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(54) Benevnelse **SCOOTER HAVING AN ELEMENT THAT CAN BE ATTACHED OR THAT IS CONNECTED IN AN ARTICULATED MANNER**

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Description

The invention disclosed here relates to a scooter which comprises a standing surface, at least one rear wheel articulated to the standing surface and at least one front wheel articulated to the standing surface.

According to the prior art persons using the scooter may stand and/or sit on the standing surface.

WO0003773 shows a scooter with a standing surface. A rear wheel and a steering device comprising a holding bar are connected to the standing surface. The steering device makes it possible to position the front wheels connected to the steering device. The user assumes a standing position on the standing surface and controls the scooter by means of the holding bar acting as an element. It is also possible for a person to sit on the standing surface and to control the scooter by means of the holding bar. WO0003773 does not disclose the use of the holding bar as a seat. U.S. Pat. No. 4,941,670 discloses a scooter with a standing surface, wheels articulated onto said standing surface and a frame with handles connected to the standing surface, wherein the frame with handles can be used as a holding bar. A seat surface is also attached to the frame. U.S. Pat. No. 4,941,670 does not mention converting the frame with handles into a seat surface. The seat surface can be used independently of the use of the frame with handles.

FR2467003 describes a skateboard, onto which a holding bar and a seat are mounted as two separate elements. The seat cannot be moved from a position for use as a seat into a storage position.

EP2476607, in which document US4941670 and FR2467003 are named as the prior art, discloses securing a seat by means of a fastening element, in contrast to U.S. Pat. No. 4,941,670, such that the fastening element encases the holding bar. EP2476607 does not disclose converting the holding bar used as an element into a seat.

The document US20150097346, which shows the preamble of the independent claims, discloses a scooter comprising an element articulated to the standing surface, which can be moved from a first position as a seat element into a second position as a holding element. However, for the scooter disclosed in US20150097346, when using the element as a seat element, the direction of travel is in reverse to the direction of travel when using the element as a holding bar.

US6296568 discloses a scooter comprising a folding seat element, wherein the folded-

up seat element is not used as a holding bar, but as a covering element without any identifiable technical purpose for an additional holding bar.

FR3018260, DE29612276, US2015068828, FR281808, CN104260808, WO2011098887, DE20214201, CN202201107 and US2010148460 do not mention the use of the seat element as a holding bar.

US6089586A, which discloses the preamble of independent claims 1 to 5, discloses a scooter, in which an element serving as a seat in a first position and as a holding bar in a second position is movable between the positions by rotating around an axis extending at a right angle to the positions. Further, the scooter disclosed in US6089586A does not comprise a weight-shifting steering system.

US20150097346 discloses a scooter which can be moved in different movement directions when used depending on the position of an element serving as a seat or as a holding bar. The element is rotatable around an axis, which axis extends at a right angle to the positions. Further, the scooter does not comprise a steering system.

USD631102 shows a scooter having an element serving as a seat or as a holding bar, which is articulated in a rotatable manner to an axis in the chassis that is at a right angle to the positions. Further, the scooter does not comprise a steering system.

The scooters according to the prior art all have the disadvantage that the scooters are mainly designed only for a person in one position. Conversion of the scooters according to the prior art for use in another body position is limited and is also associated with problems.

Unused parts such as a seat are not convenient in the scooters according to the prior art. For example, the seat gets in the way of the person standing on the standing surface—unless it is removed.

In cases where it is possible to convert a scooter suitable for a person to use while standing to a scooter suitable for a seated person, this can only be achieved with considerable effort. For this purpose parts have to be removed which cannot be stowed on the scooter when not in use.

The invention disclosed here thus addresses the problem of reducing to a minimum the elements required for using the scooter when seated or standing and making it possible to use the remaining elements in both body positions or stow away the elements that are not needed.

According to the invention this is achieved in that the scooter also comprises an element which is articulated or attached to the standing surface via a joint and/or via

an elastically and possibly plastically deformable coupling element, which element can be moved from a first position as seat element to a second position as a holding bar for a person standing on the standing surface, wherein the scooter can be moved in the same movement direction in a first position of the element and in a second position of the element when in use.

The person can move the element into the respective position prior to its use as a seat element (first position) or as a holding bar (second position).

The deformable coupling element can be designed for example as an elastically deformable coupling element in the form of a spring or a rubber element. The joint and/or the deformable coupling element, in particular an elastically deformable coupling element can be locked in the first position and/or in the second position and/or in a further position between the first position and the second position. A person skilled in the art would use locking devices for this such as for example locking devices, snap-on devices, snap-in locking devices or clamping devices according to the prior art. The joint can be designed as a locking joint for example.

Having the same movement directions in different positions of the element—in particular for scooters with a steering system—means that the driving characteristics are similar and they are easy to use. The driving characteristics are only changed slightly by changing the location of the joint centre of gravity of the person and scooter in the different positions.

The element can be articulated or attachable at different heights in the first position and/or in the second position.

The element can also be moved advantageously from the first position or the second position into a storage position.

In the storage position, the element does not prevent the person from sitting or standing on the standing surface.

The element can be coupled within the scope of this invention directly or indirectly to the standing surface, i.e. by additional elements, which are mentioned or not mentioned in this disclosure, by a mechanical connection such as for example a joint or a plug connection.

The mechanical plug connection connecting the standing surface and the element can be designed such that in the first position or second position the mechanical connection formed by a joint or by a plug system between the element and the standing surface can be released so that the element can be moved by a free movement or a movement

defined by the mechanical connection from one position to another position, so that the element in the other position is then connected mechanically to the standing surface.

The mechanical connection can thus only define the first position and the second position of the element. The invention disclosed here is not limited to the movement of the element from one position to the other position being necessarily predefined.
The joint, which can ensure the articulation of the element with the standing surface, can comprise a locking device, so that the element is locked in the first position or in the second position.
The element can be designed as an elongated element extending along a longitudinal axis of the element. The length of the element to be selected by a person skilled in the art has to be sufficiently long in the first position that a person can sit on the seat element. In the second, vertical position in its use as a holding bar the element is sufficiently long in order to be sufficiently tall that the person on the standing surface can comfortably grip the element as a holding bar.
The element can include a storage space.
The element can extend essentially horizontally in the first position and/or essentially vertically in the second position.
The scooter according to the invention can comprise a steering device, which is connected to the standing surface and on which steering device at least one front wheel and/or one rear wheel is articulated respectively. The activation of the steering device can be performed via the standing surface.
The steering device can comprise the element. The element is articulated or attached via the steering device on the standing surface, so that the element influences the steering device.
In its position as a holding bar, the element is in an essentially vertical position. The person standing on the surface can hold onto the holding bar with their hands and activate the steering system by means of the holding bar and also by means of the standing surface. The person can accelerate the scooter with their feet.
In its position as a seat element, however, the element adopts an essentially horizontal position. The person can sit on the seat element and accelerate the scooter with their feet. The person can also be allowed—provided that the steering function is not locked—to activate the steering device via the seat element.

The movement of the element from a first position as a seat surface to a second position as a holding bar is essentially—without taking into account additional movements—a rotation of the element from a horizontal position to a vertical position. For this reason, the articulated element is mounted to be rotatable about an axis of rotation of the element.

The axis of rotation of the element can be at right angles to the longitudinal axis of the element. The element is rotated in the longitudinal direction of the scooter from one position to the second position.

The axis of rotation of the element can be the angle bisector between the first position and the second position. The element is rotated by a rotation from the longitudinal direction of the scooter from one position to the second position.

The element can be connected via the standing surface to the steering device.

A holding element can be attached onto the element and/or onto the standing surface so that the user has something else to hold on to. Preferably, the steering device comprises mounts for attaching the additional holding element in the first position and the element in the second position.

The additional holding element can extend through the element. The element can be designed here to be positive-locking for diverting the forces acting on the element into the element or via the standing surface into the element with the additional holding element.

The scooter according to the invention can comprise a weight-shifting steering system and/or a rotary steering system. The scooter can also comprise a friction brake, wherein a frictional surface is pressed against a wheel, preferably the rear wheel. The provision of a steering system on the scooter according to the invention assumes that the direction of travel is not changed—particularly with a weight-shifting steering system. The steering system would otherwise not be operable.

The following description of the Figures is used to explain embodiments of the scooter according to the invention. The Figures and the descriptions of the Figures should not be considered to be restrictive. A person skilled in the art would be able to link features from the following description of the Figures with the general description above. A person skilled in the art is in particular able to replace the weight-shifting steering system mentioned by way of example in the Figures and in the description of the Figures with a rotary steering system.

In the Figures, the following reference numerals identify the following elements of the scooter according to the invention. The person on the scooter is not shown in the Figures.

1 standing surface
2 rear wheel
3 front wheel
4 steering device
5 element
6 first position (of the element)
7 second position (of the element)
8 axis of rotation of the element
9 holding element
10 first element part
11 second element part
12 seat surface
13 joint surface
14 load
15 joint
16 panel
17 first panel mount
18 second panel mount
19 additional joints
20 movement direction

FIG. 1 to FIG. 18 show side views of embodiments of the scooter according to the invention, wherein the Figures with an uneven number show the element in a first position and the Figures with an even number show the element in a second position. FIG. 1 and FIG. 2 show side views of a first embodiment of the scooter according to the invention without a steering device. The scooter of the first embodiment comprises a standing surface 1 for a person to adopt a standing position or a seated position. A rear wheel 2 and two front wheels 3 are articulated onto the standing surface 1. The scooter also comprises an element 5 attached to the standing surface 1, which can be moved from a first, essentially horizontal position 6 as a seat element (see FIG. 1) into a second, essentially vertical position 7 as a holding bar. For this the element 5 comprises a first element part 10 and a second element part 11, wherein the second

element part 11 is connected rigidly at one end to the standing surface 1 and to the other end to the first element part 10 via a joint 15. The first element part 10 can be rotated relative to the second element part 11 about the axis of rotation of the element 8. The axis of rotation of the element 8 is at right angles to the plane of FIG. 1 and FIG. 2.

The first element part 10 comprises a seat surface 12, on which the person can sit. The seat surface only has one function in the first position 6. In the second position 7 the seat surface 12 does not have a function. The scooter also comprises a holding element 9, which the person sitting on the seat surface 12 can hold on to. The holding element 9 does not have any function in the second position 7.

The scooter shown in FIG. 1 and FIG. 2 does not comprise a steering device; the rear wheel 2 and the front wheels 3 are rotatable about their axes, but not mounted adjustably for steering the scooter.

FIG. 3 and FIG. 4 show side views of a second embodiment of the scooter according to the invention, wherein FIG. 3 shows the scooter according to the invention comprising an element 5 in its first position as a seat element and FIG. 4 shows the scooter according to the invention comprising the element 5 in its second position as a holding bar.

The scooter shown in FIG. 3 and FIG. 4 comprises a standing surface 1 for a person to adopt a standing position, a rear wheel articulated onto the standing surface 1 and at least one front wheel 3 articulated via a steering device 4. In FIG. 3 and FIG. 4 the steering device 4 comprising a weight-shifting steering system is covered partly by the front wheel 3.

The scooter according to the invention also comprises an element 5 that can be attached to the steering device 4, which element 5 is shown in FIG. 3 in its first position 6 as a seat element. FIG. 4 shows the second position 7 of the element 5 as a holding bar. The first position 6 is essentially horizontal, whereas the second position 7 is essentially vertical.

The steering device 4 is connected to the standing surface 1 so that the element 5 can be attached to the standing surface 1 via the steering device.

The articulated element 5 comprises a first element part 10 and a second element part 11, wherein the first element part 10 is connected to the second element part 11 mounted rotatably by a joint 15 about an axis of rotation of the element 8. The first

element part 10 can be pivoted from a first horizontal position 6 into a second vertical position 7. The second element part 11 is fixed essentially vertically in the steering device 4 with respect to movement and by means of its length or height in the first position 6 provides a comfortable seat height for a person. In the second position the first element part 10 and the second element part 11 together provide a comfortable holding height for the person standing on the standing surface 1. The first element part 10 and the second element part 11 are joined together by the joint 15.

The first element part 10 has a seat surface 12 which is designed to provide a comfortable seat for a person. The seat surface 12 only has this technical function in the first position 6; in the second position the seat surface 12 does not have any technical function.

The first element part 10 and the second element part 11 contact one another on a joint surface 13, which is entered as a line in FIG. 3 and FIG. 4. The joint surface 13 extends orthogonally to the element axis 8. Thus for example loads 13 acting on the element 5 indicated for example in FIG. 3 and FIG. 4 can be absorbed better in the joint 15 by the person on the scooter.

The joint 15 comprises a locking device, so that it is possible to prevent the unwanted pivoting of the element 5 from one position to the other position.

The axis of rotation of the element 8 is an angle bisector between the first position 6 and the second position 7. The axis of rotation of the element 8 is inclined 45° to the horizontal and the vertical.

The scooter comprises a holding element 9, which is attached by mounts on the element 5 in the first position 6 and in the second position 7.

The additional holding element 9 in the first position 6 is used for the person sitting on the element 5 to hold on to. The additional holding element 9 is connected to be height-adjustable by the mount to the element 5, so that the sitting person can adjust the height of the additional holding element 9 to their requirements. The sitting person activates the steering device 4 operated by weight-shifting by shifting his weight in the seat on the seat surface 12 and/or by exerting force on one side (in FIG. 3 orthogonal to the plane of the Figure).

In the second position, the height for holding on to is provided by the element 5 and the additional holding element 9. Also here the additional holding element 9 is height-adjustable. The standing person activates the steering device operated by weight-shifting by shifting his weight on the standing surface 1 and/or by exerting a lateral

force (in FIG. 4 orthogonal to the plane of the Figure).

FIG. 5 and FIG. 6 illustrate the height adjustability of the element 5 on the scooter shown in FIG. 3 and FIG. 4. The element 5 comprises a first panel mount 17, by means of which the height of the element 5 can be selected relative to the standing surface 1 in the first position 6 (FIG. 5) and in the second position 7 (FIG. 6).

FIG. 7 and FIG. 8 show side views of a third embodiment of the scooter according to the invention. FIG. 7 shows the scooter comprising an element 5 in a first horizontal position 5 as a seat element; FIG. 8 shows the scooter comprising the element 5 in a second vertical position 6 as a holding element.

The scooter also comprises a standing surface 1 with an articulated rear wheel 2, a front wheel 3 articulated to a steering device 4, wherein the standing surface 1 and steering device 4 are connected mechanically. The steering device 4 operating as a weight-shifting steering system is in turn partly covered by the front wheel 3.

FIG. 7 also shows an element 5 attachable onto a panel 16, which is formed in one piece with the standing surface 1, in its first position 6 as a seat element. The element 5 comprises a first panel mount 17 fitting therewith, which is fitted onto the panel 16. The first panel mount 17 also comprises a clamping element for securing the element 5 onto the panel 16 in the first position 6, wherein the height position of the element 5 in the first position 6 can be adjusted by the clamping element. The element 5 extends horizontally and provides a sitting person with a comfortable seat surface 12.

FIG. 8 shows that the element 5 can also be attached in its second position 7 as a holding bar on the panel 16. For this the element 5 comprises a second panel mount 18, which allows the attachment of the element 5 onto the panel 16 in the second vertical position 7. The first panel mount 17 and the second panel mount 18 and the panel 16 have dimensions which would be determined by a person skilled in the art for absorbing the essential loads 18.

By attaching the element 5 in a first horizontal position 6 (see FIG. 7) and a second vertical position 7 (see FIG. 8) the element can be moved from a position of use as a seat element to a position of use as a holding bar.

FIG. 7 shows the second panel mount 18 and FIG. 8 shows the first panel mount 17 not in use. Likewise in the second position 7 the seat surface 12 is not in use.

The scooter shown in FIG. 7 and FIG. 8 comprises a holding element 9 which can be attached to the standing surface 1. The first panel mount 17 and the second panel mount 18 extend through the element 5, so that the additional holding element 9 can

be pushed through the element 5 into the panel 16, and thus inserted. The first panel mount 17 and the second panel mount 18 extend through the element—not shown in FIG. 7 and FIG. 8.

The holding element 9 is used in the first position 6 for the person sitting on the element 5 to hold on to. The additional holding element 9 is connected height-adjustably by the mount to the element 5, so that the seated person can adjust the height of the additional holding element 9 to his requirements. The seated person activates the steering device 4 operated by weight-shifting by shifting his weight in the seat on the seat surface 12 and/or by exerting a lateral force (in FIG. 3 orthogonal to the plane of the Figure).

In the second position, the height for holding on to is provided by the element 5 and the holding element 9. Here too the additional holding element 9 is height-adjustable. The standing person activates the steering device operated by weight-shifting by shifting high weight on the standing surface 1 and/or by exerting a lateral force (in FIG. 4 orthogonal to the plane of the Figure).

FIG. 9 and FIG. 10 show a side view of a scooter according to the prior art comprising a standing surface 1 for a person, a rear wheel 2 articulated to the standing surface 1 and two front wheels 3.

The scooter also comprises a holding element 9, which holding element 9 is connected to the standing surface 1.

The scooter according to the invention also comprises an element 5, which comprises a seat surface 12. The element 5 can be connected in a first, essentially horizontal position 6 (see FIG. 9) or in a second, essentially vertical position 7 (see FIG. 10) on the holding element 9 encasing the holding element 9.

FIG. 10a contained in FIG. 10 shows the element 5 in detail. The element 5 comprises two parts which are joined together for attaching the element 5 onto the holding element 9. One part of the element 5 comprises a first panel mount 17 and a second panel mount 18. The first panel mount 17 is used for mounting the holding element 9, so that the element 5 adopts the first position 6 (see FIG. 9). The second panel mount 18 is used for mounting the holding element 9 in the second position 7 (see FIG. 10).

FIG. 11 and FIG. 12 show side views of a second embodiment of the scooter according to the invention, wherein FIG. 3 shows the scooter according to the invention comprising an element 5 in its first position as a seat element and FIG. 4 shows the scooter according to the invention comprising the element 5 in its second position as

a holding bar.

The scooter shown in FIG. 11 and FIG. 12 comprises a standing surface 1 for a person to stand on, who is not shown, a rear wheel articulated to the standing surface 1 and at least one front wheel 3 articulated via a steering device 4. In FIG. 11 and FIG. 12, the steering device 4 comprising the weight-shifting steering system is covered partly by the front wheel 3.

The scooter according to the invention also comprises an element 5 attachable to the steering device 4, which element 5 is shown in FIG. 11 in its first position 6 as a seat element. FIG. 12 shows the second position 7 of the element 5 as a holding bar. The first position 6 is essentially horizontal, whereas the second position 7 is essentially vertical.

The steering device 4 is connected to the standing surface 1 so that the element 5 is connected to the standing surface 1 via the steering device.

The articulated element 5 comprises a first element part 10 and a second element part 11, wherein the first element part 10 is connected rotatably to the second element part 11 by a joint 15 about an axis of rotation of the element 8 oriented at right angles to the plane of FIG. 11 and FIG. 12. The first element part 10 can be pivoted from a first horizontal position 6 to a second vertical position 7. The second element part 11 is fixed essentially vertically and provides with its length or height in the first position 6 a comfortable seat height for a person. In the second position the first element part 10 and the second element part 11 together form a holding height which is comfortable for the person standing on the standing surface 1. The first element part 10 and the second element part 11 are connected together by the joint 15.

The first element part 10 comprises a seat surface 12 shaped to provide a comfortable seat for a person. The seat surface 12 only has this technical function in the first position 6; in the second position the seat surface 12 has no technical function.

The joint 15 comprises a locking device so that any unwanted pivoting of the element 5 from one position to another position can be prevented.

The scooter comprises a holding element 9, which is attached in the first position 6 and in the second position 7 by mounts on the element 5.

The additional holding element 9 is used in the first position 6 for the person sitting on the element 5 to hold on to. The additional holding element 9 is connected in a height-adjustable manner via the mount to the element 5, so that a seated person can adjust the height of the additional holding element 9 as required. A seated person activates

the steering device 4 operated by weight-shifting by shifting his weight when seated on the seat surface 12 and/or by exerting a lateral force (in FIG. 3 orthogonal to the plane of the Figure).

In the second position, the height for holding onto is formed by the element 5 and the additional holding element 9. Here too the additional holding element 9 is height-adjustable. The standing person activates the steering device operated by weight-shifting by shifting his weight on the standing surface 1 and/or by exerting lateral force (in FIG. 4 orthogonal to the plane of the Figure).

FIG. 13 and FIG. 14 show side views of a sixth embodiment of the scooter according to the invention which comprises a standing surface 1 for a person to adopt a standing position, which is not shown in FIG. 13 and FIG. 14, a rear wheel 2 articulated to the standing surface 1 and two front wheels 3 articulated to the standing surface 1 by means of a steering device 4.

The scooter also comprises an element 5 articulated to the standing surface 1 by means of a joint 15. The joint 15 hereby allows the rotation of the element 5 about a rotational axis of the rod 8, which rotational axis of the rod 8 is directed at right angles to the plane of the image of FIG. 13 and FIG. 14.

The element 5 comprises a first element part 10 and a second element part 11. The second element part 11 is connected at one end to the joint 15 and at its other end to the first element part 10, wherein there is a rigid connection between the first element part 10 and second element part 11. The first element part 10 and the second element part 11 have an angle of about 20° relative to one another.

FIG. 13 shows a first position 6 of the element 5, in which first position the first element part 10 is used as a seat. The first element part 10 comprises a seat surface 12, to provide the person with a comfortable seat. The joint 15 comprises a locking device to prevent the rotation of the element 5 so that the element 5 can support a seated person.

FIG. 14 shows a second position 7 of the element 5, into which second position 7 the element 5 can be moved after previously releasing the locking device. In its second position 7 the element 5 is used as a holding bar. The element 5 is essentially vertical in its second position 7, whereby the first element part 10 and the second element part 11 deviate slightly from the vertical due to the rigid, angled connection.

In the first position 6, the person sits on the first element part 10 and holds onto the holding element 9 attached to the element 5 with his hands. The person can accelerate

the scooter with his feet, as the seated person can reach the ground with his feet. It is possible in this case to adjust the height of the seat by means of the joint 15 by the inclination of the element 5. For this, alternatively or in combination with the adjustment of the inclination, the seat height can be adjusted by the telescope 19, the second element part 11 being designed in this way. The person steers the scooter by shifting his weight on the seat surface 12 and by means of the holding element 9 which the person holds with his hands.

In the second position 7, the person stands on the standing surface 1 and holds onto the holding element 9 with his hands. The person can accelerate the scooter with his feet, as the person can reach the ground with his feet. The height of the holding element 9 can be adjusted by the joint 15 by inclining the element 5. For this, alternatively or in combination with the adjustment of the inclination, the height of the holding element 9 can be adjusted by the telescope 19, the second element part 11 being designed in this way. The person steers the scooter by shifting his weight on the standing surface 1 and by means of the holding element 9 which the person holds with his hands.

FIG. 15 and FIG. 16 show a schematic side view of one embodiment of a scooter comprising a standing surface 1, a rear wheel 2 articulated to the standing surface 1 and a front wheel 3 articulated to the standing surface 1.

The scooter has an element 5, which comprises one first element part 10 and two second element parts 11. The first element part 10 and the second element parts 11 are connected to one another rotatably by joints 15, so that the first element part 10 can be moved from a first position 6 as a seat (see FIG. 16) into a storage position (see FIG. 15). In the storage position the standing surface 1, the first element part 10 and the second element part 11 form a single plane. The person standing on the scooter can basically stand on the whole plane.

The first element part 10 and the standing surface 1 are formed in one piece.

A person skilled in the art would arrange the additional joints 19, so that the transfer of elements 5 from the storage position to the first position is geometrically possible.

The scooter also comprises a holding element 9, which the person standing on the standing surface 1 or sitting on the first element part 10 can hold on to.

FIG. 17 and FIG. 18 show a schematic view of a scooter comprising a standing surface 1, a rear wheel 2 articulated to the standing surface 1 and a front wheel 3 articulated to the standing surface 1.

The scooter also comprises an element 5 attached to the standing surface 1, which element 5 comprises a first element part 10 and a second element part 11. The element parts 10, 11 are joined together by a joint 15, so that the first element part 10 can be adjusted relative to the second element part 11 by rotation about an element axis 8. Thus the element 5 can be moved from a first position 6 as a seat element (see FIG. 17) to a second position 7 as a holding bar (see FIG. 18). The first element part 10 comprises a seat surface 12, to make the seat comfortable for the person in the first position 6.

FIG. 19, FIG. 18 and FIG. 21 show side views of a scooter comprising a standing surface 1, at least one rear wheel 2 articulated to the standing surface 1 and at least one front wheel 3 articulated to the standing surface 1. Also an element 5 is articulated to the standing surface 1 via a joint 15, which element 5 comprises a first element part 10 and a second element part 11. The element parts 10, 11 are connected by an additional joint 19. The element 5 can be moved between a first position 6 as a seat element comprising a seat surface 12 (see FIG. 18) and a second position 7 as a holding bar (see FIG. 19) and a storage position (see FIG. 21). In the storage position the element 5 has a form adapted to the standing surface 1, so that the person can adjust to the element 5 in the storage position.

The person sitting on the seat surface 12 or standing on the standing surface 1 can hold onto the additional holding element 9.

P a t e n t k r a v

1. Sparkesykkel som omfatter
en ståflate (1),
minst ett bakhjul (2) som er festet til ståflaten (1), og minst ett forhjul (3) som er festet til ståflaten (1),
der sparkesykkelen kan beveges i en forover-reiseretning (20),
der sparkesykkelen kan beveges i samme forover-reiseretning (20) ved et brukstilfelle gitt av en første stilling (6) av et element (5), og ved et ytterligere brukstilfelle gitt av en andre stilling (7) av elementet (5),
der elementet (5) er festet til ståflaten (1) via et ledd (15), der elementet (5) kan konverters fra den første stillingen (6) som seteelement, til den andre stillingen (7) som holdestang for en person som står på ståflaten (1), k a r a k t e r i s e r t v e d at
elementet (5) er montert slik at det bare kan dreies om en elementdreieakse (8), der elementdreieaksen (8) er halveringslinjen mellom elementets (5) første stilling (6) og andre stilling (7).

2. Sparkesykkel som omfatter
en ståflate (1),
minst ett bakhjul (2) som er festet til ståflaten (1), og minst ett forhjul (3) som er festet til ståflaten (1),
der sparkesykkelen kan beveges i en forover-reiseretning (20),
der sparkesykkelen videre omfatter et element (5) som er festet til ståflaten (1), og sparkesykkelen kan beveges i samme forover-reiseretning (20) ved et brukstilfelle gitt av en første stilling (6) av elementet (5), og ved et ytterligere brukstilfelle gitt av en andre stilling (7) av elementet (5),
der elementet (5) kan konverters fra den første stillingen (6) som seteelement, til den andre stillingen (7) som holdestang for en person som står på ståflaten (1),
k a r a k t e r i s e r t v e d at
elementet (5) er festet via et deformerbart koplingselement.

3. Sparkesykkel som omfatter
en ståflate (1),

minst ett bakhjul (2) som er festet til ståflaten (1), og minst ett forhjul (3) som er festet til ståflaten (1),
der sparkesykkelen kan beveges i en forover-reiseretning,
der et element (5) kan konverters fra en første stilling (6) som seteelement, til en andre stilling (7) som holdestang for en person som står på ståflaten (1),
der sparkesykkelen kan beveges i samme forover-reiseretning (20) ved et brukstilfelle gitt av en første stilling (6) av elementet (5), og ved et ytterligere brukstilfelle gitt av en andre stilling (7) av elementet (5),
k a r a k t e r i s e r t v e d at
bakhjulet (2) eller forhjulet (3) kan styres ved å skifte vekten, og
der vektskiftingsstyringen videre omfatter elementet (5) som er festet til ståflaten (1) via et ledd (15) og/eller via et deformerbart koplingselement.

4. Sparkesykkel som omfatter
en ståflate (1),
minst ett bakhjul (2) som er festet til ståflaten (1), og minst ett forhjul (3) som er festet til ståflaten (1),
et holdeelement (9), der holdeelementet (9) er forbundet med ståflaten (1), der sparkesykkelen kan beveges i en forover-reiseretning,
der sparkesykkelen kan beveges i samme forover-reiseretning (20) ved et brukstilfelle gitt av en første stilling (6) av et element (5), og ved et ytterligere brukstilfelle gitt av en andre stilling (7) av elementet (5),
k a r a k t e r i s e r t v e d at
elementet (5) på holdeelementet (9) kan stikkes omhyllende på holdeelementet (9) både i en vesentlig horisontal stilling og i en vesentlig vertikal andre stilling,
der elementet (5) omfatter to elementdeler, der elementdelene sammenføyes for å stikke elementet (5) på holdeelementet (9), der en elementdel omfatter et første konsollmottak (17) for å motta holdeelementet (9) i elementets (5) første stilling (6), og et andre konsollmottak (18) for å motta holdeelementet (9) i elementets (5) andre stilling,
der elementet (5) kan konverters fra den første stillingen (6) som seteelement, til den andre stillingen (7) som holdestang for en person som står på ståflaten (1) ved å løsne elementet (5) i den første stillingen fra holdeelementet (9) og stikke elementet

(5) i den andre stillingen på holdeelementet (9).

5. Sparkesykkel som omfatter
en ståflate (1),
minst ett bakhjul (2) som er festet til ståflaten (1), og minst ett forhjul (3) som er festet til ståflaten (1),
et holdeelement (9), der holdeelementet (9) er forbundet med ståflaten (1), der sparkesykkelen kan beveges i en forover-reiseretning,
der sparkesykkelen kan beveges i samme forover-reiseretning (20) ved et brukstilfelle gitt av en første stilling (6) av et element (5), og ved et ytterligere brukstilfelle gitt av en andre stilling (7) av elementet (5),
der elementet (5) kan konverters fra en første horisontal stilling (6) som seteelement, til en andre stilling (7) som holdestang for en person som står på ståflaten (1),
k a r a k t e r i s e r t v e d at
en konsoll (16) er utformet i ett stykke med ståflaten (1), der elementet (5) omfatter et første konsollmottak (17) for å stikkes på konsollen (16) i elementets (5) første stilling (6), og et andre konsollmottak (18) for å stikkes på konsollen (16) i elementets (5) andre vertikale stilling,
der det første konsollmottaket (17) omfatter et spennelement for sikker anbringelse av elementet (5) på konsollen i den første stillingen (6),
der elementets (5) høydeposisjon kan stilles inn i den første stillingen ved hjelp av spennelementet.

6. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 5,
k a r a k t e r i s e r t v e d at elementet (5) via ytterligere elementer er koplet til ståflaten ved hjelp av en mekanisk forbindelse som for eksempel et ytterligere ledd eller en stikkforbindelse.

7. Sparkesykkel ifølge krav 6, k a r a k t e r i s e r t v e d at
i den første stillingen eller andre stillingen kan leddet eller stikkforbindelsen løsnes, slik at elementet kan konverteres ved hjelp av en bevegelse gitt av leddet eller stikkforbindelsen, eller ved fri bevegelse.

8. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 3,
k a r a k t e r i s e r t v e d at
leddet (15) eller det deformerbare koplingselementet kan låses i en første stilling og/eller i en andre stilling og/eller i en ytterligere stilling mellom den første stillingen og/eller den andre stillingen.

9. Sparkesykkel ifølge krav 1, k a r a k t e r i s e r t v e d at
elementdreieaksen (8) heller i en vinkel på 45° til vertikallinjen og horisontallinjen.

10. Sparkesykkel ifølge krav 1, k a r a k t e r i s e r t v e d at
leddet (15) omfatter en leddflate (13), der leddflaten (13) er rettet normalt på elementdreieaksen (8).

11. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 10,
k a r a k t e r i s e r t v e d at
elementet (5) kan konverteres fra den første stillingen (6) eller fra den andre stillingen (7) til en sikkerhetsstilling.

12. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 4,
k a r a k t e r i s e r t v e d at
elementet (5) i den første stillingen (6) og/eller i den andre stillingen (7) kan festes eller stikkes på i ulike høydeposisjoner.

13. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 4,
k a r a k t e r i s e r t v e d at
elementet i den første stillingen (6) strekker seg vesentlig horisontalt, og/eller i den andre stillingen (7) strekker seg vesentlig vertikalt.

14. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 13,
k a r a k t e r i s e r t v e d at
sparkesykkelen omfatter en styreanordning som er forbundet med ståflaten (1) og der det til styreanordningen (4) er festet henholdsvis minst ett forhjul (3) og/eller ett bakhjul (2).

15. Sparkesykkel ifølge krav 14, k a r a k t e r i s e r t v e d at styreanordningen (4) omfatter holdestangen som kan dreies om en styreakse, der forhjulet er anbrakt på holdestangen, og der holdestangen er dreibart montert i forhold til ståflaten.

16. Sparkesykkel ifølge et hvilket som helst av kravene 1, 2, 4 til 13, k a r a k t e r i s e r t v e d at sparkesykkelen kan styres via en vektskiftingsstyring og/eller en styreanordning.

17. Sparkesykkel ifølge krav 5, k a r a k t e r i s e r t v e d at et ytterligere holdeelement kan anbringes på elementet (5) og/eller på ståflaten (1), der det ytterligere holdeelementet (9) er høyderegulerbart forbundet med elementet (5) via et mottak.

18. Sparkesykkel ifølge et hvilket som helst av kravene 1 til 17, k a r a k t e r i s e r t v e d at elementet (5) omfatter et lagerrom.

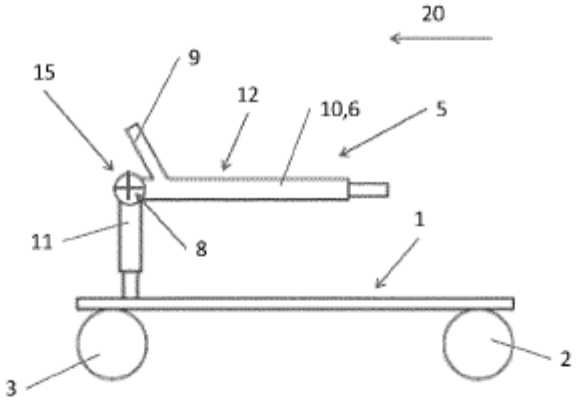


Figure 1

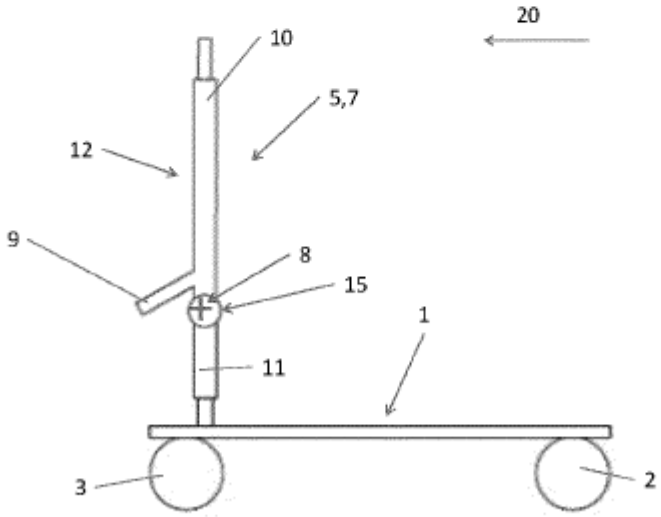


Figure 2

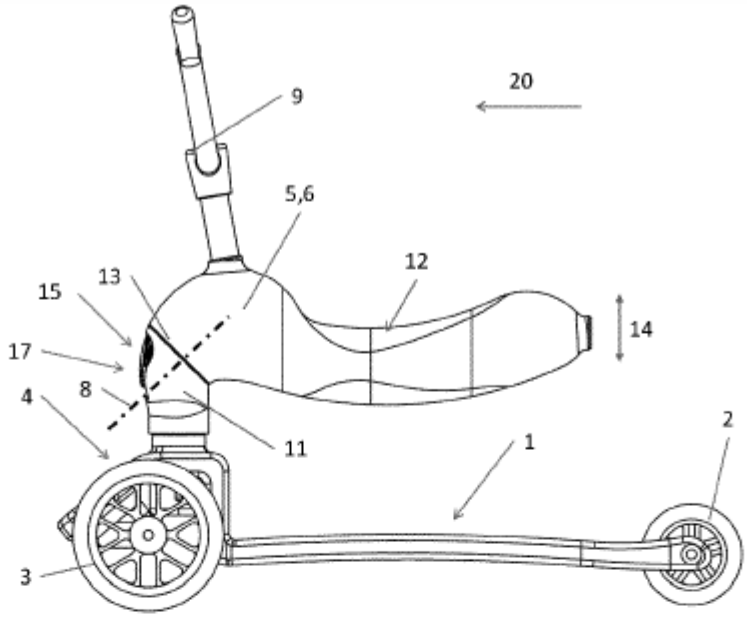
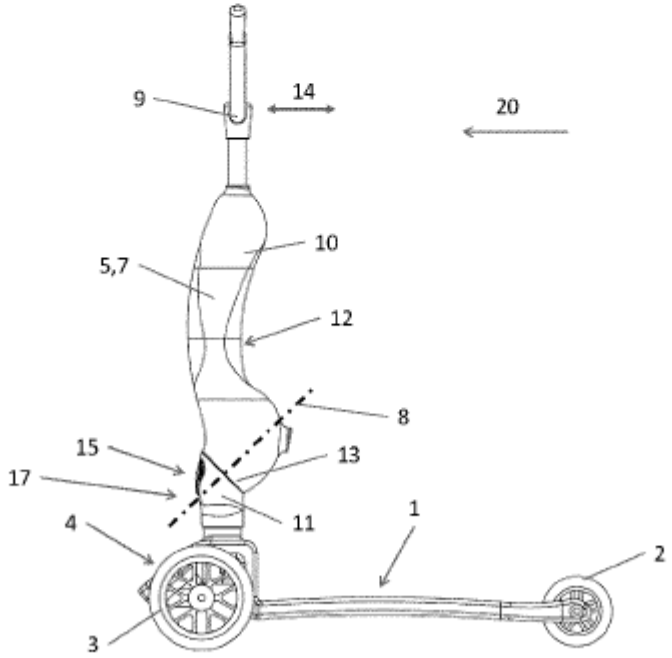


Figure 3



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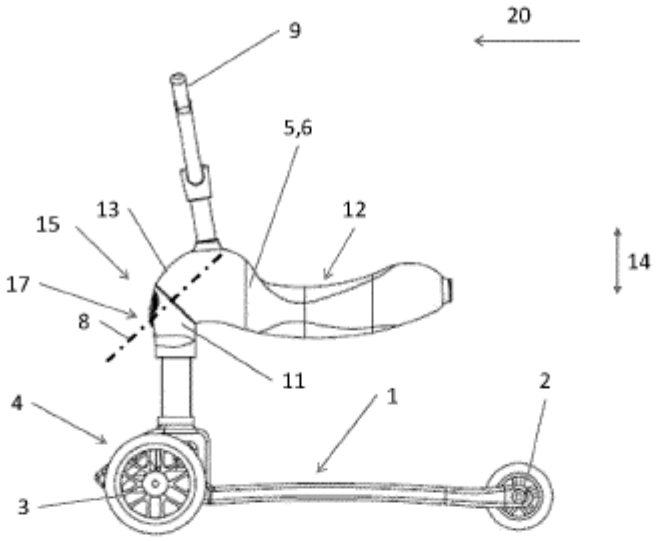

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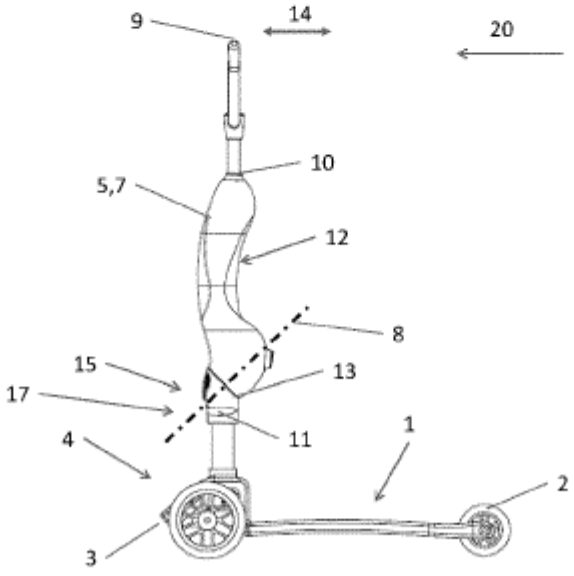

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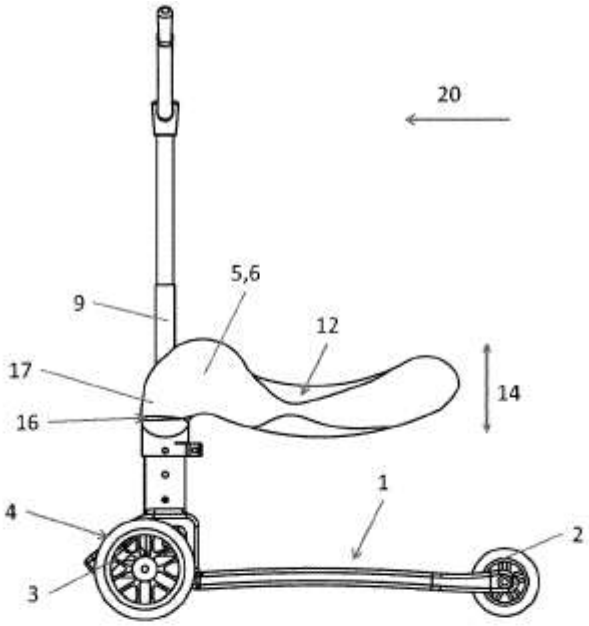

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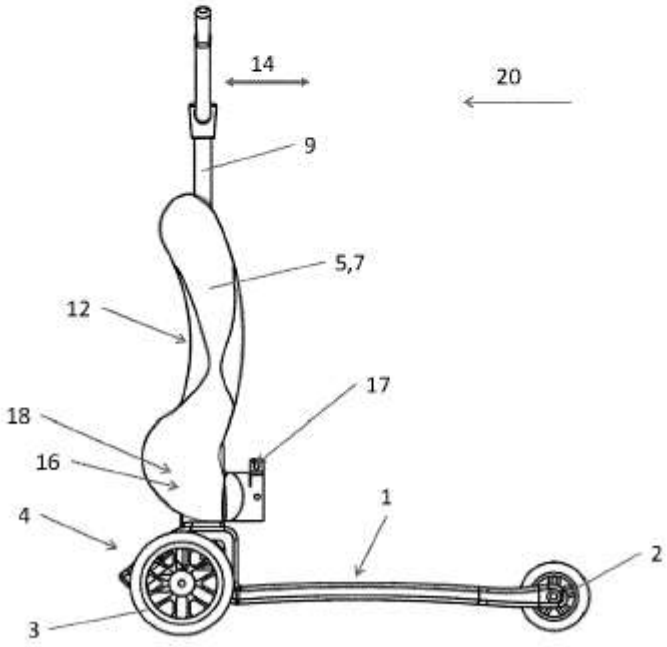

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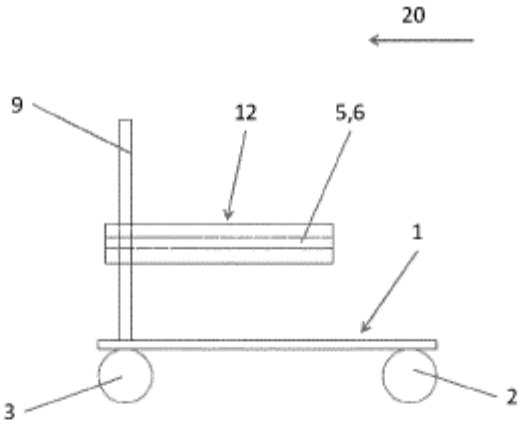

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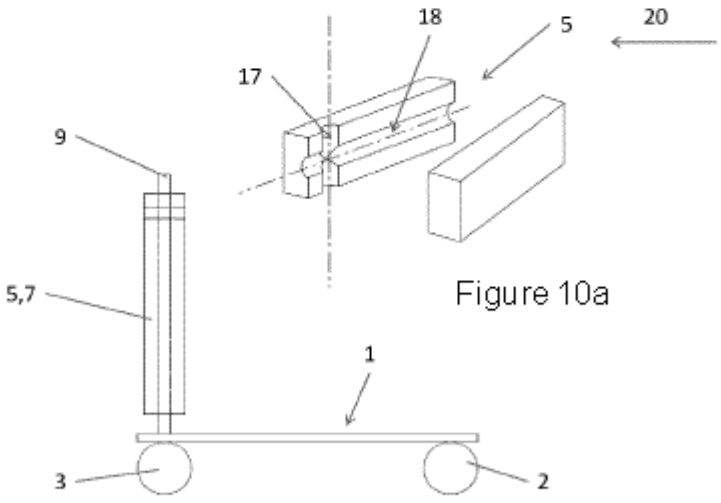


Figure 10a

Figure 10

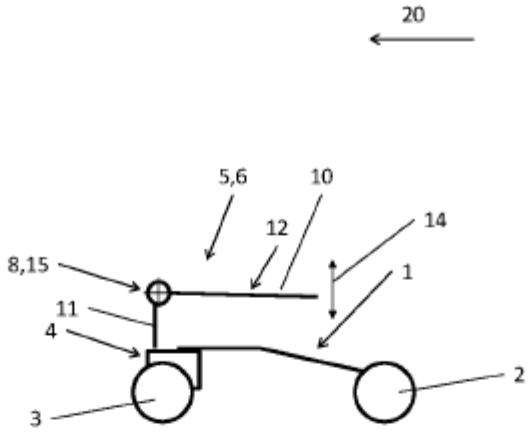


Figure 11

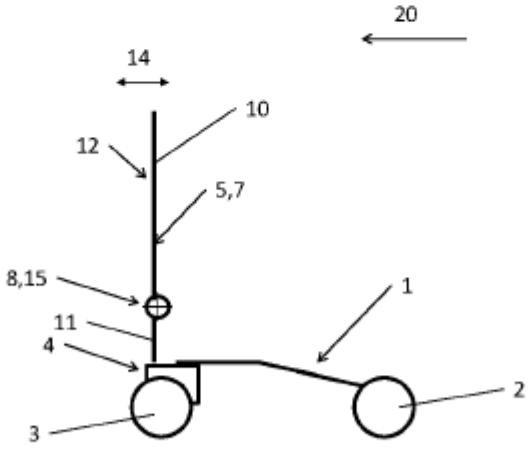
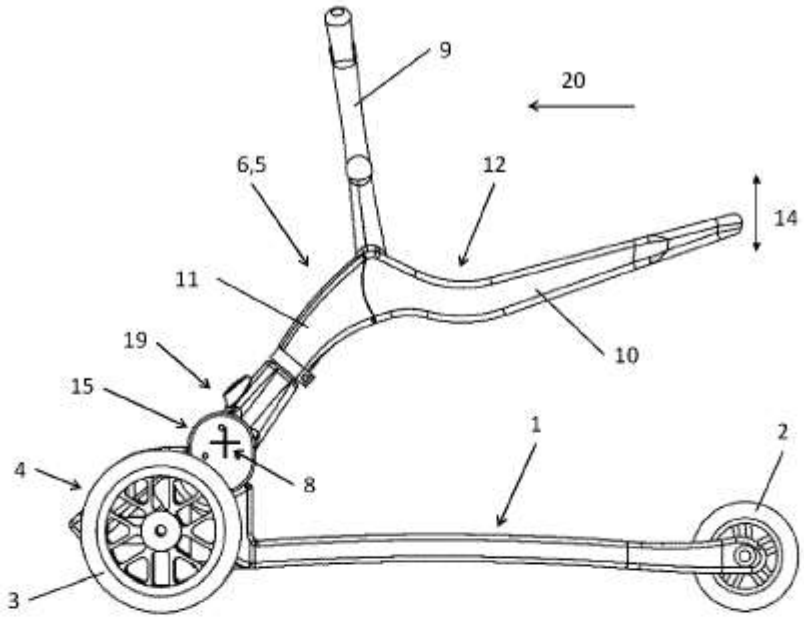


Figure 12



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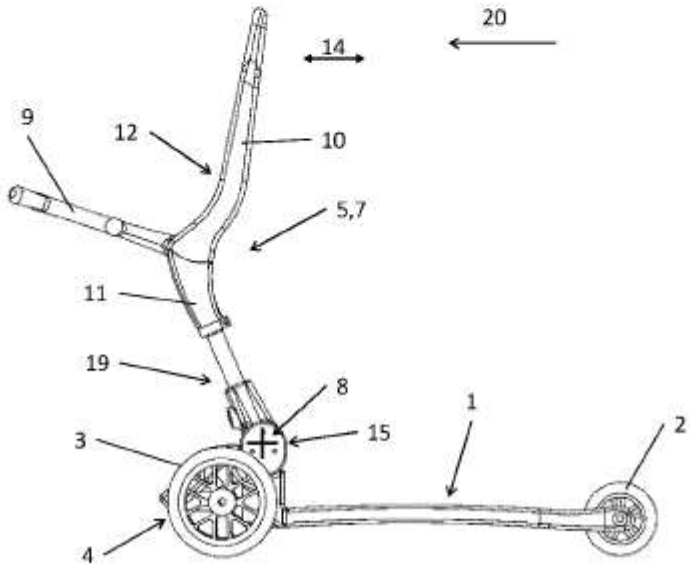

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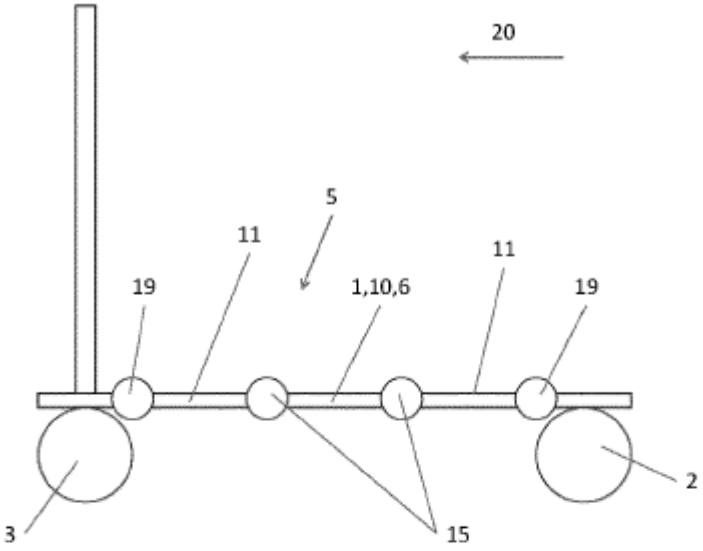

Figure 15

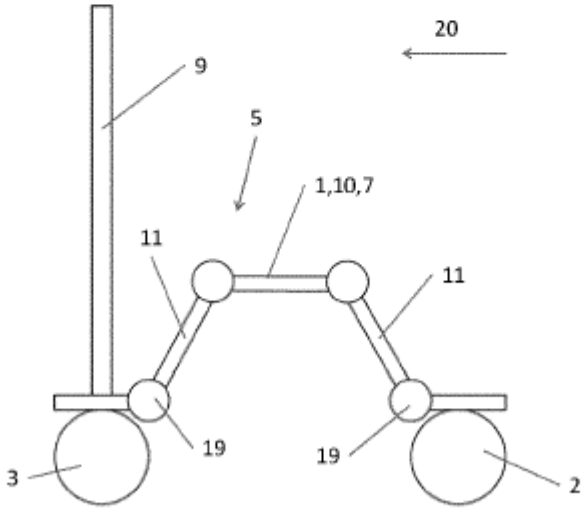

Figure 16

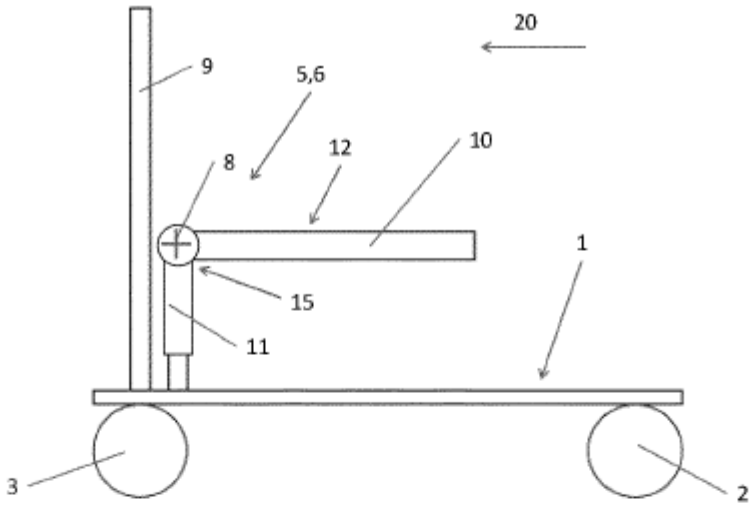

Figure 17

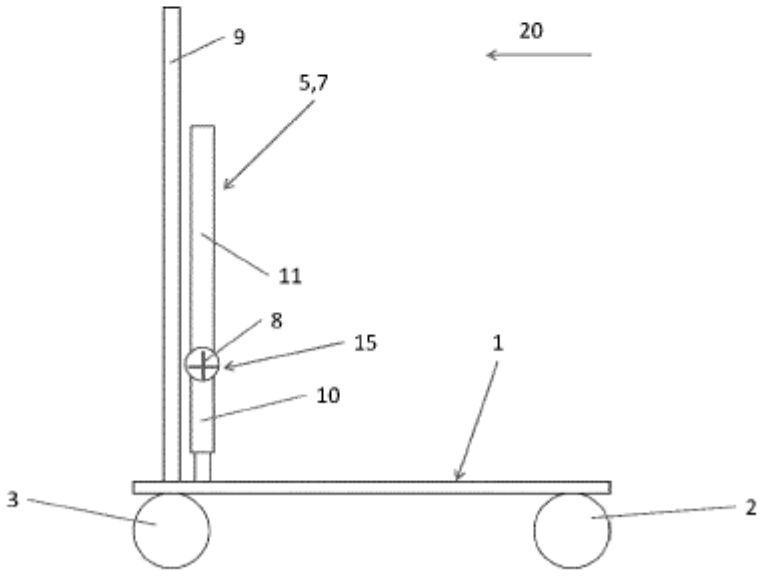

Figure 18

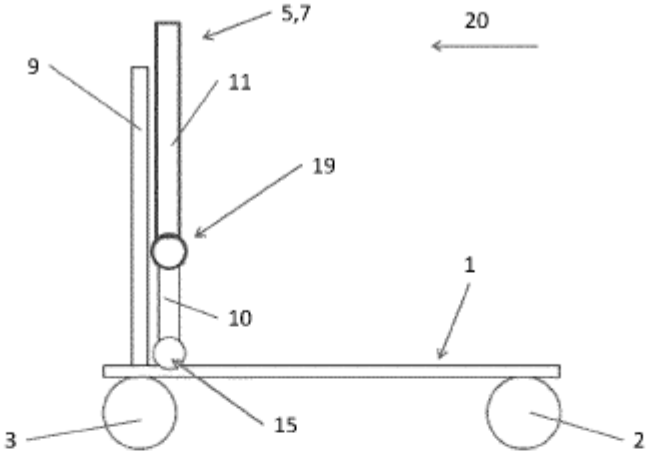

Figure 19

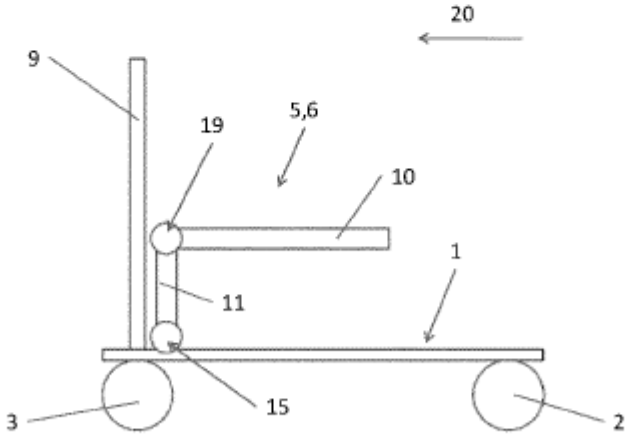

Figure 20

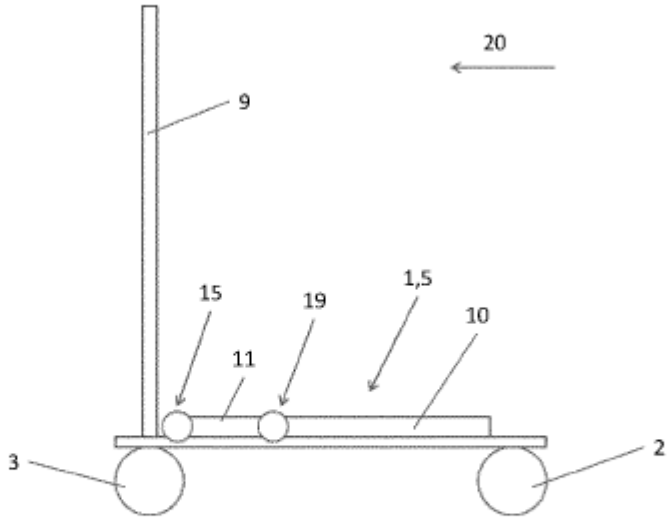

Figure 21