Rolling assembly for a walking frame

Technical Field

[001] Various embodiments relate to a rolling assembly for a walking frame.

Background

[002] A walking aid, such as a walking frame, is used especially by the elderly or those with walking disabilities, to move around.

[003] While walking frames may be made lightweight, it still becomes strenuous and tiring to lift such walking frames for every taken step. The toll of the strain over time is especially felt by the elderly, since they may already have difficulties walking.

[004] Further, in the case where the user is carrying an item with his/her hands, it becomes inconvenient to lift the walking frame.

[005] There is thus a need to make walking frames less strenuous to use, especially for the elderly and those with walking disabilities.

Summary

[006] According to various embodiments, there is provided a rolling assembly for a walking frame, the rolling assembly including: a housing; a rolling means movably coupled to the housing so as to enable a guided move thereof between a first position in which the rolling means protrudes at least partially from the housing, and a second position in which the rolling means is stowed in the housing, a resilient element arranged in the housing so as to resiliently bias the rolling means into the first position; and a coupling element arranged on the housing for coupling the rolling assembly to a walking frame.

[007] In the context of various embodiments, the term “rolling assembly” may mean a group of components placed together to form a device. In the context of

various embodiments, the rolling assembly is not limited to coupling with walking frames, but also with furniture such as tables and chairs. The term "housing" may mean a structure that is generally cap-shaped or bell-shaped, so that the housing has a base or bottom portion from which a wall extends from a perimeter of the base (or circumference in the case where the bottom portion is circular shaped). The housing serves to accommodate the components within the rolling assembly. The term "rolling means" may mean any device that can rotate, such as a caster wheel, a roller and a ball bearing. The term "coupled" means a direct or indirect link/connection between any two specified features. One or more structures may be present between the two features that are coupled together. The link/connection may be such that the two features are movable with respect to each other. The term "stowed" may mean that the rolling means is stored in the housing so that it is not visible from a side view of the rolling assembly. The term "coupling element" may mean a structure that allows the rolling assembly to couple to a walking frame. The term "arranged on" may mean that the coupling element may be a separate element to the housing or be formed as an integral part of the housing.

[008] According to various embodiments, there is provided a walking frame including a pair of front legs; and a pair of rear legs, wherein an end of each leg is coupled to a respective rolling assembly, according to various embodiments, via the coupling element of that rolling assembly. In various embodiments, the end portion of the respective front and rear legs of the walking frame can form the housing for the rolling means.

Brief Description Of The Drawings

[009] In the drawings, like reference characters generally refer to the same parts throughout the different views. The drawings are not necessarily to scale, emphasis instead generally being placed upon illustrating the principles of the invention. In the following description, various embodiments of the invention are described with reference to the following drawings, in which:

[0010] Figure 1A shows a schematic of a rolling assembly for a walking frame according to various embodiments.

[0011] Figure 1B shows a side view of a rolling assembly according to one embodiment, where a rolling means of the rolling assembly is protruding partially.

[0012] Figure 1C shows a schematic of coupling components within a rolling assembly according to one embodiment.

[0013] Figure 1D shows a side view of a rolling assembly according to one embodiment, where a rolling means of the rolling assembly is stowed.

[0014] Figure 2 shows a wheel adapter used within a rolling assembly according to various embodiments.

[0015] Figures 3 to 6 show side views of a rolling assembly according to a respective embodiment.

[0016] Figures 7 and 8 show exploded views of the rolling assembly of Figure 1B.

[0017] Figure 9 shows a housing for a rolling assembly for a walking frame according to various embodiments.

[0018] Figure 10 shows a walking frame to which a rolling assembly according to various embodiments is coupled.

Detailed Description

[0019] Various embodiments provide a rolling assembly that can be used for walking frames.

[0020] Figure 1A shows a schematic of a rolling assembly 100 for a walking frame according to various embodiments.

[0021] The rolling assembly 100 includes a housing 102. A rolling means 104 is movably coupled to the housing 102 so as to enable a guided move thereof between a first position (as denoted by the letter "F") and a second position (as denoted by the letter "S"). In the first position F, the rolling means 104 protrudes at least partially from the housing 102. In the second position S, the rolling means 104 is stowed in the housing 102. A resilient element 106 is arranged in the housing 102 so as to

resiliently bias the rolling means 104 into the first position F. A coupling element 108 is arranged on the housing 102 for coupling the rolling assembly 100 to a walking frame (not shown).

[0022] When the rolling assembly 100 is in its first position F, which is the default position where no external pressure is applied onto the rolling assembly, the rolling assembly is able to roll or glide along a surface.

[0023] In the second position S, which occurs when external pressure is applied, surface 100s of the housing 102 will become in contact with the ground, where the surface 100s will be in frictional engagement with the ground. This frictional engagement will prevent the rolling assembly 100 from rolling along the ground.

[0024] Thus, when a user applies his/her weight on a walking frame with the rolling assembly 100 attached, the rolling means 104 will be stowed in its housing 102 where the housing 102 will then make contact with the ground, thereby preventing the walking frame from slipping. However, when the user relieves some of his/her weight off the walking frame, the walking frame will lift (i.e. the rolling means 104 moves into its first position F) by the action of the biasing force provided by the resilient element 106. The user can then move the walking frame by a gliding motion. For walking frames without such a rolling assembly, a user will have to exert more effort by lifting the walking frame should he/she wish to move. Thus, the rolling assembly 100 eases use of a walking frame, especially by the elderly who have walking difficulties.

[0025] Figure 1B shows a side view of the rolling assembly 100 according to one embodiment, where the components of the rolling assembly 100 can be seen.

[0026] The rolling assembly 100 is shown to be coupled to one leg 160 of a walking frame (not shown). The rolling assembly has a housing 102. A rolling means 104 is movably coupled to the housing 102 so as to enable a guided move thereof between a first position in which the rolling means 104 protrudes at least partially from the housing (as shown in Figure 1B) and a second position (as shown in Figure 1D) in which the rolling means 104 is stowed in the housing 102.

[0027] A resilient element 106 is arranged in the housing 102 so as to resiliently bias the rolling means 104 into the first position. The housing 102 has a coupling

element 108 arranged on the housing 102 for coupling the rolling assembly 102 to a walking frame. In Figure 1B, the coupling element 108 is one of a step in a stepped arrangement 110 integral with the housing 102.

[0028] The housing 102 has a cavity 114 within which the rolling means 104 is stowed when the rolling means 104 is in the second position. When the rolling means 104 is in its first position, it protrudes from an opening 116 of the housing 102, located opposite to the coupling element 108.

[0029] In the embodiment shown in Figure 1B, the resilient element 106 is arranged between the rolling means 104 and a wall 112 of the housing 102. The resilient element 106 may be a coil spring or a rubber block.

[0030] A guide element 118 is coupled to the housing 102 and to the rolling means 104. The guide element 118 is arranged to guide the rolling means 104 when moving between the first position and the second position. In the embodiment shown in Figure 1B, the rolling means 104 is secured to the guide element 118 and the guide element 118 slides in an opening 120 of the housing 102 when the rolling means 104 moves between the first position and the second position. However, in another embodiment (see Figure 1C, which shows a schematic of the relevant portions of Figure 1B being described), the guide element 118 is secured to the housing 102 and the rolling means 104 slides along the guide element 118 when moving between the first position and the second position. The guide element 118 may be a shoulder screw.

[0031] Returning to Figure 1B, the housing 102 may be generally cup-shaped, although in other embodiments, it may be bell-shaped. The rolling means 104 includes a wheel 124 (also see inset picture 122 which shows a front view), a generally U-shaped wheel holder having two U-leg plates 126p facing each other; a U-bottom plate 126b connecting the U-leg plates 126p; and a wheel shaft 128 on which the wheel 124 is arranged. The wheel shaft 128 is arranged across and secured to the U-leg plates 126p. The guide element 118 is a shaft 130, the shaft 130 extending centrally in the housing 102 in a longitudinal direction thereof, passing through the resilient element 106. The shaft 130 is coupled at one end portion 130b thereof to the U-bottom plate 126b such that the U-bottom plate 126b is allowed to

swivel 360° around the shaft 130, and being coupled at an other end portion 130f thereof to a bottom portion 102b of the cap-shaped housing 102.

[0032] In the embodiment shown in Figure 1B, the shaft 130 is coupled to the U-bottom plate 126b via a wheel adapter 132. With reference to Figure 2 (which shows a top view and a side view of the wheel adapter 132), the wheel adapter has a shaft 232s, which has a passage 232p for the shaft 130 to pass through and a plate 232a for one end of the resilient element 106 to engage thereupon. With the wheel adapter 132 in use, the resilient element 106 is arranged around the shaft 232s.

[0033] The wheel adapter 132 has a height 202 in the range of 2.5 to 3.5cm, for example 3.0cm. The plate 232a has a thickness 204 in the range of 0.25 to 0.75cm, for example 0.5cm. The plate 232a has a diameter 206 in the range of 4.50 to 5.50cm, for example 5.00cm. The shaft 232s has a diameter 232d in the range of 1.20 to 1.40cm, for example 1.30cm.

[0034] Returning to Figure 1B, the U-leg plates 126p may be designed so as to slide, with its outer surface, along an inner circumferential wall 102ic of the cap-shaped housing 102 when the rolling means 104 moves between the first position in which the wheel 124 protrudes at least partially from the housing 102, and the second position in which the wheel 124 is stowed in the housing 102. With the outer surface of the U-leg plates 126p sliding along the inner circumferential wall 102ic of the cap-shaped housing 102, the rolling means 104 acts to enable a guided move of the rolling means 104 when moving between the first position and the second position.

[0035] The one end portion 130b of the shaft is secured to the outer side of the U-bottom plate 126b and the other end portion 130f of the shaft 130 protrudes through the opening 120 in the bottom portion 102b of the cap-shaped housing 102 allowing the shaft 130 to slide therein.

[0036] A lining 140 fabricated from non-slip material is arranged on a circumference of the housing 102 surrounding the rolling means 104. The housing 102 may be made of non-slip material. The non-slip material for both the lining 140 and the housing 102 may be rubber.

[0037] Figure 1D shows a side view of a rolling assembly 100 according to one embodiment, where a rolling means 104 of the rolling assembly 100 is stowed.

[0038] The U-bottom plate 126b of the generally U-shaped wheel holder has a diameter 180 in the range of 4.00 to 6.00cm, for example 5.00cm.

[0039] Figure 3 shows a side view of the rolling assembly 300 according to one embodiment, where the components of the rolling assembly 300 can be seen. The salient differences between the rolling assembly 300 and the rolling assembly 100 of Figure 1B are described below.

[0040] In Figure 3, the rolling means 104 includes a ball bearing roller 322.

[0041] The ball bearing roller 322 includes a ball 324 and a socket 326 accommodating the ball 324. The housing 102 is generally cap-shaped. The socket 326 is designed so as to slide, with its circumferential wall 326w, along an inner circumferential wall 102ic of the cap-shaped housing 102 when the ball bearing roller 322 moves between the first position in which the ball 324 protrudes at least partially from the housing 102, and the second position in which the ball 324 is stowed in the housing 102. With the circumferential wall 326w of the socket 326 sliding along the inner circumferential wall 102ic of the cap-shaped housing 102, the socket 326 acts to enable a guided move of the rolling means 104 when moving between the first position and the second position.

[0042] A stopper 350 may be provided at the inner circumference of the cap-shaped housing 102. The stopper 350 prevents the ball bearing roller 322 from falling out of the housing 102. The stopper 350 may be secured to the inner circumference of the cap-shaped housing 102 by screws 352.

[0043] As an optional feature, one or more guide elements 318 can be coupled to the housing 102 and to the rolling means 104, the guide element arranged to guide the rolling means 104 when moving between the first position and the second position. As shown in Figure 3, the one or more guide elements 318 is secured to the housing 102 and the socket 326 slides along the one or more guide elements 318 when moving between the first position and the second position. The one or more guide elements 318 are shown to pass through the resilient element 106 (which is

shown in Figure 3 to be a coil spring). However (not shown), the one or more guide elements may be arranged to be around the resilient element.

[0044] Figure 4 shows a side view of a rolling assembly 400 according to one embodiment, where the components of the rolling assembly 400 can be seen. The salient differences between the rolling assembly 400 and the rolling assembly 100 of Figure 1B are described below.

[0045] In Figure 4, the housing 102 is generally cap-shaped. The rolling means 104 includes a wheel 424, a generally U-shaped wheel holder having two U-leg plates 426p facing each other; a U-bottom plate 426b connecting the U-leg plates 426p; and a wheel shaft 428 on which the wheel 424 is arranged. The wheel shaft 428 is arranged across and secured to the U-leg plates 426p, wherein the U-leg plates 426p are designed so as to slide, with its outer surface 426po, along an inner circumferential wall 102ic of the cap-shaped housing 102 when the rolling means 104 moves between the first position in which the wheel 424 protrudes at least partially from the housing 102, and the second position in which the wheel 424 is stowed in the housing 102. With the outer surface 426po of the U-leg plates 426p sliding along the inner circumferential wall 102ic of the cap-shaped housing 102, the U-leg plates 426p acts to enable a guided move of the rolling means 104 when moving between the first position and the second position.

[0046] A stopper 450 may be provided at the inner circumference of the cap-shaped housing 102. The stopper 450 prevents the rolling means 104 from falling out of the housing 102. The stopper 450 may be secured to the inner circumference of the cap-shaped housing 102 by screws 452.

[0047] Figure 5 shows a side view of a rolling assembly 500 according to one embodiment, where the components of the rolling assembly 500 can be seen. The salient differences between the rolling assembly 500 and the rolling assembly 100 of Figure 1B are described below.

[0048] In Figure 5, one end portion 130b of the shaft 130 is secured to the outer side of the U-bottom plate 126b and the other end portion 130f of the shaft 130 protrudes through an opening 520 in the bottom portion 102b of the cap-shaped housing 102 allowing the shaft 130 to slide therein.

[0049] The rolling assembly 500 further includes a plate 550. The plate 550 has a central opening with a female thread. The shaft 130 is provided with a male thread 530t on a middle section thereof on which the plate 550 is threaded. The resilient element 106 is attached with its one end 106a to the plate 550 and with its other end 106b to the bottom portion 102b of the cap-shaped housing 102.

[0050] Figure 6 shows a side view of a rolling assembly 600 according to one embodiment, where the components of the rolling assembly 600 can be seen. The salient differences between the rolling assembly 600 and the rolling assembly 100 of Figure 1B are described below.

[0051] In Figure 6, one end portion of the shaft 130b protrudes through an opening 620 in the U-bottom plate 126b and is slidably arranged therein. The other end portion of the shaft 130f is secured to the inner side of the bottom portion 102b of the cap-shaped housing 102.

[0052] The rolling assembly 600 further includes a plate 650. The plate 650 has a central opening with a female thread, wherein the shaft 130 is provided with a male thread 530t on a middle section thereof on which the plate is threaded. The resilient element 106 is attached with its one end 106a to the plate and with its other end 106b to the U-bottom plate 102b. It will be appreciated that when the U-bottom plate 126b slides upwards when the rolling means 104 moves to its second position, the end portion 130b of the shaft 130 frictionally engages with the wheel 124 so as to prevent the wheel 124 from rotating. This frictional engagement further enhances the frictional engagement already between the portion of the housing 102 in contact with the floor when the rolling means 104 is in its stowed position.

[0053] The plates 550 and 650 of Figures 5 and 6 provide means to adjust the tension of the resilient element 106 when at rest (i.e. when the rolling means 104 is in its first position). Compare the weight of a heavier and a lighter user. The resilient element 106 can be shortened to accommodate for the greater pressure applied when the heavier person pushes downwards on a walking frame to which the rolling assembly 500 or 600 is attached. On the other hand, the resilient element 106 can be lengthened to accommodate for the lower pressure applied when the lighter

person pushes downwards on the walking frame to which the rolling assembly 500 or 600 is attached.

[0054] Figures 7 and 8 show exploded views of the rolling assembly 100 of Figure 1B.

[0055] Figure 7 shows that the housing 102 has an internal passage 704 having a greater diameter than the diameter of an internal passage 702 within the coupling element 108. This difference in diameters provides for an abutment 708 which acts as a stop preventing the resilient element 106 from exiting the opening 120 of the housing 102. The guide element 118 has a flange 710 which comes into contact with the outer surface of the housing 102 which is adjacent to the opening 120. The contact of the flange 710 with this outer surface of the housing 102 prevents the rolling means 104 from falling out of the housing 102. A screw thread 712 provided on an end of the guide element 118 engages a corresponding screw thread provided along the walls of an opening 714 in the rolling means 104. By tightening the guide element 118 against the rolling means 104, the tension of the spring 106 at rest can be adjusted in a similar manner to how the plates 550 and 650 of Figures 5 and 6 adjust the tension of their respective resilient element 106.

[0056] Figure 8 shows the various components of the rolling assembly 100 being aligned for connection to form the complete rolling assembly 100.

[0057] Figure 9 shows a top view 980 and a side view 950 of a housing 102 for a rolling assembly according to various embodiments.

[0058] The housing 102 has a height 902 in the range of 9.6 to 11.6cm, for example 10.6cm. The coupling element 108 has a height 904 in the range of 3.5 to 1.5cm, for example 2.5cm. A stepped portion 906 has a height 908 in the range of 0.9 to 2.9cm, for example 1.9cm. A rolling means receptacle 912 has a height 902 in the range of 5.2 to 7.2cm, for example 6.2cm.

[0059] The coupling element 108 has a diameter 914 in the range of 2.00 to 3.00cm, for example 2.56cm. The stepped portion 906 has a diameter 916 in the range of 3.50 to 4.50cm, for example 4.00cm. The rolling means receptacle 912 has an outer diameter 918 in the range of 6.50 to 7.50cm, for example 7.00cm and an opening with a diameter 920 in the range of 5.50 to 6.50cm, for example 6.00cm.

The outer wall of the opening has a portion with a curved surface 922 having a diameter in the range of 0.50 to 1.50cm, for example 1.00cm; and a generally vertical portion 926 with a height in the range of 0.05 to 0.15cm, for example 0.10cm.

[0060] The coupling element 108 has a frusto-conical portion that is angled in the range of 40 to 50°, for example 45°. The stepped portion 906 has a frusto-conical portion that is angled in the range of 40 to 50°, for example 45°. The rolling means receptacle 912 has a frusto-conical portion that has a height 928 in the range of 0.7 to 0.9cm, for example 0.8cm, where the top of the frusto-conical portion has a diameter 930 in the range of 4.90 to 5.90cm, for example 5.4cm.

[0061] The cavity 114 of the housing 102 reaches to a depth 924 in the range of 4.70 to 5.70cm, for example 5.20cm. The inner wall of the housing 102 has an opening 932 having a diameter 932 in the range of 1.70 to 2.00cm, for example 1.85cm. At the outer wall of the housing 102, the opening 120 is in the range of 0.40 to 0.60cm, for example 0.50cm. The openings 120 and 932 define the ends of a passage having a stepped diameter.

[0062] Figure 10 shows a walking frame 1000 to which a rolling assembly according to various embodiments is coupled.

[0063] The walking frame 1000 includes a pair of front legs 1002; and a pair of rear legs 1004. An end of each leg is coupled to a respective rolling assembly 100/300/400/500/600 of Figures 1A to 1D and 3 to 6 respectively, via the coupling element of that rolling assembly.

[0064] In one embodiment, the resilient element of the respective rolling assemblies coupled to the front legs 1002 has greater compressive resistance than the resilient element of the respective rolling assemblies coupled to the rear legs 1004. On the basis of experiments conducted on a walking frame with front legs being more resistive to compression than the rear legs, the tendency of the housing of the rolling assemblies coupled to the front legs to engage the ground decreased from slight pressure applied when in use. Thus, such a walking frame is less sensitive to pressure that is not intended to cause the walking frame to stop rolling.

[0065] In one embodiment, the rolling means of the respective rolling assembly coupled to the front legs 1002 may be arranged to swivel 360^{o} about a longitudinal axis 1002l of the respective front leg. The rolling means of the respective rolling assembly coupled to the rear legs 1004 may be arranged to only rotate in the moving direction of the walking frame 1000 when in use. Such an embodiment ensures more stability when a user, especially an elderly person, wishes to turn. At least one of the two rear legs 1004 will provide a pivoting point while the front legs 1002 are rolled to the direction of travel.

[0066] While embodiments of the invention will be shown and described with reference to specific embodiments, it should be understood by those skilled in the art that various changes in form and detail may be made therein without departing from the spirit and scope of the invention as defined by the appended claims. The scope of the invention is thus indicated by the appended claims and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced.

CLAIMS

1. A rolling assembly for a walking frame, the rolling assembly comprising:

a housing;

a rolling means movably coupled to the housing so as to enable a guided move thereof between a first position in which the rolling means protrudes at least partially from the housing, and a second position in which the rolling means is stowed in the housing,

a resilient element arranged in the housing so as to resiliently bias the rolling means into the first position; and

a coupling element arranged on the housing for coupling the rolling assembly to a walking frame.

2. The rolling assembly of claim 1, wherein the resilient element is arranged between the rolling means and a wall of the housing.

3. The rolling assembly of claim 2, wherein the resilient element is a rubber block or a coil spring.

4. The rolling assembly of claims 1 to 3, further comprising a guide element coupled to the housing and to the rolling means, the guide element arranged to guide the rolling means when moving between the first position and the second position.

5. The rolling assembly of claim 4, wherein the guide element is secured to the housing and the rolling means slides along the guide element when moving between the first position and the second position.

6. The rolling assembly of claim 4, wherein the rolling means is secured to the guide element and the guide element slides in an opening of the housing when the rolling means moves between the first position and the second position.

7. The rolling assembly of any one of the preceding claims, wherein the rolling means comprises a ball bearing roller.

8. The rolling assembly of claim 7, wherein

the ball bearing roller comprises a ball and a socket accommodating the ball,

the housing is generally cap-shaped, and

the socket is designed so as to slide, with its circumferential wall, along an inner circumferential wall of the cap-shaped housing when the ball bearing roller moves between the first position in which the ball protrudes at least partially from the housing, and the second position in which the ball is stowed in the housing.

9. The rolling assembly of claims 1 to 6, wherein

the housing is generally cap-shaped,

the rolling means comprises

a wheel,

a generally U-shaped wheel holder having

two U-leg plates facing each other;

a U-bottom plate connecting the U-leg plates; and

a wheel shaft on which the wheel is arranged, the wheel shaft being arranged across and secured to the U-leg plates, wherein the U-leg plates are designed so as to slide, with its outer surface, along an inner circumferential wall of the cap-shaped housing when the rolling means moves between the first position in which the wheel protrudes at least partially from the housing, and the second position in which the wheel is stowed in the housing.

10. The rolling assembly of claims 4 to 6, wherein

the housing is generally cap-shaped,

the rolling means comprises

a wheel;

a generally U-shaped wheel holder having

two U-leg plates facing each other;

a U-bottom plate connecting the U-leg plates; and

a wheel shaft on which the wheel is arranged, the wheel shaft being arranged across and secured to the U-leg plates,

the guide element is a shaft, the shaft

extending centrally in the housing in a longitudinal direction thereof,

passing through the resilient element, and

being coupled at one end portion thereof to the U-bottom plate such that the U-bottom plate is allowed to swivel 360° around the shaft, and being coupled at an other end portion thereof to a bottom portion of the cap-shaped housing.

11. The rolling assembly of claim 10 when dependent on claim 6, wherein

the one end portion of the shaft is secured to the outer side of the U-bottom plate, and

the other end portion of the shaft protrudes through an opening in the bottom portion of the cap-shaped housing allowing the shaft to slide therein.

12. The rolling assembly of claim 10 when dependent on claim 5, wherein

the one end portion of the shaft protrudes through an opening in the U-bottom plate and being slidably arranged therein, and

the other end portion of the shaft is secured to the inner side of the bottom portion of the cap-shaped housing.

13. The rolling assembly of claim 12, further comprising

a plate having a central opening with a female thread, wherein

the shaft is provided with a male thread on a middle section thereof on which the plate is threaded, and

the resilient element is attached with its one end to the plate and with its other end to the U-bottom plate.

14. The rolling assembly of claim 11, further comprising

a plate having a central opening with a female thread, wherein

the shaft is provided with a male thread on a middle section thereof on which the plate is threaded, and

the resilient element is attached with its one end to the plate and with its other end to the bottom portion of the cap-shaped housing.

15. The rolling assembly of any one of the preceding claims, wherein a lining fabricated from non-slip material is arranged on a circumference of the housing surrounding the rolling means.

16. The rolling assembly of any one of the preceding claims, wherein the housing is of a non-slip material.

17. The rolling assembly of claims 15 or 16, wherein the non-slip material is rubber.

18. A walking frame comprising

a pair of front legs; and

a pair of rear legs, wherein an end of each leg is coupled to a respective rolling assembly of claims 1 to 9 via the coupling element of that rolling assembly.

19. The walking frame of claim 18, wherein the resilient element of the respective rolling assemblies coupled to the front legs has greater compressive resistance than the resilient element of the respective rolling assemblies coupled to the rear legs.

20. The walking frame of claims 18 or 19, wherein the rolling means of the respective rolling assembly coupled to the front legs is arranged to swivel 360^{o} about a longitudinal axis of the respective front leg, and the rolling means of the respective rolling assembly coupled to the rear legs is arranged to only rotate in the moving direction of the walking frame when in use.