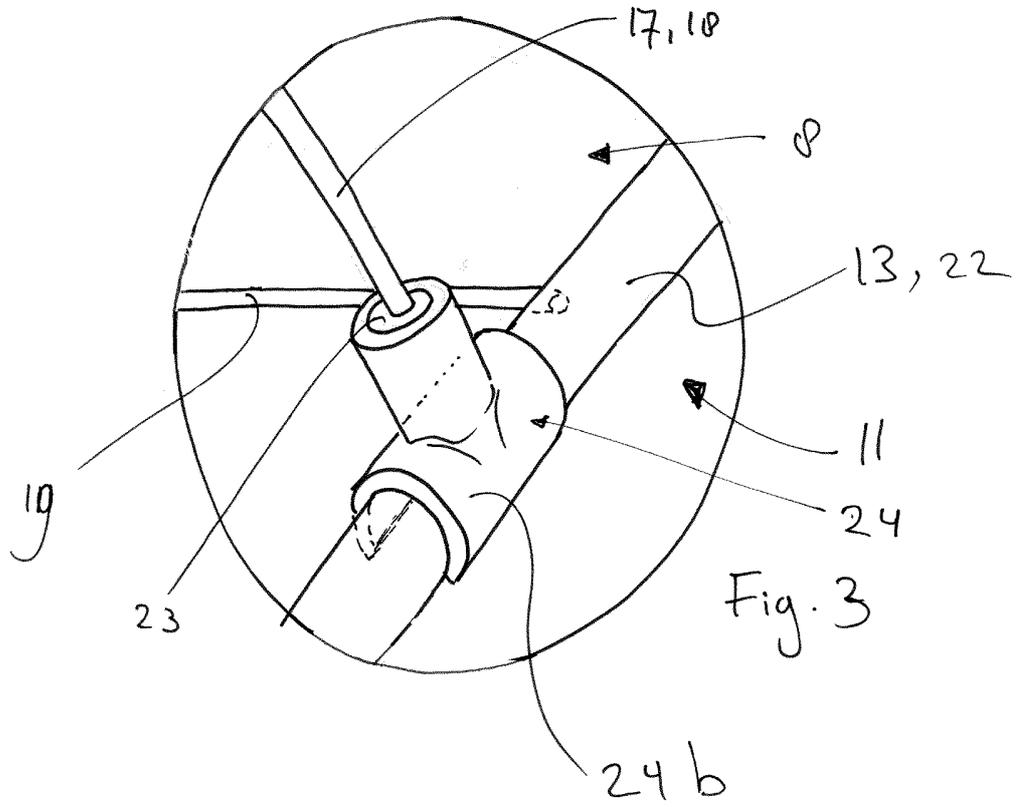


Fig. 2b



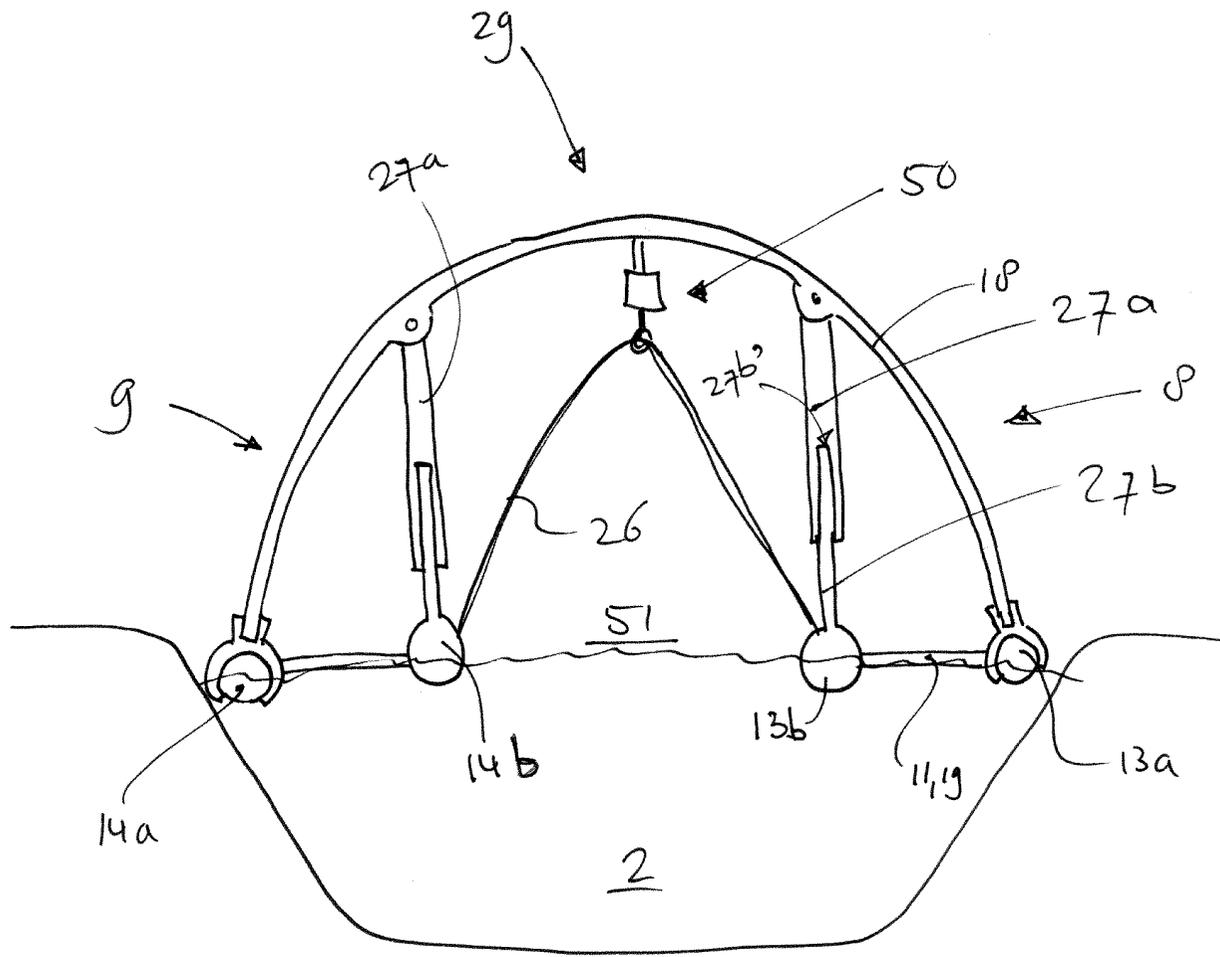


Fig. 5

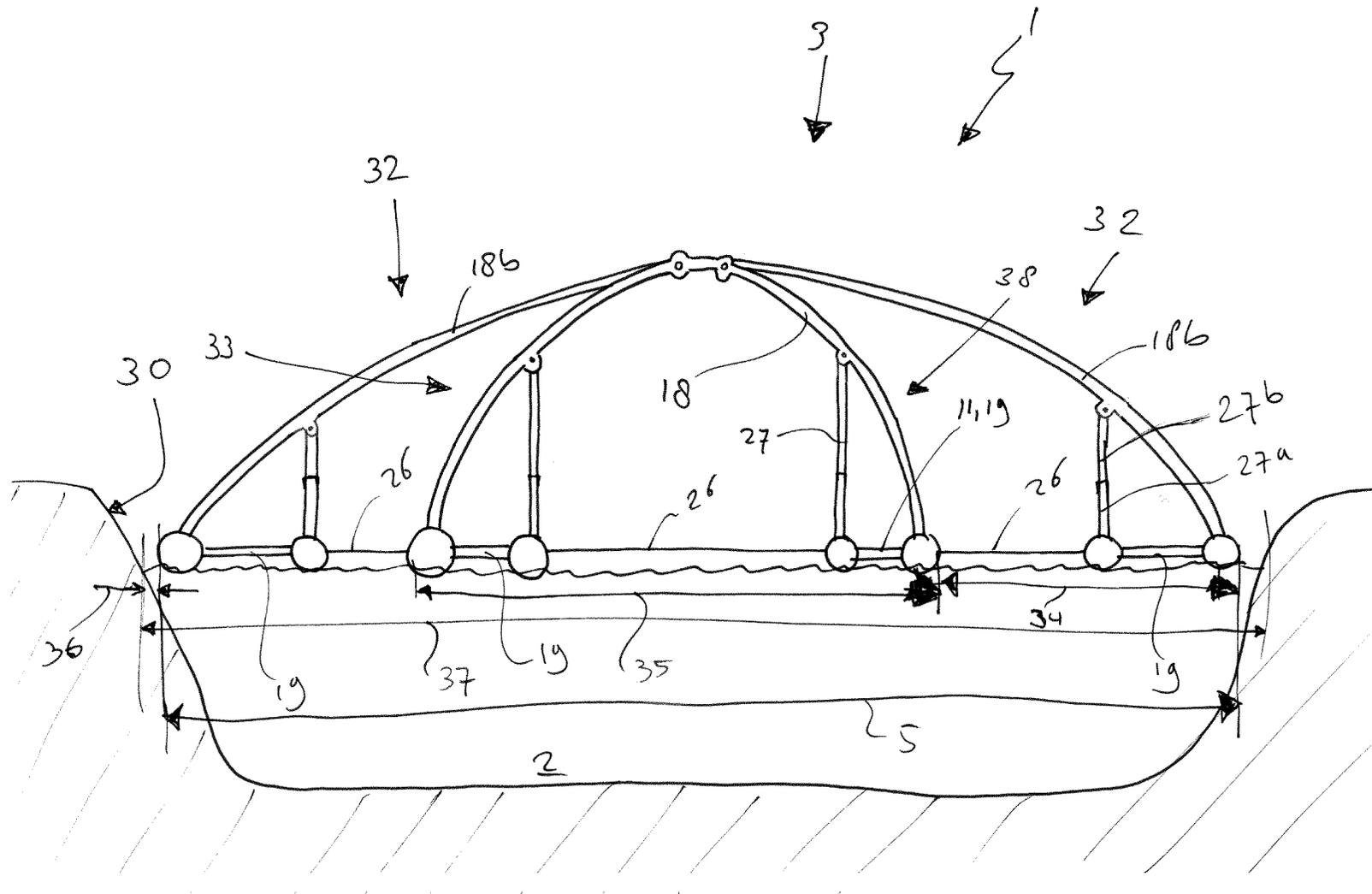


Fig. 6

# SAMENWERKINGSVERDRAG (PCT)

## RAPPORT BETREFFENDE NIEUWHEIDSONDERZOEK VAN INTERNATIONAAL TYPE

IDENTIFICATIE VAN DE NATIONALE AANVRAGE	KENMERK VAN DE AANVRAGER OF VAN DE GEMACHTIGDE  <b>P99581NL00</b>
Nederlands aanvraag nr.  <b>2010513</b>	Indieningsdatum  <b>22-03-2013</b>
	Ingeroepen voorrangdatum
Aanvrager (Naam)  <b>Mus</b>	
Datum van het verzoek voor een onderzoek van internationaal type  <b>15-06-2013</b>	Door de Instantie voor Internationaal Onderzoek aan het verzoek voor een onderzoek van internationaal type toegekend nr.  <b>SN 60243</b>
<b>I. CLASSIFICATIE VAN HET ONDERWERP</b> (bij toepassing van verschillende classificaties, alle classificatiesymbolen opgeven)	
Volgens de internationale classificatie (IPC)	
<b>A01M29/32</b> <span style="margin-left: 200px;"><b>A01K63/00</b></span>	
<b>II. ONDERZOCHE GEBIEDEN VAN DE TECHNIEK</b>	
Onderzochte minimumdocumentatie	
Classificatiesysteem	Classificatiesymbolen
<b>IPC8</b>	<b>A01M</b> <span style="margin-left: 100px;"><b>A01K</b></span>
Onderzochte andere documentatie dan de minimum documentatie, voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen	
<b>III.</b>	<b>GEEN ONDERZOEK MOGELIJK VOOR BEPAALDE CONCLUSIES</b> (opmerkingen op aanvullingsblad)
<b>IV.</b>	<b>GEBREK AAN EENHEID VAN UITVINDING</b> (opmerkingen op aanvullingsblad)

**ONDERZOEKSRAPPORT BETREFFENDE HET  
RESULTAAT VAN HET ONDERZOEK NAAR DE STAND  
VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE**

Nummer van het verzoek om een onderzoek naar  
de stand van de techniek

NL 2010513

A. CLASSIFICATIE VAN HET ONDERWERP  
INV. A01M29/32 A01K63/00  
ADD.

Volgens de Internationale Classificatie van octrooien (IPC) of zowel volgens de nationale classificatie als volgens de IPC.

B. ONDERZOCHETE GEBIEDEN VAN DE TECHNIEK

Onderzochte minimum documentatie (classificatie gevolgd door classificatiesymbolen)

A01M A01K

Onderzochte andere documentatie dan de minimum documentatie, voor dergelijke documenten, voor zover dergelijke documenten in de onderzochte gebieden zijn opgenomen

Tijdens het onderzoek geraadpleegde elektronische gegevensbestanden (naam van de gegevensbestanden en, waar uitvoerbaar, gebruikte trefwoorden)

EPO-Internal, PAJ, WPI Data

C. VAN BELANG GEACHTE DOCUMENTEN

Categorie °	Geciteerde documenten, eventueel met aanduiding van speciaal van belang zijnde passages	Van belang voor conclusie nr.
X	EP 0 351 991 A1 (FERRARI PATRICK FREDERICK) 24 januari 1990 (1990-01-24) * alinea [0014] - alinea [0019]; figuren 1-6 *	1-18
X	DE 20 2005 016174 U1 (PRIESCHL HERBERT [DE]) 23 februari 2006 (2006-02-23) * het gehele document *	1-18
X	EP 2 420 136 A1 (NETFLOAT LTD [GB]) 22 februari 2012 (2012-02-22) * figuren 1-8 *	1-18
A	US 2004/093827 A1 (WALDRON ROBERT [US]) 20 mei 2004 (2004-05-20) * alinea [0018] *	1-18



Verdere documenten worden vermeld in het vervolg van vak C.



Leden van dezelfde octroofamilie zijn vermeld in een bijlage

° Speciale categorieën van aangehaalde documenten

\*A\* niet tot de categorie X of Y behorende literatuur die de stand van de techniek beschrijft

\*D\* in de octrooiaanvraag vermeld

\*E\* eerdere octrooi(aanvraag), gepubliceerd op of na de indieningsdatum, waarin dezelfde uitvinding wordt beschreven

\*L\* om andere redenen vermelde literatuur

\*O\* niet-schriftelijke stand van de techniek

\*P\* tussen de voorrangsdatum en de indieningsdatum gepubliceerde literatuur

\*T\* na de indieningsdatum of de voorrangsdatum gepubliceerde literatuur die niet bezwarend is voor de octrooiaanvraag, maar wordt vermeld ter verheldering van de theorie of het principe dat ten grondslag ligt aan de uitvinding

\*X\* de conclusie wordt als niet nieuw of niet inventief beschouwd ten opzichte van deze literatuur

\*Y\* de conclusie wordt als niet inventief beschouwd ten opzichte van de combinatie van deze literatuur met andere geciteerde literatuur van dezelfde categorie, waarbij de combinatie voor de vakman voor de hand liggend wordt geacht

\*Z\* lid van dezelfde octroofamilie of overeenkomstige octrooipublicatie

Datum waarop het onderzoek naar de stand van de techniek van internationaal type werd voltooid

15 januari 2014

Verzenddatum van het rapport van het onderzoek naar de stand van de techniek van internationaal type

Naam en adres van de instantie

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

De bevoegde ambtenaar

Van Woensel, Gerry

**ONDERZOEKSRAPPORT BETREFFENDE HET  
 RESULTAAT VAN HET ONDERZOEK NAAR DE STAND  
 VAN DE TECHNIEK VAN HET INTERNATIONALE TYPE**

Informatie over leden van dezelfde octrooifamilie

Nummer van het verzoek om een onderzoek naar  
 de stand van de techniek

NL 2010513

In het rapport genoemd octrooigeschrift	Datum van publicatie	Overeenkomend(e) geschrift(en)	Datum van publicatie
EP 0351991	A1	24-01-1990	DE 68902963 D1 29-10-1992
			DE 68902963 T2 29-04-1993
			EP 0351991 A1 24-01-1990
			GB 2220832 A 24-01-1990
			US 4941432 A 17-07-1990
-----			
DE 202005016174 U1	23-02-2006	GEEN	
-----			
EP 2420136	A1	22-02-2012	EP 2420136 A1 22-02-2012
			GB 2483054 A 29-02-2012
-----			
US 2004093827	A1	20-05-2004	GEEN
-----			



File No. SN60243	Filing date ( <i>day/month/year</i> ) 22.03.2013	Priority date ( <i>day/month/year</i> )	Application No. NL2010513
International Patent Classification (IPC) INV. A01M29/32 A01K63/00			
Applicant Mus			

This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the application
- Box No. VIII Certain observations on the application

	Examiner Van Woensel, Gerry
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## WRITTEN OPINION

Application number  
NL2010513

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### Box No. I Basis of this opinion

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1. This opinion has been established on the basis of the latest set of claims filed before the start of the search.
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - a sequence listing
    - table(s) related to the sequence listing
  - b. format of material:
    - on paper
    - in electronic form
  - c. time of filing/furnishing:
    - contained in the application as filed.
    - filed together with the application in electronic form.
    - furnished subsequently for the purposes of search.
3.  In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

---

### Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

---

#### 1. Statement

Novelty	Yes: Claims	
	No: Claims	1-18
Inventive step	Yes: Claims	
	No: Claims	1-18
Industrial applicability	Yes: Claims	1-18
	No: Claims	

#### 2. Citations and explanations

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following documents:

- D1 EP 0 351 991 A1 (FERRARI PATRICK FREDERICK) 24 januari 1990 (1990-01-24)
- D2 DE 20 2005 016174 U1 (PRIESCHL HERBERT [DE]) 23 februari 2006 (2006-02-23)
- D3 EP 2 420 136 A1 (NETFLOAT LTD [GB]) 22 februari 2012 (2012-02-22)
- D4 US 2004/093827 A1 (WALDRON ROBERT [US]) 20 mei 2004 (2004-05-20)

1. The present application does not meet the criteria of patentability, because the subject-matter of claim 1 is not new.

Each of documents D1-D3 discloses (see passages indicated in the search report) a Vogelbelemmeringsinrichting voor het schadelijke vogels verhinderen om op een waterlichaam te landen, omvattende een langgerekte vogelbelemmeringsafdekking die is ingericht om op een oppervlak van een waterlichaam te drijven, waarbij de inrichting een breedte heeft die in hoofdzaak dwars is op een lengterichting van de afdekking, waarbij ten minste een deel van de breedte van de afdekking aanpasbaar is.

2. The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claims 14 and 18, which therefore are also considered not new.

3. The dependent claims do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of novelty and/or inventive step, see D1-D4.