



(51) International Patent Classification:
B62B 9/12 (2006.01)

(21) International Application Number:
PCT/GB2009/000639

(22) International Filing Date:
9 March 2009 (09.03.2009)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **CONNEX PUSHCHAIR SOLUTIONS LTD** [GB/GB]; 76 Denham Drive, Seaton Delaval, Whitley Bay NE25 0JY (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **NASEBY, Donna** [GB/GB]; Connex Pushchair Solutions Ltd, 76 Denham Drive, Seaton Delaval, Whitley Bay NE25 0JY (GB).

(74) Agent: **BAILEY WALSH & CO LLP**; 5 York Place, Leeds LS1 2SD (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

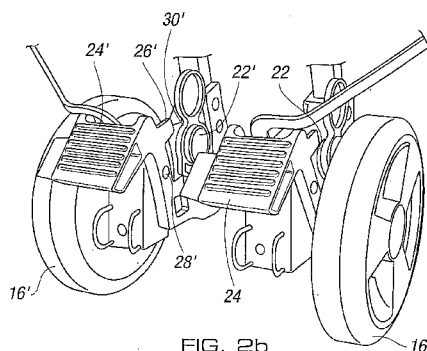
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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: PUSHCHAIR



(57) Abstract: A pushchair (2) with at least one wheel assembly (8, 8', 10, 10') including two or more wheels (14, 14', 16, 16', 116, 116') in which one wheel (14, 14') can be released from the assembly to allow reception of a further pushchair via the corresponding wheel assembly in a similarly receptive condition, thereby connecting the pushchairs together.

Pushchair

The invention to which this application relates is an improvement to a hand propelled load carrying vehicle such as a pushchair, and in particular, the invention relates to means for
5 connecting two or more pushchairs together.

It is known to connect two pushchairs in which each pushchair comprises two spaced apart side frames, one of the side frames
10 being fitted with brackets, the other of the two side frames having detachable portions at the ends thereof. To connect the pushchairs, the detachable portions, namely the wheel assemblies and the handle, are detached from the side frame of one of the pushchairs such that the ends of the now exposed
15 frame can be inserted into the brackets of the other pushchair.

Disadvantageously, the pushchairs have to be laid on their sides to be able to release the wheel assemblies from the side frames as the frames have to be lifted out of the wheel assemblies and
20 clearly this operation could not be performed if the wheel assemblies were supporting the frame at the time.

An aim of the present invention is to provide means for connecting two or more pushchairs together which is easier to
25 operate.

In one aspect of the invention, there is provided a hand propelled load carrying vehicle comprising:

at least one wheel assembly including two or more wheels
30 and adaptable between a receptive configuration and an in-use configuration;

releasing means for releasing a wheel from the wheel assembly thereby adapting the wheel assembly to the receptive configuration;

characterised in that the wheel assembly can be detachably connected to the wheel assembly of a further hand propelled load carrying vehicle, when both respective wheel assemblies are in the receptive configuration.

5

In one embodiment the hand propelled load carrying vehicle is a pushchair or pram for carrying a child.

10

In one embodiment, when the wheel assembly in a receptive configuration of a first hand propelled load carrying vehicle is connected to the wheel assembly in a receptive configuration of a second hand propelled load carrying vehicle, a combined wheel assembly is formed in an in-use configuration.

15

In one embodiment the combined wheel assembly turns as a unit to ensure that the wheels thereof do not turn against each other or in different directions otherwise. Typically the wheels are configured so as not to interfere with normal steering. Typically, the direction in which the wheels move across the surface is thereby substantially the same.

20

In a further embodiment the wheels of the combined wheel assembly are linked by gears or other connection means so that turning of the wheels is synchronised.

25

In one embodiment the wheel is mounted on a spindle in the wheel assembly, and the releasing means releases the spindle from the wheel assembly when actuated.

30

In one embodiment the releasing means is in the form of a clip which can be moved by the user from a retracted position to an extended position to release the wheel.

In a further embodiment the releasing means is a member which mates with a component of the wheel assembly to prevent release of a wheel therefrom.

- 5 In a further embodiment the releasing means is in the form of a quarter turn knob or the like.

Typically the releasing means is biased to the retracted position to prevent accidental release of the wheel.

10

In one embodiment a wheel assembly is provided with braking means. Typically the braking means includes a pedal moveable from a raised position to allow free movement of the wheels, to a lowered position in which the brakes are engaged.

15

In one embodiment the pedal includes a protrusion on one side thereof with a corresponding recess on the other side thereof. Typically when the wheel assembly of a first hand propelled load carrying vehicle is lined up for connection with a further hand
20 propelled load carrying vehicle, the recess of the pedal of the first hand propelled load carrying vehicle is lined up for corresponding engagement with the protrusion of the pedal of the further hand propelled load carrying vehicle.

- 25 In one embodiment the hand propelled load carrying vehicle is provided with one or more tubular members, one end of which is shaped to fit into the other end thereof of an adjacent tubular member. Typically the tubular members are provided with one or more apertures at either end thereof.

30

In one embodiment the longitudinal axes of the tubular members are substantially parallel with each other. Typically the longitudinal axes of the tubular members are substantially in parallel with the rotational axes of the wheels. Thus the tubular

members of one vehicle are aligned and fit into those of the other vehicle when the vehicles are placed side by side.

5 In one embodiment, removing a wheel from the wheel assembly provides access to a tubular member located thereunder.

10 In one embodiment locking means are provided to lock together the wheel assemblies, typically via the tubular members, the locking means being adaptable between an engaged configuration and a disengaged configuration.

15 In a further embodiment the locking means includes a member which mates with a component of the wheel assemblies to prevent disengagement of the same.

20 In one embodiment the wheel assemblies are drawn together as the locking means are engaged. This helps take up any tolerance in the fit between the wheel assemblies, thereby reducing wobble.

In one embodiment the locking means includes arm members extending substantially around the outside perimeter of the tubular member. Typically the arms are flexible.

25 In one embodiment the locking means are provided with retaining means to retain the locking means to the tubular member when moved to the disengaged position. Typically the retaining means are extensions of the arm members.

30 In one embodiment biasing means are provided to bias the locking means into the engaged configuration.

Typically the locking means is provided with at least one protrusion which extends into the corresponding aperture when in the engaged configuration.

- 5 In one embodiment the locking means is provided with a gripping member to allow the user to move the locking means into the disengaged configuration. Typically the gripping member is a ring which can be pulled by the user.
- 10 Typically the end of a first tubular member can be inserted into the opposed end of a second tubular member by moving the locking means to the disengaged configuration. Typically the protrusion extends through the corresponding recesses of both tubular members when in the engaged configuration to hold the
- 15 same together.

In one embodiment the protrusion is sloped on one side such that inserting the end of a first tubular member into the opposed end of a second tubular member forces the locking

20 means into the disengaged position until the protrusion can locate into the recess of the inner end. Typically the locking means can only be disengaged by user actuation thereof.

It will be appreciated that although the locking means operates

25 with tubular members, it could also operate with members of other shapes provided with suitable apertures and/or recesses.

In one embodiment the hand propelled load carrying vehicles cannot be connected unless the brakes are engaged. Typically the

30 braking means includes a portion which extends into an aperture in the tubular member to prevent insertion of a further tubular member thereinto when in the raised position, and is outside the aperture when in the lowered position to allow said insertion.

Thus when the wheel assemblies are locked together the braking means act in concert.

5 In one embodiment at least one wheel assembly is provided with suspension means. Typically the suspension means act in concert when the wheel assemblies are locked together.

10 In one embodiment the hand propelled load carrying vehicle is provided with two spaced apart side frames with load supporting means therebetween.

In one embodiment each side frame includes a front wheel assembly, a rear wheel assembly, and a handle portion.

15 In a further embodiment one side frame includes front and rear wheel assemblies. Typically the other side frame is provided with normal wheels at the front and rear thereof. Typically the normal wheels can be detached and replaced with wheel assemblies. Thus a pushchair can be provided in which one side
20 can be connected to the corresponding side of a further pushchair, and/or adapted to allow such connection on both sides thereof.

Typically the hand propelled load carrying vehicle is provided
25 with four wheel assemblies to support the vehicle at each corner thereof.

Typically tubular members are located on the front wheel assembly, rear wheel assembly, and handle portion of the hand
30 propelled load carrying vehicle.

In a further aspect of the invention, there is provided a hand propelled load carrying vehicle comprising:

at least one wheel assembly including one or more wheels;

one or more tubular members, one end of which is shaped to fit into the other end thereof of an adjacent tubular member;

locking means to releasably lock together the tubular members,

5 characterised in that the longitudinal axes of the tubular members are substantially parallel to the rotational axes of the wheels.

10 Thus when the vehicles are pushed together, the tubular members of one vehicle are aligned and fit into those of the other vehicle. The vehicles are then releasably locked together by the locking means.

15 In a yet further aspect of the invention there is provided a wheel assembly for a hand propelled load carrying vehicle as described herein.

20 In a still further aspect there is a method of connecting together two or more hand propelled load carrying vehicles, each vehicle including one or more wheel assemblies and one or more tubular members, comprising the steps of:

 lining up the vehicles side by side;

 adapting each opposed wheel assembly to a receptive configuration by releasing the outermost wheel therefrom;

25 moving the vehicles together such that the tubular members of one vehicle are inserted into the tubular members of the other vehicle;

30 characterised in that the tubular members are provided with locking means which are engaged by said insertion to prevent disconnection of the vehicles.

In one embodiment the locking means lock together at least the opposed wheel assemblies.

In one embodiment braking means are engaged to allow insertion of the tubular members.

5 In one embodiment the vehicles can be disconnected by actuating the locking means to disengage the same and pulling apart the vehicles.

10 Thus the vehicles can be connected or disconnected together while standing, without the requirement to lay the vehicles on their sides or upside down.

Specific embodiments of the invention are now described wherein:-

15 Figure 1 illustrates a hand propelled load carrying vehicle according to an embodiment of the invention.

20 Figures 2a-d illustrate the steps undertaken in connecting the rear wheel assemblies of two vehicles.

Figure 3 illustrates a partial exploded view of a rear wheel assembly.

25 Figures 4a-b illustrates how the front wheel assemblies of two vehicles are connected.

Figure 5 illustrates how the handles of two vehicles are connected.

30 Figure 6 illustrates two vehicles connected together.

With reference to Figure 1, there is illustrated a hand propelled load carrying vehicle in the form of a pushchair 2 provided with two spaced apart side frames 4, 4' with load supporting means

located therebetween in the form of seat 6 for supporting a child. Each side frame includes front wheel assemblies 8, 8', rear wheel assemblies 10, 10' and handle portions 12, 12'.

5 With reference to Figure 2a there is illustrated the left rear wheel assembly 10 of a first vehicle lined up with the right rear wheel assembly 10' of a second vehicle, as viewed from behind.

10 Each wheel assembly includes an inner wheel 14, 14' and an outer wheel 16, 16' which are mounted on spindles in the wheel assembly. The assemblies also include braking means in the form of pedals 24, 24' which are illustrated in a raised disengaged position to allow free movement of the wheels.

15 The wheels can be individually released from the wheel assemblies by pulling on the corresponding releasing means in the form of clips 18, 18', 20, 20' although it will be appreciated that other arrangements could be used.

20 With respect to Figure 2b, the outer wheels 14, 14' have been released from each wheel assembly revealing tubular members 22, 22' thereunder. The end of one of the tubular members 22 has an outer diameter so as to fit inside the end of the other tubular member 22'.

25

It can also be seen that the brake pedals 24, 24' are pivotally mounted at point 28', and include a portion 26' that can be inserted into an aperture 30' in the tubular member 22'. When the pedal 24' is moved to the lowered position to engage the
30 brakes, as illustrated, the portion 26' is raised out of the aperture 30', thereby allowing insertion of the end of one of the tubular members 22 into end of the other tubular member 22'.

As shown in Figure 2c, when the brake pedals are lowered, the two wheel assemblies can be pushed together, the tubular portions 22, 22' fitting together as described above.

5 The pedals 24, 24' are also provided with protrusions 32, 32' and corresponding recesses 34, 34' such that the opposed protrusion 32 and recess 34' fit together for additional stability when the two wheel assemblies are pushed together.

10 To ensure that the wheel assemblies do not come apart at an inconvenient time, locking means in the form of clips 36, 36' are provided to lock together the tubular members 22, 22'.

15 In the example shown, the clip 36' is provided with a protrusion extending into the tubular member 22' on which it is mounted via an aperture. In addition the protrusion is sloped such that it rides over the second tubular member 22 as it is pushed into the first tubular member 22'.

20 The second tubular member 22 is provided with an aperture 38 for locating the protrusion once the second tubular member has been pushed far enough into the first tubular member 22', thereby locking together the tubular members 22, 22'.

25 It will be appreciated that other mating and locking arrangements could be used, and indeed, may be so configured that on using the same the wheel assemblies are drawn together to ensure a snug fit therebetween.

30 As shown in Figure 2d, when locked together the wheel assemblies form a single combined unit.

To release the tubular members 22, 22', the user can pull on the ring-shaped gripping member to disengage the protrusion from

the recess 38 and allow the two wheel assemblies to be pulled apart.

Figure 3 illustrates a partial exploded view of a wheel assembly in which the clip 36' is more visible. The clip 36' includes arm members 44' which extend around the tubular member 22' and flex such that pulling on the same via the ring 42' lifts the protrusion 40' out of the aperture 38'. The clip is provided with retaining means in the form of extensions 46' to prevent the clip from being removed from the tubular member completely.

In addition it is possible to see how the spindles 48, 48' onto which the wheels 16, 16' are respective mounted are released from the main body of the wheel assembly.

The spindles 48, 48' are mounted on spindle blocks, each of which is provided with a recess 50, 50'. The recess 50 is engaged by a corresponding protrusion 52 which extends from the corresponding clip 20'. Thus when the clip 20' is pulled, the protrusion 52 is pulled out of the recess 50 and the wheel 16 is released.

With reference to Figures 4a-b there is illustrated a similar mechanism for connecting the front wheel assemblies together, and corresponding numerals are used where appropriate.

As with the rear wheel assemblies, the outer wheels are released and the end of one tubular portion 122 is pushed into the other 122' to connect the assemblies.

As shown in Figure 4b, as the tubular portions are connected the protrusion 138' of clip 142' is forced out of its aperture 138' until it can locate in the aperture 138 in the end of the inner tubular portion, thereby locking the tubular portions together.

When locked together the wheel assemblies form a single combined unit. The front wheel assemblies are provided with suspension means 154, 154' which act in concert when the assemblies are locked together.

With reference to Figure 5 there is illustrated a similar system of tubular portions and clips for connecting the handles of two pushchairs together, and corresponding numerals are used where appropriate.

The mechanism in this example is located at the upper end of the pushchair and also joins the side frame members together

As before, the end of tubular member 222 is pushed into the corresponding end of tubular member 222', the clip 242' being lifted by this movement until the protrusion 240' can locate into aperture 238 via aperture 238' to lock the handles together.

Thus, as illustrated in Figure 6, by releasing the outer wheels on the adjacent side of each pushchair and clipping the corresponding tubular members together, a double pushchair is formed.

It will be appreciated that this operation can be performed while both pushchairs are standing upright, without the requirement to lay either on its side.

It is preferable in the example shown that the clips are all colour coded to enable easy identification of the same.

It will be appreciated by persons skilled in the art that the present invention may also include further additional

modifications made to the device which does not affect the overall functioning of the device.

Claims

1. A hand propelled load carrying vehicle (2) comprising:
at least one wheel assembly (8, 8', 10, 10') including two
5 or more wheels (14, 14', 16, 16', 116, 116') and adaptable
between a receptive configuration and an in-use configuration;
releasing means (18, 18', 20, 20') for releasing a wheel (14,
14') from the wheel assembly thereby adapting the wheel
assembly to the receptive configuration;
10 characterised in that the wheel assembly can be detachably
connected to the wheel assembly of a further hand propelled
load carrying vehicle, when both respective wheel assemblies are
in the receptive configuration.
- 15 2. A hand propelled load carrying vehicle according to claim
1 formed as a pushchair or pram for carrying a child.
3. A hand propelled load carrying vehicle according to claim
1 or 2 wherein a combined wheel assembly is formed in an
20 in-use configuration when the wheel assembly in a
receptive configuration of a first hand propelled load
carrying vehicle is connected to the wheel assembly in a
receptive configuration of a second hand propelled load
carrying vehicle.
- 25 4. A hand propelled load carrying vehicle according to claim
3 wherein the wheels of the combined wheel assembly are
configured so as not to turn in different directions.
- 30 5. A hand propelled load carrying vehicle according to any
preceding claim wherein the wheel is mounted on a spindle
in the wheel assembly, and the releasing means releases the
spindle from the wheel assembly when actuated.

6. A hand propelled load carrying vehicle according to any preceding claim wherein the releasing means is in the form of a clip which can be moved by the user from a retracted position to an extended position to release the wheel.

5

7. A hand propelled load carrying vehicle according to any preceding claim wherein the releasing means is biased to the retracted position to prevent accidental release of the wheel.

10

8. A hand propelled load carrying vehicle according to any preceding claim wherein the hand propelled load carrying vehicle is provided with at least one tubular member, one end of which is shaped to fit into the other end thereof of an adjacent tubular member.

15

9. A hand propelled load carrying vehicle according to claim 8 wherein the longitudinal axes of the tubular members are substantially parallel to each other and/or the rotational axes of the wheels.

20

10. A hand propelled load carrying vehicle according to claim 8 or 9 wherein the tubular members of one hand propelled load carrying vehicle are aligned and fit into those of a further hand propelled load carrying vehicle when the hand propelled load carrying vehicles are placed side by side.

25

11. A hand propelled load carrying vehicle according to any of claims 8-10 wherein tubular members are located on the front wheel assembly, rear wheel assembly, and handle portion of the hand propelled load carrying vehicle.

30

12. A hand propelled load carrying vehicle according to any of claims 8-11 wherein removal of a wheel from the wheel

assembly provides access to a tubular member located thereunder.

5 13. A hand propelled load carrying vehicle according to any preceding claim wherein locking means are provided to lock the respective wheel assemblies together, the locking means being adaptable between an engaged configuration and a disengaged configuration.

10 14. A hand propelled load carrying vehicle according to claim 13 wherein the wheel assemblies are drawn together as the locking means are moved to the engaged configuration.

15 15. A hand propelled load carrying vehicle according to claim 13 or 14 wherein the locking means include arm members extending substantially around the outside perimeter of the tubular member.

20 16. A hand propelled load carrying vehicle according to claim 15 wherein the arm members are flexible.

25 17. A hand propelled load carrying vehicle according to any of claims 13-16 wherein the locking means are provided with retaining means to retain the locking means to a tubular member when moved to the disengaged configuration.

30 18. A hand propelled load carrying vehicle according to claim 17 wherein the retaining means are extensions of the locking means.

19. A hand propelled load carrying vehicle according to any of claims 13-18 wherein biasing means are provided to bias the locking means into the engaged configuration.

20. A hand propelled load carrying vehicle according to any of claims 13-19 wherein the locking means are provided with a gripping member to allow the user to move the locking means from the engaged configuration to the disengaged configuration.

21. A hand propelled load carrying vehicle according to any of claims 13-20 wherein the locking means are provided with at least one protrusion which extends into a corresponding aperture when in the engaged configuration.

22. A hand propelled load carrying vehicle according to claim 21 wherein the end of a first tubular member can be inserted into the opposed end of a second tubular member by moving the locking means to the disengaged configuration, and the protrusion extends through the corresponding apertures of both tubular members when in the engaged configuration to hold the same together.

23. A hand propelled load carrying vehicle according to claim 22 wherein the protrusion is sloped on one side such that inserting the end of a first tubular member into the opposed end of a second tubular member forces the locking means into the disengaged position until the protrusion can locate into the aperture of the inner end.

24. A hand propelled load carrying vehicle according to any preceding claim wherein a wheel assembly is provided with braking means.

25. A hand propelled load carrying vehicle according to claim 24 wherein the braking means includes a pedal moveable from a raised position to allow free movement of the

wheels, to a lowered position in which the brakes are engaged.

26. A hand propelled load carrying vehicle according to claim
5 25 wherein the pedal includes a protrusion on one side thereof with a corresponding recess on the other side thereof.
27. A hand propelled load carrying vehicle according to claim
10 26 wherein the recess of the pedal of a first hand propelled load carrying vehicle is lined up for corresponding engagement with the protrusion of the pedal of a further hand propelled load carrying vehicle when the wheel
15 assembly of the first hand propelled load carrying vehicle is lined up for connection with the further hand propelled load carrying vehicle.
28. A hand propelled load carrying vehicle according to claim
20 27 wherein the hand propelled load carrying vehicles cannot be connected unless the braking means of each hand propelled load carrying vehicle are engaged.
29. A hand propelled load carrying vehicle according to any
25 preceding claim wherein the hand propelled load carrying vehicle is provided with two spaced apart side frames with load supporting means therebetween.
30. A hand propelled load carrying vehicle according to claim
30 29 wherein each side frame includes a front wheel assembly, a rear wheel assembly, and a handle portion.
31. A hand propelled load carrying vehicle according to claim 29 wherein one side frame includes front and rear wheel

assemblies and the other side frame is provided with normal wheels at the front and rear thereof.

5 32. A hand propelled load carrying vehicle according to claim 31 wherein the normal wheels can be detached and replaced with wheel assemblies.

33. A hand propelled load carrying vehicle (2) comprising:
at least one wheel assembly (8, 8', 10, 10') including one or
10 more wheels (14, 14', 16, 16'; 116, 116');
one or more tubular members (22; 122), one end of which is shaped to fit into the other end thereof of an adjacent tubular member (22'; 122');
locking means (36'; 136') to releasably lock together the
15 tubular members (22, 22'; 122, 122'),
characterised in that the longitudinal axes of the tubular members (22, 22'; 122, 122') are substantially parallel to the rotational axes of the wheels (14, 14', 16, 16'; 116, 116').

20 34. A hand propelled load carrying vehicle substantially as herein described with reference to the accompanying figures.

25 35. A wheel assembly for a hand propelled load carrying vehicle according to any previous claim.

36. A wheel assembly for a hand propelled load carrying vehicle substantially as herein described with reference to the accompanying figures.

30 37. A method of connecting together two or more hand propelled load carrying vehicles (2), each vehicle including one or more wheel assemblies (8, 8', 10, 10') and one or more tubular members (22, 22'; 122, 122'), comprising the steps of:

lining up the vehicles side by side;

adapting each opposed wheel assembly to a receptive configuration by releasing the outermost wheel (14, 14') therefrom;

5 moving the vehicles together such that the tubular members (22; 122) of one vehicle are inserted into the tubular members of the other vehicle (22'; 122');

characterised in that the tubular members are provided with locking means (36'; 136') which are engaged by said
10 insertion to prevent disconnection of the vehicles.

38. A method according to claim 37 wherein the locking means lock together at least the opposed wheel assemblies.

15 39. A method according to claim 37 or 38 wherein the braking means are engaged to allow insertion of the tubular members.

20 40. A method according to any of claims 37-39 wherein the vehicles can be disconnected by actuating the locking means to disengage the same and pulling apart the vehicles.

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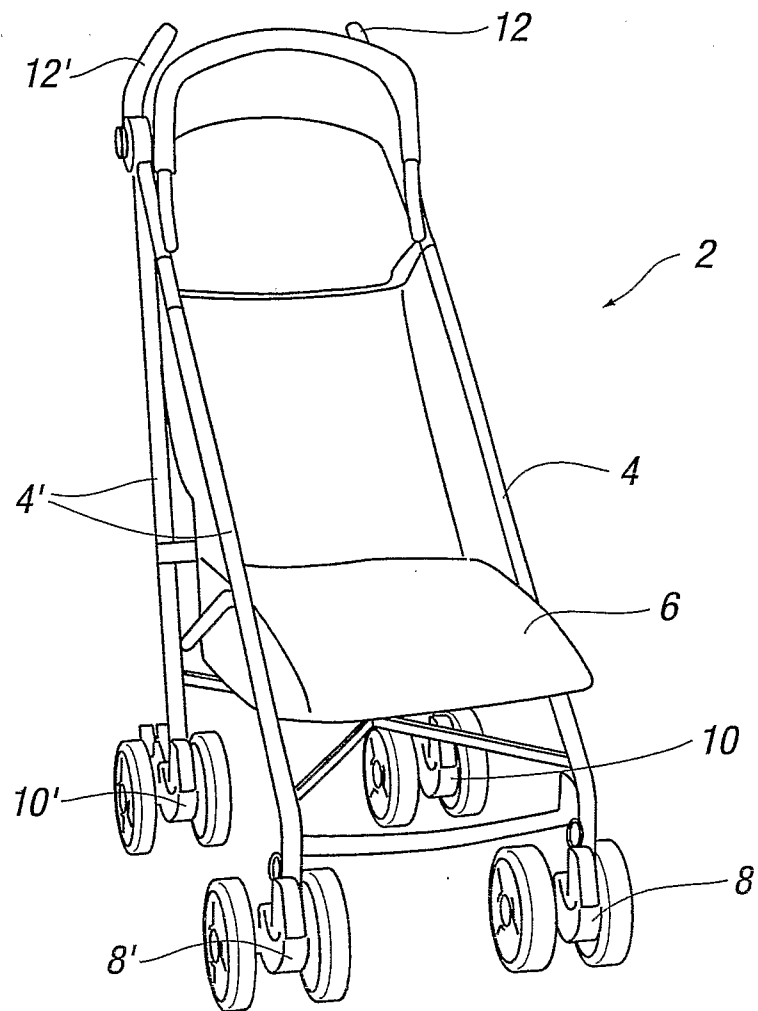
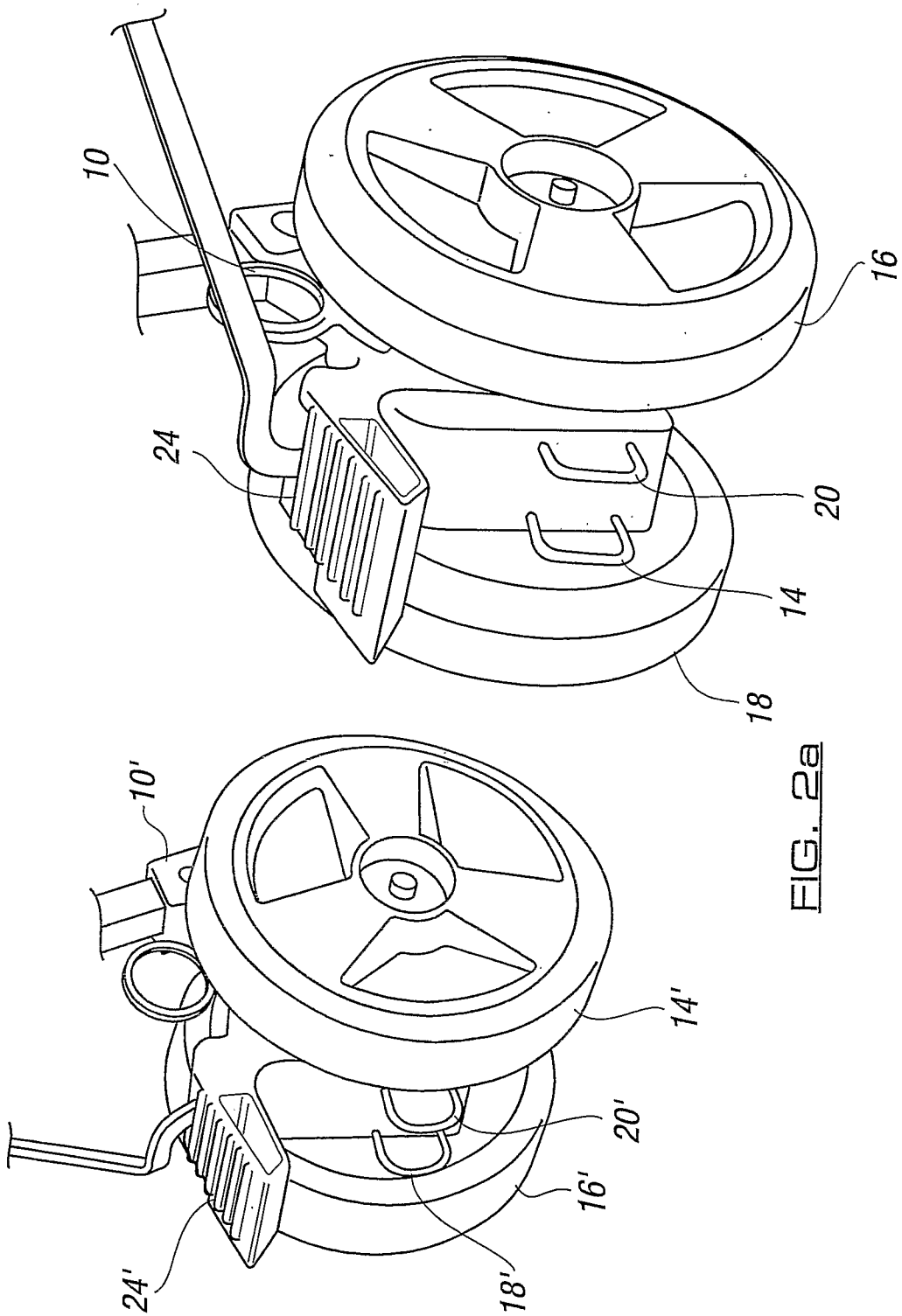


FIG. 1



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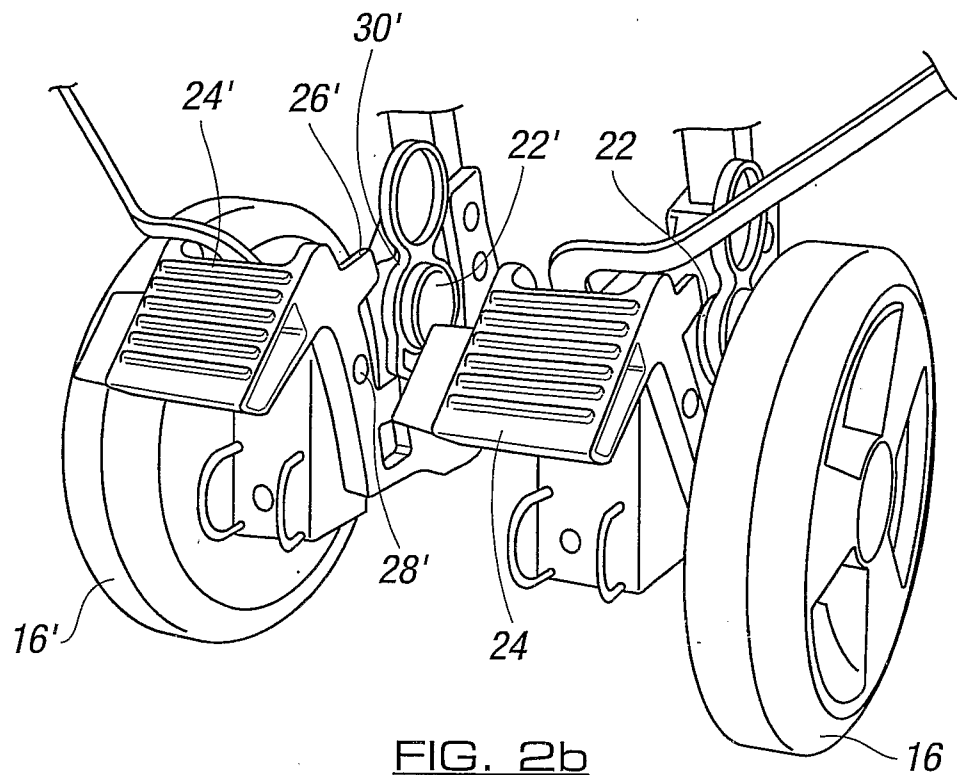


FIG. 2b

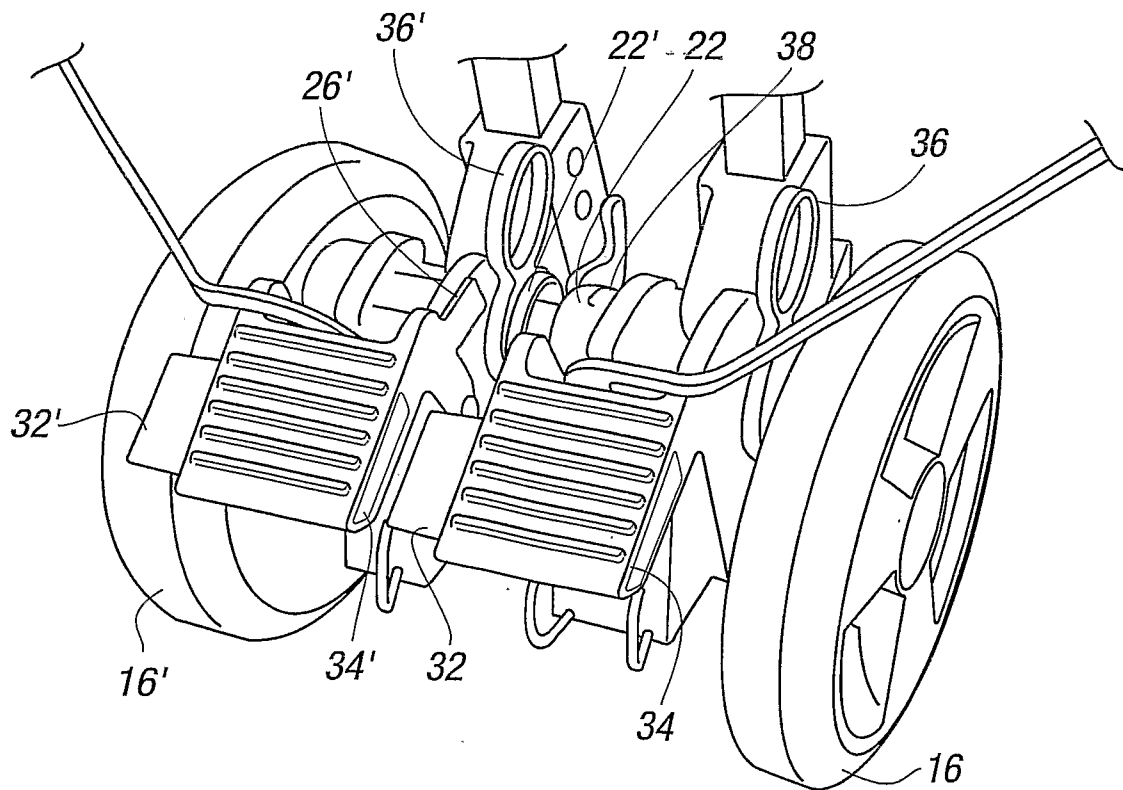


FIG. 2c

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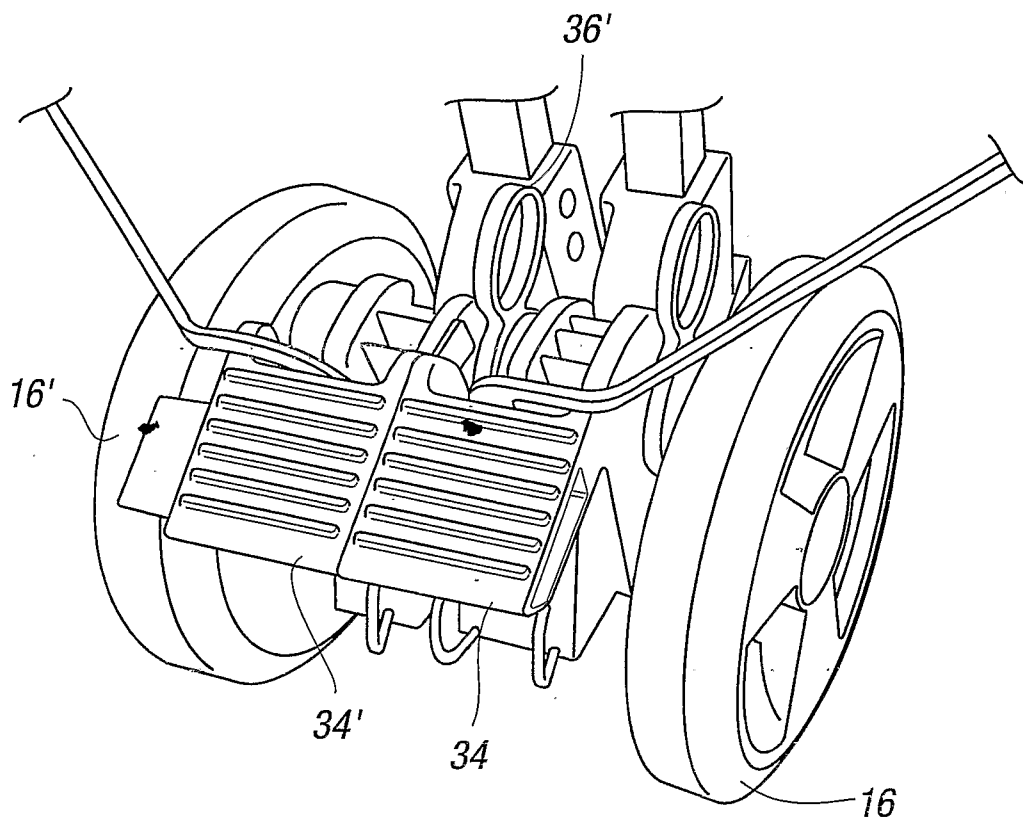
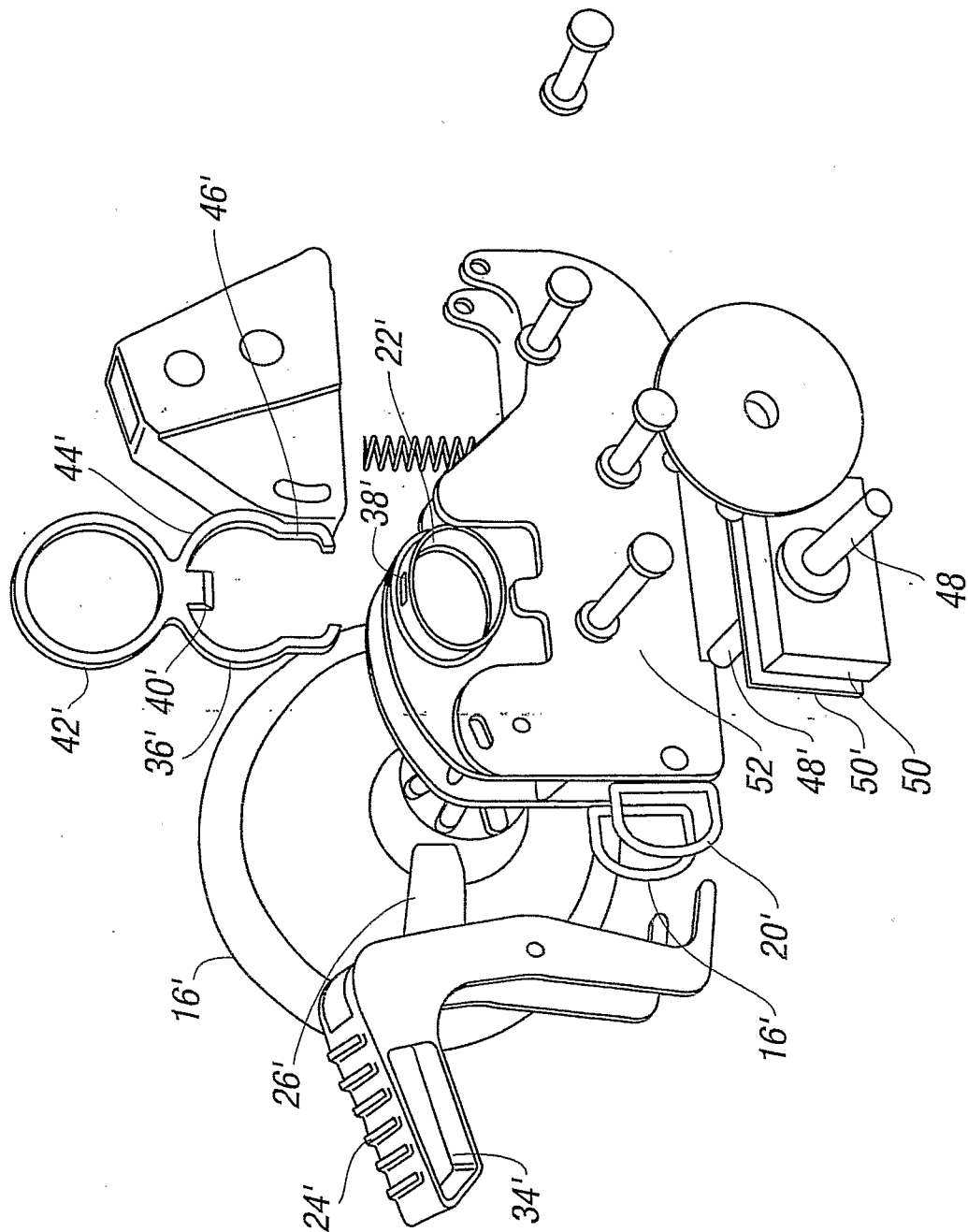


FIG. 2d

FIG. 3

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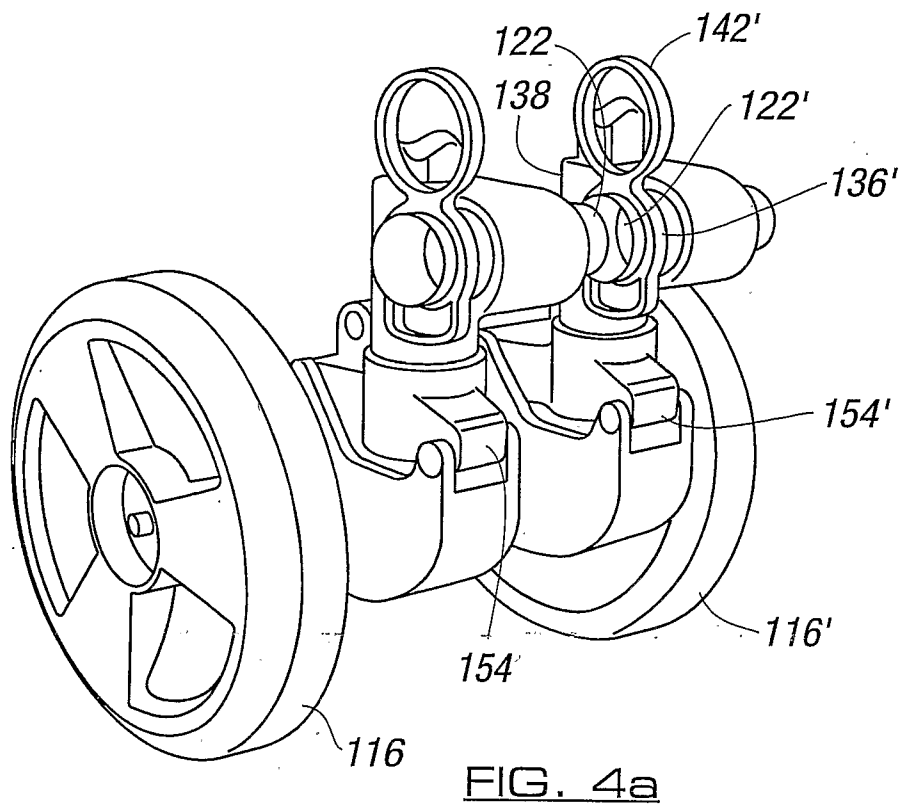


FIG. 4a

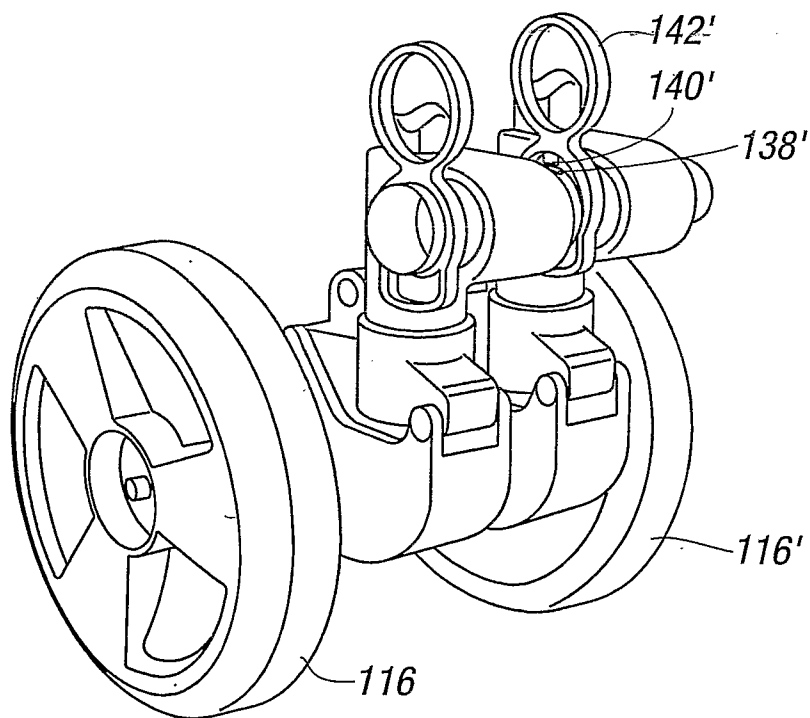


FIG. 4b

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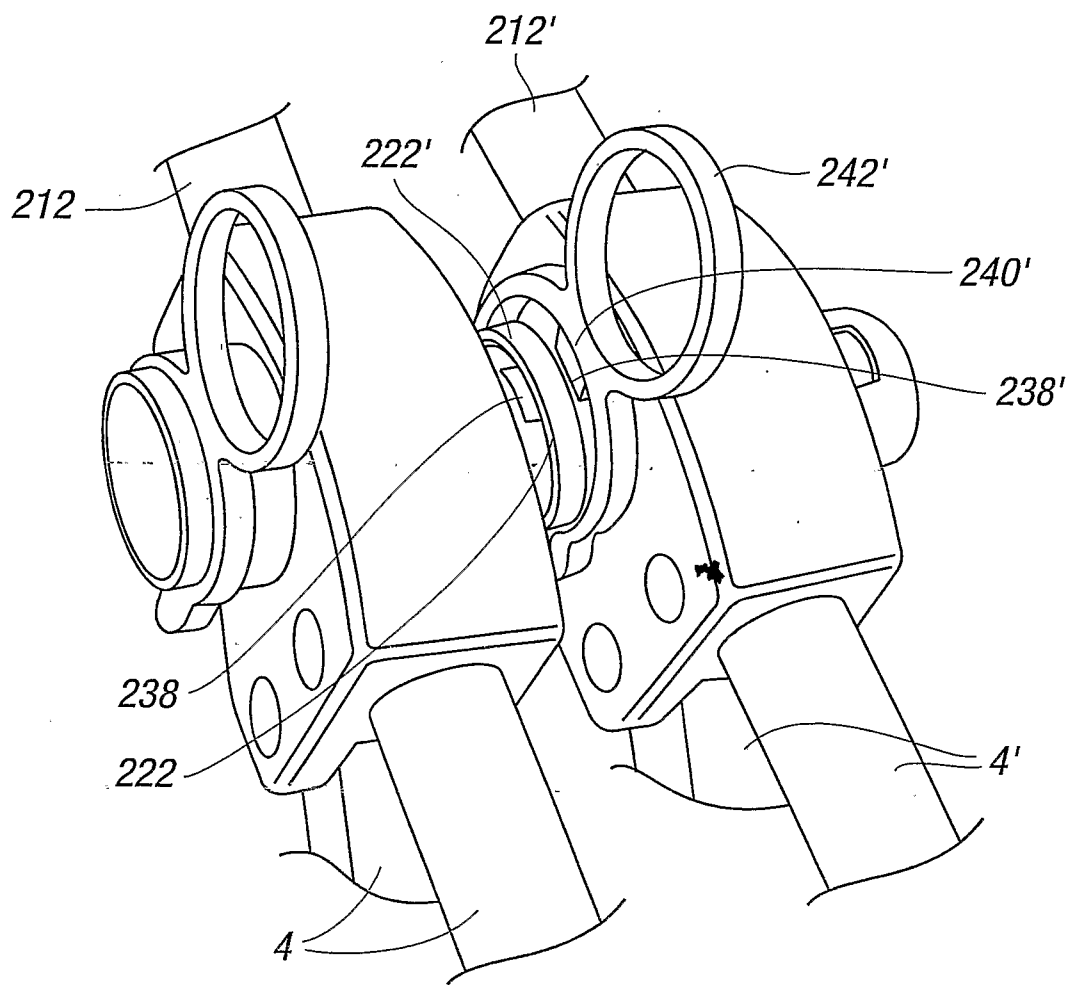


FIG. 5

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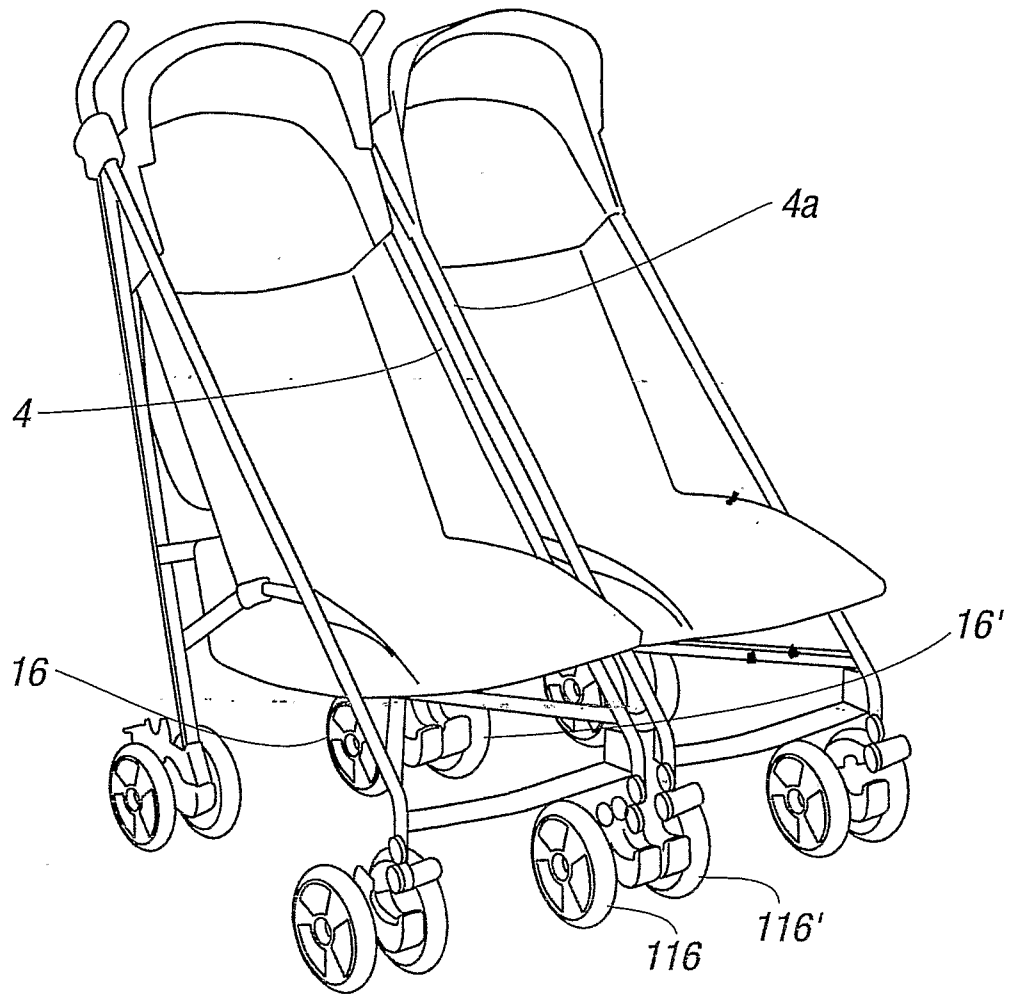


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2009/000639

A. CLASSIFICATION OF SUBJECT MATTER

INV. B62B9/12

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B62B

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

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 413 309 A (NASEBY DONNA [GB]) 26 October 2005 (2005-10-26) abstract; figures 1-3 -----	1-4, 13, 24, 35, 37
A	GB 2 437 300 A (NASEBY DONNA [GB]) 24 October 2007 (2007-10-24) abstract; figures 1,2,5,6 -----	1, 24, 35, 37
A	US 2008/179863 A1 (SCHONFELD JULIA DINAH [US]) 31 July 2008 (2008-07-31) the whole document -----	1
A	GB 2 334 010 A (MADDOCKS NINA [GB]; MADDOCKS JEANETTE [GB]; COLLINS LESLEY [GB]) 11 August 1999 (1999-08-11) abstract; figures 1A-2B -----	1



Further documents are listed in the continuation of Box C.



See patent family annex.

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- * & * document member of the same patent family

Date of the actual completion of the international search

18 November 2009

Date of mailing of the international search report

02/02/2010

Name and mailing address of the ISA/

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

Authorized officer

Wochinz, Reinmar

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2009/000639

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 34, 36
because they relate to subject matter not required to be searched by this Authority, namely:
It is completely unclear which technical features are defined by the vague wording of claims 34 and 36 (Article 6 PCT).
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-32, 35, 37-40

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-32, 35, 37-40

A hand propelled load carrying vehicle and method thereto being defined by a wheel assembly comprising releasing means for releasing a wheel such as to be detachably connectable to a similar wheel assembly.

2. claim: 33

A hand propelled load carrying vehicle being defined by one or more tubular members and locking means for the tubular members.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2009/000639

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2413309	A	26-10-2005	GB 2413310 A	26-10-2005
GB 2437300	A	24-10-2007	NONE	
US 2008179863	A1	31-07-2008	NONE	
GB 2334010	A	11-08-1999	NONE	