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Seat attachment for a stroller

Inventor(s): ZEHFUSS MARK ± (ZEHFUSS MARK)

Applicant(s): DYNAMIC BRANDS LLC ± (DYNAMIC BRANDS LLC)

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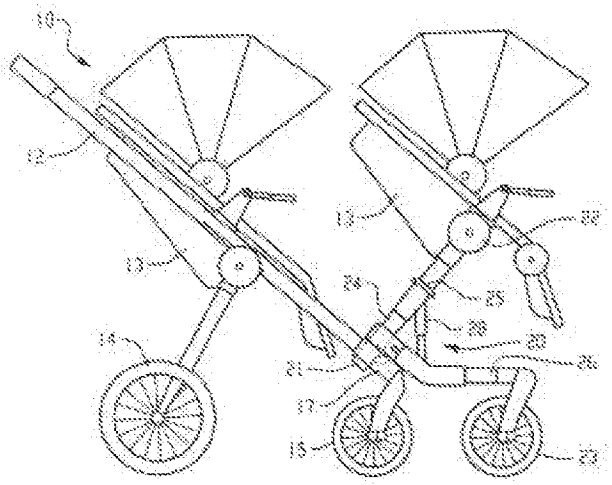
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Abstract of CN103921830 (A)

The invention relates to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to reversibly convert a single stroller into a double stroller. More specifically, versions of the seat attachment relate to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. The seat may be supported in front of a permanent seat of the stroller.



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(71)申请人 戴那米克品牌股份有限公司
地址 美国弗吉尼亚州

(72)发明人 马克·第富斯

(74)专利代理机构 北京律盟知识产权代理有限责任公司 11287
代理人 雷晓斐

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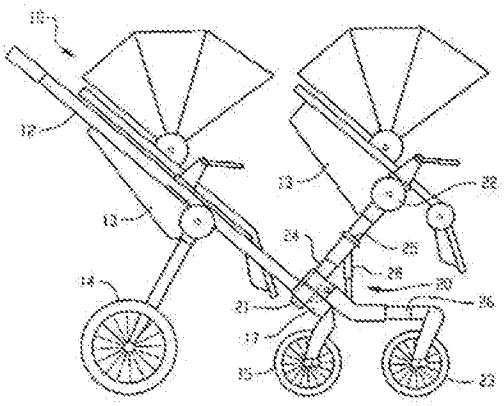
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(54)发明名称

用于手推童车的座椅附接件

(57)摘要

本发明涉及一种用于手推童车、单人手推童车及双人手推童车的座椅附接件。此座椅附接件可用来将单人手推童车以可逆方式转换成双人手推童车。更具体来说，所述座椅附接件的版本涉及一种用于手推童车的座椅附接件，其能够支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、汽车座椅或婴儿吊篮等的座椅。可将所述座椅支撑在所述手推童车的永久座椅前部。



CN 103921830 A

1. 一种用于手推童车的座椅附接件，其包括：

一个分离的左侧附接框架部件，其中所述左侧附接框架部件包括：

连接器部分，其能够以可逆方式连接到手推童车框架，及左侧座椅支撑元件，其能够将座椅支撑于前向或后向的位置中；以及

一个分离的右侧附接框架部件，其中所述右侧附接框架部件包括：

连接器部分，其能够以可逆方式连接到手推童车框架，及右侧座椅支撑元件，其能够将所述座椅支撑于位于所述左侧座椅支撑元件和所述右侧座椅支撑元件之间的前向或后向的位置中。

2. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述座椅为婴儿座椅、汽车座椅、手推童车座椅、摇篮、婴儿吊篮、或婴儿车。

3. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中所述左侧附接框架部件和所述右侧附接框架部件中的每一者具有第一端及第二端。

4. 根据权利要求 3 所述的用于手推童车的座椅附接件，其中所述第一端能够连接到手推童车框架。

5. 根据权利要求 4 所述的用于手推童车的座椅附接件，其中所述第二端连接到座椅附接部件。

6. 根据权利要求 1 所述的用于手推童车的座椅附接件，其进一步包括连接到所述左侧座椅支撑元件和所述右侧座椅支撑元件的手推童车座椅。

7. 根据权利要求 1 所述的用于手推童车的座椅附接件，其中两个连接器部分通过钮扣、搭扣件、摩擦配件、干涉配合、螺纹连接，锁定连接片，或键式连接中的至少一者以可逆方式连接到所述手推童车。

用于手推童车的座椅附接件

[0001] 本申请是申请号为 200980148829.3、申请日为 2009 年 12 月 4 日、发明名称为“用于手推童车的座椅附接件”的发明专利申请的分案申请。

技术领域

[0002] 本发明针对一种用于手推童车、单人手推童车及双人手推童车的座椅附接件。此座椅附接件可用来将单人手推童车转换成双人手推童车。更具体来说，本发明的实施例针对一种用于手推童车的座椅附接件，其能够支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、汽车座椅或婴儿吊篮等的座椅。所述座椅附接件的实施例能够将单人手推童车以可逆方式转换成双人手推童车。

背景技术

[0003] 具有多个幼儿的父母可能很难在不同地方之间运输其孩子。儿童走路慢而容易分心，且因此可能在其父母正试图在有限量的时间内完成购物任务或运动一下时落后父母。作为响应，许多父母已购买双人手推童车，其允许父母或监护者同时推着两名儿童且因此允许其更高效地办杂事、散步或慢跑。如此，双人手推童车允许父母或监护者具有比其在仅单人手推童车的情况下将具有的更大的自由，尤其是在试图照管两个睡着的儿童时。

[0004] 虽然双人手推童车具有某些优点，但双人手推童车也具有缺点。双人手推童车大致大于单人手推童车，且因此较难以操纵通过门口及沿着商店的走道行进。通常，能够容纳两名儿童的益处大大地抵消了这些缺点。然而，当父母或监护者仅随身带一个孩子时，双人手推童车的益处便不能实现而缺点仍存在。

[0005] 因此，父母通常买两个或两个以上手推童车以在不同时间使用，单人手推童车用于其仅随身带一个孩子时的时间且双人手推童车用于其需要将容纳两个孩子的手推童车时的时间。此通常产生其自身的一组问题。必须储存多个手推童车且典型汽车的尾箱或运动型多用途车的后部中存在很少空间来用于折叠式双人手推童车及折叠式单人手推童车两者。

[0006] 手推童车制造商已尝试通过提供用于使第二个儿童站在单人手推童车的后部上的地方或为第二个儿童提供挂在单人手推童车的座椅下方且稍靠后的另一座位的附接件来解决此问题。此为儿童提供第二个座椅，但所述儿童被紧裹到前座椅的后部，此可能为不舒适的、减少座椅下方储存的容量且妨碍父母将手提袋挂在把手上。

[0007] 存在对可方便地转换成双人手推童车的单人手推童车的需要。还需要将单人手推童车转换成能够容纳两名儿童而不损失父母或监护者的方便性的全双人手推童车的转换套件。

发明内容

[0008] 手推童车通常为单人手推童车（具有一个座椅以用于运输一名儿童的手推童车）或还可为双人手推童车（具有两个座椅以用于运输两名儿童的手推童车）。本发明的实施

例针对一种用于手推童车的座椅附接件，其包括：连接器部分，其能够直接连接到手推童车框架或连接到所述手推童车框架的附接框架部件；及座椅支撑元件，其能够支撑座椅。在某些实施例中，所述用于手推童车的附接件包括具有第一端及第二端的附接框架部件。所述第一端可能够将所述座椅附接件连接到手推童车框架且所述第二端可能够连接到所述座椅支撑元件。所述座椅支撑元件因此能够将座椅支撑在手推童车上。在更特定实施例中，可将所述座椅支撑在前向或后向位置中。

[0009] 另一实施例包括手推童车及用于所述手推童车的座椅附接件，其中所述手推童车包括连接到所述手推童车的框架的附接框架部件且所述用于手推童车的座椅附接件包括连接器部分。所述附接框架部件及所述连接器部分包括能够牢固地连接在一起的组件。在某些实施例中，所述附接框架部件及所述连接器部分包括能够牢固地且以可释放方式连接在一起的组件。以此方式，所述座椅附接件可附接到所述手推童车，且如上文所界定的座椅可连接到所述座椅附接件，因此将单人手推童车以可逆方式转换成双人手推童车。

[0010] 在另一实施例中，所述用于手推童车的座椅附接件进一步包括至少一个车轮。所述车轮可通过车轮支撑框架连接到所述座椅附接件，所述车轮支撑框架可刚性地附接到或可以枢转方式附接到所述座椅附接件。所述车轮支撑框架可连接到座椅附接件的任一区段，优选地所述车轮支撑框架以枢转方式连接到所述座椅附接件的后部部分在邻近于连接器部分的区域中或连接于接近附接部分的中间处。

[0011] 所述用于手推童车的座椅附接件的实施例可进一步包括折叠机构。所述折叠机构可包括以滑动方式连接到所述附接部分的滑动部件以及具有连接到所述滑动部件的第一端及连接到所述车轮支撑框架的第二端的折叠框架部件或斜撑。所述折叠机构允许所述车轮支撑框架从第一位置（使用中位置）枢转到第二位置（折叠位置）。所述用于手推童车的附接件还可包括锁定机构，其在使用中位置中将所述附接件紧固到手推童车且在处于折叠位置中时将所述手推童车解锁以允许所述附接件连接到所述手推童车或从所述手推童车拆卸。所述锁定机构可为附接到所述车轮支撑框架的小突出部，其啮合所述手推童车或所述手推童车附接部分中的对应孔口以将所述附接件紧固到所述手推童车。在折叠位置中，所述突出部不啮合在所述孔口中。

[0012] 另一方面针对一种双人手推童车。所述双人手推童车可包括框架，其中所述框架包括把手部分、前车轮支撑部分、后车轮支撑部分及折叠机构。所述双人手推童车的实施例包括手推童车框架，所述手推童车框架包括车轮、所述框架、第一座椅及连接到所述框架的连接器部分。所述双人手推童车可进一步包括座椅附接框架，所述座椅附接框架包括车轮、第二座椅及能够连接到手推童车框架的连接器部分的第二附接部分。所述第二附接部分可以可释放方式连接到所述连接器部分。此外，所述第二座椅可以可释放方式连接到所述座椅附接框架且能够将所述第二座椅支撑在前向或后向位置中。

[0013] 所述双人手推童车的另一实施例包括能够以可释放方式支撑第一儿童座椅的第一座椅附接件及能够以可释放方式支撑第二儿童座椅的第二座椅附接件。所述座椅附接件可包括用于将座椅支撑在两个侧上的两个座椅连接器部分。

[0014] 所述双人手推童车的又一实施例包括邻近于前车轮支撑部分的至少一个第一座椅附接件及邻近于每一折叠机构及/或把手部分的第二座椅附接件。所述第一座椅附接件可位于连接到所述车轮支撑部分的至少一个前车轮上面。

[0015] 所述手推童车的又一实施例包括：框架；至少一个前车轮；至少一个后车轮；第一手推童车座椅，其具有永久地附接到所述框架的至少一个第一附接部分，及至少一个以可释放方式连接的第二座椅附接部分，其能够将第二座椅支撑在所述第一手推童车座椅的前部。如同在其它实施例中一样，所述座椅附接件可包括两个座椅连接器。任一个或两个座椅附接部分可为具有两个座椅连接器的单个部分或各自包括一座椅连接器的两个单独件。

[0016] 在以上实施例中的任一者中，手推童车、双人手推童车或附接件可包括以下特征中的一者或一者以上：用于以可拆卸方式接纳所述附接部分的套筒。所述座椅附接部分可包括突出部，其具有与所述套筒的互补形状以用于插入到所述套筒中。此外，所述第二座椅可与所述座椅附接件成整体。

[0017] 在各种实施例中呈现了手推童车、双人手推童车及附接件的方面，然而，所属领域的技术人员将理解各种实施例的组件的各种变化形式及可互换性，其打算包含在本发明的范围中。

附图说明

[0018] 图 1 展示单人手推童车的实施例；

[0019] 图 2 展示用以将单人手推童车转换成双人手推童车的座椅附接件的实施例；

[0020] 图 3 展示图 1 的单人手推童车附接到图 2 的座椅附接件的组合；

[0021] 图 4 展示能够将汽车座椅支撑在图 2 的附接件上的座椅附接件的实施例；

[0022] 图 5 展示图 1 的单人手推童车附接到呈三轮车样的骑乘装置形式的附接件的实施例的组合；且

[0023] 图 6A 展示用于将附件支撑在手推童车上的附件附接件；图 6B 展示用于附接到图 6A 的附件附接件的手提袋或手提包。

[0024] 图 7 展示用于支撑包括一个车轮的座椅的附接件。

[0025] 图 8 展示能够以可逆方式从单人手推童车转换成双人手推童车的手推童车的实施例，其包括不包括车轮的附接部分。

[0026] 图 9A、9B、9C、9D、9E 及 9F 展示图 8 中所示的手推童车的实施例的各种配置。

具体实施方式

[0027] 本发明涉及一种用于手推童车的附件、附接件或转换套件（下文中称“座椅附接件”）。如上文所论述，父母或监护者可能发现自己处于其中在一手推童车中运输两个儿童会更方便的情形中，但同时发现具有单人手推童车及双人手推童车两者是不方便的。所述座椅附接件的实施例解决此问题。在一个方面中，所述用于手推童车的座椅附接件的实施例能够将单人手推童车转换成双人手推童车。举例来说，所述座椅附接件可支撑例如但不限于手推童车座椅、婴儿座椅、摇篮、婴儿车、婴儿吊篮或汽车座椅的座椅。因此，父母或监护者不需要单人手推童车及双人手推童车两者。经配置以接纳用于将单人手推童车转换成双人手推童车的座椅附接件的手推童车为使用者提供方便性。可通过将所述座椅附接件附接到单人手推童车且接着附接第二座椅来将所述单人手推童车连接成双人手推童车。如此，所述用于将单人手推童车转换成双人手推童车的座椅附接件的实施例包括能够连接到手推童车框架的至少一个连接器部分及能够支撑座椅的座椅支撑元件。所述座椅附接件可

任选地包括用于额外支撑及稳定性的至少一个车轮，然而，为更方便起见，所述附接件的实施例不包含车轮。在某些实施例中，车轮可使双人手推童车稳定，但在所述附接件的其它实施例中，所述车轮可能并非合意的或必需的。举例来说，所述附接件的额外实施例包括手推车样、四车轮货车样、三轮车样的附接件或可连接到手推童车的其它骑乘玩具。三轮车样的附接件将允许儿童在手推童车的前部骑乘或被推着。

[0028] 图 1 中展示单人手推童车 10 的实施例的侧视图。注意，图 1 仅展示单人手推童车 10 的一侧，然而，大多数组件包含位于所述单人手推童车的另一侧上但未展示于图 1 中的互补组件。单人手推童车 10 包括支撑座椅 13 的框架 12。框架 12 可任选地包含至少一个（优选地为两个）折叠机构 16，其允许将手推童车 10 折叠成用于储存或运输手推童车 10 的更方便大小。

[0029] 在此实施例中，将座椅 13 展示为典型的手推童车座椅，然而，其它类型的座椅可用于单人手推童车中。座椅 13 可永久地附加到框架 12 或以可释放方式连接使得其能够被拆卸并用不同座椅来替代。如本文中所使用，“以可释放方式连接”或“以可释放方式附接”意指所述连接并非永久连接且所述连接能够由手推童车的使用者连接及断开而不需要特殊工具或特殊技能。可释放连接包含（但不限于）钮扣、搭扣件、摩擦配件、干涉配合、螺纹连接、锁定连接片、键式连接、其它扣件等。在图 1 的手推童车 10 上，框架 12 支撑在一对后车轮 14 及一对前车轮 15 上。在此实施例中，后车轮 14 为固定的且不以所述框架为轴而旋转或枢转。单人手推童车 10 上的所述对前车轮 15 枢转以使得使单人手推童车 10 转动更容易且更方便。虽然在某些手推童车中枢转车轮可为优选的，但具有固定非枢转车轮的手推童车也为常见的。应注意，单人手推童车不需要成对的前车轮或后车轮且可用单个车轮来替代前对车轮 15 或后对车轮 14。按常规，许多单人手推童车（包含伞式手推童车、慢跑手推童车、全地形手推童车以及其它手推童车）可仅包含一个前车轮。本发明的座椅附接件的实施例可能够将任何样式的手推童车转换成双人手推童车，包含具有一个或两个前车轮的手推童车。

[0030] 手推童车 10 的实施例包括两个附接框架部件 17。连接器部分优选地位于手推童车的前部上以允许座椅附接件及座椅连接到手推童车 10 的前部。附接框架部件 17 允许座椅附接件（例如用于将单人手推童车 10 转换成如图 3 中所示的双人手推童车的座椅附接件）连接到手推童车。图 3 中仅展示一个座椅附接件，手推童车 10 将使用如图 3 中所展示的两个座椅附接件或包括两个座椅支撑元件的一个座椅附接件。手推童车 10 的实施例具有左侧及右侧附接框架部件 17。手推童车 10 的座椅附接件的实施例将包括能够在附接框架部件 17 处连接到手推童车框架的对应连接器部分。虽然关于单人手推童车描述了用于手推童车的座椅附接件，但所述附接件可类似地附接到双人手推童车。因此，所述座椅附接件的实施例可用于将双人手推童车转换成三人手推童车（如果需要的话）。

[0031] 图 2 中展示本发明的座椅附接件 20 的实施例。图 2 的座椅附接件呈解锁及折叠配置。座椅附接件 20 包括：能够连接到附接框架部件 17 的一对连接器部分 21，能够支撑座椅的两个座椅附接元件 22，及车轮 23。在此实施例中，所述连接器部分连接到座椅附接件 20 的后部，从而允许座椅附接件 20 连接到手推童车（例如图 1 中所示的手推童车 10）的前部。所述座椅附接件的其它实施例可包含一个以上车轮、一个连接器部分、一个座椅支撑元件或这些元件的组合。举例来说，在具有一个车轮的手推童车的实施例中，所述附接框

310 of 1090 MOCKINGBIRD ET AL. EX1019

架部件可位于前车轮的轮叉上。

[0032] 座椅附接件 20 包括将附接件 20 的车轮 23 连接到附接框架部件 24 的车轮支撑框架 26。每一附接框架部件 24 具有第一及第二端。所述第一端能够连接到手推童车框架且所述第二端连接到座椅支撑元件 22。座椅附接件 20 的实施例包括以枢转方式连接到两个附接框架部件 24 的车轮支撑框架 26。车轮支撑框架 26 或附接框架 24 可横跨手推童车在两个附接框架部件 17 之间的宽度。枢转连接 27 允许折叠并方便地储存或运输座椅附接件，但并非是本发明所必需的。所述枢转连接为任选的且提供更大方便性，然而，附接件的实施例可包括以可释放方式连接的车轮支撑框架或刚性框架，其可经并入以产生具有更大强度以供在其中（例如）可需要更强座椅附接件的情形中（例如在全地形或慢跑手推童车的情况下）使用的座椅附接件。可在附接框架上的任一点处连接所述车轮支撑框架，优选地在接近连接器部分 21 处或在接近附接框架 24 的中间处连接所述车轮支撑框架。

[0033] 举例来说，不具有车轮的座椅附接件的实施例可包含连接器部分 21 或附接框架部件 24 及座椅附接部件 22。在此实施例中，将不需要枢转连接 27、车轮支撑框架 26、滑动连接器 25 或车轮 23。

[0034] 座椅附接件 20 包括折叠机构，所述折叠机构包括连接到斜撑 28 的第一端的滑动连接器 25。斜撑 28 的第二端以枢转方式连接到车轮支撑框架 26。在此实施例中，可使滑动连接器 25 在附接框架部件 24 上于第一位置与第二位置之间移动。随着滑动连接器 25 移动，斜撑 28 将车轮支撑框架 26 从使用中位置推到储存位置。所述储存位置较紧凑，如图 2 中所示。另外，座椅附接件 20 的实施例包括能够将座椅附接件 20 紧固到手推童车（例如图 1 中所示的手推童车 10）的锁定机构 29。通过将滑动连接器 25 移动到其中使车轮支撑框架 26 及车轮 23 延展的使用中位置来啮合锁定机构 29。在用于手推童车 10 的座椅附接件 20 的实施例中，座椅附接件 20 的车轮以枢转方式连接到所述连接器部分，且当所述车轮处于使用中位置时，可释放连接被锁定，且当将车轮 23 移动到储存位置时，可释放连接被解锁，从而允许从手推童车 10 拆卸座椅附接件 20。可储存座椅附接件 20 且手推童车 10 可方便地用作单人手推童车。按设计，座椅附接件 20 可重新连接到手推童车 10 以用作双人手推童车。在本发明的任一实施例中，可将座椅附接部分在手推童车框架上紧固到适当位置中且锁定机构可与具有或不具有车轮的实施例一起使用。所述座椅附接件或手推童车框架可包括用于将手推童车与座椅附接件紧固在一起的锁定机构。所述锁定机构可为能够在使用期间将各组件紧固在一起的任何机构且可为（例如）摩擦锁定装置、螺纹连接、孔中栓塞 (peg in a hole) 或干涉锁定装置，例如孔或槽中销子。在图 2 中所示的实施例 20 中，在使附接件 20 从展开位置移动到折叠位置时，锁定机构 29 随车轮支撑框架 26 枢转。锁定机构 29 可滑动到图 1 中所示的手推童车 10 的附接框架部件中的孔或凹口中。如此，可通过将附接件 20 的附接部分 21 定位于手推童车 10 的附接部分 17 的槽 18 中而将附接件 20 附接到手推童车 10。可将滑动连接器 25 移动到使用中位置，移动车轮支撑框架且将锁定机构 29 定位到手推童车 10 的锁定槽 19 中。

[0035] 座椅附接件 20 的实施例的连接器部分 21 具有圆柱形形状。可将连接器部分 21 插入到图 1 的手推童车 10 的附接框架部件 17 的圆柱形凹部 18 中以紧固所述座椅附接件并将单人手推童车转换成双人手推童车，如图 3 中所示。座椅附接件的其它实施例可包含任何类型的连接器部分。所述连接器部分可具有实心或管状构造且可为任何横截面形状，

举例来说，包含（但不限于）圆形、多边形、正方形、矩形及三角形。可利用其它附接机构将所述座椅附接件连接到手推童车，例如（但不限于）U 形托架、U 形螺栓、管夹、O 形托架、螺丝、螺栓或其它夹紧或附接构件。手推童车的附接框架部件具有互补及协作形状，其允许将连接器部分紧固到手推童车的附接部分。

[0036] 在图 3 中，展示图 2 的座椅附接件 20 连接到图 1 的单人手推童车 10，从而形成双人手推童车。将双人手推童车配置展示为两个手推童车座椅 13 呈直列式配置，但还可将其它配置（例如手推童车座椅及摇篮或婴儿车）支撑在所述双人手推童车上。此外，座椅附接件的座椅支撑元件可能够将前手推童车座椅支撑在前向或后向位置中。

[0037] 手推童车 10 的实施例仅作为一种类型的手推童车的实例而展示，所述手推童车的框架可为许多可能配置中的任一者。本发明的附件的实施例可经配置以用在手推童车的任何此种配置上。举例来说，婴儿手推童车的不同实施例可不包含两个前车轮，可不包含折叠机构或可只包含仅一个折叠机构。另外，婴儿手推童车可包含婴儿手推童车 10 中不包含的额外特征。举例来说，所述手推童车可任选地包括固定前车轮，完全不同的框架配置或位于手推童车的座椅底下的储存篮。

[0038] 座椅支撑部件可为能够将座椅支撑在座椅附接件上的任何配置。图 4 中展示供与汽车座椅或其它婴儿座椅一起使用的座椅支撑部件的另一实施例。图 4 的座椅支撑部件 40 的实施例包括主要支撑件 41。主要支撑件 41 包括用于支撑座椅的中心部分的支架。座椅的另一部分可搁靠在支撑杆 42 上。在此实施例中，支撑杆 42 可经调整以容纳不同形状及大小的座椅。支撑杆 42 可在孔口 43 内滑动且当处于支撑某一座椅的所要位置中时被锁定于适当位置中。因此，座椅被支撑在两个主要支撑件 41 及支撑杆 42 上。可通过将带 44 及 45 环绕在座椅上并借助带扣或其它紧固构件将所述带锁定于此位置中来进一步将所述座椅紧固在座椅附接部件 40 中。

[0039] 图 5 中展示用于手推童车的座椅附接件的另一实施例。组合 50 包括手推童车 10 及座椅附接件 51。座椅附接件 51 为三轮车样的附接件，其包括连接器部分 52、具有座椅支撑元件 56、座椅 57 及车轮 55 的框架 53。所述三轮车样的附接件可附接到手推童车 10 以允许在手推童车 10 中推着一名儿童而一名儿童骑乘座椅附接件 51。举例来说，所述座椅附接件还可为其它形状，例如汽车、卡车或动物形状。

[0040] 图 5 的手推童车 10 的实施例包括额外附件附接部分 58。附件附接部分 58 附接到手推童车 10 的框架部件。附件附接部分 58 的实施例展示于图 6A 上。此实施例特别适用于将如图 6B 中所示的手提袋或手提包 64 附接到手推童车 10。

[0041] 当使用手推童车时，父母或监护者通常携带其它物项，例如手提包、食品杂货手提袋、蜂窝电话、尿布、清洁湿巾或者其它个人或婴儿相关物项。一些手推童车具有用于放置此些物项的底部储存篮。然而，这些储存篮可能不方便接近或一些轻量手推童车不包含此些储存物。因此，手推童车的使用者可将手提包或购物手提袋挂在手推童车的把手上。此由于容易接近而为方便的，但把手上的手提袋的重量可导致手推童车不平衡且增加手推童车向后倾倒的趋势。挂在手推童车的把手上的沉重的手提袋可甚至在座椅上有儿童的情况下也导致手推童车向后倾斜。如果手推童车正面临上坡或不平坦的地形、正被向上推过路边或由幼小的儿童占用，那么问题会更糟。举例来说，可通过上文所描述的夹紧或附接方法中的任一者将附接部分附接到手推童车的框架。优选地，在接近手推童车 10 的重心处附接

312 of 1090 MOCKINGBIRD ET AL. EX1019

附件附接件 58 以避免产生手推童车的不平衡条件。图 6A 中展示附件附接件 58 的实施例。展示附件附接件 58 在接近折叠机构处连接到图 1 中的手推童车 10 的手推童车框架 12。所述附件的实施例包括用于连接到手推童车框架的第一端 61 及用于以可释放方式连接到所述附件的第二端 62。第一端 61 包括可连接到手推童车 10 的框架 12 的孔口 64。在某些实施例中，孔口 64 在一角度上 - 使得附件附接部分 58 的轴线为大致水平的。附件附接件 58 可任选地包括用于将附件附接到附件附接件 58 的肋状件。如图 6A 中所示的肋状件可用任何其它锁定元件或紧固构件替换，包含（例如）摩擦配件、旋紧式配件、干涉配件。

[0042] 图 6B 中展示用于附接到附件附接件 58 的附件的一个实例。所述附件为手提袋或手提包 64。所述附件包含能够紧固到附件附接件 58 上的附接部分 62 的附接部分 65。可通过将附接部分 65 紧固到附接部分 62 而将手提袋或手提包 64 紧固在手推童车 10 上。如所展示，附接部分 65 在附件附接件 58 的圆柱形附接部分 62 上滑动。附接部分 65 可包含接纳将手提袋或手提包 64 紧固到手推童车 10 的肋状件 63 的内部环形凹部。因此，如从侧面所观看，手提袋或手提包 64 被紧固到手推童车 10 在所述手推童车的中心部分中。因此，手提袋或手提包 64 被方便地紧固到手推童车 10，同时不引起手推童车 10 的不平衡条件。

[0043] 图 8 中展示手推童车 80 的另一实施例。可在附接件上不添加另一车轮的情况下容易地将手推童车 80 从包括一个座椅的单人手推童车转换成包括两个座椅的双人手推童车。手推童车 80 包括能够支撑手推童车座椅 86 的框架 81。在此实施例中，框架 81 包括前车轮支撑部分 81a、后车轮支撑部分 81b 及把手部分 81c。手推童车 80 的实施例的框架 81 进一步包括连接前车轮支撑部分 81a、后车轮支撑部分 81b 及把手部分 81c 的折叠机构 81d。折叠机构 81d 允许将手推童车折叠成较紧凑大小以便储存或运输。图 8A 展示呈折叠配置的手推童车 80。

[0044] 手推童车 80 进一步包括至少一个前车轮 82（可在图 8A 中看到手推童车 80 的两个前车轮 82）、至少一个后车轮 83（可在图 8A 中看到手推童车 80 的两个后车轮 83）、手推童车座椅 86 及能够将第二个座椅支撑在所述手推童车座椅的前部的座椅支撑部分 84。手推童车 80 可进一步包括储存篮 87。座椅支撑部分可具有能够牢固地将座椅支撑在手推童车上的任何设计。举例来说，座椅支撑部分 84 可类似于图 2 中所示的座椅支撑部分 20，但不具有车轮 23、斜撑 28、枢转连接 27 及 / 或车轮支撑框架 26。优选地，所述座椅支撑部分能够支撑座椅使得处于所述座椅中的儿童大致高于手推童车的框架。此提供对座椅的更容易接近、不阻挡对储存篮的接近、允许座椅的更通用配置、允许将更多种的座椅附接到所述框架且允许父母或其它监护者更容易地监视并看到每一座椅中的儿童。

[0045] 手推童车 80 包括手推童车座椅 86。手推童车座椅 86 位于邻近于把手部分 81c 处。手推童车座椅 86 可以固定方式附接到或以可拆卸方式附接到框架 81。在其中手推童车座椅 86 以可拆卸方式附接到框架 81 的手推童车 80 的实施例中，手推童车座椅 86 可被拆卸及重新放置成后向配置（参见图 9A）、由座椅支撑元件 84 上的幼儿提篮 91 或汽车座椅替换（参见图 9C）或者用座椅支撑元件 84 上的婴儿车 92 替换（参见图 9D）。手推童车 80 的实施例可包括邻近于把手部分 81c 的第二座椅支撑元件 89。包括第二座椅支撑元件 89 的手推童车 80 允许座椅被容易地拆卸并重新配置成不同定向或用不同样式的座椅替换。

[0046] 手推童车 80 的实施例包括第一座椅支撑元件 84。座椅支撑元件 84 连接到手推童车 80 的前车轮支撑框架 81a。座椅支撑元件 84 邻近于框架 81 的前车轮支撑部分 81a。

313 of 1090 MOCKINGBIRD ET AL. EX1019

所述座椅支撑元件能够将第二手推童车座椅 85 支撑在手推童车座椅 86 的前部。此为手推童车 80 的使用者提供方便性及多用性。座椅支撑元件可以固定方式附接到或以可拆卸方式附接到前车轮支撑部分 81a。前座椅 85 可大致定位于前车轮上方，使得手推童车保持稳定。优选地，所述座椅应经定位使得手推童车的重心在前车轮与后车轮之间。如果不，那么可在附接件上放置额外车轮，如先前所描述。座椅支撑元件 84 包括座椅连接器 88。座椅连接器 88 可为多用途的通用连接器，其允许在座椅支撑元件 84 上更换不同座椅。举例来说，任何样式的座椅可经配置以连接到所述座椅连接器，例如（但不限于）手推童车座椅、婴儿座椅、摇篮、婴儿车、婴儿吊篮或汽车座椅。

[0047] 所述手推童车附接件的实施例包括连接器部分及座椅支撑元件。所述连接器部分能够将所述座椅附接件连接到框架。

[0048] 在图 8 中所示的实施例中，手推童车 80 包括第一手推童车座椅 86 及第二手推童车座椅 85。展示手推童车座椅 86 呈前向配置且展示第二手推童车座椅 85 呈后向配置。座椅支撑元件 84 能够将座椅支撑在连接到车轮支撑部分 81a 的前车轮 82 上面。优选地，前座椅大致位于前车轮上方且后座椅大致位于后车轮上方。

[0049] 虽然在图 8 的侧视图中无法看到，但所述手推童车的典型实施例将包括两个座椅连接器部分。一个座椅连接器部分将支撑座椅的每一侧。所述连接器部分可为一件式或多个部分。

[0050] 图 9A 到图 9F 展示对于本发明的手推童车可能有的各种配置。这些配置不应被视为手推童车的所有可用配置且所属领域的技术人员基于本说明书及图式集将认识到许多额外可能性。依据前文将了解，虽然本文已出于说明的目的描述了本发明的特定实施例，但可做出各种修改，此并不背离本发明的精神及范围。因此，本发明不受除所附权利要求书以外的限制。

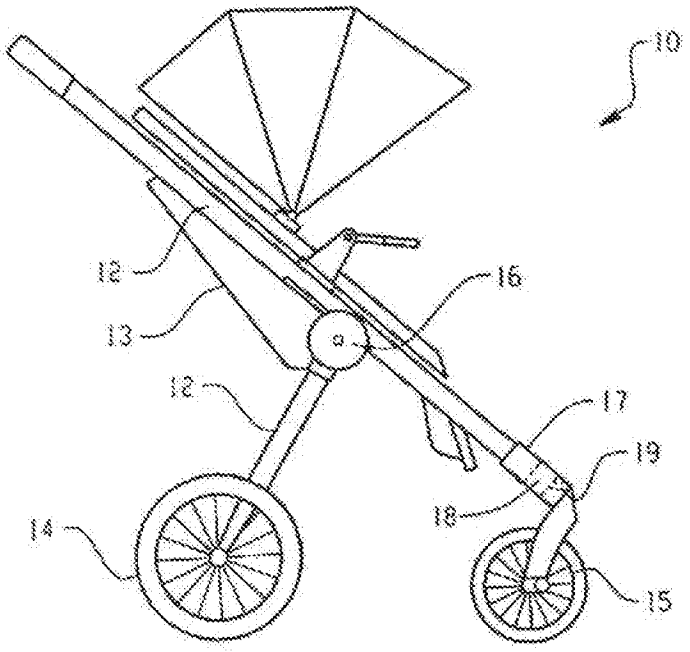


图 1

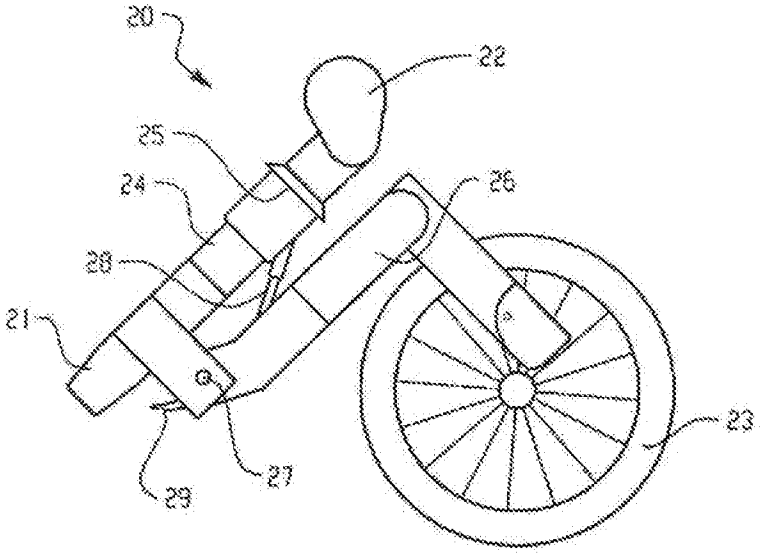


图 2

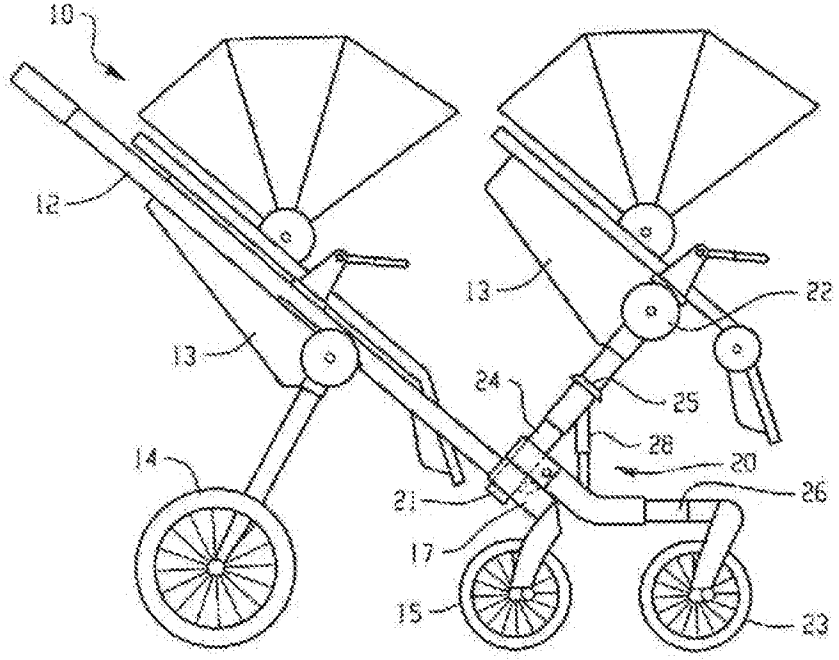


图 3

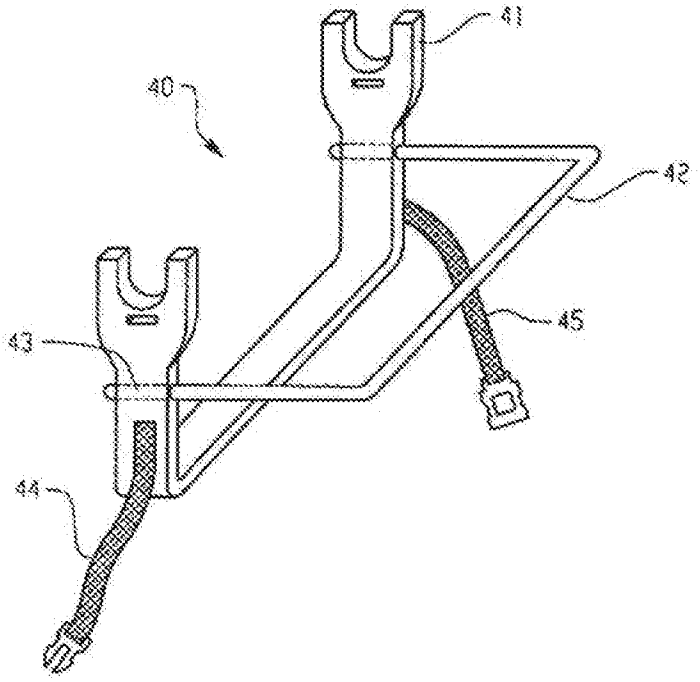


图 4

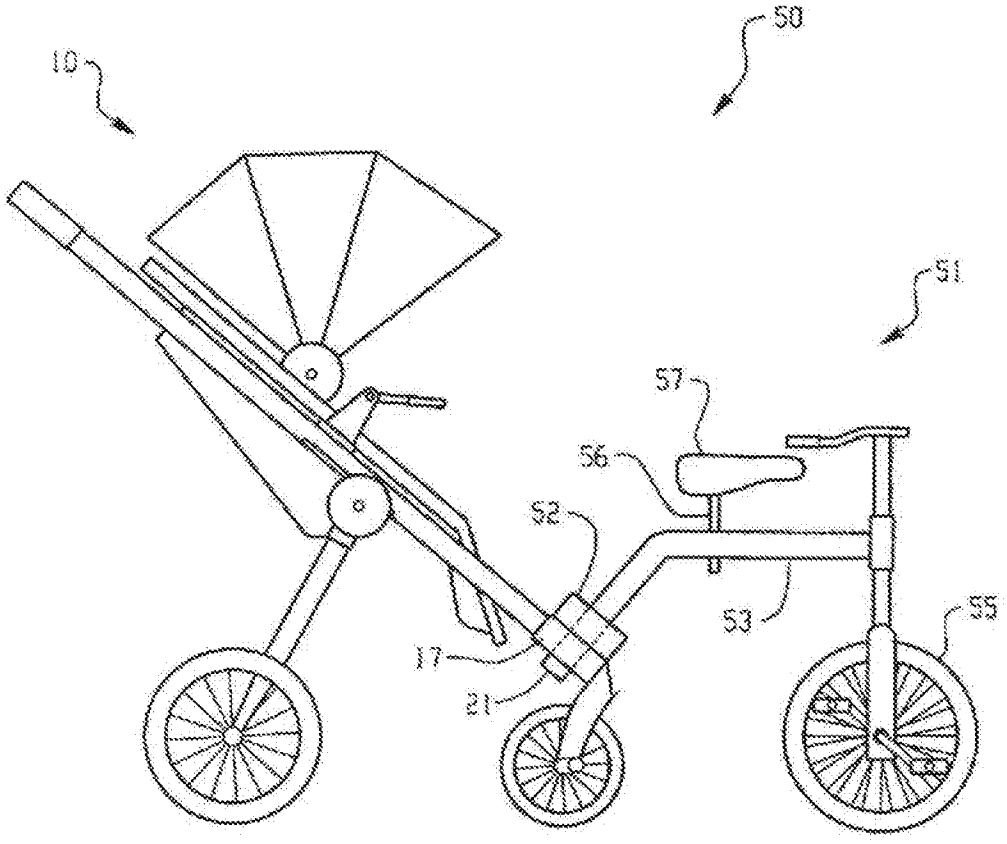


图 5

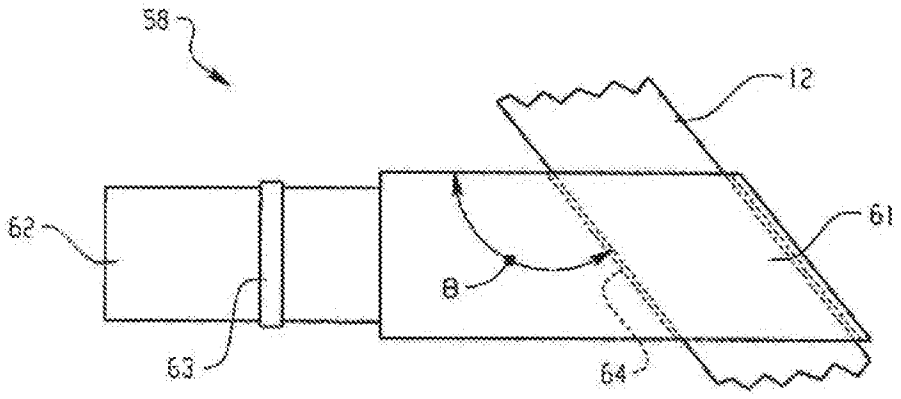


图 6A

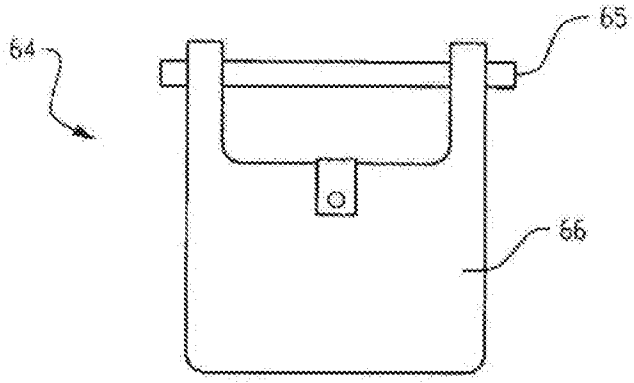


图 6B

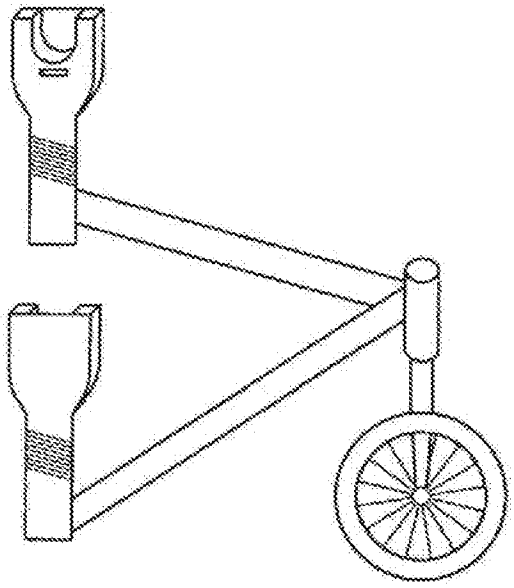


图 7

5/8

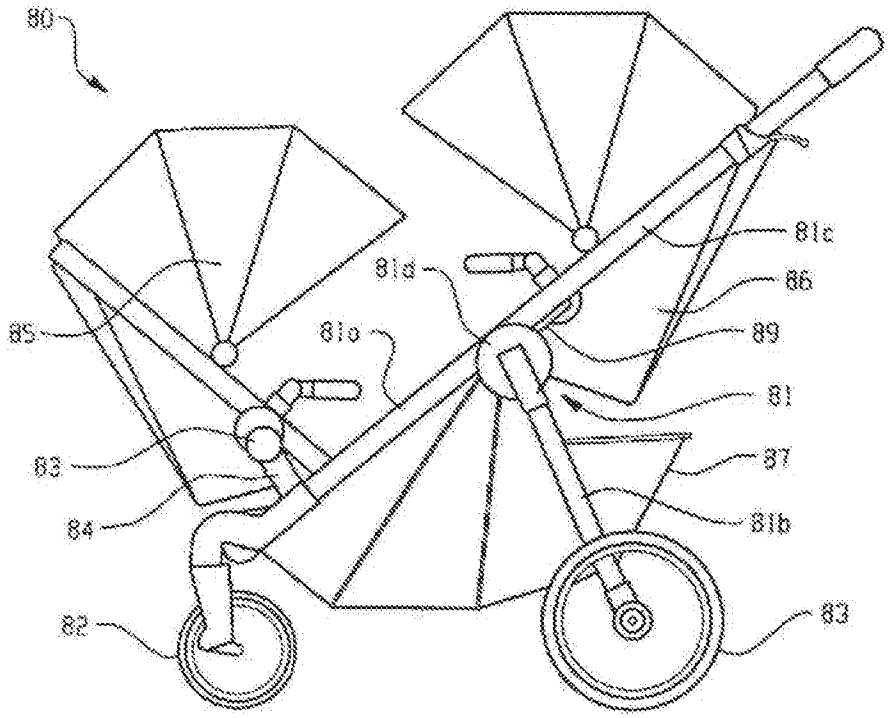

80
81c
81d
86
85
81a
89
81
83
87
84
81b
82
83

图 8

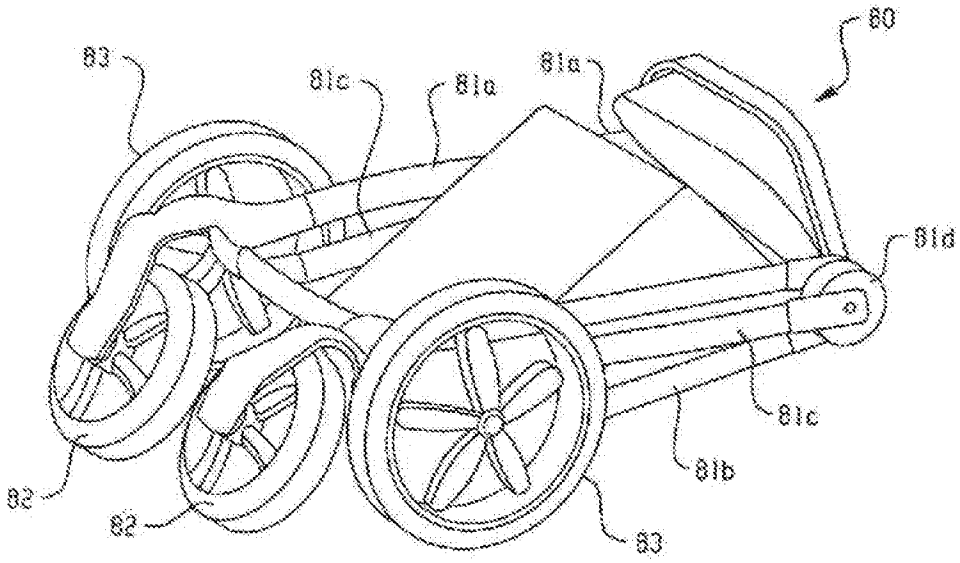

80
83
81c
81a
81a
81d
81c
81b
82
82
83

图 8A

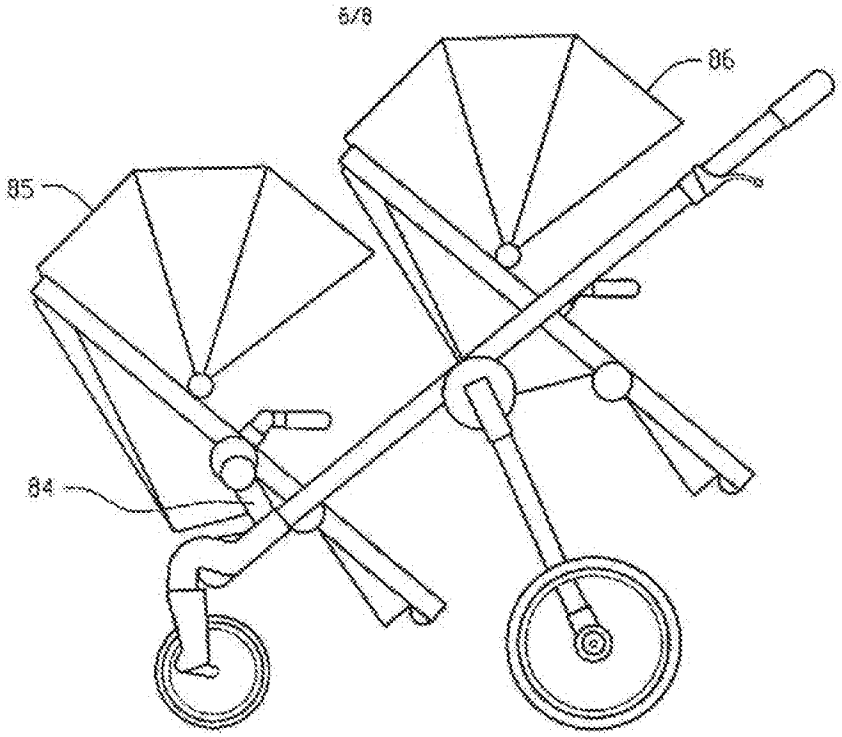


图 9A

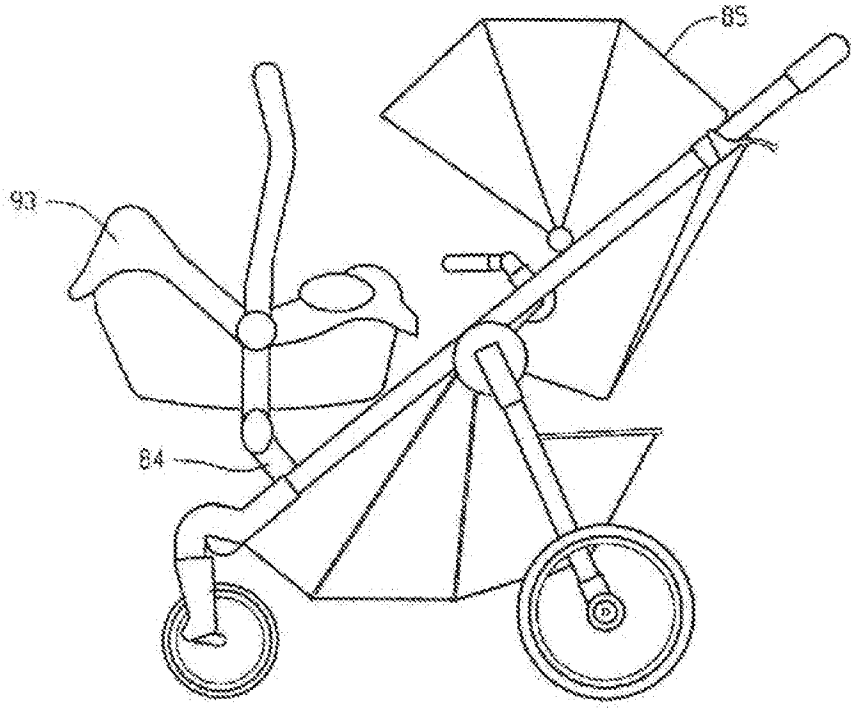


图 9B

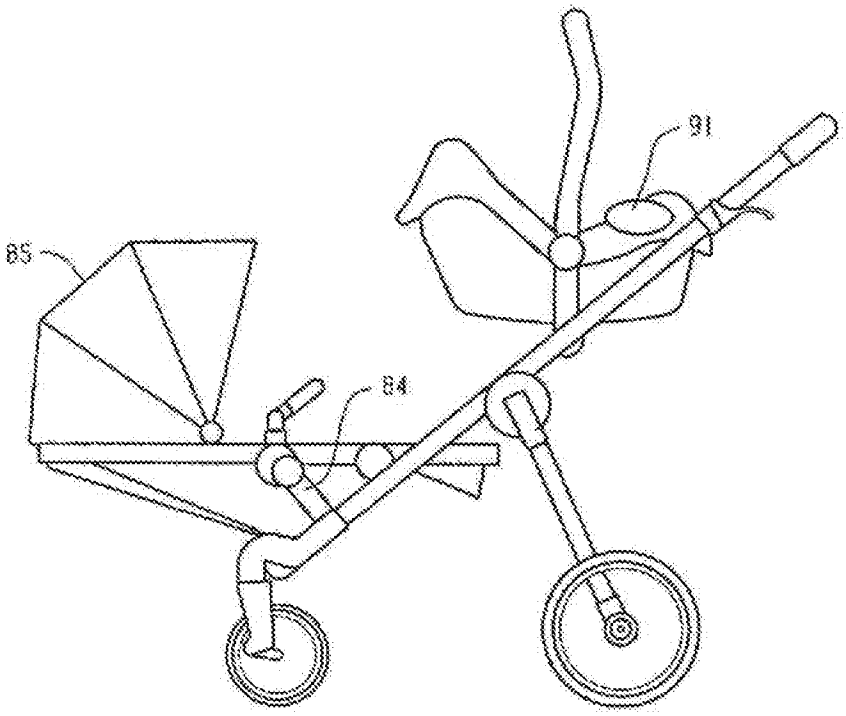


图 9C

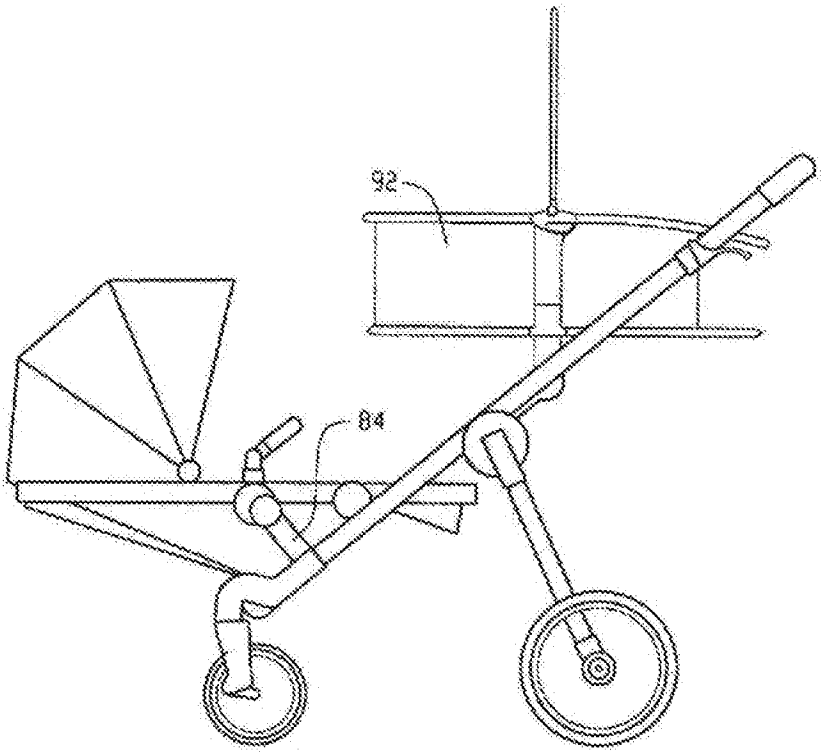


图 9D

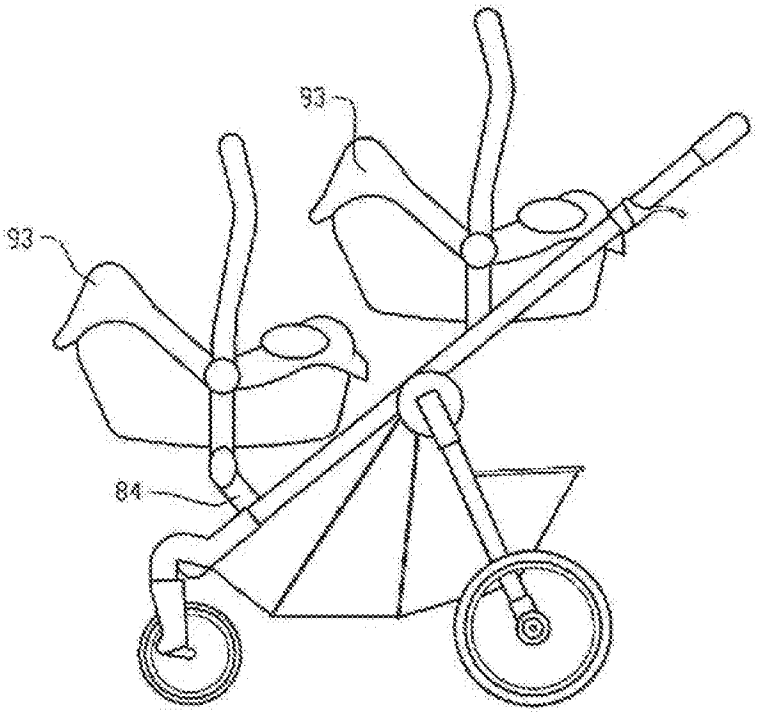


图 9B

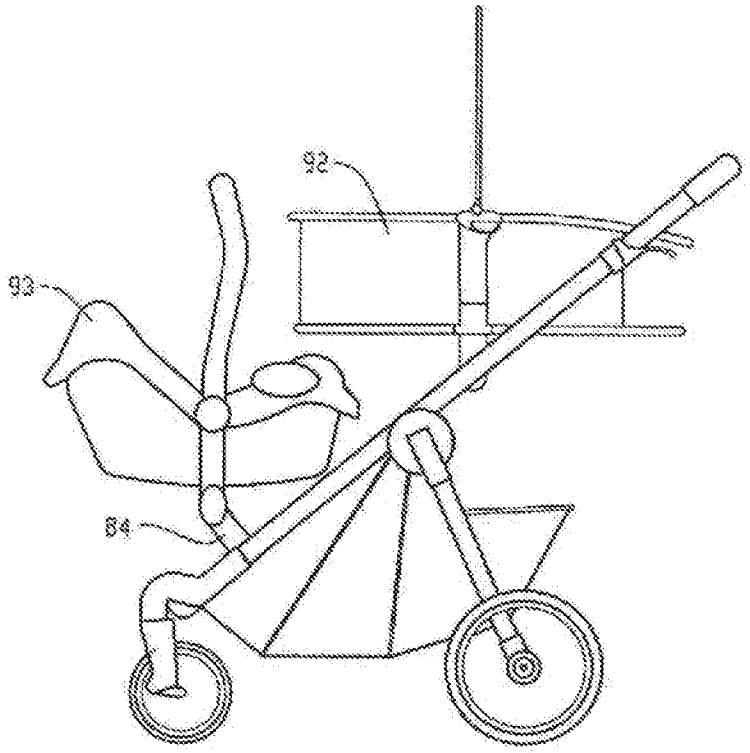


图 9F

Espacenet

Bibliographic data: CN201626448 (U) — 2010-11-10

Multifunctional baby carrier

Inventor(s): GE LUO ± (LUO GE)

Applicant(s): GE LUO ± (LUO GE)

Classification: **- international:** ***B62B7/04; B62B9/12***
- cooperative:

Application number: CN20102115279U 20100211

Priority number(s): CN20102115279U 20100211

Abstract of CN201626448 (U)

The utility model relates to a multifunctional baby carrier, which comprises a baby carrier body, a baby carrier frame and wheels. Lateral handrails are arranged on two sides of the baby carrier body; a detachable device is arranged on the lateral handrails, and comprises a receiving device arranged on the lateral handrails and a connecting seat capable of being mounted and demounted on the receiving device; the receiving device comprises grooves formed on the lateral handrails; a cross rod is fixed in the grooves in the transverse direction; the connecting seat comprises a connecting seat casing, in which a fixed hook capable of being buckled in the cross rod is arranged; a spring is arranged between the fixed hook and the connecting seat casing, and is connected with a button; and the connecting seat is fixed on an automobile seat or a cradle. The utility model has the advantages that the detachable device is arranged on the lateral handrails of the baby carrier, so that the automobile seat or the cradle can be conveniently mounted or demounted to greatly facilitate users; and moreover, the structure is simple, and both the mounting and the demounting are very simple.

MOCKINGBIRD ET AL. EX1019

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(73)专利权人 罗革
地址 315316 浙江省慈溪市观海卫镇工业园东区慈溪市福贝贝儿童用品有限公司

(72)发明人 罗革

(51)Int.Cl.
B62B 7/04(2006.01)
B62B 9/12(2006.01)

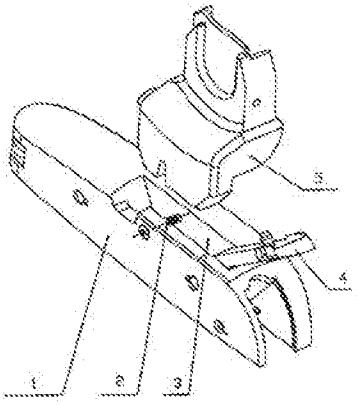
权利要求书 1 页 说明书 2 页 附图 3 页

(54)实用新型名称

一种多功能童车

(57)摘要

本实用新型涉及一种多功能童车，包括车身、车架与车轮，车身两侧设有侧扶手，所述的侧扶手上设置可拆卸装置，可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座，所述的接收装置包括设置在侧扶手上的凹槽，所述的凹槽内横向方向上固定有横杆，所述的连接座包括连接座壳体，壳体内设置有能扣入横杆的固定钩，固定钩与连接座壳体之间设置弹簧，弹簧连接按钮，且连接座固定在汽车座椅或摇篮上。本实用新型在童车的侧扶手上设置可拆卸装置，使得汽车座椅或者摇篮可以方便地安装或拿下，大大方便了用户，且本实用新型结构简单，安装和拆卸都很简单。



CN 201626448 U

1. 一种多功能童车，包括车身、车架与车轮，车身两侧设有侧扶手，其特征在于：所述的侧扶手上设置可拆卸装置，所述的可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座，所述的接收装置包括设置在侧扶手上的凹槽，所述的凹槽内横向方向上固定有横杆，所述的连接座包括连接座壳体，壳体内设置有能扣入横杆的固定钩，固定钩与连接座壳体之间设置弹簧，弹簧连接按钮，且所述的连接座固定在汽车座椅或摇篮上。

一种多功能童车

（一）技术领域

[0001] 本实用新型涉及一种童车，尤其是涉及一种能放置多种部件的多功能童车。

（二）背景技术

[0002] 目前市场上的童车一般不具备儿童汽车安全座椅功能，如专利号为 03225254.4 的中国实用新型专利一种两用童车，其结构包括可折叠主体，连接在主体下端的四个可折叠车轮，主体装设有汽车安全带卡扣机构，在儿童乘坐位置有用于缚紧乘员的安全带。完全打开时，与普通童车无异，四个车轮收折后，可放在汽车座椅上，扣上汽车安全带作为汽车安全座椅使用。虽然，该款童车实现双重功能，但是毕竟童车与汽车座椅在要求上差别较大，折叠后的童车作为汽车座椅在安全性和舒适性上大打折扣。

（三）发明内容

[0003] 为了克服现有技术中的不足，本实用新型提供一种汽车座椅或提篮可拆卸地安装在童车上的多功能童车，结构简单，使用方便。

[0004] 本实用新型解决其技术问题的技术方案是：

[0005] 一种多功能童车，包括车身、车架与车轮，车身两侧设有侧扶手，所述的侧扶手上设置可拆卸装置，所述的可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座，所述的接收装置包括设置在侧扶手上的凹槽，所述的凹槽内横向方向上固定有横杆，所述的连接座包括连接座壳体，壳体内设置有能扣入横杆的固定钩，固定钩与连接座壳体之间设置弹簧，弹簧连接按钮，且连接座固定在汽车座椅或提篮上。

[0006] 在童车的侧扶手上设置凹槽，凹槽内设置横杆，按下按钮，连接座通过固定钩锁定横杆，由于连接座固定在汽车座椅或提篮上，则汽车座椅或提篮就安装在童车上了。在拆卸时，只要按下按钮，固定钩从横杆中脱离就可以了，这时候，将汽车座椅安装在车上，或者可以手提提篮。在童车的侧扶手上设置可拆卸装置，使得汽车座椅或者提篮可以方便地安装或拿下，大大方便了用户。

[0007] 本实用新型的有益效果在于：本实用新型在童车的侧扶手上设置可拆卸装置，使得汽车座椅或者提篮可以方便地安装或拿下，大大方便了用户，且本实用新型结构简单，安装和拆卸都很简单。

（四）附图说明

[0008] 图 1 是本实用新型可拆卸装置的结构示意图；

[0009] 图 2 是本实用新型连接座的爆炸结构示意图；

[0010] 图 3 是本实用新型的结构示意图。

（五）具体实施方式

[0011] 下面结合附图和具体实施方式对本实用新型作进一步详细说明。

[0012] 如图 3 所示，一种多功能童车，包括车身、车架以及车轮，车架的两侧设有侧扶手 1，如图 1 所示，侧扶手上表面上设有凹槽 3，凹槽横向宽度方向悬空固定有一横杆 2，凹槽与横杆组成接收装置，侧扶手上还连接有能翻转的扶手盖 4，能盖住在凹槽上。如图 1、图 2 所示，另设有连接座 5，连接座 5 固定在汽车座椅或提篮 9 上，连接座可方便安装在接收装置上，连接座与接收装置组成侧扶手的可拆卸装置，连接座包括壳体 6，壳体背面设有连接座盖 7，壳体 6 内设置固定钩 8，且固定钩钩体能够伸出连接座，固定钩 8 与座壳体之间设置弹簧，弹簧连接按钮。按下按钮，将固定钩锁定横杆上，然后释放按钮，则汽车座椅和提篮 9 就连接在童车上了，如图 3 所示，而需要拆卸时，只需要将固定钩脱离就好了，这样，汽车座椅就可以方便地安装在汽车上，或者轻松地提提篮了。

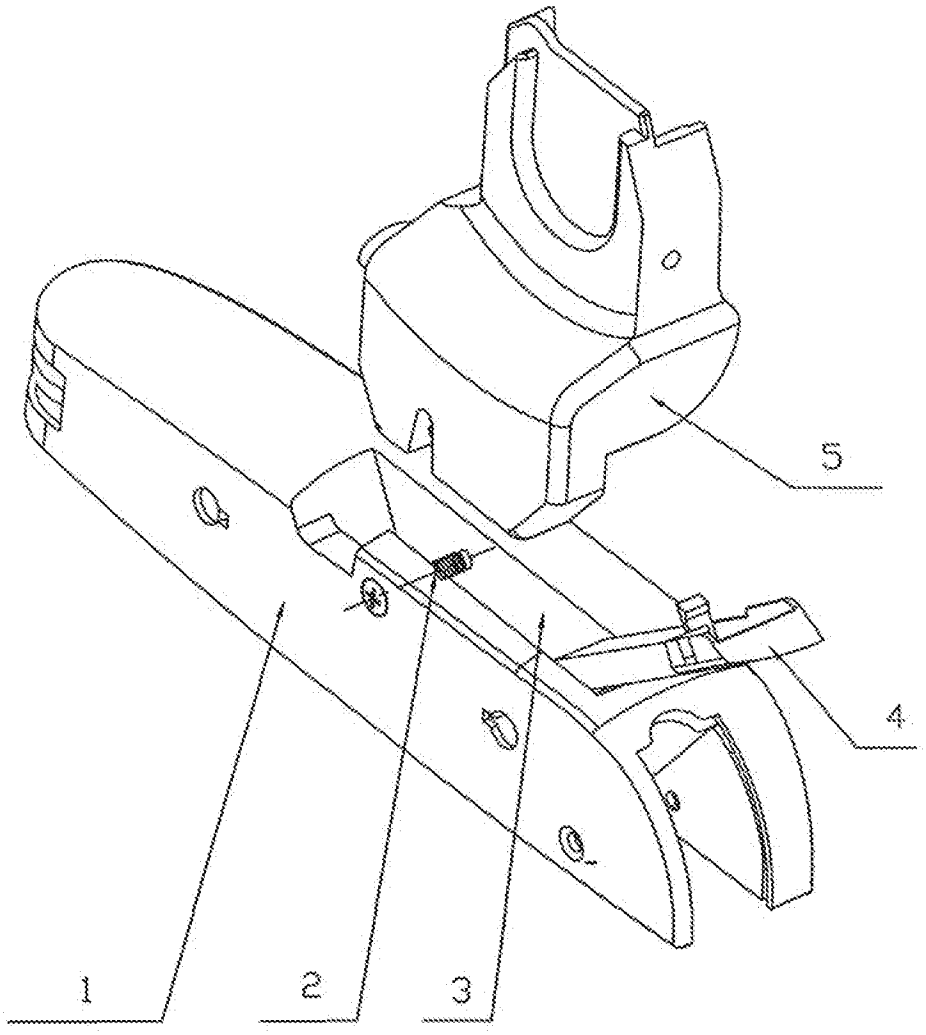


图 1

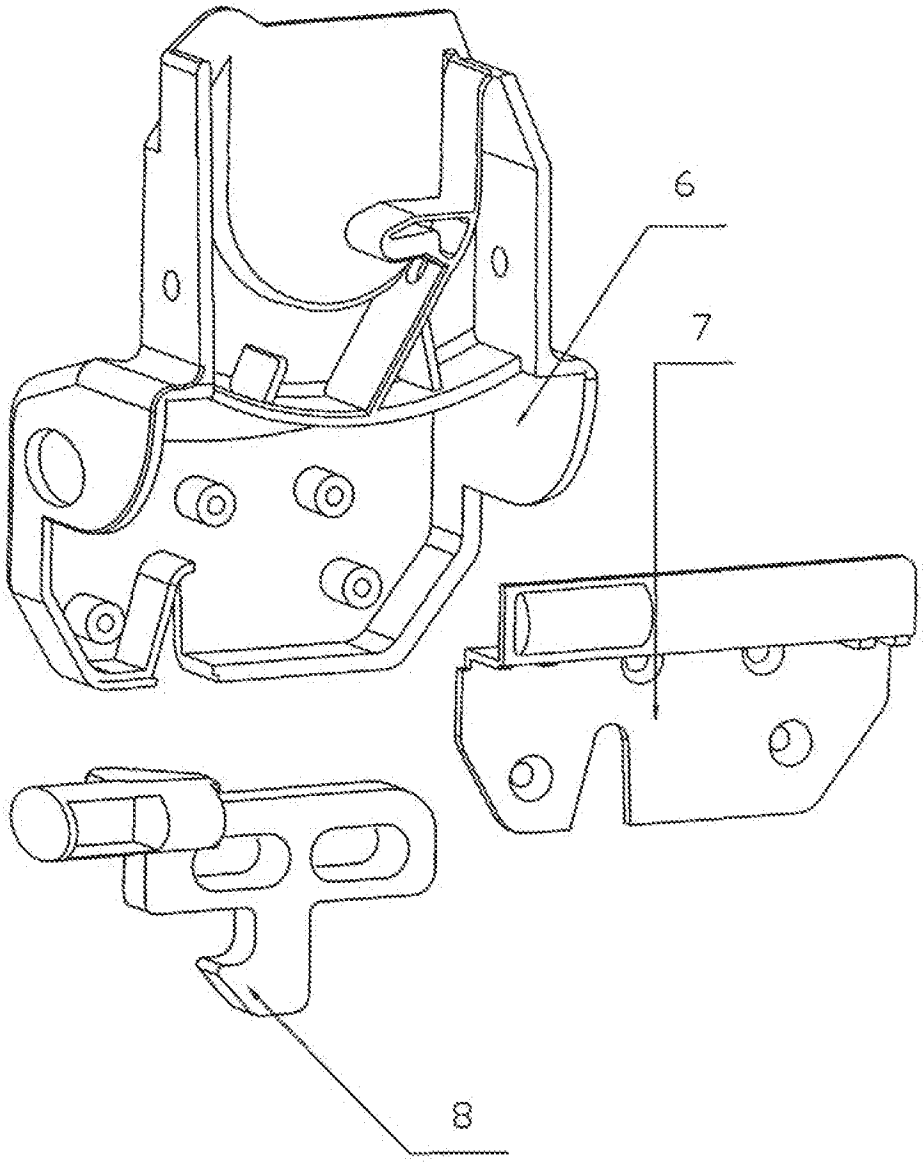


图 2

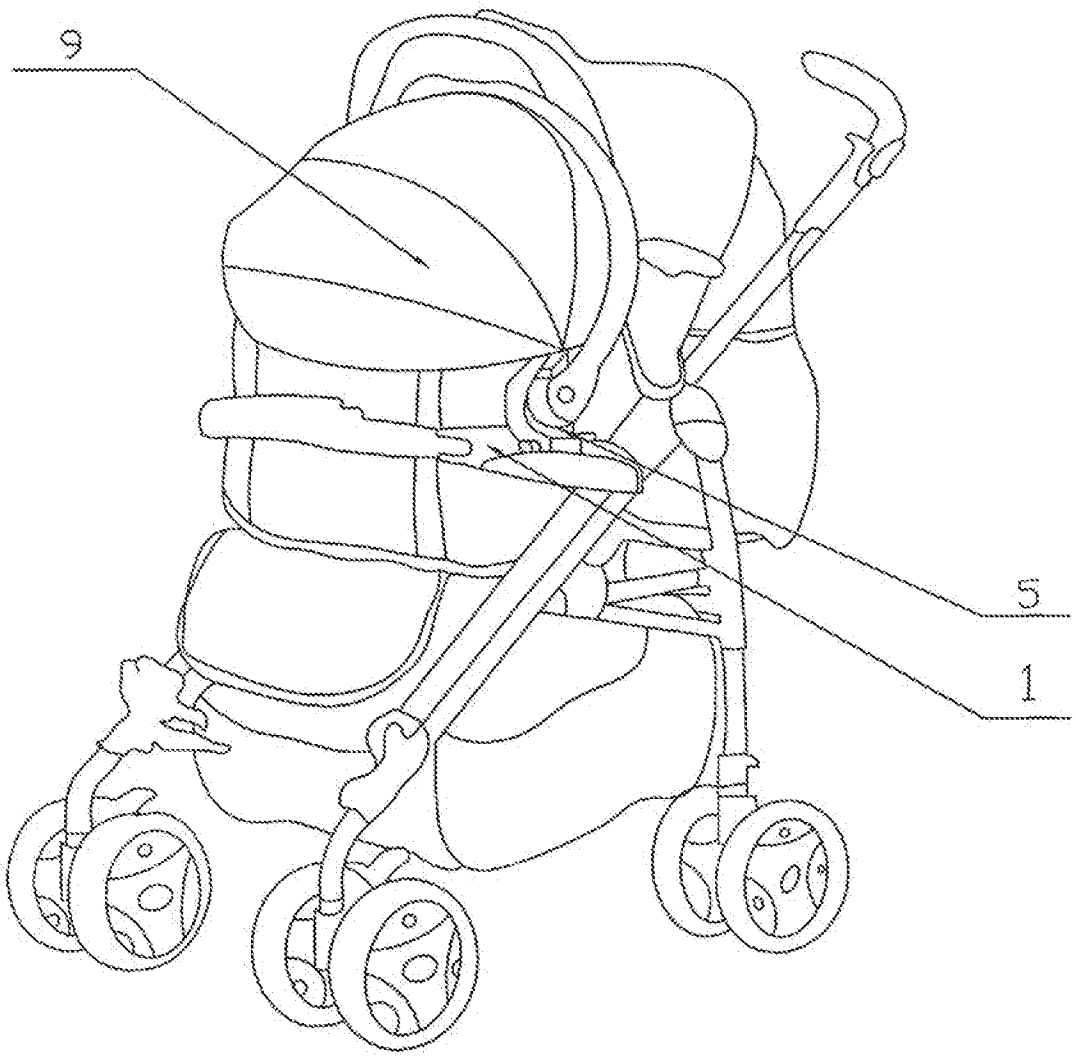


图 3

Espacenet

Bibliographic data: CN201646823 (U) — 2010-11-24

Baby trolley capable of change direction of sitting bag

Inventor(s): JIANZHAO GUO ± (GUO JIANZHAO)

Applicant(s): GOODBABY CHILD PRODUCTS CO LTD ± (GOODBABY CHILD PRODUCTS CO., LTD)

Classification: **- international:** ***B62B9/12***
- cooperative:

Application number: CN2010261383U 20100111

Priority number (s): CN2010261383U 20100111

Abstract of CN201646823 (U)

The utility model relates to a baby trolley capable of change the direction of a sitting bag, which comprises a vehicle frame of the trolley and a sitting bag framework arranged in the vehicle frame of the trolley, wherein connecting elements which are detachably and fixedly matched and connected are respectively arranged in corresponding positions of the vehicle frame of the trolley and the sitting bag framework, the sitting bag framework is provided with a first position or a second positioning which is fixedly matched and connected with the vehicle frame of the trolley, and the first position horizontally rotates 180 degrees to be overlapped with the second position correspondingly to the vehicle frame of the trolley. Compared with the prior art, the utility model has the advantages that the sitting bag part in the baby trolley of the utility model can be singly dismounted for changing the direction, the nursing of babies can be convenient, the structure is simple, and the use is convenient.

(19)中华人民共和国国家知识产权局

(12)实用新型专利

(10)授权公告号 CN 201646823 U
(45)授权公告日 2010.11.24

(21)申请号 201020061383.0

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(73)专利权人 好孩子儿童用品有限公司
地址 215331 江苏省昆山市陆家镇杨溪东路20号

(72)发明人 郭剑钊

(74)专利代理机构 苏州创元专利商标事务所有限公司 32103
代理人 孙仿卫

(51)Int.Cl.
B62B 9/12(2006.01)

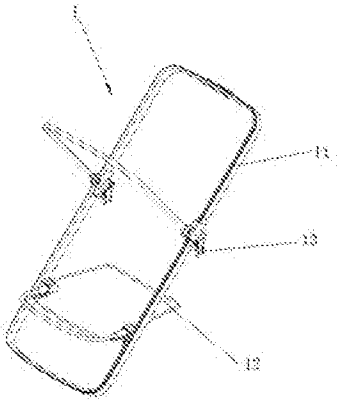
权利要求书 1 页 说明书 2 页 附图 3 页

(54)实用新型名称

一种可坐兜换向的儿童推车

(57)摘要

本实用新型涉及一种可坐兜换向的儿童推车，其包括推车车架、设置在推车车架内的坐兜框架，所述推车车架和坐兜框架的相应位置上各自设有相互可拆卸地配合固定连接的连接件，所述的坐兜框架具有与推车车架配合固定连接的第一位置或第二位置；相对于所述推车车架，所述的第一位置水平旋转180度后与所述第二位置重合。本实用新型与现有技术相比具有下列优点：本实用新型儿童推车中的坐兜部分可以单独拆卸下来进行换向，方便护理幼儿，结构简单使用方便。



CN 201646823 U

1. 一种儿童推车，其包括推车车架、设置在推车车架内的坐兜框架，其特征在于：所述推车车架和坐兜框架的相应位置上各自设有相互可拆卸地配合固定连接的连接件，所述的坐兜框架具有与推车车架配合固定连接的第一位置或第二位置；

相对于所述推车车架，所述的第一位置水平旋转 180 度后与所述第二位置重合。

2. 根据权利要求 1 所述的推车，其特征在于：所述的配合固定连接为卡扣连接方式。

3. 根据权利要求 2 所述的推车，其特征在于：所述的推车车架上的两相对侧部对称地设有卡槽，所述的坐兜框架的围框管上的相应位置设有与各卡槽配合固定连接的插件。

4. 根据权利要求 3 所述的推车，其特征在于：所述的卡槽位于所述推车车架的推把杆与前轮支架的连接处，所述的插件位于所述坐兜框架的上围框和下围框的连接处。

5. 根据权利要求 2 或 3 所述的推车，其特征在于：所述插件的前后侧对称地设有弹性突起；相应地，所述卡槽的前后侧壁对称地开设有与弹性突起配合卡扣孔。

一种可坐兜换向的儿童推车

技术领域

[0001] 本实用新型涉及一种儿童推车。

背景技术

[0002] 儿童推车一般大体上包括推车车架、设置在推车车架内的坐兜框架，现有技术中，坐兜框架与推车车架的两相对内侧固定连接。

[0003] 然后这样的结构设置不便于护理幼儿，例如不方便照顾观看，有时车向前推行时，幼儿无法避免日晒。

发明内容

[0004] 为了克服现有技术的不足，本实用新型提供了其包括推车车架、设置在推车车架内的坐兜框架，其中，所述推车车架和坐兜框架的相应位置上各自设有相互可拆卸地配合固定连接的连接件，所述的坐兜框架具有与推车车架配合固定连接的第一位置或第二位置；相对于所述推车车架，所述的第一位置水平旋转 180 度后与所述第二位置重合。

[0005] 优选的，所述的配合固定连接为卡扣连接方式。

[0006] 进一步优选的，所述的推车车架上的两相对侧部对称地设有卡槽，所述的坐兜框架的围框管上的相应位置设有与各卡槽配合固定连接的插件。

[0007] 再优选的，所述的卡槽位于所述推车车架的推把杆与前轮支架的连接处，所述的插件位于所述坐兜框架的上围框和下围框的连接处。

[0008] 优选的，所述卡槽的前后侧壁对称地开设有卡扣孔；相应地，所述插件的前后侧设有与卡扣孔配合的弹性突起。

[0009] 由于上述技术方案运用，本实用新型与现有技术相比具有下列优点：本实用新型儿童推车中的坐兜部分可以单独拆卸下来进行换向，方便护理幼儿，结构简单使用方便。

附图说明

[0010] 附图 1 为本实用新型儿童推车中的坐兜框架的立体图；

[0011] 附图 2 为附图 1 所示坐兜框架的侧视图；

[0012] 附图 3 为本实用新型的儿童推车的装配后立体图；

[0013] 其中：1、坐兜框架；11、上围框；12、下围框；13、插件；131、弹性突起；2、推车车架；21、推把杆；22、前轮支架；23、卡槽。

具体实施方式

[0014] 下面结合附图、详细说明本实用新型优选的实施方式：

[0015] 图 3 所示为一种儿童推车，其包括推车车架 2、设置在推车车架内的坐兜框架 1。

[0016] 推车车架 2 和坐兜框架 1 的相应位置上各自设有相互可拆卸地配合固定连接的连接件，坐兜框架 1 具有与推车车架配合固定连接的第一位置（图 3 所示位置）或第二位置；

相对于推车车架 2，第一位置水平旋转 180 度后与第二位置重合，即第二位置为第一位置换向后的位置。

[0017] 推车车架 2 和坐兜框架 1 的可拆卸地配合固定连接为卡扣连接方式。

[0018] 参见图 3，推车车架 2 的两相对内侧部对称地各设有一个卡槽 23，卡槽 23 具体位于推把杆 21 与前轮支架 22 的连接处，两个卡槽 23 结构相同。卡槽 23 的前后侧壁对称地开设有卡扣孔（图中未示出）。

[0019] 参见图 1、2 坐兜框架 1 的围框管上设有两个插件 13，插件 13 具体位于上围框 11 和下围框 12 的连接处。两个插件 13 的结构相同。插件 13 的前后侧对称地设有弹性突起 131。弹性突起 131 与卡扣孔的位置向对应。

[0020] 参见图 1、2、3，卡槽 23 与插件 13 之间为卡扣连接。插件 13 插入卡槽 23 内，弹性突起 131 滑入卡扣孔内，从而将坐兜固定安装到推车车架 2 上；按压弹性突起 131 的同时向上顶推（或拔出）插件 13，弹性突起 131 脱离卡扣孔，从而将坐兜从推车车架上拆卸下来。

[0021] 将坐兜拆卸下来后，可将其换向（推车车架 2 相对静止时，将坐兜框架 1 绕重垂线旋转 180 度，将图 3 的第一位置变换为第二位置），两个插件 13 的位置互换后再插入相应的卡槽 23 中，从而实现换向后的坐兜框架 1 与推车车架 2 固定。

[0022] 本实用新型的儿童推车并不局限于上述的实施例，凡根据本实用新型的精神实质所作的等效变化或修饰，都应涵盖在本实用新型的保护范围内。

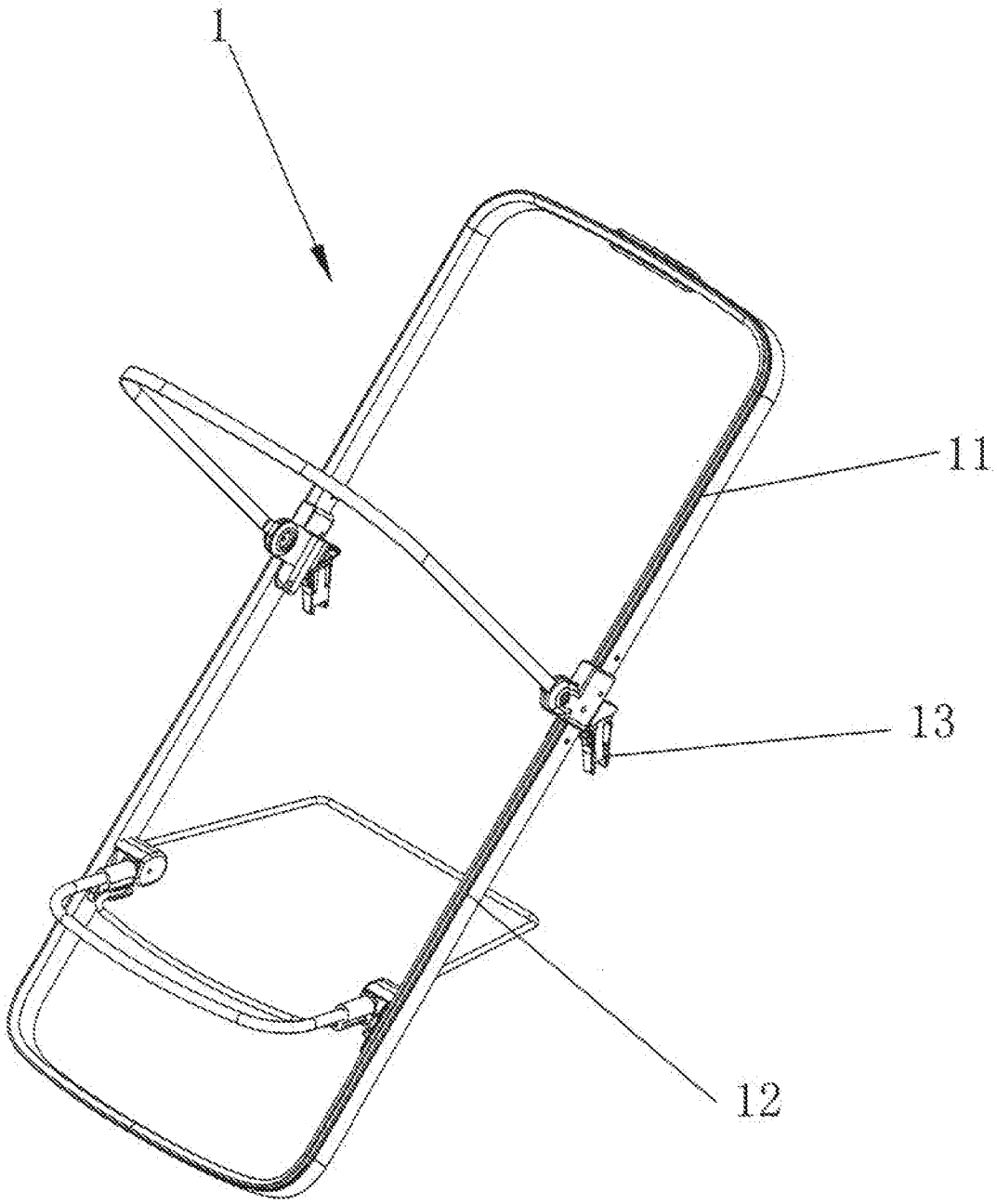


图 1

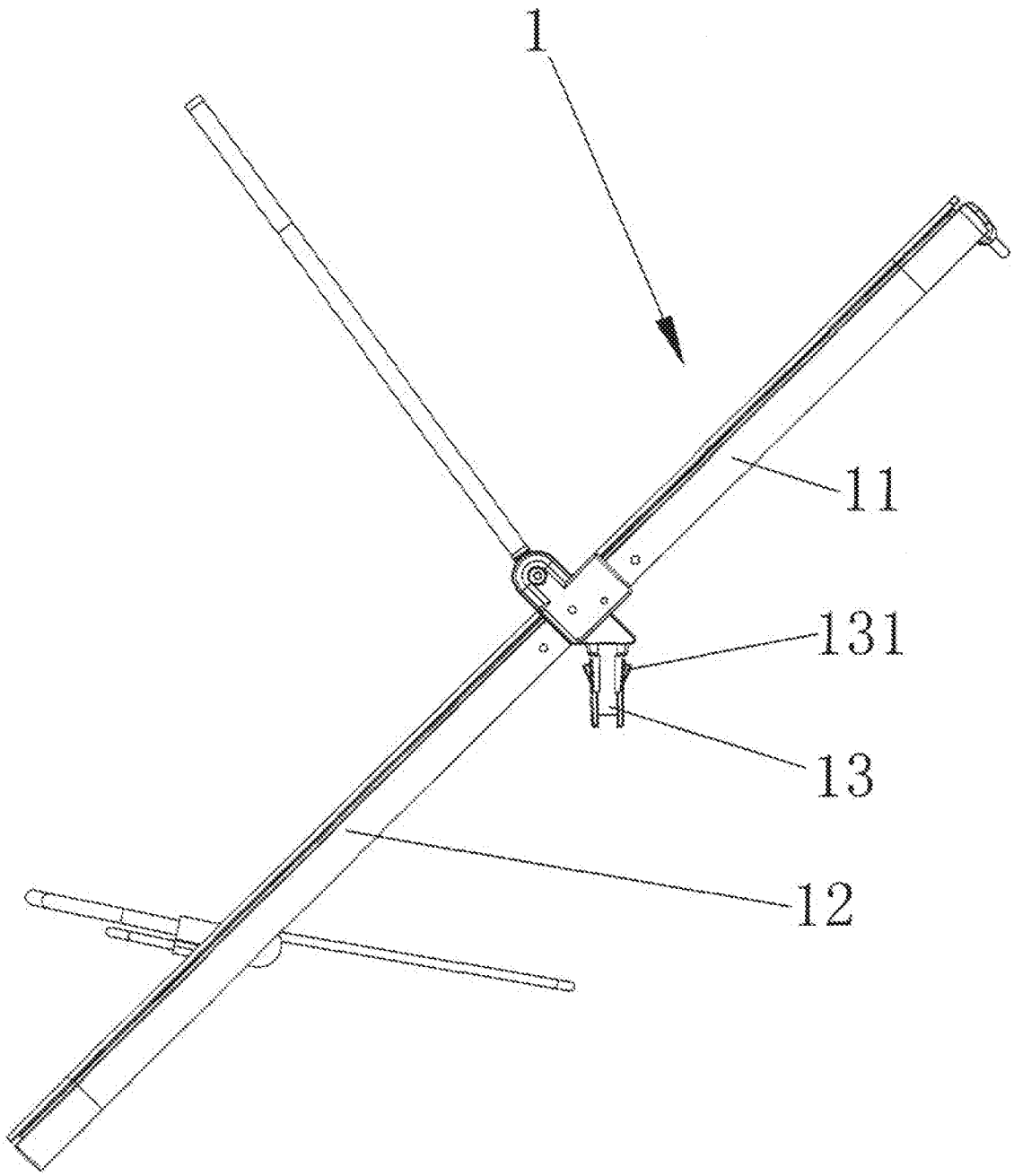


图 2

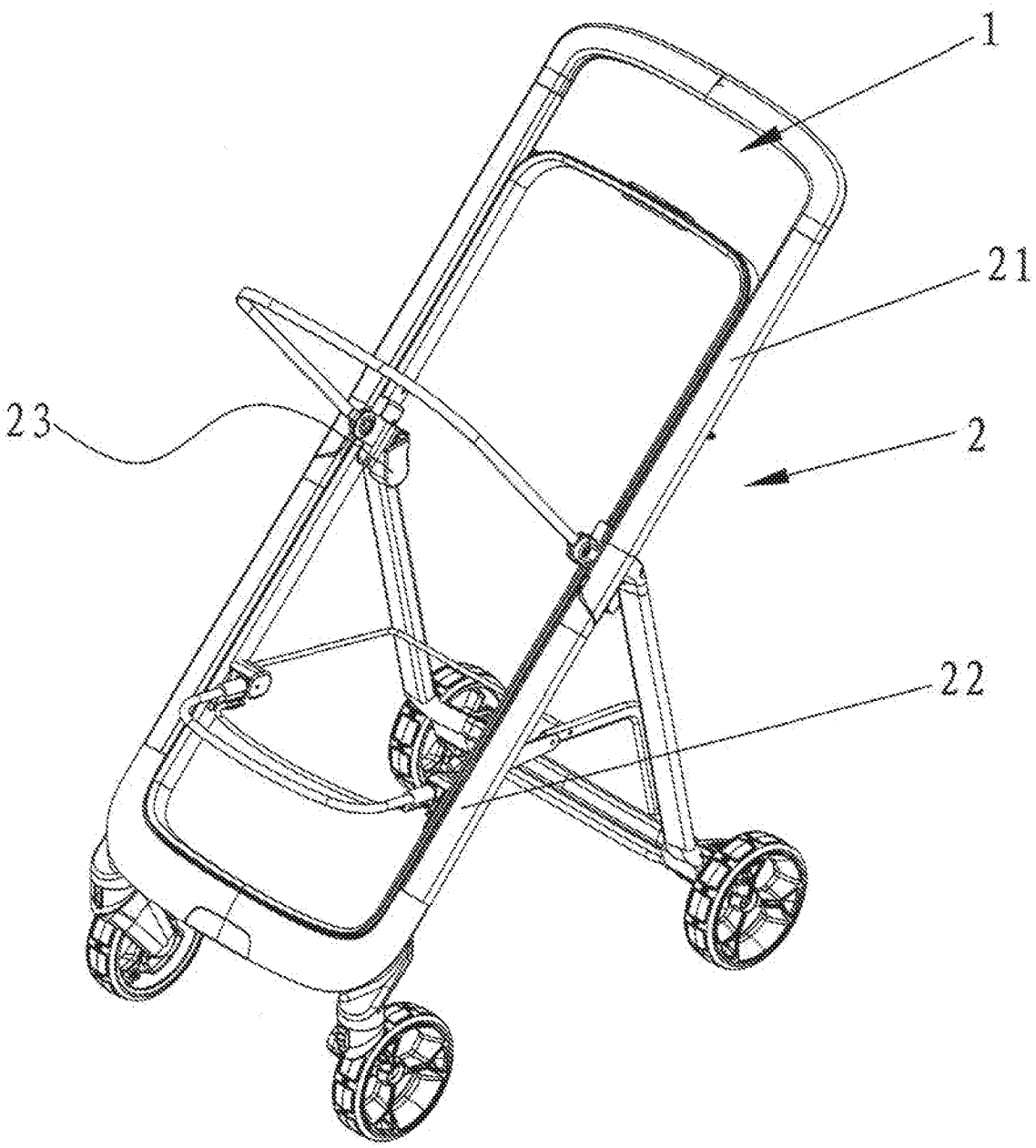


图 3

Europäisches Patentamt
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European Patent Office
80298 MUNICH
GERMANY

Questions about this communication ?
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Intès, Didier Gérard André
Cabinet Beau de Loménie
158 rue de l'Université
75340 Paris Cedex 07
FRANCE

ORIGINAL
Rec'd 15625
28 AOUT 2017
Cabinet Beau de Loménie
Date 29.08.17

Reference	Application No./Patent No.
3H319420/3.VIG	17161947.1 - 1760
Applicant/Proprietor	
Baby Jogger, LLC	

Communication

The extended European search report is enclosed.

The extended European search report includes, pursuant to Rule 62 EPC, the European search report (R. 61 EPC) or the partial European search report/ declaration of no search (R. 63 EPC) and the European search opinion.

Copies of documents cited in the European search report are attached.

☑ 0 additional set(s) of copies of such documents is (are) enclosed as well.

The following have been approved:

☑ Abstract ☑ Title

☐ The Abstract was modified and the definitive text is attached to this communication.

The following figure(s) will be published together with the abstract: 8A

Refund of search fee
If applicable under Article 9 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.

Should you wish to further prosecute this application in the examination phase, your attention is drawn to the provisions of Rule 70a EPC. An invitation to respond to the extended European search report will be issued once the date of publication of the European search report has been mentioned in the European Patent Bulletin (R. 69(1), R. 70(2) EPC).

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EUROPEAN SEARCH REPORT

Application Number
EP 17 16 1947

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 6 286 844 B1 (CONE II RICHARD E [US] ET AL) 11 September 2001 (2001-09-11) * the whole document *	1,2,4-6, 13,14 3,7-12, 15	INV. B62B7/00
X	US 2014/191483 A1 (ROLICKI PETER [US] ET AL) 10 July 2014 (2014-07-10) * paragraph [0071]; figure 10 *	1,8-10, 13,15	
X	WO 2014/042524 A1 (WF INTERNAT HOLDING B V [NL]) 20 March 2014 (2014-03-20) * figure 6 *	1,13	
A	US 2016/046315 A1 (ZEHFUSS MARK [US] ET AL) 18 February 2016 (2016-02-18) * the whole document *	1-15	

TECHNICAL FIELDS SEARCHED (IPC)
B62B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	22 August 2017	Lindner, Volker

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 17 16 1947

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

22-08-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6286844 B1	11-09-2001	US 6286844 B1	11-09-2001
		US 2001013689 A1	16-08-2001
US 2014191483 A1	10-07-2014	CN 105835933 A	10-08-2016
		US 2014191483 A1	10-07-2014
		US 2015021872 A1	22-01-2015
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		WO 2014042524 A1	20-03-2014
US 2016046315 A1	18-02-2016	US 2016046315 A1	18-02-2016
		WO 2016025690 A1	18-02-2016

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

Information on Search Strategy - Pilot phase (see OJ 2015, A86)
The type of information contained in this sheet may change during the pilot for improving the usefulness of this new service.

Application Number
EP 17 16 1947

TITLE: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

APPLICANT: Baby Jogger, LLC

IPC CLASSIFICATION: B62B7/00

EXAMINER: Lindner, Volker

CONSULTED DATABASES: WPI

CLASSIFICATION SYMBOLS DEFINING EXTENT OF THE SEARCH:

IPC:

CPC: B62B7/008, B62B9/028

FI/F-TERMS:

KEYWORDS OR OTHER ELEMENTS FEATURING THE INVENTION:
A stroller (10), comprising:
a stroller frame (12);
a plurality of wheels (14, 15) coupled to the stroller frame (12);
a first seat coupled to the stroller frame (12);
a first seat attachment housing (1105) disposed along a first portion of the stroller frame (12);
a second seat attachment housing (1110) disposed along a second portion of the stroller frame (12);
a first removable seat attachment adapter (84) configured to be removably coupled to the first seat attachment housing (1105); and
a second removable seat attachment adapter (89) configured to be removably coupled to the second seat attachment housing (1110).

EPO FORM P04A42

The examination is being carried out on the **following application documents**

Description, Pages

1-20 as originally filed

Claims, Numbers

1-15 as originally filed

Drawings, Sheets

1/18-18/18 as originally filed

1 The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1 US 6 286 844 B1 (CONE II RICHARD E [US] ET AL) 11 September 2001 (2001-09-11)

D2 US 2014/191483 A1 (ROLICKI PETER [US] ET AL) 10 July 2014 (2014-07-10)

D3 WO 2014/042524 A1 (WF INTERNAT HOLDING B V [NL]) 20 March 2014 (2014-03-20)

2 The present application does not meet the requirements of Article 52(1) EPC, because **the subject-matter of claims 1, 2, 4-6, 13 and 14 is not new in the sense of Article 54(1) and (2) EPC.**

2.1 **Claims 1 and 13**

The document D1 discloses (the references in parentheses applying to this document):
A stroller (14) comprising: a stroller frame (14,16,68); a plurality of wheels (74) coupled to the stroller frame; a first seat (12) coupled to the stroller frame; a first seat attachment housing (16) disposed along a first portion of

the stroller frame; a second seat attachment housing (16) disposed along a second portion of the stroller frame; a first removable seat attachment adapter (46,124) configured to be removably coupled to the first seat attachment housing; and a second removable seat attachment adapter (46,124) configured to be removably coupled to the second seat attachment housing.

A method of attaching a second stroller seat to a stroller (14) comprising: providing a stroller (14) comprising: a stroller frame (14,16,68); a plurality of wheels (74) coupled to the stroller frame (14,16,68); a first stroller seat coupled to the stroller frame (14,16,68);
a first seat attachment housing (16) disposed along a first portion of the stroller frame (14,16,68); a second seat attachment housing (16) disposed along a second portion of the stroller frame (14,16,68); a first removable seat attachment adapter; and a second removable seat attachment adapter; wherein each of the first and the second removable seat attachment adapters comprise a first end and a second end, the second end comprising a seat connector; inserting the first end of the first removable seat attachment adapter into first seat attachment housing (16); inserting the first end of the second removable seat attachment adapter into the second seat attachment housing (16); and coupling the second stroller seat to the seat connector of each of the first removable seat attachment adapter (16) and the second removable seat attachment adapter (16).

The subject-matter of claims 1 and 13 is therefore not new (Article 54(1) and (2) EPC).

2.2 Documents D2 and D3 disclose also the subject matter of claims 1 and 13:

D2: frame (102); a plurality of wheels (110), first seat (106), first seat attachment housing (1002), second seat attachment housing (1002), first and second adapters (108)
D3: frame (12); a plurality of wheels (30), first seat (22), first seat attachment housing (64), second seat attachment housing (66), first and second adapters (40)

2.3 **Claims 2, 4-6, 13 and 14**

The document D1 discloses also (the references in parentheses applying to this document):

A stroller, wherein each of the first seat attachment housing and the second seat attachment housing comprise: an adapter receiving cavity (90) configured to receive at least a portion of a respective one of the first and the second removable seat attachment adapters; and a door (102,104) disposed adjacent a top side of the respective seat attachment housing and configured to move from a closed configuration, preventing access to the adapter receiving cavity from the top side of the respective seat attachment adapter, to an open configuration allowing access to the adapter receiving cavity from the top side of the respective seat attachment adapter, wherein the door is rotatably coupled to the respective seat attachment housing and wherein the door is configured to rotate from the closed configuration to the open configuration (Fig.1-13), further comprising a hinge (88, 92) having a first portion coupled to the door and a second portion coupled to the respective seat attachment housing (Fig.1-13), wherein the hinge rotatably couples the door to the respective seat attachment housing (Fig.1-13), wherein the adapter receiving cavity comprises: a first open end; and a distal second open end (Fig.1-13); wherein the adapter receiving cavity provides a through hole through the respective first or second seat attachment housing,

Methode, wherein the stroller (14) further comprises a first door (102,104) disposed adjacent a top side of the first seat attachment housing (16) and a second door (102,104) disposed adjacent a top side of the second seat attachment housing (16), the method further comprising:
adjusting the first door (102,104) from a closed configuration, preventing access to first seat attachment housing (16), to an open configuration, allowing access to the first seat attachment housing (16), prior to inserting the first end of the first removable seat attachment adapter into first seat attachment housing (16);
adjusting the second door (102,104) from the closed configuration to the open configuration prior to inserting the first end of the second removable seat attachment adapter into the second seat attachment housing (16).

The subject-matter of claims 2, 4-6, 13 and 14 is therefore not new (Article 54(1) and (2) EPC).

3 A latching mechanism is well known and disclosed in D2 (see figure 10 and [0071]), the features of claim 8-10 and 15 are merely one of several straight-forward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

Thus the present application does not meet the criteria of an inventive, because **the subject-matter of claims 8-10 and 15 does not involve an inventive step.**

4 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments made, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages of the application as filed on which these amendments are based (see Guidelines F-III, 2.6).

If the applicant considers it appropriate, these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

5 To meet the requirements of Rule 42(1)(b) EPC, the document D1 should be identified in the description and its relevant contents should be indicated. The applicant should ensure that it is clear from the description which features of the subject-matter of the independent claim is known from the document D1.

6 The combination of the features of dependent claim 3 is neither known from, nor rendered obvious by, the available prior art. A new independent claim may be drafted to include these features, bearing in mind that the features known in combination in D1 should be placed in the preamble of such a claim in accordance with Rule 43(1) EPC.

7 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments made, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages

of the application as filed on which these amendments are based (see Guidelines E-II, 1).

8 To meet the requirements of Rule 42(1)(b) EPC, the document D1 should be identified in the description and its relevant contents should be indicated. The applicant should ensure that it is clear from the description which features of the subject-matter of the independent claim is known from the document D1.

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European Patent Office
Office européen des brevets

European Patent Office
80298 MUNICH
GERMANY
Tel: +49 89 2399 0
Fax: +49 89 2399 4465

Haley, Stephen
Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES
ROYAUME-UNI

Formalities Officer
Name: Rocchi, Sabrina
Tel: +49 89 2399 - 2106
or call
+31 (0)70 340 45 00

Substantive Examiner
Name: Gineste, Bertrand
Tel: +49 89 2399 - 5718

Application No.	Ref.	Date
09 831 215.0 - 1760	MJB08641EP	13.01.2016
Applicant: Baby Jogger, LLC		

Communication pursuant to Article 94(3) EPC

The examination of the above-identified application has revealed that it does not meet the requirements of the European Patent Convention for the reasons enclosed herewith. If the deficiencies indicated are not rectified the application may be refused pursuant to Article 97(2) EPC.

You are invited to file your observations and insofar as the deficiencies are such as to be rectifiable, to correct the indicated deficiencies within a period

of 4 months

from the notification of this communication, this period being computed in accordance with Rules 126(2) and 131(2) and (4) EPC. One set of amendments to the description, claims and drawings is to be filed within the said period on separate sheets (R. 50(1) EPC).

If filing amendments, you must identify them and indicate the basis for them in the application as filed. Failure to meet either requirement may lead to a communication from the Examining Division requesting that you correct this deficiency (R. 137(4) EPC).

Failure to comply with this invitation in due time will result in the application being deemed to be withdrawn (Art. 94(4) EPC).

Registered letter
EPO Form 2001 12.10CSX

Gineste, Bertrand
Primary Examiner
For the Examining Division

Enclosure(s): 3 page/s reasons (Form 2906)

The examination is being carried out on the **following application documents**

Description, Pages

1, 3-12	as published	
2, 13	filed in electronic form on	11-06-2014

Claims, Numbers

1-15	filed in electronic form on	11-06-2014

Drawings, Sheets

1/8-8/8	as published

Reference is made to the following document; the numbering will be adhered to in the rest of the procedure.

D1 ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16)

The arguments of the applicant in his letter dated 10.06.2014 have been duly acknowledged.

1 Amendments filed

The newly filed documents do not meet the requirements of Article 123(2) EPC in that some amendments are not based on the original application documents for the following reasons:

1.1 Claims 1 and 11

1.1.1 The feature of claims 1 and 11 relating to "**separate** left and right attachment frame members" does not have any basis in the application as originally filed which merely discloses a seat attachment provided with left and right attachment frame members (see [0031] of the original description), each of these frame members being removably connected to the stroller frame (12) in a front portion of the stroller (10) adjacent to the corresponding left and right front wheels (see [0029] of the original description).

1.1.2 The original description and the original drawings remains silent with regard to a **potential separation** between left and right attachment frame members (24). According to paragraph [0029] of the original description: "Only one seat attachment is shown in Figure 3, the stroller 10 would use two seat

attachments as shown in Figure 3 or one seat attachment comprising two seat support elements.". This means that seat 13 can be attached to stroller 10:

- either by a single seat attachment 20 comprising two seat support elements 22 or
- by left and right seat attachments 20, each comprising a seat support element 22.

A seat attached to stroller 10 by **separate** left and right seat attachments 20, i.e. by **separate** left and right frame members 24 is not disclosed in paragraph [0029] of the original description.

1.1.3 Each of attachment frame members 24 is removably connected to the corresponding side of stroller frame 10, both sides of the stroller frame being usually not separable as mentioned by the applicant in his letter dated 10.06.2014, page 3, last paragraph. Thus, there is no reason why left and right attachment frame members should be separable.

Besides, paragraph [0031] of the original description discloses two attachment frame members, wherein wheel support frame 26 connecting seat attachment wheel 23 to attachment support frame 24 is pivotally connected to both attachment frame members (24). Wheel support frame 26 seems therefore to connect left and right attachment frame members.

Also according to paragraph [0031], "attachment frame member 24 may span the width of the stroller between the two attachment frame members 17". It seems therefore that left and right attachment frame members seem to be fixedly connected to each other.

The separation mentioned in claim 1 can therefore not be considered as implicit to a person skilled in the art.

1.1.4 The information concerning the separation of the left and right attachment frame members present in claim 1 is therefore not directly and unambiguously derivable from that previously presented by the original application, even when account is taken of matter which is implicit to a person skilled in the art.

1.1.5 Thus the addition of this feature introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 123(2) EPC (see the Guidelines for Examination in the EPO H-IV; 2).

2 Further prosecution

2.1 Claims 1 and 11 have been drafted as separate independent claims.

Under Article 84 in combination with Rule 43(2) EPC, an application may contain more than one independent claim in a particular category only if the subject-matter claimed falls within one or more of the exceptional situations set out in paragraph (a), (b) or (c) of Rule 43(2) EPC. This is not the case in the present application, however, for the following reason: it seems that the stroller according to claim 1 comprises all of the features of the seat attachment according to claim 11, i.e. that the stroller according to claim 1 could be rewritten as dependent on the seat attachment according to claim 11.

3 Miscellaneous

3.1 The applicant is invited to file new claims which take account of the above comments.

3.2 When filing amended claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision, especially of the introductory portion and any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed (Article 123(2) EPC).

3.3 The applicant is invited to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion and to indicate the passages of the application as filed on which these amendments are based (see article 123(2) EPC as well as the Guidelines for Examination in the EPO H-III; 2.1 and 2.2). The applicant is reminded that the European Patent Office no longer accepts handwritten amendments as set out in the Official Journal, OJ EPO 2013, 603 ("Notice from the European Patent Office dated 8 November 2013 concerning application of Rules 49 and 50 EPC to handwritten amendments").

Espacenet

Bibliographic data: ES2253093 (A1) — 2006-05-16

Small double infantile car has two small car units each of which may be utilized separate from other since car units are removably attached by connectors

Inventor(s): JANE STOPP JOAQUIM [ES] ± (JANE STOPP JOAQUIM)

Applicant(s): PLAY SA [ES] ± (PLAY, S.A)

Classification: - international: *B62B9/12*
- cooperative: **B62B7/008**; **B62B7/142**; **B62B7/145**; **B62B9/102**; **B62B9/12**; B62B2207/02 more

Application number: ES20040001973 20040806

Priority number(s): ES20040001973 20040806

Also published as: ES2253093 (B1)

Abstract of ES2253093 (A1)

The car is comprised of two small car units joined together by removable connectors. The removable connectors include a pair of sockets in the front part of one car unit and a pair of steel rods in the rear part of the other car unit. The steel rods are removably insertable into the sockets such that each car unit may be utilized separate from the other.

(19) OFICINA ESPAÑOLA DE PATENTES Y MARCAS

ESPAÑA

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(12) SOLICITUD DE PATENTE A1

(22) Fecha de presentación: **06.08.2004**

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(43) Fecha de publicación del folleto de la solicitud: **16.05.2006**

(71) Solicitante/s: **PLAY, S.A.**
Polígono Industrial Riera de Caldes
Rda. Boada Vell, 6
08184 Palau de Plegamans, Barcelona, ES

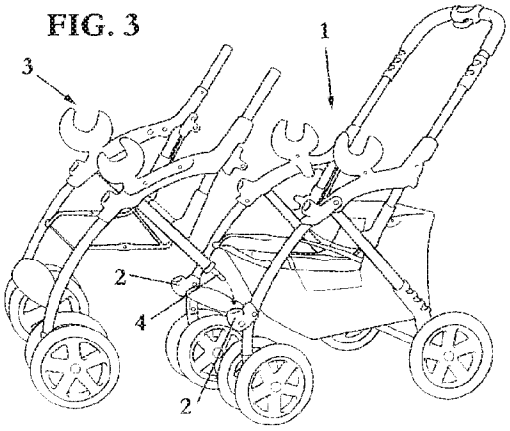
(72) Inventor/es: **Jane Stopp, Joaquim**

(74) Agente: **Ponti Sales, Adelaida**

(54) Título: **Cochecito infantil doble.**

(57) Resumen:
Cochecito infantil doble.
El cochecito comprende un primer cochecito infantil (1) y un segundo cochecito infantil (3) unidos entre sí, y se caracteriza por el hecho de que los dos cochecitos están unidos mediante medios de acoplamiento amovibles (2, 4). Dichos medios de acoplamiento amovibles comprenden un par de casquillos (2) previstos en la parte delantera de dicho primer cochecito infantil (1), donde se alojan un par de varillas (4) previstas en la parte posterior del segundo cochecito infantil (3). Se consigue un cochecito infantil doble que también se puede utilizar de manera individual.

FIG. 3



ES 2 253 093 A1

DESCRIPCIÓN

Cochecito infantil doble.

La presente invención se refiere a un cochecito infantil doble, que puede utilizarse para llevar dos niños a la vez, o de manera independiente.

Antecedentes de la invención

En la actualidad existen cochecitos infantiles dobles, que habitualmente se utilizan para llevar gemelos, aunque también se pueden usar para llevar niños de diferentes edades.

Estos cochecitos dobles comprenden dos cochecitos infantiles unidos a través de una única estructura, de manera que no se pueden separar.

Esta imposibilidad de separar los cochecitos presenta varios inconvenientes. En primer lugar, no se pueden utilizar los cochecitos por separado, lo que implica que si se han de llevar los dos niños por separado es necesario un cochecito independiente. En segundo lugar, si los niños son de diferente edad, cuando el mayor ya no necesita un cochecito infantil, únicamente se dispone de un cochecito infantil doble, no pudiéndose utilizar de manera individual.

Por lo tanto, es evidente la necesidad de un cochecito infantil que se pueda utilizar como cochecito infantil doble para dos niños a la vez y, al mismo tiempo, si se desea, utilizarlo como dos cochecitos infantiles independientes.

Descripción de la invención

Con el cochecito infantil de la invención se consiguen resolver los inconvenientes citados, presentando otras ventajas que se describirán.

El cochecito infantil doble de la presente invención comprende un primer cochecito infantil y un segundo cochecito infantil unidos entre sí, y se caracteriza por el hecho de que los dos cochecitos infantiles están unidos mediante medios de acoplamiento amovibles.

Gracias a esta característica, el cochecito infantil de la presente invención se puede utilizar con ambos cochecitos unidos o separados, según se desee.

Según una realización preferida, dichos medios de acoplamiento amovibles comprenden un par de casquillos previstos en la parte delantera de dicho primer cochecito infantil, donde se alojan un par de varillas previstas en la parte posterior del segundo cochecito infantil.

De esta manera, el acoplamiento y desacoplamiento de los dos cochecitos puede realizarse cómoda y rápidamente en el momento que se desee utilizar dichos cochecitos unidos o por separado.

Preferentemente, el segundo cochecito infantil comprende un par de ruedas montadas de manera amovible, estando dichas ruedas amovibles de dicho segundo cochecito montadas en dichas varillas.

Ventajosamente, dicho segundo cochecito comprende un manillar montado de manera amovible.

Breve descripción de los dibujos

Para mejor comprensión de cuanto se ha expuesto se acompañan unos dibujos en los que, esquemáticamente y tan sólo a título de ejemplo no limitativo, se representa un caso práctico de realización.

La figura 1 es una vista en perspectiva del primer cochecito de la presente invención;

La figura 2 es una vista en perspectiva del segundo cochecito de la presente invención;

La figura 3 es una vista en perspectiva de los dos cochecitos justo antes de su unión;

La figura 4 es una vista en perspectiva de cochecito doble de la presente invención; y

Las figuras 5 y 6 son vistas en perspectiva de dos cochecitos dobles según dos realizaciones alternativas.

Descripción de una realización preferida

En la figura 1 se ha representado un primer cochecito infantil 1, cuya única diferencia respecto a un cochecito infantil convencional es la presencia de medios de acoplamiento en su parte delantera. En concreto dichos medios de acoplamiento son un par de casquillos 2, cuya función se describirá posteriormente.

El resto del cochecito infantil no se describe, ya que es convencional y no forma parte de la presente invención.

En la figura 2 se ha representado un segundo cochecito infantil 3 que puede acoplarse al primer cochecito infantil 1 citado anteriormente. En este caso, la diferencia entre este segundo cochecito 3 y uno convencional es que comprende medios de acoplamiento en su parte trasera, en concreto un par de varillas 4, que se alojan en los casquillos 2 citados anteriormente cuando se utilizan ambos cochecitos 1, 3 acoplados entre sí, o en las que se colocan las ruedas traseras 5 del segundo cochecito 3, las cuales están montadas de manera amovible.

Además, el manillar 6 también está montado de manera amovible, pudiéndose retirar cuando se utilice el cochecito doble 1, 3.

Como es evidente, los dos cochecitos 1, 3 representados en las figuras 1 y 2 pueden utilizarse de manera independiente. Si se desea utilizarlos conjuntamente, simplemente se han de retirar las ruedas traseras 5 y el manillar 6 del segundo cochecito 3, introduciéndose las varillas 4 en los correspondientes casquillos 2, tal como se muestra en la figura 3. Aunque no se ha representado en las figuras, es evidente que los casquillos 2 comprenden algún sistema de retención para evitar que las varillas 4 se salgan accidentalmente.

Una vez realizada esta operación, el cochecito infantil doble de la presente invención queda tal como se ha representado en la figura 4, listo para utilizarse con dos niños.

Para volver a utilizar los dos cochecitos 1, 3 de manera independiente simplemente hay que realizar la operación inversa a la descrita anteriormente.

En las figuras 5 y 6 se han representado dos ejemplos de utilización del cochecito doble de la presente invención.

En la figura 5, se ha representado el cochecito doble con un asiento trasero 8 y un capazo delantero 7, mientras que en la figura 6 se ha representado con dos asientos 8. Como es sobradamente conocido, el capazo 7 es adecuado para bebés que han de ir echados, mientras que el asiento 8 es adecuado para niños que pueden permanecer sentados.

Es evidente que las combinaciones representadas en las figuras 5 y 6 son solamente a modo de ejemplo, pudiéndose utilizar cualquier combinación adecuada además de las representadas.

A pesar de que se ha hecho referencia a una realización concreta de la invención, es evidente para un experto en la materia que el coche infantil descrito es susceptible de numerosas variaciones y modifica-

357 of 1090 MOCKINGBIRD ET AL. EX1019

ciones, y que todos los detalles mencionados pueden ser substituidos por otros técnicamente equivalentes, sin apartarse del ámbito de protección definido por las reivindicaciones adjuntas.

REIVINDICACIONES

1. Cochecito infantil doble, que comprende un primer cochecito infantil (1) y un segundo cochecito infantil (3) unidos entre sí, **caracterizado** por el hecho de que los dos cochecitos están unidos mediante medios de acoplamiento amovibles (2, 4).

2. Cochecito infantil doble según la reivindicación 1, **caracterizado** por el hecho de que dichos medios de acoplamiento amovibles comprenden un par de casquillos (2) previstos en la parte delantera de dicho primer cochecito infantil (1), donde se alojan un par de varillas (4) previstas en la parte posterior del segundo cochecito infantil (3).

3. Cochecito infantil doble según la reivindicación 1 ó 2, **caracterizado** por el hecho de que el segundo cochecito infantil (3) comprende un par de ruedas (5) montadas de manera amovible.

4. Cochecito infantil doble según las reivindicaciones 2 y 3, **caracterizado** por el hecho de que dichas ruedas amovibles (5) de dicho segundo cochecito están montadas en dichas varillas (4).

5. Coche infantil doble según la reivindicación 1, **caracterizado** por el hecho de que dicho segundo cochecito (3) comprende un manillar (6) montado de manera amovible.

FIG. 1

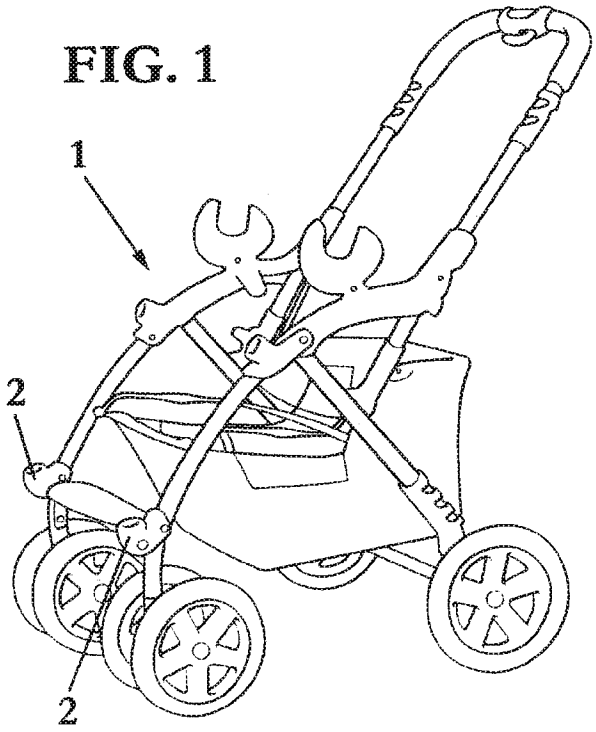


FIG. 2

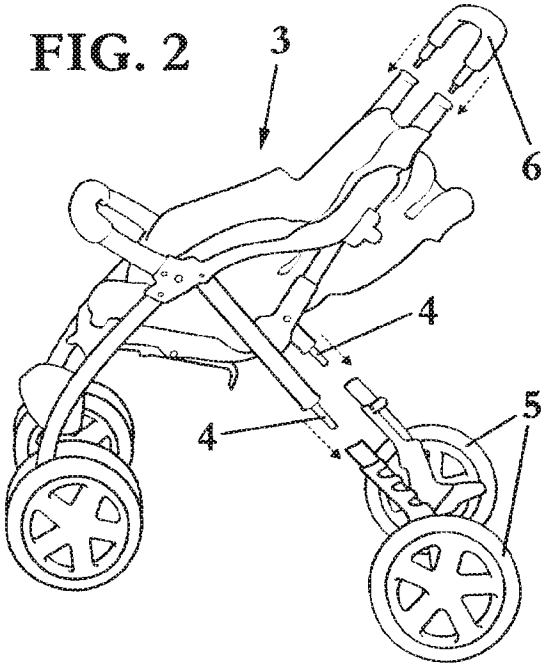


FIG. 3

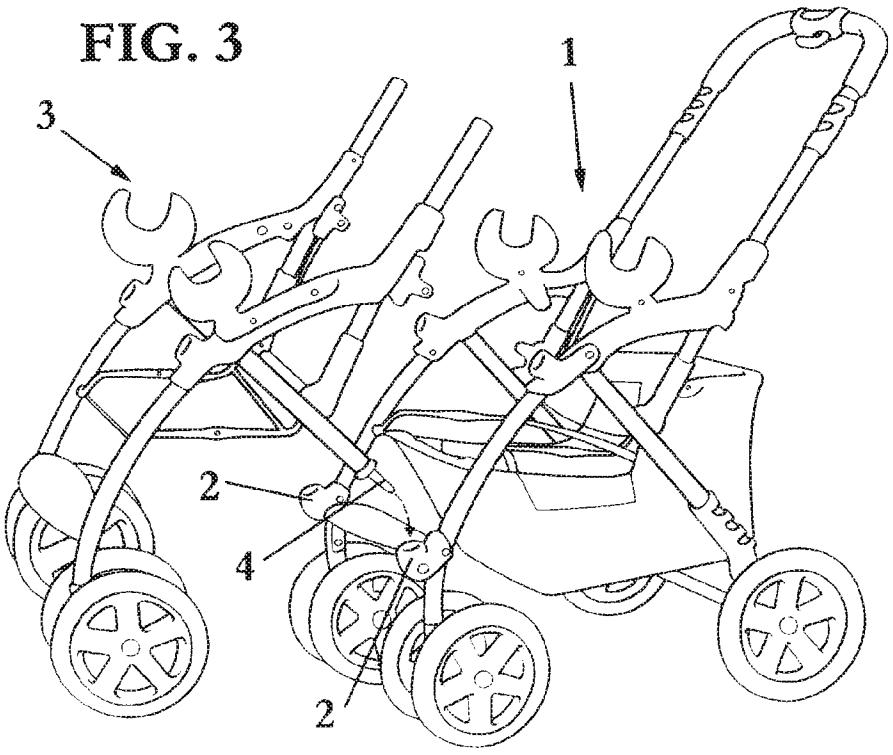


FIG. 4

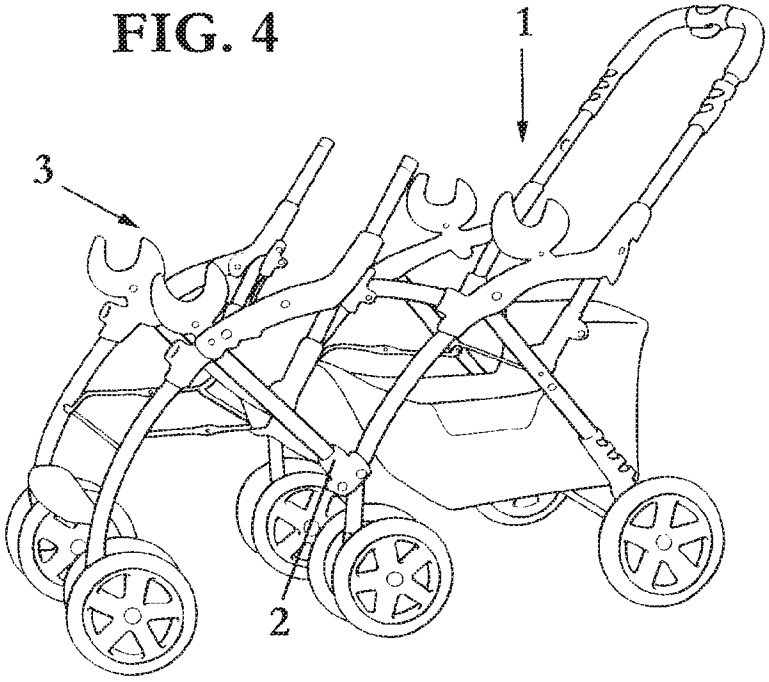


FIG. 5

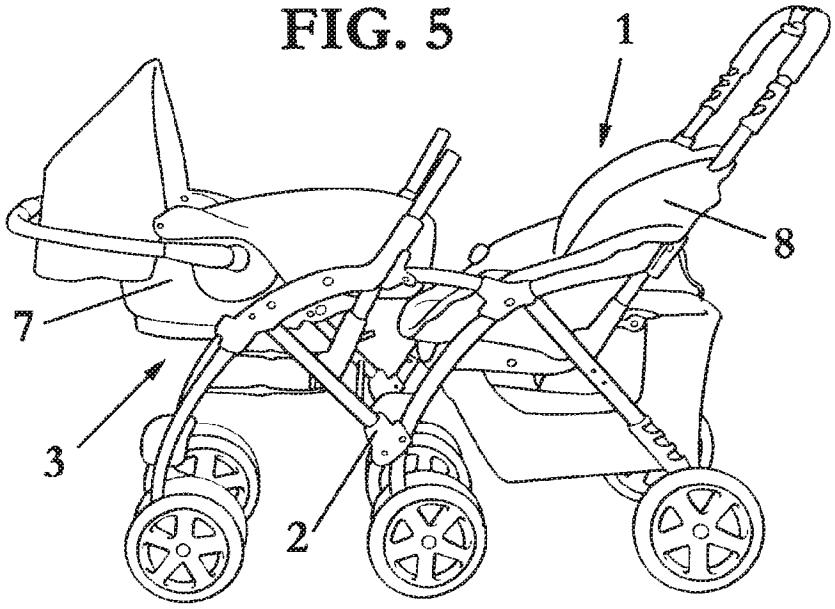
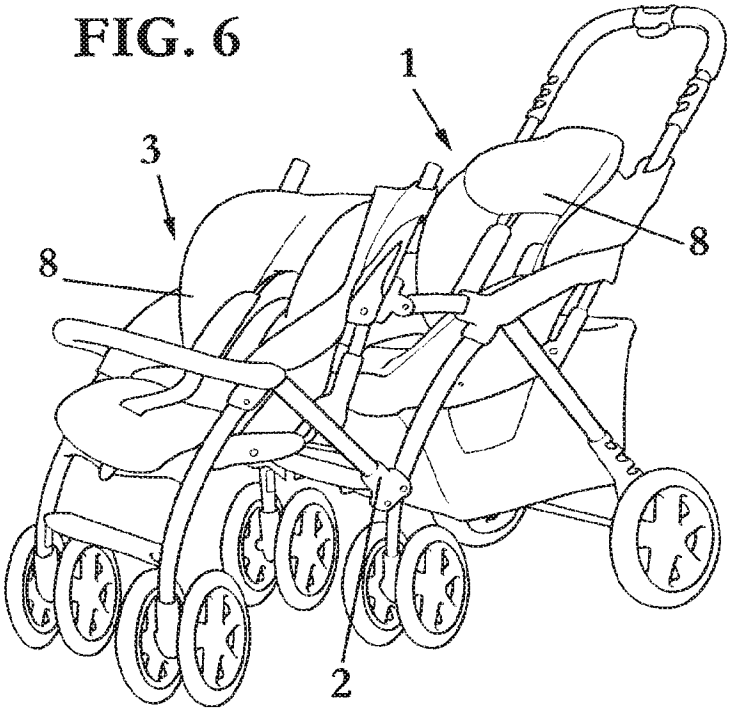


FIG. 6



OFICINA ESPAÑOLA DE PATENTES Y MARCAS

ESPAÑA

(11) ES 2 253 093

(21) Nº de solicitud: 200401973

(22) Fecha de presentación de la solicitud: **06.08.2004**

(32) Fecha de prioridad:

INFORME SOBRE EL ESTADO DE LA TÉCNICA

(51) **Int. Cl.:** ***B62B 9/12*** (2006.01)

DOCUMENTOS RELEVANTES

Categoría	Documentos citados	Reivindicaciones afectadas
X	GB 2368824 A (LACKEY) 15.05.2002, página 8, línea 29 - página 12, línea 20; figuras 4,5,7.	1,5
A		2
X	US 5522121 A (FRAYND) 04.06.1996, columna 1, líneas 30-37; figura 1.	1
A	US 6449801 B1 (DURRIN) 17.09.2002, columna 1, línea 50 - columna 2, línea 62; figuras 3,4.	3,4

Categoría de los documentos citados

X: de particular relevancia
Y: de particular relevancia combinado con otro/s de la misma categoría
A: refleja el estado de la técnica
O: referido a divulgación no escrita
P: publicado entre la fecha de prioridad y la de presentación de la solicitud
E: documento anterior, pero publicado después de la fecha de presentación de la solicitud

El presente informe ha sido realizado

☒ para todas las reivindicaciones ☐ para las reivindicaciones nº:

Fecha de realización del informe	Examinador	Página
20.04.2006	O. Fraile Paredes	1/1

Europäisches Patentamt
European Patent Office
Office européen des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application Number
EP 09 83 1215

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16) * the whole document *	1-14	INV. B62B7/00 B62B9/28 B62K13/00
X	GB 2 309 203 A (JANE SA [ES]) 23 July 1997 (1997-07-23) * the whole document *	1,2,4-13	ADD. B62B7/14 B62B3/00
X	WO 2008/135974 A2 (KATZ GEVA [IL]; LAZAROVICH ORON [IL]) 13 November 2008 (2008-11-13) * the whole document *	1-14	

TECHNICAL FIELDS SEARCHED (IPC)

B62B
B62K

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search	Date of completion of the search	Examiner
Munich	4 November 2013	Gineste, Bertrand

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

3

EPO FORM 1503 03.82 (P04C04)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 09 83 1215

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-11-2013

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
ES 2253093 A1	16-05-2006	NONE	
GB 2309203 A	23-07-1997	DE 29700497 U1	13-03-1997
		ES 1033012 U	16-07-1996
		FR 2743539 A3	18-07-1997
		GB 2309203 A	23-07-1997
		PT 9347 T	29-08-1997
WO 2008135974 A2	13-11-2008	AU 2008246981 A1	13-11-2008
		CA 2712277 A1	13-11-2008
		EP 2170674 A2	07-04-2010
		IL 183033 A	31-10-2012
		US 2010301585 A1	02-12-2010
		WO 2008135974 A2	13-11-2008

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

The examination is being carried out on the **following application documents**

Description, Pages

1-13 as published

Claims, Numbers

1-14 filed with entry into the regional phase before the EPO

Drawings, Sheets

1/8-8/8 as published

Reference is made to the following documents; the numbering will be adhered to in the rest of the procedure.

D1 ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16)

D2 GB 2 309 203 A (JANE SA [ES]) 23 July 1997 (1997-07-23)

D3 WO 2008/135974 A2 (KATZ GEVA [IL]; LAZAROVICH ORON [IL]) 13 November 2008 (2008-11-13)

1 Amendments filed

The newly filed documents do not meet the requirements of Article 123(2) EPC in that some amendments are not based on the original application documents for the following reasons:

1.1 Claim 1

1.1.1 Claim 1 as filed with entry into the regional phase before the EPO (thereafter named claim 1) is a combination of claims 28 and 1 as published with the international patent application WO 2010/065884.

1.1.2 According to the wording of claim 1, the second seat support element seems to be part of the attachment frame member whereas according to claim 1 as published, this second seat support element is part of the seat attachment not of the attachment frame member.

1.1.3 Thus this amendment introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 123(2) EPC (see the Guidelines for Examination in the EPO H-IV; 2.2 and 2.4.4).

1.1.4 To overcome this objection, a new claim 1 could read:

A stroller comprising:

- a frame comprising a first seat support element;
- a first seat removably connected to the first seat support element;
- at east one front wheel and at east one rear wheel and
- a seat attachment comprising:
  - an attachment frame member comprising a connector portion capable of connecting to the stroller frame in a front portion of the stroller adjacent to the front wheel and
  - a second seat support element capable of supporting a second seat ~~to the stroller frame~~.

1.1.5 In order not to delay further the search and the examination of the current European patent application, the present opinion will be based on this new claim 1.

2 Concerning the claims

2.1 Clarity

2.1.1 Claim 1

2.1.1.1 The application does not meet the requirements of Article 84 EPC, because claims 3, 6, 8, 10, 11 and 14 are not clear.

2.1.1.2 Claim 3 is indeed defined by "a wheel support frame connecting the wheel to ..." but it is not clear from the wording of claim 3 to which wheel (front wheel, rear wheel or the **seat attachment** wheel defined in claim 2) the wheel support frame member is connected. In order to overcome this unclarity, the term wheel in claims 2 and 3 could be replaced by the term **seat attachment** wheel.

2.1.1.3 The term "the seat attachment member" used in claim 6 is not previously defined. This term could be replaced by "the second seat support element" as explained in [0031]

2.1.1.4 The term "the seat attachment" of claims 10 and 11 is not previously defined unless claim 9 is dependent on new claim 1.

2.1.1.5 The term "the attachment frame" of claims 2, 8 and 14 is not previously defined. This wording could be replaced by "seat attachment"

2.2 Novelty

2.2.1 New claim 1

2.2.1.1 Document D1 discloses (the references in parentheses applying to this document) a:
stroller (1) comprising:

- a frame comprising a first seat support element (see column 2, lines 61 to 24);
- a first seat (8) removably connected to the first seat support element;
- at east one front wheel and at east one rear wheel (see figure 1) and
- a seat attachment (3) comprising:
  - an attachment frame member comprising a connector portion (4) capable of connecting to the stroller frame in a front portion of the stroller adjacent to the front wheel and
  - a second seat support element capable of supporting a second seat (see column 2, lines 61 to 24) ~~to the stroller frame~~.

2.2.1.2 Thus, it appears that the stroller of claim 1 is not new as required by Articles 52(1) and 54(1)(2) EPC. Therefore claim 1 is not allowable.

2.2.1.3 For the sake of completeness it is pointed out that the objection of lack of novelty of the stroller of claim 1 set above could also have been substantiated with documents D2 (see the whole document) and D3 (see the whole document).

2.2.2 Claims 2 to 14

2.2.2.1 Document D1 (see the whole document) discloses also all of the additional features of claims 2 to 11, 13 and 14

2.2.2.2 Document D2 (see the whole document) discloses also all of the additional features of claims 2 to 4 to 13.

2.2.2.3 Document D3 (see the whole document) discloses also all of the additional features of claims 2 to 14.

2.2.2.4 Thus, it appears that the stroller of claims 2 to 14 is not new as required by Articles 52(1) and 54(1)(2) EPC. Therefore claims 2 to 14 are not allowable.

2.3 Industrial applicability

The stroller of claims 1 to 14 can be made in an industry, it is therefore considered industrially applicable as required by Article 57 EPC.

3 Further prosecution

3.1 At present it is not apparent which part of the application could serve as basis for a new, allowable claim 1. Should the Applicant nevertheless regard some particular matter as patentable, he should substantiate this in detail by indicating in his letter of reply any difference vis à vis the state of the art and the significance thereof. He should also file a claim including such particular matter.

3.2 The new independent claim should be drafted in the two-part form specified in Rule 43(1) of the EPC (see Guidelines for Examination in the EPO F-IV; 2.2) in which the features known from document D1 are part of the preamble. The characterising portion should contain the essential features for which, in combination with the features of the preamble, protection is sought, i.e. the features which the invention adds to the prior art and which distinguish it clearly from the prior art.

3.3 Reference numerals should be added after the technical features of the claims. This should be done in both parts of claims having the two-part form as specified in Rule 43(1) EPC (see Rule 43(7) and in the Guidelines for Examination in the EPO F-IV; 4.19).

4 Concerning the description

4.1 To meet the requirements of Rule 42(1)(b) EPC, document D1 should be identified in the description and the relevant background art disclosed therein should be briefly discussed (see the Guidelines for Examination in the EPO F-II; 4.3).

4.2 The description should be rendered consistent with the new claims. The technical problem solved by the claimed invention and its solution having regard to document D1 should be specified (see Rule 42(1)c) EPC and Guidelines for Examination in the EPO F-II; 4.6).

4.3 The vague statement in the description paragraph [0049] implies that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity of the claims (Article 84 EPC) when used to interpret them (see the Guidelines for Examination in the EPO, F-IV; 4.4). This statement should therefore be amended by adding a reference to the claims to remove this inconsistency.

5 Miscellaneous

5.1 The applicant is invited to file new claims which take account of the above comments.

5.2 When filing amended claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision, especially of the introductory portion and any statements of problem or advantage, not to add subject-matter which extends beyond the content of the application as originally filed (Article 123(2) EPC).

5.3 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant should clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and indicate the passages of the application as filed on which these amendments are based (see Guidelines for Examination in the EPO H-III; 2.2).

5.4 If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

(12) UK Patent Application (19) GB (11) 2 309 203 (13) A

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(22) Date of Filing 23.12.1996

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(71) Applicant(s)
Jané S A

(Incorporated in Spain)

Mercaders S/No, Poligono Industrial Riera De Caldes, E-08184 Palau De Plegamans (Barcelona), Spain

(72) Inventor(s)
Ramon Jane Cabagnero

(74) Agent and/or Address for Service
R R Prentice & Co
The Hop Exchange, 24 Southwark Street, LONDON, SE1 1TY, United Kingdom

(51) INT CL^6
B62B 7/04 // B62B 9/12

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B7B BTX1 B406 B407

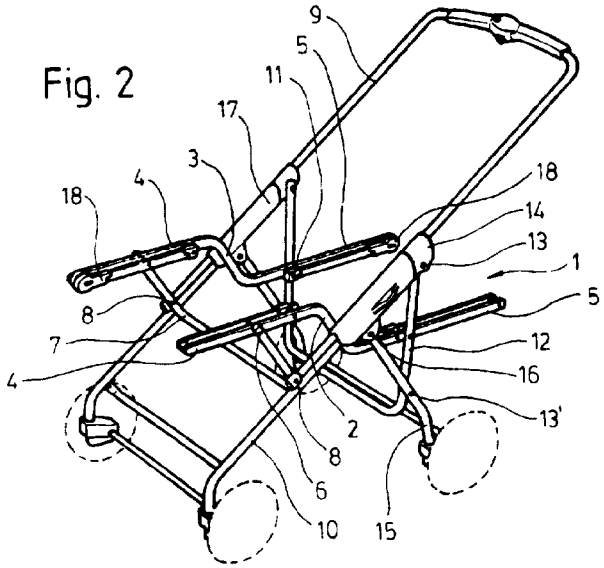
(56) Documents Cited
FR 002615155 A1 US 5033761 A US 4753453 A
US 4728112 A US 4542915 A

(58) Field of Search
UK CL (Edition O) B7B BTF1 BTX1
INT CL^6 B62B 7/00 7/04 9/00 9/10 9/12 9/28
Online: WPI

(54) Compact two seater pushchair

(57) A two-seater pushchair comprises a foldable frame 1 upon which can be mounted two seats (figures 3 and 4) or a seat and a carry cot (figure 5), which frame has two side bars 2, 3 each having an upper portion 4 for mounting one seat/carry cot and a lower portion 5 at a different level for mounting the other seat/carry cot. The seats can be mounted variously to face one another or otherwise (figures 3 to 5). The portions may include devices 18 for locking the seats and/or carry cot in place. The upper portions and lower portions of the side bars may be linked by respective U-shaped supports 7 and 12. A backrest (R figure 3) and legrest (P figure 3) of the seat(s) may recline and a hood (T figures 3A and 5) may be provided on the seat(s)/carry cot.

Fig. 2



GB 2 309 203 A

MOCKINGBIRD ET AL. EX1019

Fig. 1

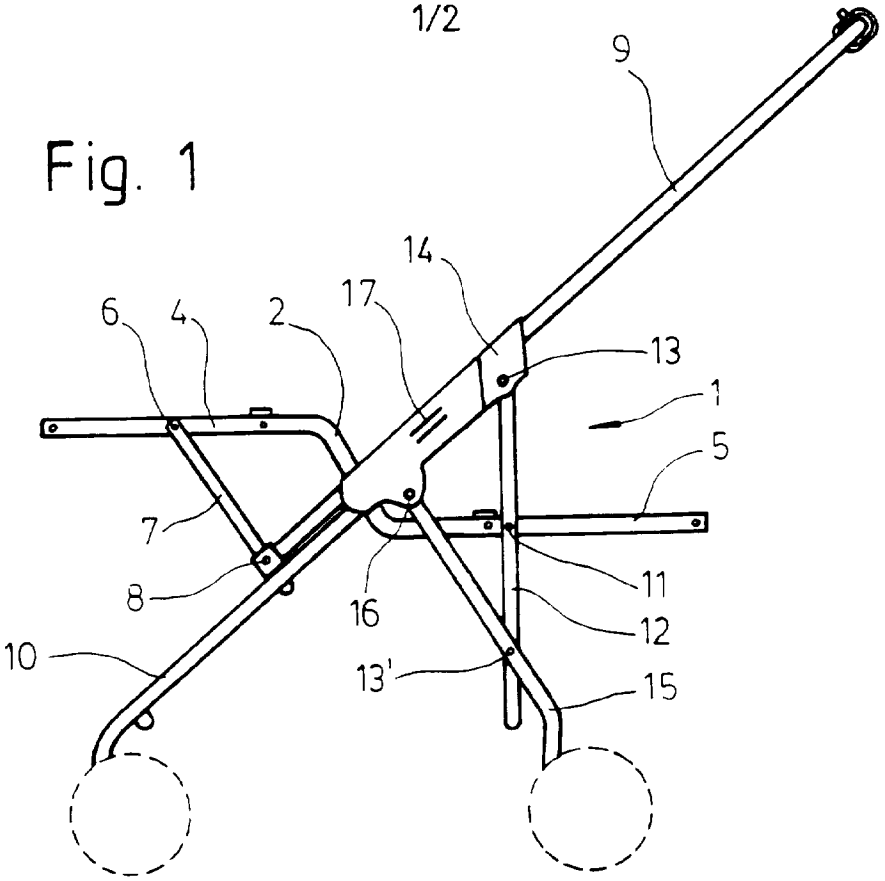
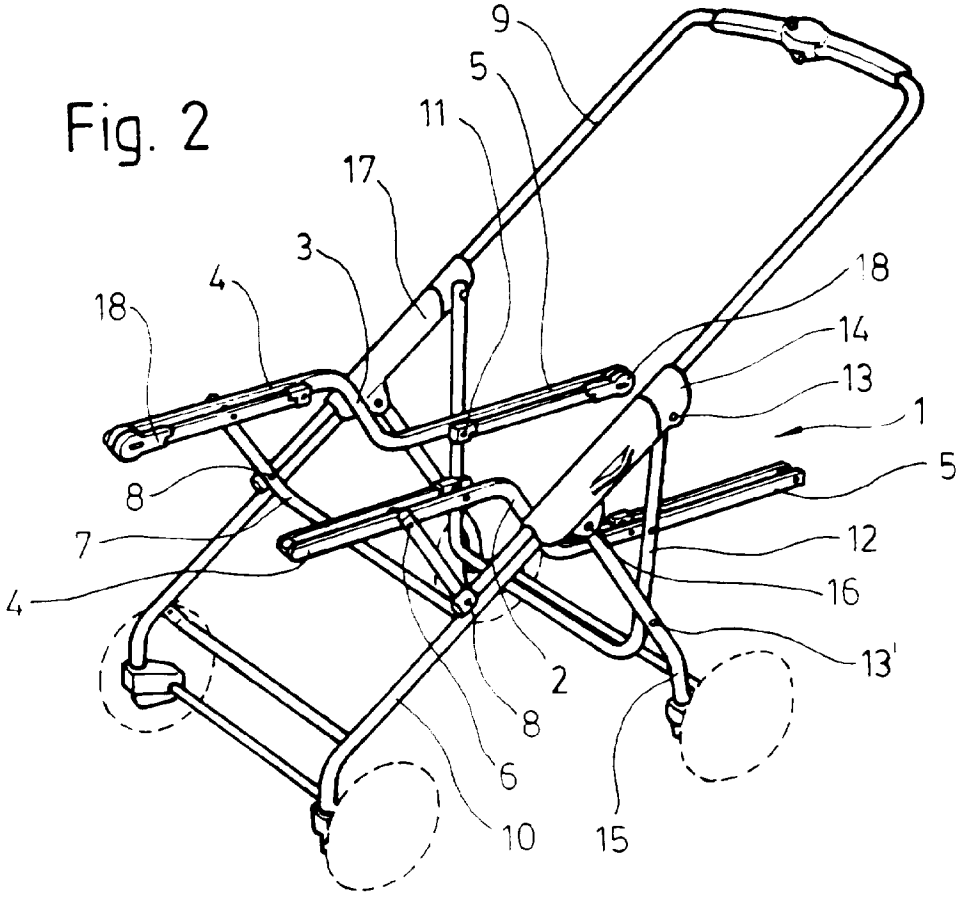

9
14
17
6
4
2
13
1
5
7
11
8
16
12
10
13'
15

Fig. 2


9
5
11
17
3
4
18
18
14
13
1
5
8
7
12
16
4
13'
2
8
6
10
15

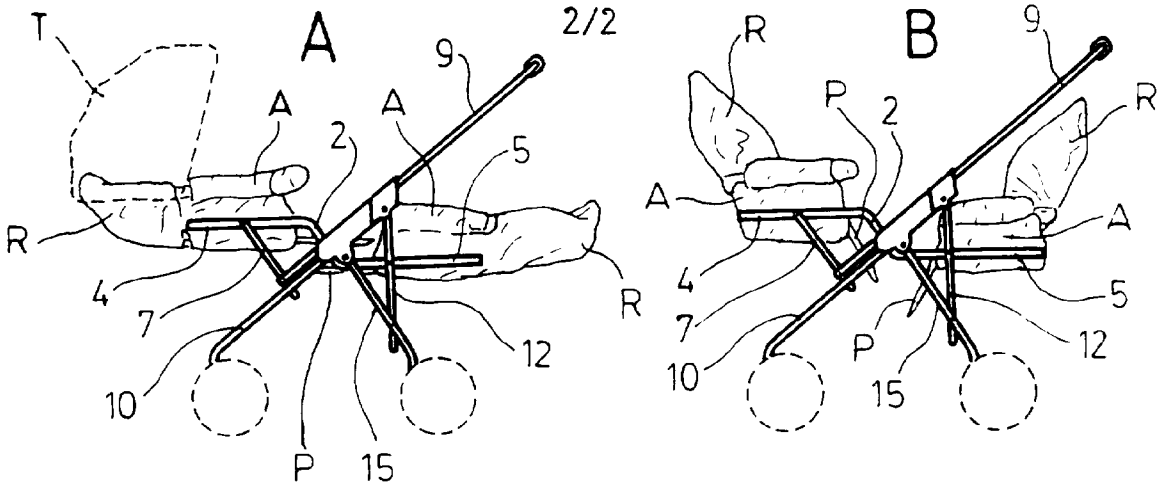


Fig. 3

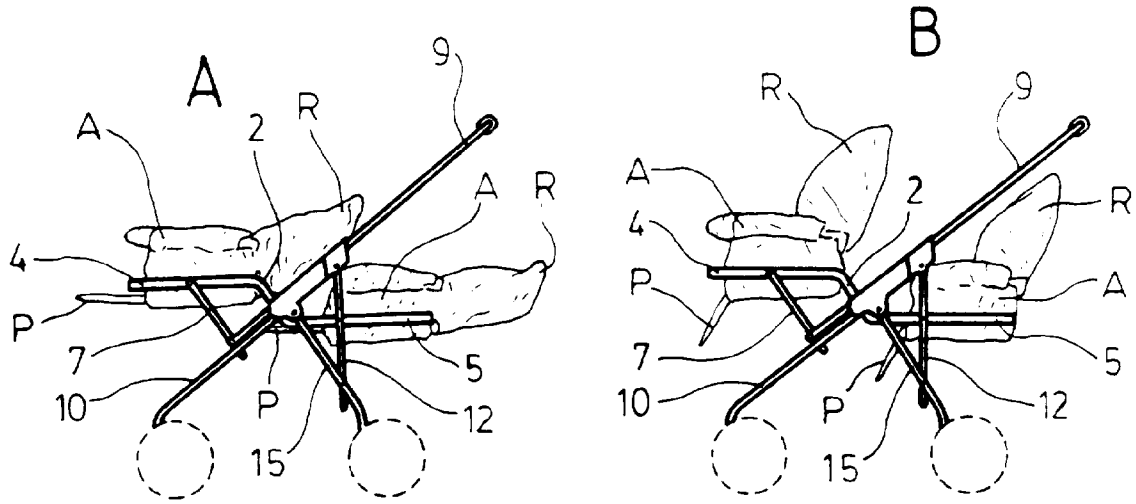


Fig. 4

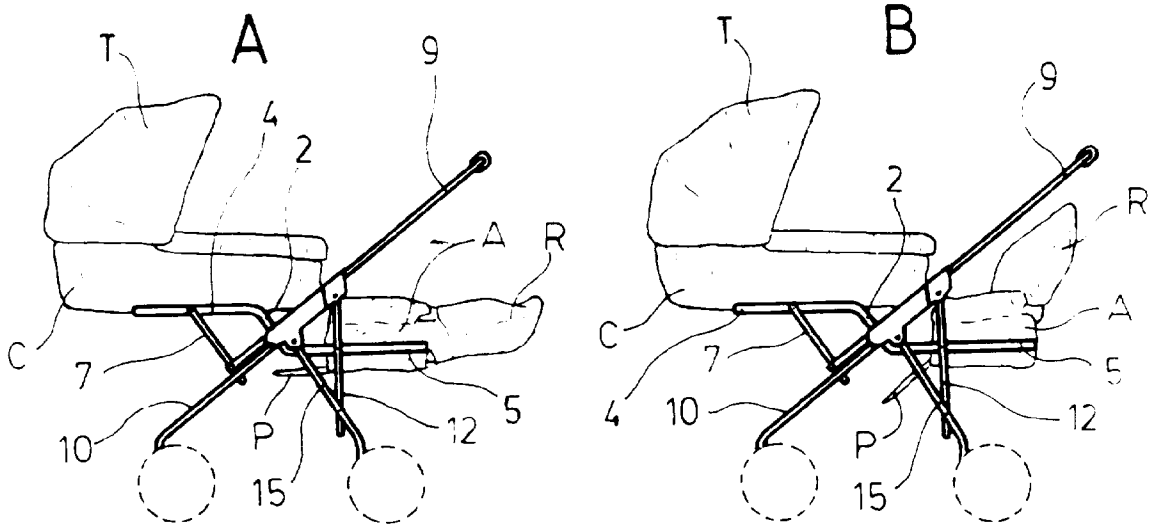


Fig. 5

MOCKINGBIRD ET AL. EX1019

Two-seater children's pram-pushchair

This invention refers to a two-seater children's pram-pushchair.

Different models of two-seater children's pram-pushchairs are already known, created for twins, usually comprising a frame with four or six sets of wheels upon which one double-width seat or two single seats or two carry-cots are assembled side by side. These seats or carry-cots are usually placed looking forwards or backwards.

The problem with these pram-pushchairs is their width which hinders their passing through normal-width doors. To solve this problem, there are also two-seater pushchairs whose width is similar to that of conventional pram-pushchairs, where the seats are arranged one behind the other. In this case the pushchair is particularly long, making it difficult to fold up and with its not fitting into a car boot. In order to reduce this length in as far as possible, in some cases the matter of the child's comfort has been simplified using seats in which the child cannot lie flat.

The object of this invention is to achieve a two-seater children's pram-pushchair in which the children can lie down without the device being excessively long and of a normal width, with the additional advantage that the children can sit one in front of the other or looking at each other, and with its even being possible to use one seat and one carry-cot for transporting two children of different ages.

For this purpose, the common feature is that the chassis of the pram-pushchair has two side bars, each one of them formed by two stretches on different levels, with the two seats or one seat and one carry-cot being coupled freely on the higher stretches of the two bars and on the lower of them respectively.

BAD ORIGINAL

The two stretches of the two side bars on the different levels include a device to lock and unlock the fixture of the seats and carry-cot assembled on them.

These and other features are better understood from the detailed description that follows, to facilitate which two sheets of drawings are attached where a practical case of the embodiment mentioned is shown; this is provided merely as a non-restrictive example of the scope of this present invention.

In the drawings :

Figure 1 shows the side elevation of the frame of the pushchair in question.

Figure 2 shows a perspective view of that frame, and

Figures 3, 4 and 5 represent, schematically, some of the different positions of the seats and carry-cot.

According to the drawings, the pram-pushchair includes a foldable frame -1- presenting, characteristically, two side bars -2- and -3- each one of which formed by facing stretches -4- and -5- on different levels. Of these, stretches -4-, which are higher, are the front ones whereas stretches -5-, which are lower, are the rear ones.

In this case, the side bars are coupled by means of joints to the frame of the pram-pushchair. Thus, the higher front stretches -4- are jointed at an intermediate point -6- at the ends of the branches of a first U-shaped support -7- which is jointed underneath by points -8- to the ends of the branches of the handle in an inverted U-shape -9-, sliding along those branches along the front feet -10- of the frame when the pram-pushchair is folded up.

Meanwhile, the lower rear stretches -5- of the side bars -2- and -3- are jointed at an intermediate point -11- to an intermediate point of the branches of a second support in a U-shape -12- ; at the higher end -13- these

BAD ORIGINAL

are jointed to different brackets -14- coupled to the front feet -10- and underneath -13- they are jointed to the rear feet -15- ; these, at their higher end -16- are jointed to different brackets -17- linked to the brackets of the handle -9-.

The stretches -4- and -5- of the side bars are equipped with devices -18- to lock and unlock the fixtures of the corresponding seats -A- comprising a jointed back-rest -R- and leg-rest -P- and a carry-cot -C-; the seats and the carry-cot can be equipped with a hood -T-.

This structure and design of the side bars -2- and -3- make it possible to arrange the seats in front of each other and lying down (figure 3-A) or in front of each other and with the back-rest raised and the leg-rest lowered (figure 3-B), or to have one seat behind the other lying down (Figure 4-A) or with the back-rest raised and the leg-rest lowered (figure 4-B). It is also possible to arrange a carry-cot and a lying seat (Figure 5-A) or with the seat with the back-rest raised and the leg-rest lowered (Figure 5-B). Logically, other combinations can also be made such as for example one seat looking forwards and other looking backwards.

It is to be understood that the frame -1- may present a different structure to the one that is shown here as the essential factor of this pram-pushchair is the coupling of the side bars with its facing stretches on different levels of the frame.

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CLAIMS

1.Two-seater children's pram-pushchair comprising a foldable frame upon which the seats are assembled, characterized in that the frame has two side bars, each one of them formed by facing stretches on different levels, coupling fixedly on the higher stretches of the two bars and on the lower stretches thereof the corresponding seats or one seat and one carry-cot, where the seats can be arranged facing one another or otherwise.

2. Two-seater children's pram-pushchair, according to Claim 1, characterized in that the two stretches on different levels of the two side bars include devices for locking and unlocking the coupling of the seats and carry-cot assembled on them.

3. Two-seater children's pram-pushchair, according to Claim 1, characterized in that the front stretches of the side bars are linked by a joint at an intermediate point of the higher ends of the branches of the first support in a U-shape, articulated underneath the frame of the pram-pushchair.

4. Two-seater children's pram-pushchair, according to claim 1, characterized in that the rear stretches of the side bars are linked in a jointed way on an intermediate point of the branches of a second U-shapep support above and below the frame of the pram-pushchair.

5. Two-seater children's pram-pushchair, substantially as described herein with reference to the drawings.

BAD ORIGINAL

Amendments to the claims have been filed as follows

CLAIMS

1. A two-seater children's pram-pushchair comprising a foldable frame adapted to receive two seats, wherein the frame has two side bars, each one of which has two parts located at different heights, the two seats or one seat and one carry-cot being detachably mountable on the upper and lower parts of the side bars in such a manner as to face one another or be located one behind the other.

2. A two-seater children's pram-pushchair according to claim 1, wherein the said two parts of each of the side bars include devices for locking and unlocking the seats or carry-cot detachably mounted on said parts.

3. A two-seater children's pram-pushchair according to claim 1 or claim 2, wherein the upper parts of the side bars are located towards the front and are articulatedly linked at an intermediate point by a U-shaped joint which is articulated at a lower point to the frame of the pram-pushchair.

4. A two-seater children's pram-pushchair according to any one of the preceding claims, wherein the lower parts of the side bars are located towards the rear and are linked at an intermediate point by a second U-shaped joint which is articulatedly located at its upper point and at its lower point to the frame of the pram-pushchair.

5. A two-seater children's pram pushchair substantially as described herein with reference to the drawings.

The Patent Office

-6-

Application No: GB 9626714.1
Claims searched: 1 to 5

Examiner: Karl Whitfield
Date of search: 12 March 1997

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): B7B (BTF1, BTX1)

Int Cl (Ed.6): B62B 7/00, 7/04, 9/00, 9/10, 9/12, 9/28

Other: Online database: Derwent World Patents Index accessed via Questel

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X	US 4728112	(WYNENS) see especially figures 1 & 3	1 at least
X	US 4753453	(SCHILBACH) see especially figures 5-8	1 at least
X	US 4542915	(WHEELER et al) see especially 2	1 at least
X	FR 2615155 A1	(BOIDIN) see especially figures 1 & 2	1 at least
A	US 5033761	(KELLY) see especially figures 2-4	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

An Executive Agency of the Department of Trade and Industry
MOCKINGBIRD ET AL. EX1019

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference DYN005.PCT	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/US2009/066817	International filing date *(day/month/year)* 04 December 2009 (04.12.2009)	Priority date *(day/month/year)* 04 December 2008 (04.12.2008)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DYNAMIC BRANDS, LLC		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

	Date of issuance of this report 07 June 2011 (07.06.2011)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Beate Giffo-Schmitt e-mail: pt03.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: BERNARD PIKE
TROUTMAN SANDERS LLP
600 PEACHTREE STREET, N.E., SUITE 5200
PATENT & TRADEMARK DEPARTMENT
ATLANTA, GA 30308-2216

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	29 JAN 2010

Applicant's or agent's file reference	FOR FURTHER ACTION
DYN005.PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2009/066817	04 December 2009	12 April 2009

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642

Applicant DYNAMIC BRANDS, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 January 2010	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2009)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

Form PCT/ISA/237 (Box No. I) (July 2009)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	6, 7, 9, 10, 15-27, 32	YES
	Claims	1-5, 8, 11-14, 28-31, 33, 34	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-34	NO
Industrial applicability (IA)	Claims	1-34	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 8 and 11-14 lack novelty under PCT Article 33(2) as being anticipated by Jones et al.
Referring to claims 1-5, 8 and 11-14, Jones et al disclose [Cl. 1] a seat attachment (see Fig. 1) for a stroller (10), comprising: an attachment frame member (2, 4, 8) comprising a connector portion (14) capable of connecting to a stroller frame (12); and a seat support element (20) capable of supporting a seat (22); [Cl. 2] comprising: a wheel (6); [Cl. 3] further comprising a wheel support frame (30) connecting the wheel (6) to the attachment frame member (2, 4, 8); [Cl. 4] wherein the wheel support frame (30) is pivotally connected to the attachment frame member (2, 4, 8); [Cl. 5] wherein the wheel support frame (30) is pivotally connected near the middle of the attachment frame member (2, 4, 8) (30 is pivotally connected to the middle portions of the sides of platform member 2 when viewed from the side, see Fig. 2); [Cl. 8] wherein the wheel support frame (30) is capable of pivoting from a first position to a second position (30 appears to be a 360 degree pivotable caster wheel); [Cl. 11] wherein the attachment frame member (2, 4, 8) has a first end (8) and a second end (4); [Cl. 12] wherein the first end (8) is capable of connecting to a stroller frame (12); [Cl. 13] wherein the second end (4) is connected to the seat attachment member (20); [Cl. 14] wherein the seat support element (20) is capable of supporting a seat (22) in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2).

Claims 28-31, 33 and 34 lack novelty under PCT Article 33(2) as being anticipated by Maciejczyk.
Referring to claims 28-31, 33 and 34, Maciejczyk discloses [Cl. 28] a stroller (200), comprising: a frame (230, 240); at least one front wheel (210); at least one rear wheel (220) ; a stroller seat (260); and a seat attachment portion (100) capable of supporting a second seat (110) in front of the stroller seat (260); [Cl. 29] wherein the seat attachment portion (100) comprises two seat connectors (120, 130); [Cl. 30] wherein the seat attachment portion (100) is removably connected to the frame (230, 240); [Cl. 31] wherein the seat attachment portion (100) comprises two portions (120, 130) each comprising one seat connector (seat 110 would be supported by two attachment portions 100, one on each side of the stroller); [Cl. 33] wherein the second seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 34] wherein the second seat (110) is integral to the seat attachment portion (100) (Figs. 2 and 3 show the seat be connected directly to first support element 120).

Claims 6, 7, 9, 10 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Maciejczyk.
Referring to claims 6, 7, 9, 10 and 15, Jones et al disclose the seat attachment for stroller of claims 1, 5 and 8 and [Cl. 15] wherein the seat support element (20) is capable of supporting the seat (22) in either a forward or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2), but fails to disclose [Cl. 6] further comprising a folding mechanism; [Cl. 7] wherein the folding mechanism comprises a sliding connector slidingly connected to the attachment frame member and a strut having a first end connected to the sliding member and a second end connected to the wheel support frame; [Cl. 9] wherein the first position is a locked and in-use position and the second position is an unlocked and folded position; [Cl. 10] wherein the seat is a baby seat, a car seat, a stroller seat, a bassinet, or a pram; [Cl. 15] further comprising a stroller seat,
However, Maciejczyk disclose a stroller seat attachment [Cl. 6] further comprising a folding mechanism (500) (see Figs. 8 and 9); [Cl. 7] wherein the folding mechanism (500) comprises a sliding connector (523) slidingly connected to the attachment frame member (230) and a strut (530) having a first end (531) connected to the sliding member (523) and a second end (540) connected to the wheel support frame (230) (both ends of strut 530 are connected to wheel support frame 230 either directly or indirectly, see Fig.s 8 and 9); [Cl. 9] wherein the first position (see Fig. 8) is a locked and in-use position (a child could be placed in seat) and the second position (see Fig. 9) is an unlocked and folded position; [Cl. 10] wherein the seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 15] further comprising a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the folding mechanism and the stroller seat of Maciejczyk in order to provide a reliable means of being able to easily collapse a stroller with an attached seat so the stroller can easily be collapsed to place in the trunk of a car but still be able to safely secure the additional child when in use.

Continued on Supplemental Box

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V

Claims 16-23 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang.
Referring to claims 16-23, Jones et al disclose [Cl. 16] a stroller (10), comprising: a stroller frame (12) comprising wheels (see Fig. 6), a frame (12), a first seat (not labeled, see Fig. 6) and an attachment frame member (8) connected to the frame (12); a seat attachment (2, 4) comprising a wheel (6), a second seat (22), and a connector portion (14) capable of connecting to the attachment frame member (12); [Cl. 17] wherein the connector portion (14) is capable of being releasably connected to the attachment frame member (8) (attachment structure 107 may be attached or directly connected to arm 8, Para [0048]); [Cl. 18] wherein the second seat (22) is releasably connected to the seat support element (20); [Cl. 19] wherein the seat support element (20) is capable of supporting the second seat (22)in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2); [Cl. 20] stroller (10), comprising: a first seat attachment (2, 4, 8) capable of removably supporting a child seat (22); and a second seat attachment (12) capable of supporting a child seat (stroller seat is supported by frame member 12); [Cl. 21] wherein each seat attachment (8) comprises two seat connector portions (14); [Cl. 22] wherein the child seat (stroller seat is supported by frame member 12) is one of a stroller seat (see Fig. 6); [CL. 23] comprising a frame (12), wherein the frame (12) comprises a handle portion (11), a front wheel support portion (see Fig. 11e) and a back wheel support portion (see Fig. 11e); but fails to disclose [Cl. 16] a double stroller; [Cl. 20] a double stroller.
However, Huang discloses a locking device for a front seat of a double stroller wherein [Cl. 16] a double stroller (see Fig. 1); [Cl. 20] a double stroller (see Fig. 1).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the double stroller of Huang in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller.

Claims 24-27 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang in view of Maciejczyk.
Referring to claims 24-27, Jones et al and Huang disclose the double stroller of claim 23, [Cl. 26] wherein the second seat attachment (22 of Jones et al) is adjacent to the handle portion (11 of Jones et al); but fails to disclose [Cl. 24] wherein a first seat attachment is adjacent to the front wheel support portion; [Cl. 25] wherein the first seat attachment is above at least one front wheel connected to the wheel support portion; [Cl. 27], further comprising a folding mechanism that connects the handle portion, the front wheel support portion, and the back wheel support portion.
However, Maciejczyk disclose a stroller seat attachment [Cl. 24] wherein a first seat attachment (100) is adjacent to the front wheel support portion (230); [Cl. 25] wherein the first seat attachment (100) is above at least one front wheel (210) connected to the wheel support portion (230); [Cl. 27], further comprising a folding mechanism (500) that connects the handle portion (210), the front wheel support portion (230), and the back wheel support portion (240) (mounting arrangement 500 is connected to portion 230 which is connected to handle portion 210 and back wheel support 240).
It would have been obvious to a person of ordinary skill at the time of the invention to use the double stroller of Jones et al and Huang and the seat attachment is placed on the front portion of the stroller in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller, without the additional seat interfering with the person pushing the stroller.

Claim 32 lack an inventive step under PCT Article 33(3) as being obvious over Maciejczyk in view of Haeggberg.
Referring to claim 32, Maciejczyk discloses the stroller of claim 30, but fails to disclose [Cl. 32] wherein the frame comprises a sleeve for removably connecting the seat attachment portion to the frame.
However, Haeggberg discloses a stroller trailer [Cl. 32] wherein the frame (2) comprises a sleeve (18) for removably connecting the seat attachment portion (35) to the frame (2) (see Fig. 6a, holders 34 act as a sleeve for ball 35 of seat attachment portion).
It would have been obvious to a person of ordinary skill at the time of the invention to use the stroller of Maciejczyk and the sleeve attachment means of Haeggberg in order to provide a reliable means of attaching the seat attachment to the stroller that would require minimum effort to securely attach the additional seat.

Claims 1-34 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

Form PCT/ISA/237 (Supplemental Box) (July 2009)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference DYN005.PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2009/066817	International filing date *(day/month/year)* 04 December 2009	(Earliest) Priority Date *(day/month/year)* 12 April 2009
Applicant DYNAMIC BRANDS, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 9 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 3

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/066817

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - B62B 7/00; B62D 7/14, 63/00 (2010.01)
USPC - 280/642, 32.7, 47.131, 647, 648, 656, 657

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 practicable, search terms used)
PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2007/0114738 A1 (JONES et al) 24 May 2007 (24.05.2007) entire document	1-5, 8, 11-14 --- 6, 7, 9, 10, 15-27
X -- Y	US 2007/0001429 A1 (MACIEJCZYK) 04 January 2007 (04.01.2007) entire document	28-31, 33, 34 --- 6, 7, 9, 10, 15, 24-27, 32
Y	US 5,338,096 A (HUANG) 16 August 1994 (16.08.1994) entire document	16-27
Y	US 2003/0025304 A1 (HAEGGBERG) 06 February 2003 (06.02.2003) entire document	32

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 August 2010	29 JAN 2010
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: BERNARD PIKE
TROUTMAN SANDERS LLP
600 PEACHTREE STREET, N.E., SUITE 5200
PATENT & TRADEMARK DEPARTMENT
ATLANTA, GA 30308-2216

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	29 JAN 2010
Applicant's or agent's file reference: DYN005.PCT	FOR FURTHER ACTION: See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2009/066817	04 December 2009	12 April 2009

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642

Applicant DYNAMIC BRANDS, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 January 2010	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2009)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	6, 7, 9, 10, 15-27, 32	YES
	Claims	1-5, 8, 11-14, 28-31, 33, 34	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-34	NO
Industrial applicability (IA)	Claims	1-34	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 8 and 11-14 lack novelty under PCT Article 33(2) as being anticipated by Jones et al.
Referring to claims 1-5, 8 and 11-14, Jones et al disclose [Cl. 1] a seat attachment (see Fig. 1) for a stroller (10), comprising: an attachment frame member (2, 4, 8) comprising a connector portion (14) capable of connecting to a stroller frame (12); and a seat support element (20) capable of supporting a seat (22); [Cl. 2] comprising: a wheel (6); [Cl. 3] further comprising a wheel support frame (30) connecting the wheel (6) to the attachment frame member (2, 4, 8); [Cl. 4] wherein the wheel support frame (30) is pivotally connected to the attachment frame member (2, 4, 8); [Cl. 5] wherein the wheel support frame (30) is pivotally connected near the middle of the attachment frame member (2, 4, 8) (30 is pivotally connected to the middle portions of the sides of platform member 2 when viewed from the side, see Fig. 2); [Cl. 8] wherein the wheel support frame (30) is capable of pivoting from a first position to a second position (30 appears to be a 360 degree pivotable caster wheel); [Cl. 11] wherein the attachment frame member (2, 4, 8) has a first end (8) and a second end (4); [Cl. 12] wherein the first end (8) is capable of connecting to a stroller frame (12); [Cl. 13] wherein the second end (4) is connected to the seat attachment member (20); [Cl. 14] wherein the seat support element (20) is capable of supporting a seat (22) in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2).

Claims 28-31, 33 and 34 lack novelty under PCT Article 33(2) as being anticipated by Maciejczyk.
Referring to claims 28-31, 33 and 34, Maciejczyk discloses [Cl. 28] a stroller (200), comprising: a frame (230, 240); at least one front wheel (210); at least one rear wheel (220) ; a stroller seat (260); and a seat attachment portion (100) capable of supporting a second seat (110) in front of the stroller seat (260); [Cl. 29] wherein the seat attachment portion (100) comprises two seat connectors (120, 130); [Cl. 30] wherein the seat attachment portion (100) is removably connected to the frame (230, 240); [Cl. 31] wherein the seat attachment portion (100) comprises two portions (120, 130) each comprising one seat connector (seat 110 would be supported by two attachment portions 100, one on each side of the stroller); [Cl. 33] wherein the second seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 34] wherein the second seat (110) is integral to the seat attachment portion (100) (Figs. 2 and 3 show the seat be connected directly to first support element 120).

Claims 6, 7, 9, 10 and 15 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Maciejczyk.
Referring to claims 6, 7, 9, 10 and 15, Jones et al disclose the seat attachment for stroller of claims 1, 5 and 8 and [Cl. 15] wherein the seat support element (20) is capable of supporting the seat (22) in either a forward or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2), but fails to disclose [Cl. 6] further comprising a folding mechanism; [Cl. 7] wherein the folding mechanism comprises a sliding connector slidingly connected to the attachment frame member and a strut having a first end connected to the sliding member and a second end connected to the wheel support frame; [Cl. 9] wherein the first position is a locked and in-use position and the second position is an unlocked and folded position; [Cl. 10] wherein the seat is a baby seat, a car seat, a stroller seat, a bassinet, or a pram; [Cl. 15] further comprising a stroller seat.
However, Maciejczyk disclose a stroller seat attachment [Cl. 6] further comprising a folding mechanism (500) (see Figs. 8 and 9); [Cl. 7] wherein the folding mechanism (500) comprises a sliding connector (523) slidingly connected to the attachment frame member (230) and a strut (530) having a first end (531) connected to the sliding member (523) and a second end (540) connected to the wheel support frame (230) (both ends of strut 530 are connected to wheel support frame 230 either directly or indirectly, see Fig.s 8 and 9); [Cl. 9] wherein the first position (see Fig. 8) is a locked and in-use position (a child could be placed in seat) and the second position (see Fig. 9) is an unlocked and folded position; [Cl. 10] wherein the seat (110) is a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well); [Cl. 15] further comprising a stroller seat (110 is a toddler seat so that would be considered a stroller seat as well).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the folding mechanism and the stroller seat of Maciejczyk in order to provide a reliable means of being able to easily collapse a stroller with an attached seat so the stroller can easily be collapsed to place in the trunk of a car but still be able to safely secure the additional child when in use.

Continued on Supplemental Box

Form PCT/ISA/237 (Box No. V) (July 2009)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2009/066817

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:
Box V

Claims 16-23 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang.
Referring to claims 16-23, Jones et al disclose [Cl. 16] a stroller (10), comprising: a stroller frame (12) comprising wheels (see Fig. 6), a frame (12), a first seat (not labeled, see Fig. 6) and an attachment frame member (8) connected to the frame (12); a seat attachment (2, 4) comprising a wheel (6), a second seat (22), and a connector portion (14) capable of connecting to the attachment frame member (12); [Cl. 17] wherein the connector portion (14) is capable of being releasably connected to the attachment frame member (8) (attachment structure 107 may be attached or directly connected to arm 8, Para [0048]); [Cl. 18] wherein the second seat (22) is releasably connected to the seat support element (20); [Cl. 19] wherein the seat support element (20) is capable of supporting the second seat (22)in either a forward (see Fig. 1) or backward position (20 may be attached in a reversed direction which would allow the child to sit in reverse direction and be able to place their feet on platform 2); [Cl. 20] stroller (10), comprising: a first seat attachment (2, 4, 8) capable of removably supporting a child seat (22); and a second seat attachment (12) capable of supporting a child seat (stroller seat is supported by frame member 12); [Cl. 21] wherein each seat attachment (8) comprises two seat connector portions (14); [Cl. 22] wherein the child seat (stroller seat is supported by frame member 12) is one of a stroller seat (see Fig. 6); [CL. 23] comprising a frame (12), wherein the frame (12) comprises a handle portion (11), a front wheel support portion (see Fig. 11e) and a back wheel support portion (see Fig. 11e); but fails to disclose [Cl. 16] a double stroller; [Cl. 20] a double stroller.
However, Huang discloses a locking device for a front seat of a double stroller wherein [Cl. 16] a double stroller (see Fig. 1); [Cl. 20] a double stroller (see Fig. 1).
It would have been obvious to a person of ordinary skill at the time of the invention to use the seat attachment for a stroller of Jones et al and the double stroller of Huang in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller.

Claims 24-27 lack an inventive step under PCT Article 33(3) as being obvious over Jones et al in view of Huang in view of Maciejczyk.
Referring to claims 24-27, Jones et al and Huang disclose the double stroller of claim 23, [Cl. 26] wherein the second seat attachment (22 of Jones et al) is adjacent to the handle portion (11 of Jones et al); but fails to disclose [Cl. 24] wherein a first seat attachment is adjacent to the front wheel support portion; [Cl. 25] wherein the first seat attachment is above at least one front wheel connected to the wheel support portion; [Cl. 27], further comprising a folding mechanism that connects the handle portion, the front wheel support portion, and the back wheel support portion.
However, Maciejczyk disclose a stroller seat attachment [Cl. 24] wherein a first seat attachment (100) is adjacent to the front wheel support portion (230); [Cl. 25] wherein the first seat attachment (100) is above at least one front wheel (210) connected to the wheel support portion (230); [Cl. 27], further comprising a folding mechanism (500) that connects the handle portion (210), the front wheel support portion (230), and the back wheel support portion (240) (mounting arrangement 500 is connected to portion 230 which is connected to handle portion 210 and back wheel support 240).
It would have been obvious to a person of ordinary skill at the time of the invention to use the double stroller of Jones et al and Huang and the seat attachment is placed on the front portion of the stroller in order to provide a reliable means of being able to safely transport more than 2 children by adding a additional seat to a double stroller, without the additional seat interfering with the person pushing the stroller.

Claim 32 lack an inventive step under PCT Article 33(3) as being obvious over Maciejczyk in view of Haeggberg.
Referring to claim 32, Maciejczyk discloses the stroller of claim 30, but fails to disclose [Cl. 32] wherein the frame comprises a sleeve for removably connecting the seat attachment portion to the frame.
However, Haeggberg discloses a stroller trailer [Cl. 32] wherein the frame (2) comprises a sleeve (18) for removably connecting the seat attachment portion (35) to the frame (2) (see Fig. 6a, holders 34 act as a sleeve for ball 35 of seat attachment portion).
It would have been obvious to a person of ordinary skill at the time of the invention to use the stroller of Maciejczyk and the sleeve attachment means of Haeggberg in order to provide a reliable means of attaching the seat attachment to the stroller that would require minimum effort to securely attach the additional seat.

Claims 1-34 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 November 2005 (10.11.2005)

PCT

(10) International Publication Number
WO 2005/105545 A1

(51) International Patent Classification[7]: B62B 9/00

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(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
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(71) Applicant and
(72) Inventor: **ROHL, Stephanie** [GB/GB]; 63 St Marks Road, Henley-on-Thames, Oxon RG9 1LP (GB).

(74) Agents: **GREY, Ian** et al.; Venner, Shipley LLP, 20 Little Britain, London EC1A 7DH (GB).

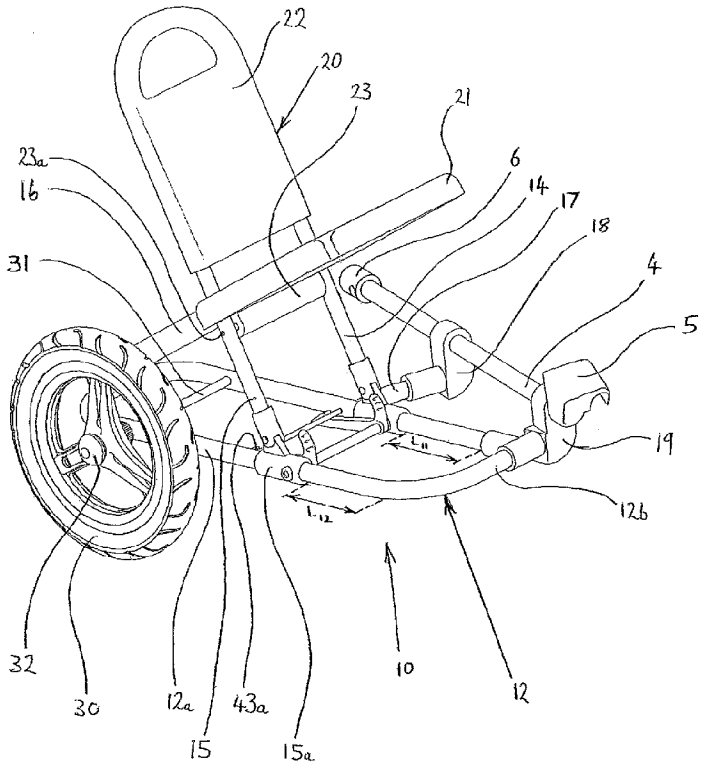
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[Continued on next page]

(54) Title: AUXILIARY PUSHCHAIR SEAT



(57) **Abstract:** An auxiliary seat (1) attachable to a pushchair (2) to enable it to accommodate two children seated side-by-side and facing in the same direction. The seat comprises a frame (10) having a backrest (22) and a base (21) and a wheel (30) in contact with the ground in an operative position to support a child seated on the base (21) with their back against the backrest (22). The frame is configured so that the backrest (22) and the base fold substantially flat when the auxiliary seat is not in use.

WO 2005/105545 A1

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Auxiliary Pushchair Seat

Description

The present invention relates to a pushchair, and more specifically, to an add-on seating device for pushchairs.

It is often the case with parents having more than one child that the age gap between the children is such that the older child is not fully able to walk by the time the second child is born or is reluctant to do so for an extended period of time. During the first child's initial years, the parents will most probably have bought a single-seat pushchair to transport the child around in until it learns to walk properly. Modern pushchairs can be an expensive outlay, and perhaps difficult to afford, especially for young couples who may be at an early stage of their professional careers or those on low income. Therefore, when the second child is born, the parents find themselves requiring another pushchair so that both children can be transported together. Therefore, they must either buy another single-seat pushchair in addition to the first, which means having to use two pushchairs each time both children are taken out together or, buy a new double-seat pushchair, which means the original single-seat pushchair is then redundant. In either case, it involves another significant financial outlay for the parents.

One solution to this problem is to provide an add-on device that can be attached to the existing single-seat pushchair to adapt it to be able to carry both children simultaneously. Recently, pushchair add-on products have become commercially available and one such device comprises a wheeled platform that attaches to the rear of the pushchair, on which the elder child can stand whilst the younger child is seated.

However, this platform type of device has a number of disadvantages. Firstly, as the device is a platform and not a seat, it requires the elder child to remain standing, which can quickly tire them out and become uncomfortable for them. This has a safety implication as well, since the elder child is not provided with a harness to stop them falling off the device. Secondly, the device is positioned at the rear of the

pushchair between the pushchair and the parent. This means that the parent has to lean forward and stoop over and/or around the standing child in order to push the pushchair, and this can quickly cause backache and stiffness, and is generally uncomfortable over anything but the shortest distances. Thirdly, the wheels of the platform are positioned behind the rear wheels of the pram, which means that it can be difficult to push the pushchair up or down kerbs, as the device hinders the ability of the pushchair to be pivoted about the rear wheel axle. This device can also unbalance the pushchair and cause it to tip over very easily

It is therefore an object of the present invention to provide an add-on pushchair seating device that substantially alleviates or overcomes the problems mentioned above.

According to the present invention, therefore, there is provided an auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side and facing the same direction, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use.

In a preferred embodiment, the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism. Conveniently, the scissor-like mechanism includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

Preferably, the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

Advantageously, the auxiliary seat comprises a locking mechanism to retain the seat in the erect operative position, and the locking mechanism preferably retains the seat in the erect operative position by locking the at least one sliding joint in place.

In a preferred embodiment, the locking mechanism comprises a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame. Preferably, the latch is located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

The frame is preferably attached to the pushchair by a first clamping means extending from one side of the frame, and the first clamping means is conveniently attached to a first support strut which is hingedly attached to the frame.

Furthermore, the frame may further be attached to the pushchair by a second clamping means extending from said one side of the frame, and the second clamping means may also be hingedly attached to the frame.

In one preferred embodiment, the first and second clamping means are attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair. Alternatively, the first and second clamping means may be attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

Preferably, the auxiliary seat is releasably attachable to said pushchair, and in a preferred embodiment, it can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

Conveniently, the at least one wheel is detachable, and is preferably positioned such that when the auxiliary seat is mounted on the pushchair in an operative position,

the at least one wheel is in alignment with a rear wheel of the pushchair. In a preferred embodiment, the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, an axle of the at least one wheel is coaxial with an axle of a rear wheel of the pushchair.

Advantageously, the seat includes a safety harness to retain a child in position thereon.

A preferred embodiment includes a rain cover attached to the seat to at least partially surround a child sitting on the seat, and an alternative embodiment includes a sunshade attached to the seat to shade a child sitting on the seat. A toy steering wheel is conveniently positionable in front of a child sitting on the seat, or a toy hobby-horse style attachment may be positionable in front of a child sitting on the seat.

A preferred embodiment of the present invention will now be described, with reference to the accompanying drawings, in which:

Figure 1 shows a perspective view of a pushchair add-on device according to a first embodiment of the invention, in an erected operative position;
Figure 2 shows the pushchair add-on device of Figure 1 in a collapsed position;
Figure 3 shows a side view of the pushchair add-on device of Figure 1;
Figure 4 shows a side view of the pushchair add-on device of Figure 2;
Figure 5 shows a rear perspective view of the pushchair add-on device of Figures 1 and 3;
Figure 6 shows the pushchair add-on device in the erect position attached to a conventional pushchair; and
Figure 7 shows the pushchair add-on device in the collapsed position attached to a conventional pushchair, and folded up in a storage position.

Referring now to the drawings, a pushchair add-on device 1, for attachment to any type of conventional pushchair 2 (see Figures 6 and 7), is shown, comprising a chassis frame 10, a seat portion 20 and a wheel 30. The chassis 10 comprises first

and second generally curved L-shaped tubular chassis members 11, 12 arranged so that long sides 11a, 12a of each member 11, 12 are parallel to one another, and short sides 11b, 12b are parallel to one another. Each end of each chassis member 11, 12 is connected to a correspondingly opposite end of the other member so as to form a generally rectangular chassis frame 10.

The seat portion 20 comprises a base 21 and a backrest 22. It can also include a seat harness (not shown) comprising a strap extending from either side of the backrest 22 and one extending from the middle of the base 21 at the front thereof, in which all three straps meet in a 'T' – shaped clasp.

The chassis frame 10 includes two collars, 14a, 15a, one slideably received on each of the long sides 11a, 12a of the L-shaped chassis members 11, 12. Each collar 14a, 15a includes a pivot joint integrally formed therewith, and a backrest support stanchion 14, 15 is pivotably attached to each of the collar pivot joints 14a, 15a respectively, and extends therefrom. The backrest 22 is attached at either side to the backrest support stanchions 14, 15 and the backrest 22 is thereby pivotable about the collar pivot joints 14a, 15a.

The chassis 10 also includes a seat support stanchion 16 pivotably attached at one end by a pivot joint 16a to the short side 11b of the first L-shaped chassis member 11 at the rear of the chassis frame 10. The base 21 is rigidly secured to the other end of the seat support stanchion 16 and a lug 23 extends from the rear of the base 21. A hinge rod 23a extends through the lug 23 and each end of the hinge rod 23a extends through the backrest support stanchions 14, 15 respectively. The base 21 is thereby pivotable relative to the backrest support stanchions 14, 15 about said hinge rod 23a and lug 23.

The mechanism described above allows the seat portion 20 to be moveable from a collapsed position shown in Figures 2 and 4 in which the base 21 and backrest 22 lie substantially flat against the chassis frame 10, to an operative position as shown in Figures 1, 3, 5 and 6 in which the seat portion 20 is erected and the plane of the base 21 is substantially at right angles to the plane of the backrest 22. The

arrangement of the components is such that the backrest support stanchions 14, 15 and the seat support stanchion 16, are moveable relative to one another in a scissor-like action, wherein the central pivot point of the scissor action is the hinge rod 23a and the lug 23 on the base 21. The end of the seat support stanchion 16 remote from the base 21 is only pivotable relative to the chassis member 11, and is not moveable laterally relative to it. Therefore, to enable the scissor-action mentioned above, the collar pivot joints 14a, 15a, to which the backrest support stanchions 14, 15 are attached, slide along a section L_{11}, L_{12} of the chassis members 11, 12 respectively as the seat portion 20 is moved from the erect position to the collapsed position.

The chassis 10 further includes a horizontal axle shaft 31 that extends from the long side 11a of the first chassis member 11 through the long side 12a of the second chassis member 12 and protrudes a short distance out of the other side of the second chassis member 12. A section of the protruding end of the axle shaft 31 is threaded in order to receive a retaining nut 32. The wheel 30 includes a central aperture through which the protruding end of the axle shaft 31 can be received. The retaining nut 32 can then be screwed onto the threaded end of the axle shaft 31 to retain the wheel 30 in place whilst allowing it to be freely rotatable about the axle shaft 31. The wheel 30 is therefore easily removable from the axle shaft 31 by removal of the retaining nut 32. It will be appreciated that other such retaining means may be used instead of a screw thread and retaining nut, for example, a snap-fit retaining cap.

A clamp strut 17 is attached at one end to the first chassis member 11 and extends outwardly therefrom away from the second chassis member 12. An attachment clamp 18 is disposed on the other end of the clamp strut 17 and is operable to detachably clamp onto a frame of a conventional pushchair 2. Furthermore, a second attachment clamp 19 is disposed at the end of the short side 12b of the second chassis member 12, and, as with the first attachment clamp, is operable to detachably clamp onto a frame of a conventional pushchair 2. The two attachment clamps 18, 19 together can thereby secure the device 1 of the invention to the side of the conventional pushchair 2. Each attachment clamp 18, 19 is pivotable relative

to the clamp strut 17/chassis member 12 respectively, for reasons which will become apparent from the description hereafter.

The device 1 includes a locking mechanism 40 to enable the seat portion 20 of the device 1 to be retained in the erected operative position (see Figures 5 and 6). The locking mechanism 40 comprises a locking shaft 41 that extends between the slidable collar pivot joints 14a, 15a and is rotatable about its axis relative to the collar pivot joints 14a, 15a. The locking shaft 41 therefore restricts the movement of one collar pivot joint 14a relative to the other 15a, so they can only be moved together and in the same direction. Two locking arms 42, 43 are rigidly secured to the locking shaft 41 and extend rearwardly therefrom, substantially parallel to the long sides 11a, 12a of the chassis members 11, 12. Each arm 42, 43 includes a latch portion 42a, 43a at an end distal from the locking shaft 41. A fixed shaft 44 extends between the chassis members 11, 12 and parallel to the locking shaft 41, and is positioned rearwardly of the locking shaft 41 such that the latch portions 42a, 43a of the arms 42, 43 are just able to be clipped over the fixed shaft 44 and held in this locked position hooked over the fixed shaft 44 by friction therewith. Therefore, when the arms 42, 43 are in this locked position, the collar pivot joints 14a, 15a are prevented from sliding along sections L_{11}, L_{12} of the chassis members 11, 12 respectively, and thereby retain the seat portion 20 in the erect operative position.

As described above, the locking mechanism 40 enables the seat portion 20 of the device 1 to be locked in the erected operative position, and thereby capable of supporting a child thereon in a sitting position next to a child sitting in the pushchair 2 so that they are both facing in the same direction. When the device 1 is not in use, the locking mechanism 40 can be released by unclipping the latch portions 42a, 43a from the fixed shaft 44 and rotating the arms 42, 43 downwards. This can be done by pushing lever release tabs 42b, 43b which are formed on the end of the rotating arms 42, 43 perpendicular thereto and at the end distal from the latch portions 42a, 43a. This will allow the collar pivot joints 14a, 15a to freely slide along sections L_{11}, L_{12} of the chassis members 11, 12 respectively. The base 21 and seat stanchion 16 can then pivot downwards about the pivot joint 16a, and the backrest 22 and backrest stanchions 14, 15 can pivot downwards about the collar

pivot joints 14a, 15a, the backrest stanchions 14, 15 pivoting relative to the seat stanchion 16 about the hinge rod 23a in a scissor-like motion as described above, until the seat portion 20 of the device 1 is in the collapsed position.

Once the device 1 has been put into the collapsed position shown in Figures 2 and 4 and as described above, it can be folded up against the side of the conventional pushchair 2 into the storage position, as shown in Figure 7. This is possible due to the attachment clamps 18, 19 being pivotable relative the clamp strut 17/chassis member 12 respectively, as described above. Once the device 1 has been folded into this storage position, is can be held in place by a retaining means such as a clip (not shown).

With the device 1 in the storage position, the pushchair 2 has a much slimmer profile and will fit through normal doorways with ease. However, if a user wishes to neaten the appearance of the pushchair 2 and device 1 combination further, and make it even slimmer, they may unscrew the wheel retaining nut 32 and remove the wheel 30 from the axle shaft 31.

As can be seen in Figure 6, one of the advantages of the present invention is that when it is attached to a pushchair 2 and is not in the folded storage position, the wheel 30 of the device 1 is aligned with or is coaxial with wheels 3 of the pushchair 2. This means that the pushchair 2 and device 1 combination can be tilted backwards on all three wheels 30, 3 about their common contact line on the ground or their common axis, in order to get up a kerb, for example, and so is much more easily manoeuvrable than a conventional pushchair 2 would be with any of the other known add-on devices.

It is intended that the attachment clamps 18, 19 of the device 1 are suitable to attach to a frame of any conventional pushchair 2. However, some pushchairs currently available may not have side frames compatible with the attachment clamps 18, 19, and so it is envisaged that the device may be supplied with a replacement section of pushchair frame 4 that can be substituted for the relevant section of the original frame to allow the device to be attachable thereto. The specific replacement

section of frame 4 could be pushchair-specific, so that a user could identify which pushchair they already own, and purchase a device of the present invention that comes with the appropriate replacement frame section.

In an alternative attachment mechanism to that described above, a universal supplementary section of frame 4 could be provided. This supplementary section 4 would be attachable to the attachment clamps 18, 19 and could further include pushchair-specific attachment means 5, 6 to couple the device 1, via the supplementary frame section 4, to the pushchair 2. Therefore, instead of replacing a section of the existing pushchair frame, there would be an additional section of frame 4. In this case, the user would identify which pushchair they already own, and purchase a device 1 of the present invention that comes with the appropriate pushchair-specific attachment means 5, 6 to enable the device 1 to be fitted to their pushchair 2.

In a further embodiment of the invention, a strap 7 may be connected between a top part 22a of the backrest 22 and a part of the pushchair 2 which is higher than the top 22a of the backrest 22 (see Figure 6). This strap 7 prevents the auxiliary seat device 1 from pivoting downwards about the attachment clamps 18, 19 relative to the pushchair 2 if the wheel 30 runs over a hole or drops off a kerb, for example. In such a scenario, the weight of the auxiliary seat device 1 (and a child thereon) is transferred through the strap 7 to the pushchair 2 and is balanced out by the weight of said pushchair 2 and of a child in the pushchair seat. It will be appreciated that this means of preventing the auxiliary seat device 1 from pivoting downwards beyond a certain angle does not necessarily need to be a strap 7 as shown in Figure 6. For example, a rigid rod could be used secured to the pushchair 2 and some suitable point on the auxiliary seat device 1.

Other unillustrated embodiments of the present invention may include additional features or accessories. For example, a rain cover could be provided, attachable to the auxiliary seat device 1, to partially or entirely surround a child seated on the device to shelter the child from wind/rain/sleet/snow. The rain cover could

incorporate a supporting frame structure attachable to the device. Alternatively, the device could be provided with a sunshade or parasol.

In addition to the functional accessories mentioned above, the auxiliary seat device 1 may also include an accessory intended to amuse the child whilst the child is in the seat. This could include a toy steering wheel or dashboard arrangement, or a hobby-horse style attachment positionable in front of the child.

Claims

1. An auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side and facing the same direction, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use.

2. An auxiliary seat according to claim 1 wherein the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism.

3. An auxiliary seat according to claim 2 wherein the scissor-like mechanism includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

4. An auxiliary seat according to claim 3 wherein the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and in which said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

5. An auxiliary seat according to any preceding claim comprising a locking mechanism to retain the seat in the erect operative position.

6. An auxiliary seat according to claim 3 or claim 4 comprising a locking mechanism to retain the seat in the erect operative position and which locks the at least one sliding joint in place.

7. An auxiliary seat according to claim 6 wherein the locking mechanism comprises a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame.

8. An auxiliary seat according to claim 7 wherein the latch is located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

9. An auxiliary seat according to any preceding claim wherein the frame is attached to the pushchair by a first clamping means extending from one side of the frame.

10. An auxiliary seat according to claim 9 wherein the first clamping means is attached to a first support strut which is hingedly attached to the frame.

11. An auxiliary seat according to claim 9 or claim 10 wherein the frame is further attached to the pushchair by a second clamping means extending from said one side of the frame.

12. An auxiliary seat according to claim 11 wherein the second clamping means is hingedly attached to the frame.

13. An auxiliary seat according to claim 11 or claim 12 wherein the first and second clamping means are attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair.

14. An auxiliary seat according to claim 11 or claim 12 wherein the first and second clamping means are attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

15. An auxiliary seat according to any preceding claim which is releasably attachable to said pushchair.

16. An auxiliary seat according to any preceding claim which can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

17. An auxiliary seat according to any preceding claim wherein the at least one wheel is detachable.

18. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, the at least one wheel is in alignment with a rear wheel of the pushchair.

19. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, an axle of the at least one wheel is coaxial with an axle of a rear wheel of the pushchair.

20. An auxiliary seat according to any preceding claim wherein the seat includes a safety harness to retain a child in position thereon.

21. An auxiliary seat according to any preceding claim including a rain cover attached to the seat to at least partially surround a child sitting on the seat.

22. An auxiliary seat according to any preceding claim including a sunshade attached to the seat to shade a child sitting on the seat.

23. An auxiliary seat according to any preceding claim including a toy steering wheel positionable in front of a child sitting on the seat.

24. An auxiliary seat according to any preceding claim including a toy hobby-horse style attachment positionable in front of a child sitting on the seat.

25. A pushchair incorporating an auxiliary seat according to any preceding claim.

26. An auxiliary seat substantially as hereinbefore described with reference to the accompanying drawings.

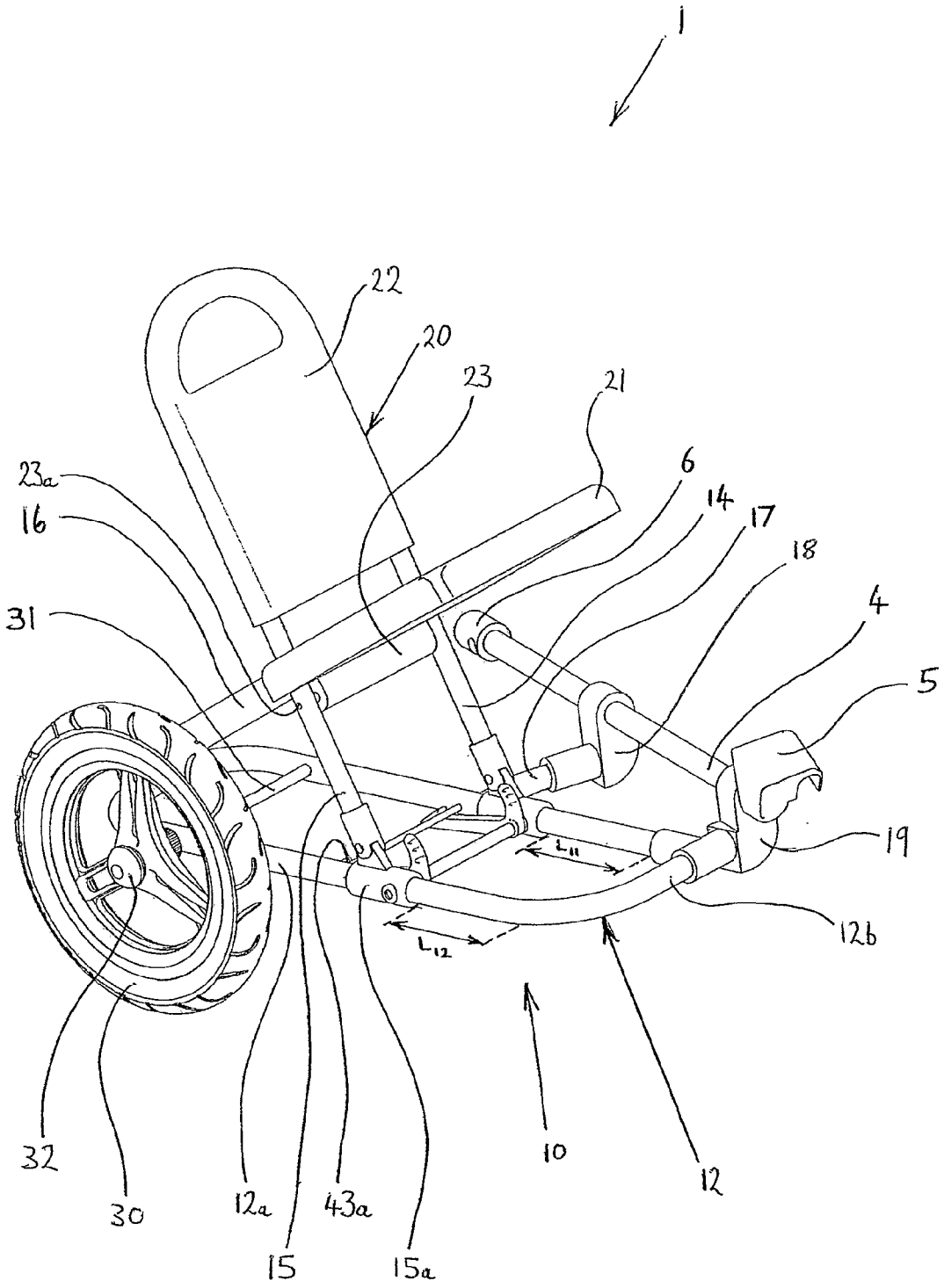

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22
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23
21
23a
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6
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17
18
31
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L_{11}
L_{12}
12b
32
30
12a
43a
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15a
10
12

FIGURE 1

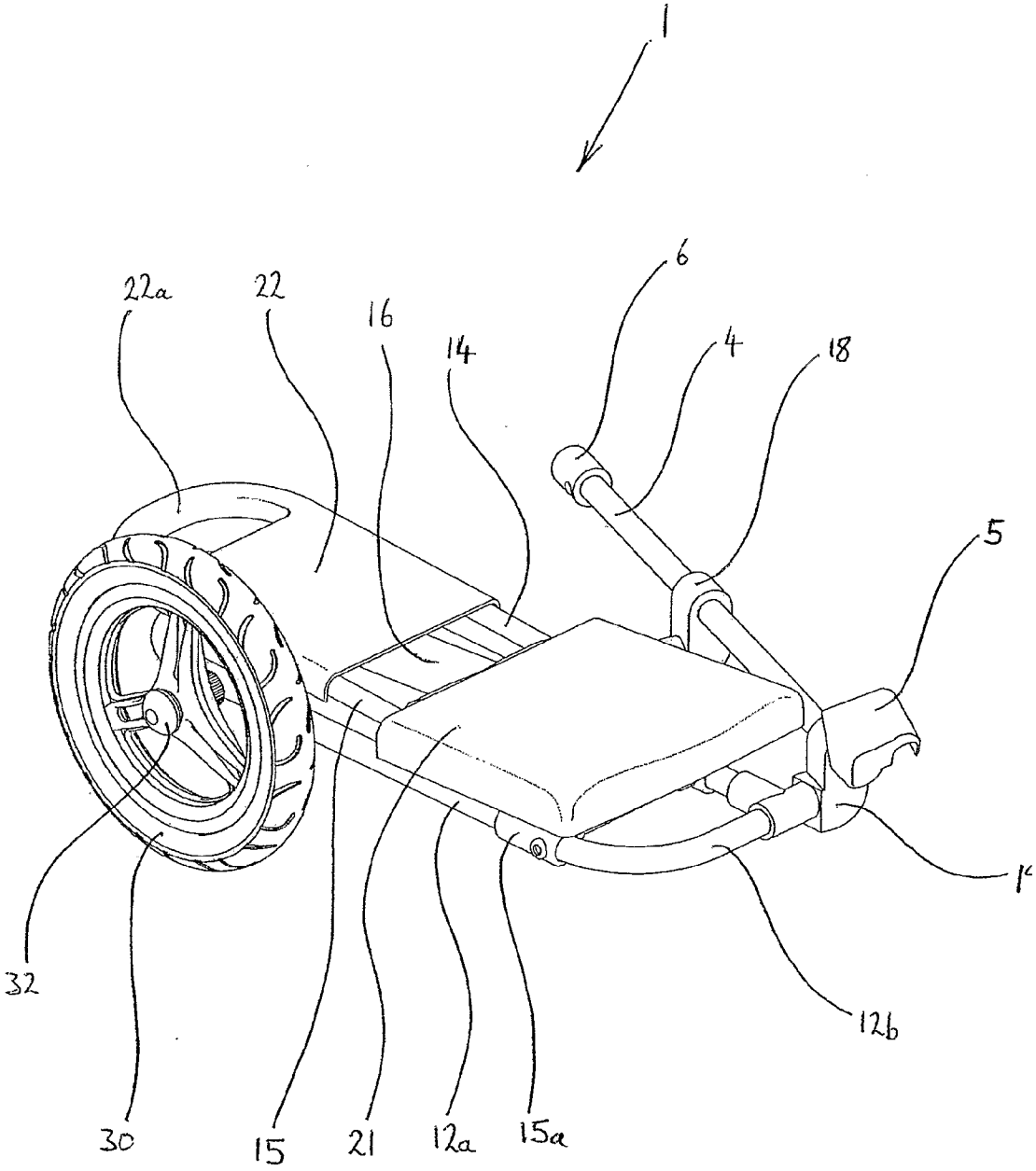


FIGURE 2.

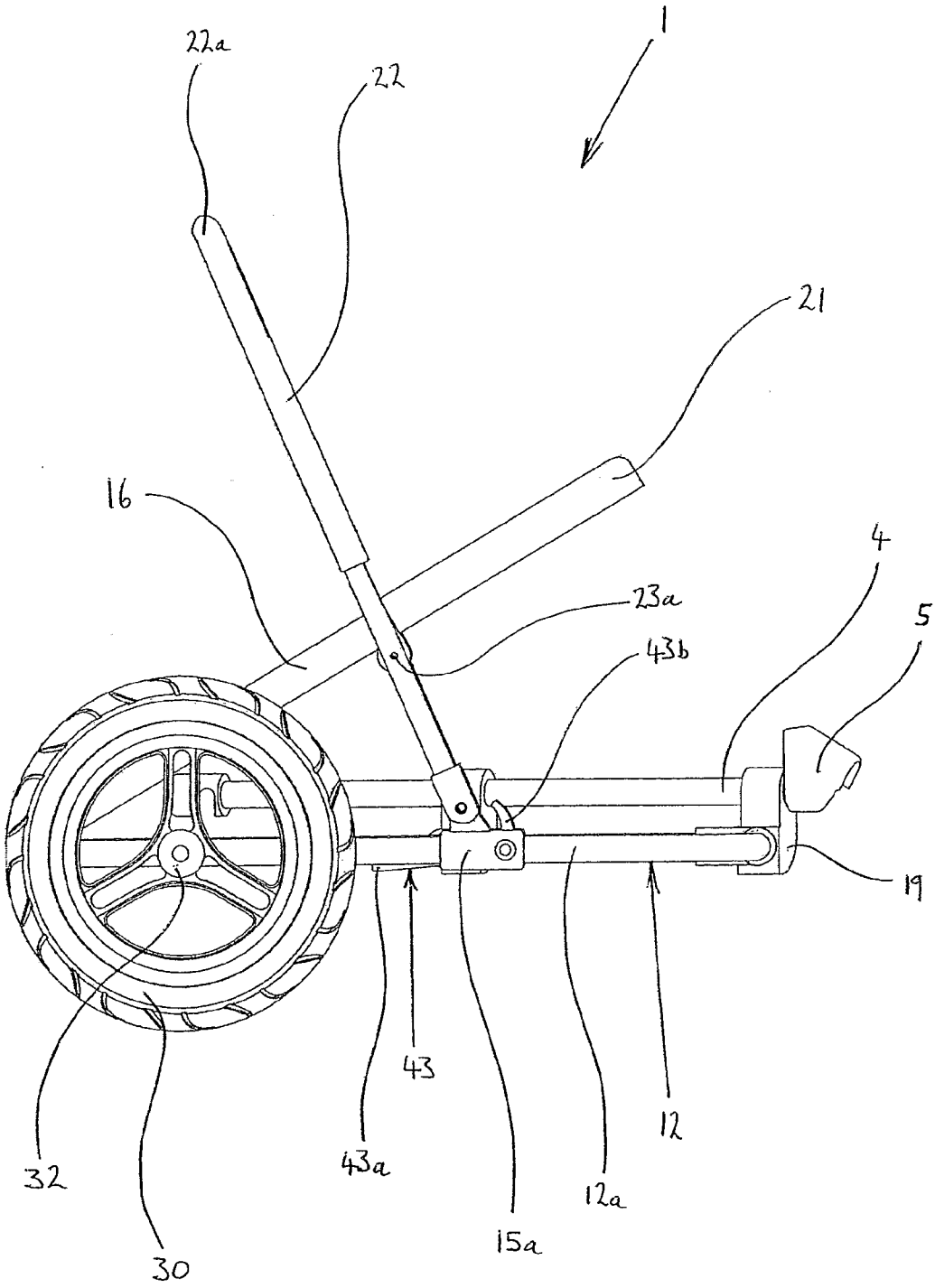


FIGURE 3

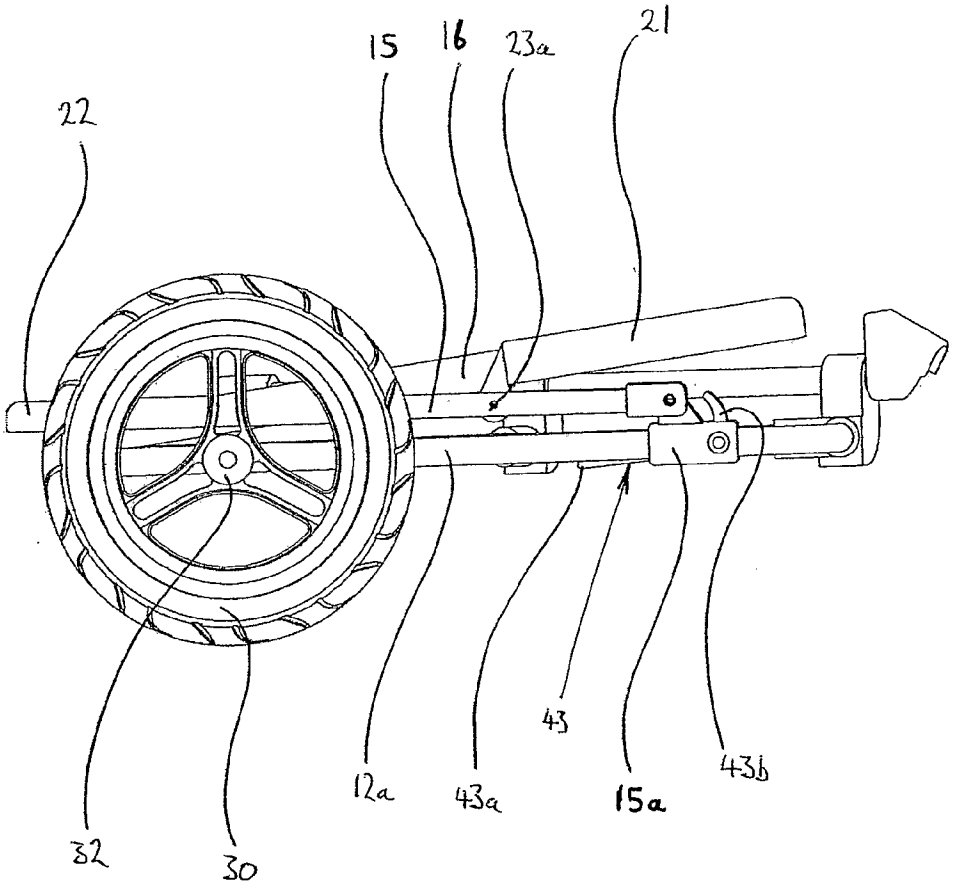


FIGURE 4

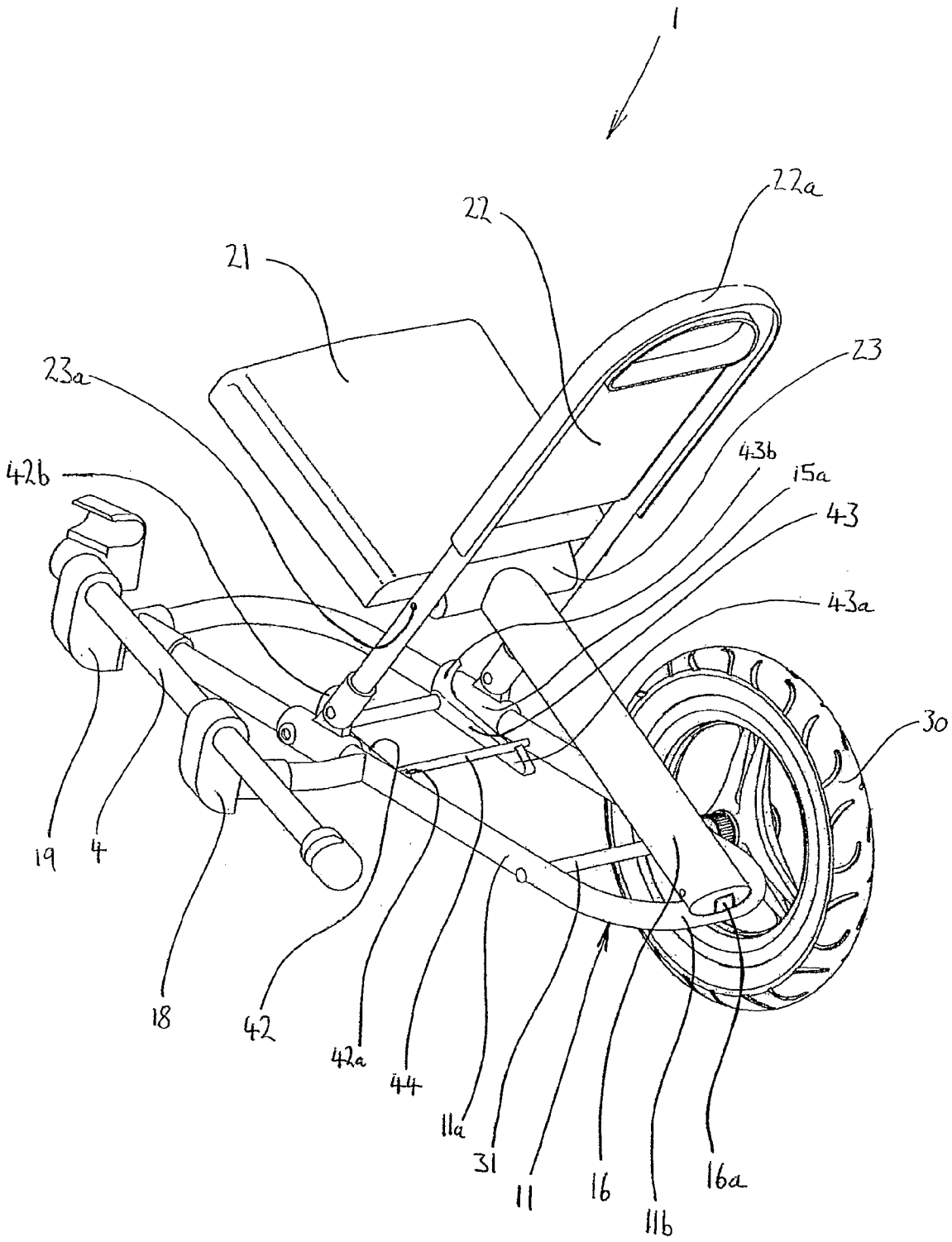

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22a
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23a
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42b
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16
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16a

FIGURE 5

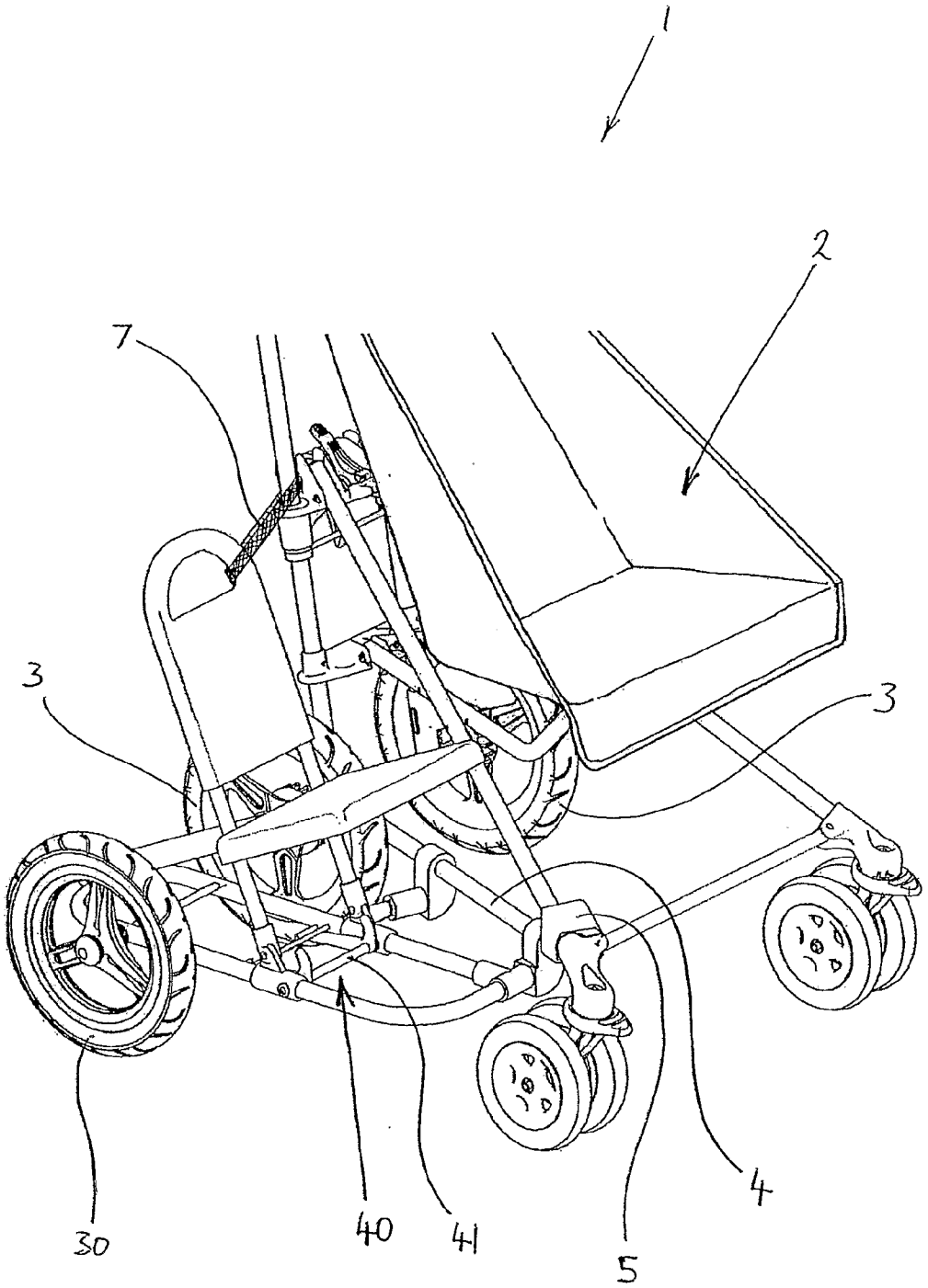


FIGURE 6.

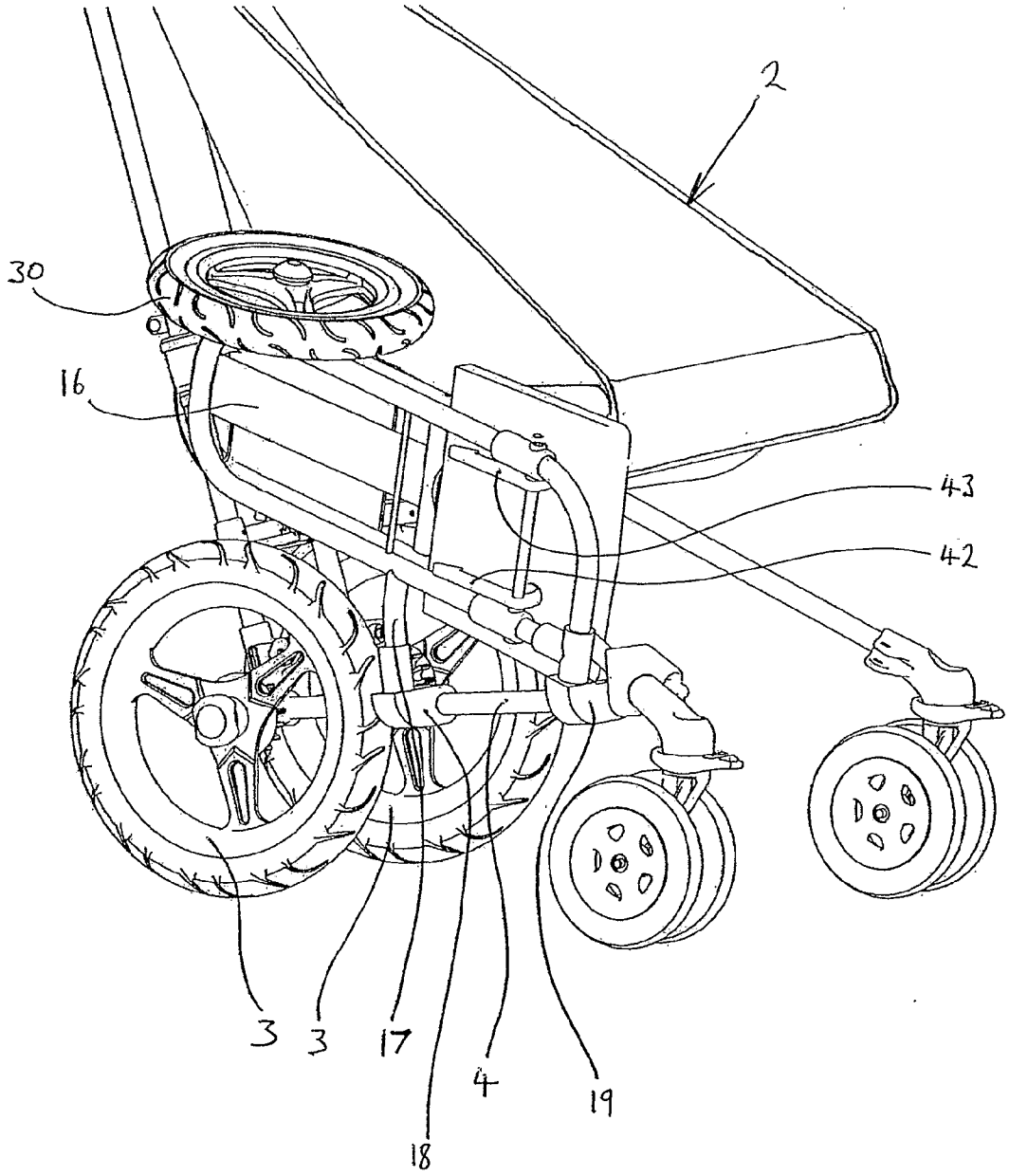


FIGURE 7

INTERNATIONAL SEARCH REPORT

Inte nal Application No
PCT/GB2004/002170

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B62B9/00

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

B. FIELDS SEARCHED

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 000 645 A (SCHMIDT CARL O) 19 September 1961 (1961-09-19) abstract; figures 1,2,4,7	1,5, 9-18,25, 26
Y	figures 1,2,4,7	2-4,6
Y	US 6 715 783 B1 (HANSON WAYNE H ET AL) 6 April 2004 (2004-04-06) abstract; figures 4,8,10	2-4,6
A	figures	1
A	DE 40 33 548 A1 (TROAX-AXO AB, HILLERSTORP, SE) 25 April 1991 (1991-04-25) abstract; figure 1	1-4

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 June 2005	15/06/2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lindner, V

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

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Form PCT/ISA/210 (continuation of second sheet) (January 2004)

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(71) Applicant and
(72) Inventor: **ROHL, Stephanie** [GB/GB]; 63 St Marks Road, Henley-on-Thames, Oxon, RG9 1LP (GB).

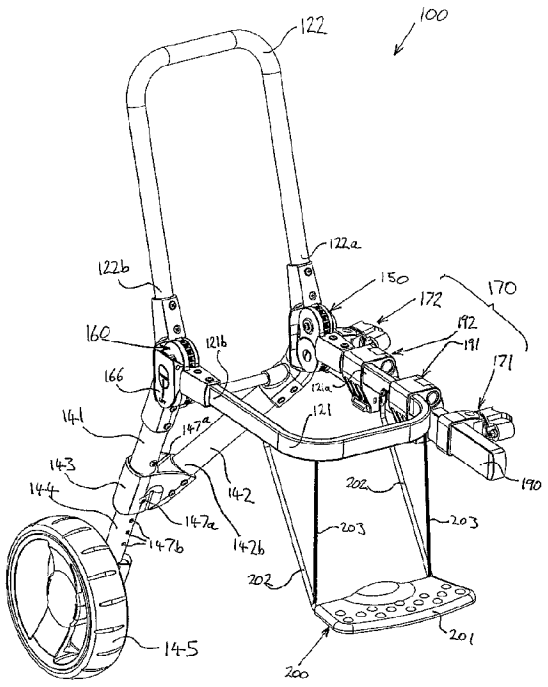
(74) Agents: **GREY, Ian** et al.; Venner Shipley LLP, 20 Little Britain, London EC1A 7DH (GB).

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[Continued on next page]

(54) Title: AUXILIARY PUSHCHAIR SEAT



(57) Abstract: An auxiliary seat (1) attachable to a pushchair (2) to enable it to accommodate two children seated side-by-side. The seat comprises a frame (10) having a backrest (22) and a base (21) and a wheel (30) in contact with the ground in an operative position. A child seated on the base is supported with their back against the backrest (22). The frame (10) is configured so that the backrest (22) and the base (21) fold substantially flat when the auxiliary seat is not in use. The auxiliary seat (1), including the base (21) and backrest (22), can pivot relative to the pushchair (2) to be folded against the side thereof in a storage position with the wheel (30) off the ground, once the base (21) and backrest (22) of the seat have been folded substantially flat.

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Auxiliary Pushchair Seat

Description

The present invention relates to a pushchair, and more specifically, to an add-on seating device for pushchairs.

It is often the case with parents having more than one child that the age gap between the children is such that the older child is not fully able to walk by the time the second child is born or is reluctant to do so for an extended period of time. During the first child's initial years, the parents will most probably have bought a single-seat pushchair to transport the child around in until it learns to walk properly. Modern pushchairs can be an expensive outlay, and perhaps difficult to afford, especially for young couples or those on low income. Therefore, when the second child is born, the parents find themselves requiring another pushchair so that both children can be transported together. Therefore, they must either buy another single-seat pushchair in addition to the first, which means having to use two pushchairs each time both children are taken out together or, buy a new double-seat pushchair, which means the original single-seat pushchair is then redundant. In either case, it involves another significant financial outlay for the parents.

One solution to this problem is to provide an add-on device that can be attached to the existing single-seat pushchair to adapt it to be able to carry both children simultaneously. Recently, pushchair add-on products have become commercially available and one such device comprises a wheeled platform that attaches to the rear of the pushchair, on which the elder child can stand whilst the younger child is seated.

However, this platform type of device has a number of disadvantages. Firstly, as the device is a platform and not a seat, it requires the elder child to remain standing, which can quickly tire them out and become uncomfortable for them. This has a safety implication as well, since the elder child is not provided with a harness to stop them falling off the device. Secondly, the device is positioned at the rear of the

pushchair between the pushchair and the parent. This means that the parent has to lean forward and stoop over and/or around the standing child in order to push the pushchair, and this can quickly cause backache and stiffness, and is generally uncomfortable over anything but the shortest distances. Thirdly, the wheels of the platform are positioned behind the rear wheels of the pram, which means that it can be difficult to push the pushchair up or down kerbs, as the device hinders the ability of the pushchair to be pivoted about the rear wheel axle. This device can also unbalance the pushchair and cause it to tip over very easily

It is therefore an object of the present invention to provide an add-on pushchair seating device that substantially alleviates or overcomes the problems mentioned above.

Accordingly, the present invention provides an auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use and wherein the auxiliary seat, including the base and backrest, can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

In a preferred embodiment, the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism, and the scissor-like mechanism preferably includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

Conveniently, the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and in which said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

A locking mechanism is preferably provided to retain the seat in the erect operative position, and preferably, a locking mechanism locks the at least one sliding joint in place and may comprise a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame. The latch is preferably located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

In an alternative embodiment of the invention, the backrest and the base are pivotably connected to one another by hinge joints to be pivotable from the erect operative position to the collapsed storage position in which the backrest lies flat against the base.

The base conveniently comprises a base frame and a seat covering attached thereto, and the backrest preferably comprises a backrest frame with a backrest covering attached thereto.

In a preferred embodiment, the wheel is secured to the frame by a pivotable wheel mechanism which can pivot from an extended operative position to a folded storage position in which the wheel mechanism lies substantially flat against the frame.

The wheel mechanism preferably includes a telescopic strut to allow the distance of the wheel from the frame to be telescopically adjusted independently of the pivoting of the wheel mechanism from the operative position to the storage position, and the telescopic strut conveniently includes a locking mechanism to lock the strut in the desired position.

In a preferred embodiment, in the storage position, the wheel mechanism lies flat against the base on the opposite side thereto to the backrest.

The wheel mechanism is preferably connected to the frame at said hinge joints, and the backrest and the wheel mechanism are advantageously mechanically connected to one another to be moveable from their respective operative positions to their folded storage position together.

At least one hinge joint preferably includes a locking means to lock the backrest, and preferably also the associated wheel mechanism, in the operative position or in the storage position. The locking means preferably includes a pair of ratchet plates operated by a cam lever to move from a locked position in which the ratchets of each plate engage with each other, to an unlocked position in which the ratchets of each plate are out of engagement with each other to allow the backrest and/or wheel mechanism to pivot about the hinge joints.

The frame may be attached to the pushchair by a first clamping means extending from one side of the frame, and the first clamping means may be attached to a first support strut which is hingedly attached to the frame. The frame is preferably further attached to the pushchair by a second clamping means extending from said one side of the frame and the second clamping means is conventiently hingedly attached to the frame. The first and second clamping means are preferably attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair. Alternatively, the first and second clamping means may be attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

The auxiliary seat may include at least one clamp to secure the add-on seat to a frame of a pushchair, and the at least one clamp is preferably attached to a connection bar, and the frame is attached to the connection bar by at least one hinge connector to be pivotable relative to the connection bar. The at least one clamp and/or the at least one hinge connector are preferably slidable relative to the connection bar allow the position of the frame to be adjusted relative to the pushchair. The frame and connection bar are advantageously releasably attached to

the connection bar. At least one hinge connector preferably includes a locking mechanism to lock the auxiliary seat in the operative position.

The auxiliary seat of the invention is preferably releasably attachable to said pushchair. A preferred embodiment of the invention includes a locking mechanism to secure the auxiliary seat in the storage position.

In a preferred embodiment, the at least one wheel is detachable, and the at least one wheel is preferably positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, the at least one wheel is in alignment with a rear wheel of the pushchair, and more preferably, coaxial with an axle of a rear wheel of the pushchair.

The seat conveniently includes a safety harness to retain a child in position thereon, and may also include a rain cover attached to the seat to at least partially surround a child sitting on the seat. A sunshade may also be attached to the seat to shade a child sitting on the seat, and a toy steering wheel or a toy hobby-horse style attachment may be positionable in front of a child sitting on the seat.

Preferred embodiments of the present invention will now be described, by way of examples only, with reference to the accompanying drawings, in which:

Figure 1 shows a perspective view of a pushchair add-on device according to a first embodiment of the invention, in an erected operative position;
Figure 2 shows the pushchair add-on device of Figure 1 in a collapsed position;
Figure 3 shows a side view of the pushchair add-on device of Figure 1;
Figure 4 shows a side view of the pushchair add-on device of Figure 2;
Figure 5 shows a rear perspective view of the pushchair add-on device of Figures 1 and 3;
Figure 6 shows the pushchair add-on device in the erect position attached to a conventional pushchair;
Figure 7 shows the pushchair add-on device in the collapsed position attached to a conventional pushchair, and folded up in a storage position;

Figure 8 is a perspective view of a second embodiment of a pushchair add-on device according to the invention, in an operative position with the base and backrest removed;

Figure 9 is a plan view from above of the seat of Figure 8;

Figure 10 is a side view of the seat of Figures 8 and 9;

Figure 11 is a front view of the seat of Figures 8 – 10;

Figure 12 is a perspective view of the seat of Figures 8 – 11 in a collapsed position;

Figure 13 is a plan view from above of the seat of Figure 12;

Figure 14 is a side view of the seat of Figures 12 and 13;

Figure 15 is a front view of the seat of Figures 12 – 14;

Figure 16 is a perspective view of the seat of Figures 8 – 15, collapsed and folded up in a storage position;

Figure 17 is a plan view from above of the seat of Figure 16;

Figure 18 is a side view of the seat of Figures 16 and 17;

Figure 19 is a front view of the seat of Figures 16 – 18;

Figures 20A – 20B are side views of the left hinge bracket;

Figure 21 is an exploded perspective view of the left hinge bracket of Figures 20A and 20B;

Figures 22A – 22E are various perspective views of the right hinge bracket showing the locking mechanism;

Figure 23 is an exploded perspective view of the right hinge bracket of Figures 22A – 22E;

Figure 24 is an exploded perspective view of a frame clamp;

Figure 25 is a plan view from above of an assembled frame clamp of Figure 24;

Figure 26 is a side view of the frame clamp of Figure 25;

Figure 27 is an exploded perspective view of a hinged frame clip;

Figure 28 is an end view of an assembled frame clip of Figure 27;

Figure 29 is a side view of the frame clip of Figure 28;

Figure 30 is an exploded perspective view of the wheel; and

Figure 31 is a perspective view of the seat of Figures 8 – 19 with the base and backrest covers in place.

Referring now to Figures 1 – 7 of the drawings, a pushchair add-on device 1, for attachment to any type of conventional pushchair 2 (see Figures 6 and 7), is shown, comprising a chassis frame 10, a seat portion 20 and a wheel 30. The chassis 10 comprises first and second generally curved L-shaped tubular chassis members 11, 12 arranged so that long sides 11a, 12a of each member 11, 12 are parallel to one another, and short sides 11b, 12b are parallel to one another. Each end of each chassis member 11, 12 is connected to a correspondingly opposite end of the other member so as to form a generally rectangular chassis frame 10.

The seat portion 20 comprises a base 21 and a backrest 22. It can also include a seat harness (not shown) comprising a strap extending from either side of the backrest 22 and one extending from the middle of the base 21 at the front thereof, in which all three straps meet in a 'T' – shaped clasp.

The chassis frame 10 includes two collars, 14a, 15a, one slideably received on each of the long sides 11a, 12a of the L-shaped chassis members 11, 12. Each collar 14a, 15a includes a pivot joint integrally formed therewith, and a backrest support stanchion 14, 15 is pivotably attached to each of the collar pivot joints 14a, 15a respectively, and extends therefrom. The backrest 22 is attached at either side to the backrest support stanchions 14, 15 and the backrest 22 is thereby pivotable about the collar pivot joints 14a, 15a.

The chassis 10 also includes a seat support stanchion 16 pivotably attached at one end by a pivot joint 16a to the short side 11b of the first L-shaped chassis member 11 at the rear of the chassis frame 10. The base 21 is rigidly secured to the other end of the seat support stanchion 16 and a lug 23 extends from the rear of the base 21. A hinge rod 23a extends through the lug 23 and each end of the hinge rod 23a extends through the backrest support stanchions 14, 15 respectively. The base 21 is thereby pivotable relative to the backrest support stanchions 14, 15 about said hinge rod 23a and lug 23.

The mechanism described above allows the seat portion 20 to be moveable from a collapsed position shown in Figures 2 and 4 in which the base 21 and backrest 22 lie

substantially flat against the chassis frame 10, to an operative position as shown in Figures 1, 3, 5 and 6 in which the seat portion 20 is erected and the plane of the base 21 is substantially at right angles to the plane of the backrest 22. The arrangement of the components is such that the backrest support stanchions 14, 15 and the seat support stanchion 16, are moveable relative to one another in a scissor-like action, wherein the central pivot point of the scissor action is the hinge rod 23a and the lug 23 on the base 21. The end of the seat support stanchion 16 remote from the base 21 is only pivotable relative to the chassis member 11, and is not moveable laterally relative to it. Therefore, to enable the scissor-action mentioned above, the collar pivot joints 14a, 15a, to which the backrest support stanchions 14, 15 are attached, slide along a section L_{11}, L_{12} of the chassis members 11, 12 respectively as the seat portion 20 is moved from the erect position to the collapsed position.

The chassis 10 further includes a horizontal axle shaft 31 that extends from the long side 11a of the first chassis member 11 through the long side 12a of the second chassis member 12 and protrudes a short distance out of the other side of the second chassis member 12. A section of the protruding end of the axle shaft 31 is threaded in order to receive a retaining nut 32. The wheel 30 includes a central aperture through which the protruding end of the axle shaft 31 can be received. The retaining nut 32 can then be screwed onto the threaded end of the axle shaft 31 to retain the wheel 30 in place whilst allowing it to be freely rotatable about the axle shaft 31. The wheel 30 is therefore easily removable from the axle shaft 31 by removal of the retaining nut 32. It will be appreciated that other such retaining means may be used instead of a screw thread and retaining nut, for example, a snap-fit retaining cap.

A clamp strut 17 is attached at one end to the first chassis member 11 and extends outwardly therefrom away from the second chassis member 12. An attachment clamp 18 is disposed on the other end of the clamp strut 17 and is operable to detachably clamp onto a frame of a conventional pushchair 2. Furthermore, a second attachment clamp 19 is disposed at the end of the short side 12b of the second chassis member 12, and, as with the first attachment clamp, is operable to

detachably clamp onto a frame of a conventional pushchair 2. The two attachment clamps 18, 19 together can thereby secure the device 1 of the invention to the side of the conventional pushchair 2. Each attachment clamp 18, 19 is pivotable relative to the clamp strut 17/chassis member 12 respectively, for reasons which will become apparent from the description hereafter.

The device 1 includes a locking mechanism 40 to enable the seat portion 20 of the device 1 to be retained in the erected operative position (see Figures 5 and 6). The locking mechanism 40 comprises a locking shaft 41 that extends between the slidable collar pivot joints 14a, 15a and is rotatable about its axis relative to the collar pivot joints 14a, 15a. The locking shaft 41 therefore restricts the movement of one collar pivot joint 14a relative to the other 15a, so they can only be moved together and in the same direction. Two locking arms 42, 43 are rigidly secured to the locking shaft 41 and extend rearwardly therefrom, substantially parallel to the long sides 11a, 12a of the chassis members 11, 12. Each arm 42, 43 includes a latch portion 42a, 43a at an end distal from the locking shaft 41. A fixed shaft 44 extends between the chassis members 11, 12 and parallel to the locking shaft 41, and is positioned rearwardly of the locking shaft 41 such that the latch portions 42a, 43a of the arms 42, 43 are just able to be clipped over the fixed shaft 44 and held in this locked position hooked over the fixed shaft 44 by friction therewith. Therefore, when the arms 42, 43 are in this locked position, the collar pivot joints 14a, 15a are prevented from sliding along sections L_{11}, L_{12} of the chassis members 11, 12 respectively, and thereby retain the seat portion 20 in the erect operative position.

As described above, the locking mechanism 40 enables the seat portion 20 of the device 1 to be locked in the erected operative position, and thereby capable of supporting a child thereon in a sitting position next to a child sitting in the pushchair 2 so that they are both facing in the same direction. When the device 1 is not in use, the locking mechanism 40 can be released by unclipping the latch portions 42a, 43a from the fixed shaft 44 and rotating the arms 42, 43 downwards. This can be done by pushing lever release tabs 42b, 43b which are formed on the end of the rotating arms 42, 43 perpendicular thereto and at the end distal from the latch portions 42a, 43a. This will allow the collar pivot joints 14a, 15a to freely slide

along sections L_{11}, L_{12} of the chassis members 11, 12 respectively. The base 21 and seat stanchion 16 can then pivot downwards about the pivot joint 16a, and the backrest 22 and backrest stanchions 14, 15 can pivot downwards about the collar pivot joints 14a, 15a, the backrest stanchions 14, 15 pivoting relative to the seat stanchion 16 about the hinge rod 23a in a scissor-like motion as described above, until the seat portion 20 of the device 1 is in the collapsed position.

Once the device 1 has been put into the collapsed position shown in Figures 2 and 4 and as described above, it can be folded up against the side of the conventional pushchair 2 into the storage position, as shown in Figure 7. This is possible due to the attachment clamps 18, 19 being pivotable relative the clamp strut 17/chassis member 12 respectively, as described above. Once the device 1 has been folded into this storage position, is can be held in place by a retaining means such as a clip (not shown).

With the device 1 in the storage position, the pushchair 2 has a much slimmer profile and will fit through normal doorways with ease. However, if a user wishes to neaten the appearance of the pushchair 2 and device 1 combination further, and make it even slimmer, they may unscrew the wheel retaining nut 32 and remove the wheel 30 from the axle shaft 31.

As can be seen in Figure 6, one of the advantages of the present invention is that when it is attached to a pushchair 2 and is not in the folded storage position, the wheel 30 of the device 1 is aligned with or is coaxial with wheels 3 of the pushchair 2. This means that the pushchair 2 and device 1 combination can be tilted backwards on all three wheels 30, 3 about their common contact line on the ground or their common axis, in order to get up a kerb, for example, and so is much more easily manoeuvrable than a conventional pushchair 2 would be with any of the other known add-on devices.

It is intended that the attachment clamps 18, 19 of the device 1 are suitable to attach to a frame of any conventional pushchair 2. However, some pushchairs currently available may not have side frames compatible with the attachment clamps

18, 19, and so it is envisaged that the device may be supplied with a replacement section of pushchair frame 4 that can be substituted for the relevant section of the original frame to allow the device to be attachable thereto. The specific replacement section of frame 4 could be pushchair-specific, so that a user could identify which pushchair they already own, and purchase a device of the present invention that comes with the appropriate replacement frame section.

In an alternative attachment mechanism to that described above, a universal supplementary section of frame 4 could be provided. This supplementary section 4 would be attachable to the attachment clamps 18, 19 and could further include pushchair-specific attachment means 5, 6 to couple the device 1, via the supplementary frame section 4, to the pushchair 2. Therefore, instead of replacing a section of the existing pushchair frame, there would be an additional section of frame 4. In this case, the user would identify which pushchair they already own, and purchase a device 1 of the present invention that comes with the appropriate pushchair-specific attachment means 5, 6 to enable the device 1 to be fitted to their pushchair 2.

In a further embodiment of the invention, a strap 7 may be connected between a top part 22a of the backrest 22 and a part of the pushchair 2 which is higher than the top 22a of the backrest 22 (see Figure 6). This strap 7 prevents the auxiliary seat device 1 from pivoting downwards about the attachment clamps 18, 19 relative to the pushchair 2 if the wheel 30 runs over a hole or drops off a kerb, for example. In such a scenario, the weight of the auxiliary seat device 1 (and a child thereon) is transferred through the strap 7 to the pushchair 2 and is balanced out by the weight of said pushchair 2 and of a child in the pushchair seat. It will be appreciated that this means of preventing the auxiliary seat device 1 from pivoting downwards beyond a certain angle does not necessarily need to be a strap 7 as shown in Figure 6. For example, a rigid rod could be used secured to the pushchair 2 and some suitable point on the auxiliary seat device 1.

Referring now to Figures 8 – 31, a second embodiment 100 of an add-on pushchair seat of the invention is shown. As with the first embodiment described above, the

second embodiment is also attachable to a frame of any conventional pushchair to provide a secondary side seat for a second child to sit on, in addition to a first child seated in the pushchair itself.

The second embodiment of an add-on seat 100 of the invention generally comprises a folding support frame 120 having a seat or base frame member 121 and a backrest frame member 122, and a wheel mechanism 140 including a wheel 145 in contact with the ground when the add-on seat 100 is in an operative position. An attachment mechanism 170 is provided to enable the add-on seat 100 to be secured to a conventional pushchair.

The base frame member 121 and the backrest frame member 122 are both substantially 'U'-shape frame members, each having a respective first (left-side) distal end 121a, 122a, and respective second (right-side) distal end 121b, 122b. The base frame member 121 and the backrest frame member 122 are pivotally connected to each other at their first distal ends 121a, 122a and at their second distal ends 121b, 122b by left and right hinge brackets 150, 160 respectively.

A seat covering 123 is attached to the base frame member 121, and a backrest covering 124 is attached to the backrest frame member 122 (see Figure 31). The seat covering 123 provides the seat for a child to sit on when the add-on seat 100 is in use, and the backrest covering 124 provides a surface for the seated child to lean against. Both the seat covering 123 and the backrest covering 124 are preferably made of a flexible material such as a fabric or a flexible plastic and are attached to each other at their adjacent edges 123a, 124a. The seat covering 123 and the backrest covering 124 are both tensioned across the base frame member 121 and backrest frame member 122 respectively. Alternatively, the seat covering and backrest covering could be made from a rigid plastic material.

A wheel mechanism 140 is connected to the folding support frame 120 at the hinge brackets 150, 160 and comprises a main wheel strut 141 pivotally attached at one end 141a to the right hinge bracket 160, and a diagonal bracing strut 142 pivotally attached at one end 142a to the left hinge bracket 150. The other end 142b of the

bracing strut 142 is secured to the other end 141b of the main wheel strut 141 by a V-shaped moulded connector 143. This enables the main wheel strut 141 and the bracing strut 142 to be pivotable together about the left and right hinge brackets 150, 160 from an operative position in which they extend away from the frame 120 (see Figures 8 – 11), to a collapsed position (see Figures 12 – 15) and a storage position (see Figures 16 – 19) in which they lie flat against the base frame member 121 of the folding support frame 120.

A third sliding wheel strut 144 is telescopically received in the main wheel strut 141 and is slidable relative thereto to move in and out thereof. A wheel 145 is rotatably and detachably attached to an axle 146 at the free end 144a of the sliding strut 144 remote from the main wheel strut 141. An axle bracket 146a is secured to the free end 144a of the sliding wheel strut 144 to support the axle 146 thereon. The sliding strut 144 is locked in a desired position within the main strut 141 by means of securing bolts 147a extending though the main strut 141 and through apertures 147b in the sliding strut 144. To alter the position of the sliding strut 144 within the main strut 141, and thereby the distance of the wheel 145 from the hinge brackets 150, 160, the securing bolts 147a are removed, the sliding strut 144 moved to the new position with the appropriate apertures 147b aligned with the bolts 147a in the main strut 141, and the bolts 147a are screwed in again through the apertures 147b. It will be appreciated that other unillustrated means of securing the sliding strut 144 within the main strut 141 are possible, for example, spring-biased buttons on the sliding strut 144 being received in apertures in the main strut 141. In such an embodiment, the sliding strut 144 could be adjusted by depressing the buttons into the sliding strut 144 so that they are clear of the holes in the main strut 141, and when the sliding strut 144 was located in the new desired position, the buttons would spring out into the nearest holes in the main strut 141 under spring bias to lock the sliding strut 144 in position.

The wheel 145 is releasably attached to the axle 146, and includes the attachement mechanism as shown in Figure 30. The wheel 145 comprises a tyre 145a attached to a rim 145b. The rim 145b has a spring-biased button 145c at its centre (see Figure 10 for example) which can be depressed into the rim 145b. The wheel also

comprises two bearings 148 and two over-lapping axle-plates 149a, 149b, each with a hole therethrough, all contained within the rim 145b by a retaining plate 145d. In use, the wheel 145 is secured to the axle 146 by depressing the button 145c which is configured so as to push the two axle-plates 149a, 149b together so that the holes in each plate are aligned. The axle 146 can then be passed through a hole in the retaining plate 145d, through the first bearing 148, through the aligned holes in the axle-plates 149a, 149b, and through the second bearing 148. The button 145c is then released and the axle-plates move apart under the action of resilient spring arms on their sides pushing against a portion of the rim 145b, and lips on the axle-plates 149a, 149b then locate in a circumferential groove (not shown) in the axle 146 to hold the wheel 145 onto the axle 146. To release the wheel 145 from the axle 146, the process described above is reversed.

The left and right hinge brackets 150, 160 will now be described in more detail with reference to Figures 20 – 23. The left hinge bracket 150 comprises a housing plate 151, a backrest arm 152 and a wheel strut arm 153. The backrest arm 152 and the wheel strut arm 153 each include an integrally formed toothed cog portion 152a, 153a, and are rotatably secured to the housing plate 151 with the teeth of each cog portion 152a, 153a meshing. Therefore, when one arm is rotated, it causes the other arm to rotate. In use, the left side distal end 122a of the backrest frame member 122 is secured in an aperture in the backrest arm 152, and the one end 142a of the diagonal bracing strut 142 is secured in an aperture in the wheel strut arm 153. The housing plate 151 includes an aperture 151a which, in use, receives the left distal end 121a of the base frame member 121. The toothed cog portion 152a of the backrest arm 152 also includes a central aperture 152c, around which ratchet ridges 152d are radially arranged. A ratchet plate 154 is connected to the toothed cog portion 152a and has its own set of ratchet ridges 154a which engage with the ratchet ridges 152d of the toothed cog portion 152a so that the ratchet plate 154 rotates when the toothed cog portion 152a of the backrest arm 152 rotates. A wire guide 155 is attached to the side of the ratchet plate 154 remote from the toothed cog portion 152a, and a wire 156 extends from the ratchet plate 154, through the wire guide 155 and through a guide lug 151b on the left housing plate 151. The wire 156 is attached to the ratchet plate 154 such that when the left backrest arm 152 is

pivoted from the operative position to the collapsed position, the wire 156 is pulled through the wire guide 155 and though the guide lug 151b, for reasons which will be explained in more detail below.

The right hinge bracket 160 is similar to the left hinge bracket 150 and comprises a backrest arm 162 and a wheel strut arm 163. The backrest arm 162 and the wheel strut arm 163 each include an integrally formed toothed cog portion 162a, 163a, and are rotatably secured to the housing plate 161 with the teeth of each cog portion 162a, 163a meshing. Therefore, when one arm is rotated, it causes the other arm to rotate. In use, the right side distal end 122b of the backrest frame member 122 is secured in an aperture in the backrest arm 162, and the one end 141a of the main wheel strut 141 is secured in an aperture in the wheel strut arm 163. The housing plate 161 includes an aperture 161a which, in use, receives the right distal end 121b of the base frame member 121. Any suitable means may be used to secure the backrest frame member 122 in the backrest arms 152, 162 and the diagonal bracing strut 142 and the main wheel strut 141 in the wheel strut arms 153, 163, such as screws, rivets or bolts. Similarly, the same suitable means can be used to secure the base frame member 121 to the apertures 151a, 161a in the left and right housing plates 151, 161 respectively.

The above arrangement allows the base and backrest frame members 121, 122 to be pivotable relative to one another about the hinge brackets 150, 160 from an operative position (see Figures 8 – 11), in which each frame member 121, 122 is spaced from the other, to a collapsed position and a storage position, in which the backrest frame member 122 is folded substantially flat and lies against the base frame member 121 (see Figures 12 - 19). In the operative position, the backrest arms 152, 162 and the wheel strut arms 153, 163 extend away from each other (see Figures 20A and 22A) and are at their maximum angular displacement from the base frame member 121, limited by end faces 152b, 162b of the backrest arms 152, 162 adjacent the toothed cog portions 152a, 162a, contacting end faces 153b, 163b of the wheel strut arms 153, 163 adjacent the toothed cog portions 153a, 163a (indicated at arrows 'A'). In the collapsed position and the storage position, the backrest arms 152, 162 and the wheel strut arms 153, 163 lie close to each other

either side of their respective housing plate 151, 161 (see Figures 20B and 22E). The backrest arms 152, 162 and the wheel strut arms 152, 163 can be locked in the operative or storage position by a locking mechanism, described in detail below.

The right hinge bracket 160 includes a locking mechanism to lock the backrest arm 162 and the wheel strut arm 163 in a chosen position relative to each other. The locking mechanism comprises a locking plate 164 with a central post 164a, a spring 165 and a locking lever 166. The toothed cog portion 162a of the backrest arm has a central aperture 162c, around which ratchet ridges 162d are radially arranged. The locking plate 164 has a corresponding set of ratchet ridges (not shown) radially disposed around where the central post 164a joins the locking plate 164. The ratchet ridges 162d are located on the side of the toothed cog 162a that faces the ratchet ridges on the locking plate 164. The backrest arm 162 is rotatably attached to the housing plate 161 by the post 164a of the locking plate 164 passing though the spring 165, through the aperture 162c in the centre of the toothed cog portion 162a, through an aperture 161b in the housing plate 161 and is secured to the locking lever 166 by a pin 167 which extends though the locking lever 166 and through an aperture in the end of the post 164a.

Once assembled as described above, the locking lever 166 is pivotable about the pin 167. However, the distance $D_{unlocked}$ between the axis of the pin 167 and an upper angled face 166b of the locking lever 166 is less than a distance D_{locked} between the axis of the pin 167 and a rear face 166c of the locking lever 166. Therefore, when the locking lever 166 is moved from a locked position (see Figures 22A and 22E) to an unlocked position (see Figures 22C and 22D), the locking lever 166 acts as a cam against the housing plate 161 and the pin 167 moves towards the housing plate 161 by a distance equal to $[D_{locked} - D_{unlocked}]$. This moves the post 164a and therefore the locking plate 164 away from the toothed cog portion 162a by a corresponding distance which is sufficient to ensure that the two sets of ratchet ridges are spaced from one another. The backrest arm 162 and the wheel strut arm 163 are therefore free to rotate relative to the housing plate 161. The spring 165 ensures that the locking plate 164 is held away from the toothed cog portion 162a when the locking lever 166 is in the unlocked position.

When the locking lever 166 is moved from the unlocked position to the locked position, the cam action moves the pin 167 by a distance equal to $[D_{locked} - D_{unlocked}]$ away from the housing plate 161. This pulls the central post 164a and the locking plate 164 towards the toothed cog portion 162a and the ratchet ridges 162d on the toothed cog portion 162a into engagement with the ratchet ridges on the locking plate 164. Neither the locking plate 164 nor the locking lever 166 can rotate about the axis of the central post 164a. The locking plate 164 is shaped to abut a portion of the housing plate 161 and is thereby prevented from rotating relative to the housing plate 161. The wheel strut arm 163 is rotatably attached to the housing plate 161 by a shaft 168. The end of the shaft 168 proximate the locking lever 166 has a mushroom head 168a which projects from the end of the shaft 168 away from the wheel strut arm 163. The locking lever 166 includes a locking aperture 166a to receive the mushroom head 168a at the end of the shaft 168, and a latch mechanism within the locking lever 166 (not shown) engages with the rim of the mushroom head 168a to secure the locking lever 166 thereto. The locking lever also includes a release button 169 which disengages the latch mechanism from the mushroom head 168a to allow the locking lever to be pivoted about the pin 167 as described above. Therefore, when the locking lever 166 is secured to the mushroom head 168a at the end of the shaft 168 as described above, it is unable to rotate about the axis of the central post 164a. As a result, the backrest arm 162 and the wheel strut arm 163 are locked in position until the locking lever 166 is again moved to the unlocked position as described above, so that the ratchet ridges are moved out of engagement with each other. As the backrest frame member 122 connects the left backrest arm 152 to the right backrest arm 162, and the wheel struts 141, 142 connect the left wheel strut arm 153 to the right wheel strut arm 163, the locking mechanism locks the movement of the both the wheel mechanism 140 and the backrest frame member 122 about the hinge brackets 150, 160.

The add-on seat 100 is provided with an attachment mechanism 170 to enable it to be secured to a conventional pushchair. The attachment mechanism 170 comprises front and rear pushchair clamps 171, 172, a connection bar 190, and front and rear hinges 191, 192. The pushchair clamps 171, 172 can be secured to a side frame of a

pushchair and are releasably attachable to the connection bar 190. They are also designed to be able to be securely attached to pushchair frames of different cross-sections and dimensions, for example, they can attach to circular, oval, square and rectangular cross-section pushchair frames. The front and rear hinges 191, 192 are pivotally attached to the base frame member 121 and also to the connection bar 190. Therefore, when the two pushchair clamps 171, 172 are secured to the pushchair frame and to the connection bar 190, and the two hinges 191, 192 are secured to the base frame member 121 and to the connection bar 190, the add-on seat 100 is secured to the pushchair.

The connection bar 190 may also be provided with an articulated section 190a (see Figures 9 and 10) which is of the same cross-sectional dimension as the connection bar 190, but which is connected to one end thereof by an articulated joint 190b to be pivotable about a vertical axis of the joint 190b relative to the connection bar 190. This articulated section is designed to enable the add-on seat 100 to be connected to a pushchair whose side frame may not lie parallel with the forward direction of travel of the pushchair. For example, modern three-wheeled pushchairs have two rear wheels and the side frames taper inwards towards a single front wheel. To enable the add-on seat 100 to be attached to such a pushchair, the rear pushchair clamp 172 can be connected to the rear of the side frame of the pushchair and to the rear of the connection bar 190, and the front pushchair clamp 171 can be connected to the front of the pushchair and to the articulated section 190a of the connection bar 190, so that the front pushchair clamp 171 and articulated section 190a would be inset from the rear pushchair clamp 172 due to the shape of the pushchair. The articulated section 190a of the connection bar 190 would thus be pivoted towards the pushchair at an angle to the connection bar 190. The add-on seat 100 would still be secured to the pushchair, but the connection bar 190, and therefore the folding support frame 120 and wheel mechanism 140, would be in alignment with the direction of travel of the pushchair, and not angled inwards parallel to the tapered side of the pushchair. It will be appreciated that the articulated section 190a could equally be connected to the rearmost end of the connection bar 190 instead of the front end if necessary, for example, if the side of

the pushchair to which is it so be attached, tapered inwardly towards the rear of the pushchair.

The two pushchair clamps 171, 172 are identical and so only one will be described in detail hereafter. The pushchair clamps 171, 172 comprise a first body 173 with a flexible metal band 174 ridgedly secured at one end 174a to one side of the first body 173, and the other free end 174b removably received in an aperture 173a in the opposite side of the first body 173. The aperture 173a houses a threaded screw 175 and the other free end 174b of the band 174 is received in the aperture 173a in contact with the threaded screw 175. The side of the band 174 adjacent the threaded screw 175 is provided with a series of parallel grooves 174c which cooperate with the thread of the threaded screw 175 such that when the threaded screw 175 is turned clockwise, the band 174 is pulled through the aperture 173a, reducing the size of the loop of band 174 between the rigidly secured one end 174a of the band 174 and the threaded screw 175. Conversely, when the threaded screw is turned anticlockwise, the other free end 174b of the band 174 is pushed through the aperture 173a, enlarging the size of the loop of band 174 between the rigidly secured one end 174a of the band 174 and the threaded screw 175, until the other end 174b of the band 174 is pushed free of the threaded screw 175. This function is similar to that of known 'jubilee clips'.

A second body 176 is secured to the first body 173 and can rotate relative to the first body 173 so that the second body 176 can be positioned in a specific orientation about a horizontal axis, regardless of at which angle the first body 173 is secured to a pushchair. The second body 176 includes a front opening to an internal cavity, and an upper and lower circular hole 176a, 176b in the upper and lower faces respectively leading to the internal cavity. A shaft 177 is disposed vertically within the internal cavity and includes side wings 177a which are received in corresponding slots 177b in the side walls of the internal cavity. A bolt 178 extends through a hole in the middle of the shaft 177 and through the rear wall of the second body portion 176, and is secured to the first body portion 173, providing the rotateable coupling described above. Upper and lower ends of the shaft 177 are provided with buttons 179a, 179b respectively, which are slidably received thereon and biased away from

each other by upper and lower springs 180a, 180b respectively. When assembled, the upper and lower buttons 179a, 179b extend through the upper and lower holes 176a, 176b and are prevented from being pushed all of the way through their respective hole by a lip 181a, 181b at the base of each button which abuts the rim of the hole 176a, 176b on the inside of the internal cavity.

The pushchair clamps 171, 172 further include a third body 182 comprising a box section with a rectangular aperture 183 therethrough, and upper and lower arms 184a, 184b extending perpendicularly from the upper and lower faces of the box section. Each arm 184a, 184b has a circular aperture 185a, 185b therethrough sized slightly larger than the diameter of the buttons 179a, 179b of the second body 176. The third body 182 can be releasably secured to the second body 176 by depressing the buttons 179a, 179b towards each other so that they sit within the apertures 176a, 176b, and then sliding the third body 182 to engage with the second body 176 with the upper and lower arms 184a, 184b above and below the upper and lower surfaces of the second body 176. When the upper and lower circular holes 176a, 176b in the second body 176 are aligned with the upper and lower circular apertures 185a, 185b in the arms 184a, 184b respectively, the buttons 179a, 179b can spring outwards under the biasing force of the springs 180a, 180b through both upper and lower holes 176a, 176b and upper and lower apertures 185a, 185b to secure the second and third bodies 176, 182 together.

The front and rear hinges 191, 192 are similar to each other and will be described in detail hereafter. Both hinges 191, 192 comprise a first part 193 and a second part 194, pivotally connected to one another by a hinge rod 195 and pivotable relative to one another from an operative position in which the first and second part 193, 194 lie adjacent to each other, to a storage position in which the first and second parts 193, 194 extend away from each other.

The first part 193 has a rectangular aperture 193a therethrough of the same cross sectional dimension as that of the base frame member 121 to allow, in use, the base frame member 121 to make a press fit in the aperture 193a to be secured thereto. The second part 194 has a rectangular aperture 194a therethrough of the same cross

sectional dimension as that of the connection bar 190 to allow, in use, the connection bar 190 to make a press fit in the aperture 194a to be secured thereto.

The first part 193 of the rear hinge 192 has a latch plate 198 which is received in a slot 196 in the bottom of the first part 193, and is spring biased out of the slot 196. The latch plate 198 is prevented from being pushed out of the slot 196 by a small retaining pin 198a which is located in a small vertical slot 193b in the side of the first part 193 of the hinge 192. The second part 194 has a flange 197 extending perpendicularly from the side of the second part 194 opposite the latch plate 198, and an upstanding lip 197a extends from the flange 197. As the hinge 192 is pivoted to the operative position, the lip 197a contacts the latch-plate 198 and pushes it upwards against the force of the spring bias, until the lip 197a passes the latch plate 198 and the latch plate 198 clicks into place between the lip 197a and the second part 194 of the hinge 192. The hinge 192 is thereby retained in the operative position until the latch plate 198 is lifted up and retracted into the slot 196 to release the lip 197a and allow the first and second parts 193, 194 to pivot freely. The latch plate 198 is attached to the wire 156 from the left hinge bracket 150 at a wire fastening point 198b on the top of the latch plate 198. The wire 156 extends from the wire fastening point, through the slot 196, out of the first part 193 of the rear hinge 192 and to the guide lug 151b, the wire guide 155 and ratchet plate 154 as described previously. Therefore, when the wire 156 is pulled by rotation of the ratchet plate 154 on rotation of the backrest arm 152, the latch plate 198 is pulled upwards in the direction of arrow 'B' into the slot.

The front hinge 191 does not have the latch plate 198 and lip 197a arrangement of the rear hinge 192. Instead, the front hinge only has a flange without an upstanding lip, and when the front hinge 191 is in the operative position, a lower face of the first part 193 sits on the flange 197 and is supported by it, but is not locked in that position. However, it is possible, in an alternative embodiment of the invention, for both front and rear hinges 191, 192 to include the latch 198 and lip 197a arrangement of the rear hinge 192.

The pushchair also includes a footrest 200, comprising a foot plate 201 and two support arms 202 pivotably attached to the base frame member 121. The footrest 200 can pivot from an operative position in which a seated child can rest their feet on the foot plate 201 (see Figures 8 – 11), to a folded position in which the footrest 200 is folded flat against the base frame member 121 (see Figures 12 – 19). The footrest 200 can be retained in the folded position by the wheel struts 153, 163 sandwiching it between them and the base frame member 121. The footrest also includes two wires or strings 203 extending from the footplate 201, or proximate the footplate 201, to the base frame member 121 to limit the maximum degree to which the footrest 200 can pivot away from the base frame member 121.

The add-on pushchair seat 100 of the invention is used as described hereafter. First, the two pushchair clamps 171, 172 are secured to the side frame of a pushchair. Once in place, the clamps 171, 172 are designed to remain secured to the pushchair at all times, even when the add-on seat 100 is not attached to the pushchair, and also when the pushchair itself is folded away for storage. The pushchair clamps 171, 172 are secured to the pushchair by unscrewing the threaded screw 175 so that the free end 174b of the steel band 174 is free of the first body 173. The steel band is then passed around an appropriate part of the pushchair frame and the free end 174b of the band 174 pushed into the aperture 173a so that the grooves 174c in the band 174 engage with the thread of the screw 175. The threaded screw 175 is then rotated clockwise to pull the band through the aperture 173a in the first body 173, which tightens the band 174 around the frame of the pushchair and grips the frame clamp 171, 172 thereto. An important feature of this system is that the pushchair clamps 171, 172 are attachable to pushchair frames of varying shapes and sizes, allowing the add-on seat 100 of the invention to be universally used with any commercially available pushchair. Although the add-on seat is adjustable to allow the pushchair clamps to be positioned at a range of heights on the side of the pushchair frame, it is important that each pushchair clamp 171, 172 is placed at the same height as the other.

Next, the second bodies 176 are rotated about their securing bolts 178 so that each one is positioned with the upper button 179a directly above the lower button 179b

and the axis of the shaft 177 lying vertically. The two third bodies 182 are secured to the connection bar 190 and/or the articulated section 190a of the connection bar 190 if necessary, with the connection bar 190 and articulated section 190a making a press fit in the rectangular apertures 183. The third bodies 182 can be forced to slide along the connection bar 190 and articulated section 190a against the resistance of the press fit, so that they are horizontally spaced to align with the first and second bodies 173, 176 on the pushchair. The third bodies 182 are then attached to the second bodies 176 as described above, by depressing the upper and lower buttons 179a, 179b, sliding the upper and lower arms 184a, 184b above and below the upper and lower surfaces of the second bodies 176, and releasing the buttons 179a, 179b so that they spring though the upper and lower holes 176a, 176b in the second bodies 176, and also through the upper and lower apertures 185a, 185b in the arms 184a, 184b respectively. The third bodies 182 are thereby secured to the first and second bodies 173, 176, and so the connection bar 190 and articulated section is secured to the pushchair frame. As described above, the hinges 191, 192 are also secured to the connection bar 190 and to the base frame member 121, thereby connecting the whole add-on seat 100 to the pushchair.

The add-on seat 100 must be adjusted so that it is positioned correctly with respect to the pushchair. First the whole device is folded into the operative position as shown in Figures 8 – 11, with hinges 191, 192 in the operative position so the base frame member 121 is positioned in a horizontal plane, the backrest frame member 122 folded away from the base frame member 121, and the wheel mechanism 140 fully folded away from the base frame member 121. Next, the sliding wheel strut 144 is telescopically adjusted within the main wheel strut 141 until the wheel 145 contacts the ground. It will be appreciated that if the pushchair clamps 171, 172 are positioned either higher or lower on the pushchair frame, the sliding wheel strut 144 will need to be either extended out of, or retracted into the main wheel strut 141 for the wheel 145 to contact the ground. Once the sliding wheel strut 144 is in the correct position, it is secured in that position by the securing bolts 147a extending though the main strut 141 and through apertures 147b in the sliding strut 144. Finally, the add-on seat 100 is positioned so that the wheel 145 is aligned with the rear wheels of the pushchair to which it is attached. This can be done by sliding

either the hinges 191, 192 along the connection bar 190 and/or articulated section 190a, or by sliding the third bodies 182 of the pushchair clamps 171, 172 along the connection bar 190. This allows the add-on seat 100 to be moved forwards or backwards with respect to the pushchair, until the correct position is obtained.

It is an important feature of the add-on seat 100 of the invention that it is constructed so that the rear wheel 145 and axle 146 can be positioned in line with and/or co-axial with the rear wheels of the pushchair. This enables the pushchair and attached add-on seat 100 to easily mount kerbs because a user can tilt the pushchair backwards towards themselves so that the pushchair and add-on seat 100 all pivot about a common axis – i.e. the line of contact on the ground of the pushchair wheels and the add-on seat 100 wheel 145. If the wheel 145 of the invention is not aligned with the rear wheels of the pushchair, the combined apparatus of the pushchair and add-on seat 100 would not tilt backwards (or forwards, to descend kerbs) easily.

It will be appreciated that if the height at which the add-on seat 100 is attached on the pushchair is changed, then the extension of the sliding wheel strut 144 within the main wheel strut 141, and the position of the base frame member 121 relative to the pushchair will have to be changed if the wheel 145 is to remain in line/co-axial with the rear wheels of the pushchair. More specifically, if the pushchair clamps 171, 172 are positioned higher up on the pushchair, the sliding wheel strut 144 will need to be extended out of the main wheel strut 141 further so that the wheel 145 contacts the ground, and consequently, the wheel 145 will be positioned further back relative to the pushchair. The base frame member 121 will then need to be moved forwards relative to the pushchair to re-align the wheel 145 with the wheels of the pushchair. Conversely, if the pushchair clamps 171, 172 are positioned lower down on the pushchair, the sliding wheel strut 144 will need to be retracted into the main wheel strut 141 for the wheel 145 to contact the ground, and consequently, the wheel 145 will be positioned further forwards relative to the pushchair. Therefore, the base frame member 121 will then need to be moved backwards relative to the pushchair to re-align the wheel 145 with the wheels of the pushchair.

Once in this operative position, the backrest frame member 122 is locked relative to the base frame 121 by the cam action of the locking lever 166 pulling the ratchet ridges of the locking mechanism into engagement as described above. The locking lever 166 is also held in the locked position by the internal latch engaging with the mushroom head 168a of the shaft 168 of the right hinge bracket 160, as described above. A child can then sit on the seat covering 123 with their back against the backrest covering 124 to be transported around on the add-on seat.

When the pushchair is to be used to carry only one child and the add-on seat 100 is not required, the add-on seat 100 can be folded from the operative position to a collapsed position (as shown in Figures 12 – 15) and then folded up to a storage position (as shown in Figures 16 - 19) as described hereafter.

The release button 169 is depressed (Figure 22B), releasing the internal latch within the locking lever 166 which allows the locking lever 166 to pivot about the pin 167 (Figure 22C) and free the mushroom head 168a of the shaft 168 from the locking aperture 166a. As described above, this cam action of the locking lever 166a allows the locking plate 164 to move away from the toothed cog portion 162a of the backrest arm 162 under the biasing force of the spring 165, and thereby disengage the ratchet ridges 162d on the toothed cog portion 162a from the ratchet ridges on the locking plate 164. This allows the two backrest arms 152, 162 and the two wheel strut arms 153, 163 to pivot about the hinge brackets 150, 160 respectively (Figure 22D), and therefore allows the associated backrest frame member 122 and wheel mechanism 140 to pivot about the hinge brackets 150, 160.

The wheel mechanism 140 and the backrest frame member 122 can then be folded into the collapsed position in which they both lie flat against the base frame member 121 (see Figures 12 – 15). Once in this collapsed position, the locking lever 166 can be pivoted back to the locked position (Figure 22E), pulling the locking plate 164 back towards the locking lever 166 and thereby engaging the ratchet ridges 162d on the toothed cog 162a with the ratchet ridges on the locking plate 164. This locks the backrest arms 152, 162 and associated backrest frame member 122, and the wheel strut arms 153, 163 and associated wheel mechanism 140, in the collapsed

position. As mentioned previously, the footrest 200 is folded up with the wheel mechanism 140 in the collapsed position and is held between the main and bracing wheel struts 141, 142 and the base frame member 121.

Once in the collapsed position as described above, the add-on seat 100 can be folded up against the side of the pushchair into the storage position (see Figures 16 – 19). By moving the backrest frame member 122 to the folded collapsed position as described above, the wire 156 is pulled though the wire guide 155 and though the guide lug 151b, which pulls the latch plate 198 into the slot 196 in the rear hinge 192 to release the lip 197a, and thereby release the second part 194, of the rear hinge 192 from the first part 193. The collapsed folding support frame 120 and wheel mechanism 140 can then be pivoted upwards about the front and rear hinges 191, 192 to the storage position to lie flat against the side of the pushchair in a substantially vertical plane.

The add-on seat can be retained in the storage position described above by using a strap (not shown) to hold it to the pushchair. In addition, the wheel 145 can be removed from the axle as described above, and attached to a 'false axle' 146b protruding from the side of the connection bar 190 (see Figures 16 and 18). The side of the wheel 145 thereby abuts the hinges 191, 192 and prevents them from pivoting back to the operative position.

If the pushchair is to be transported, for example, in the boot of a car, it will most probably be necessary to remove the main body of the add-on seat 100 from the pushchair to allow the pushchair to be folded. This is done by detaching the third bodies 182 from the second bodies 176 of the pushchair clamps 171, 172 as described above. The only part of the add-one seat 100 that then remains attached to the pushchair is the first and second bodies 173, 176 of the pushchair clamps 171, 172 which are intended to be small enough to not hinder the folding mechanism of modern pushchairs.

Other unillustrated embodiments of the present invention may include additional features or accessories. For example, a rain cover could be provided, attachable to

the auxiliary seat device 1/100, to partially or entirely surround a child seated on the device to shelter the child from wind/rain/sleet/snow. The rain cover could incorporate a supporting frame structure attachable to the device. Alternatively, the device could be provided with a sunshade or parasol.

The add-on seat 1/100 would preferably include a seat belt or a 3- or 5- point safety harness to secure around the child's waist and/or shoulders when seated, to prevent the child from falling off the seat and being injured.

The wheel struts 141, 142, 144 and folding frame members 121, 122 are intended to be made from light-weight steel tubing for optimum strength and rigidity, whilst also remaining light enough to carry easily. This also has the benefit of minimising the weight of the accessory exerted on the side of the pushchair so that when it is in the storage position, it does not cause the pushchair to tip over. It is also envisaged that the seat cover 123 and the backrest cover 124 are easily removable for cleaning, and replaceable when worn or to change the aesthetic appearance of the invention.

In addition to the functional accessories mentioned above, the auxiliary seat device 1 may also include an accessory intended to amuse the child whilst the child is in the seat. This could include a toy steering wheel or dashboard arrangement, or a hobby-horse style attachment positionable in front of the child.

Claims

1. An auxiliary seat attachable to a pushchair to enable it to accommodate two children seated side-by-side, the seat comprising a frame having a backrest and a base and a wheel in contact with the ground in an operative position to support a child seated on the base with their back against the backrest, wherein the frame is configured so that the backrest and the base fold substantially flat when the auxiliary seat is not in use and wherein the auxiliary seat, including the base and backrest, can pivot relative to the pushchair to be folded against the side thereof in a storage position with the wheel off the ground, once the base and backrest of the seat have been folded substantially flat.

2. An auxiliary seat according to claim 1 wherein the base and the backrest are pivotable relative to one another such that they are collapsible from the erect operative position to the collapsed folded position by means of a scissor-like mechanism.

3. An auxiliary seat according to claim 2 wherein the scissor-like mechanism includes at least one sliding joint to enable the base and backrest to be erected and collapsed.

4. An auxiliary seat according to claim 3 wherein the backrest is attached to one end of a first support strut and the base is attached to one end of a second support strut, and in which said first and second support struts are pivotable relative to each other and the end of the first support strut remote from the backrest is connected to the at least one sliding joint.

5. An auxiliary seat according to any preceding claim comprising a locking mechanism to retain the seat in the erect operative position.

6. An auxiliary seat according to claim 3 or claim 4 comprising a locking mechanism to retain the seat in the erect operative position and which locks the at least one sliding joint in place.

7. An auxiliary seat according to claim 6 wherein the locking mechanism comprises a latch extending from the at least one sliding joint, operable to lock onto a fixed shaft on the frame.

8. An auxiliary seat according to claim 7 wherein the latch is located at one end of an arm, the arm rotatably mounted to the at least one sliding joint and operable to move from a first locked position in which the latch snags on the fixed shaft, to a second unlocked position in which the latch is clear of the fixed shaft to allow movement of the at least one sliding joint.

9. An auxiliary seat according to claim 1 wherein the backrest and the base are pivotably connected to one another by hinge joints to be pivotable from the erect operative position to the collapsed storage position in which the backrest lies flat against the base.

10. An auxiliary seat according to claim 9 wherein the base comprises a base frame and a seat coving attached thereto.

11. An auxiliary seat according to claim 9 or claim 10 wherein the backrest comprises a backrest frame with a backrest covering attached thereto.

12. An auxiliary seat according to any of claims 9 – 11 wherein the wheel is secured to the frame by a pivotable wheel mechanism which can pivot from an extended operative position to a folded storage position in which the wheel mechanism lies substantially flat against the frame.

13. An auxiliary seat according to claim 12 wherein the wheel mechanism includes a telescopic strut to allow the distance of the wheel from the frame to be telescopically adjusted independently of the pivoting of the wheel mechanism between the operative position and the storage position.

14. An auxiliary seat according to claim 13 wherein the telescopic strut includes a locking mechanism to lock the strut in the desired position.

15. An auxiliary seat according to any of claims 12 to 14 wherein, in the storage position, the wheel mechanism lies flat against the base on the opposite side thereto to the backrest.

16. An auxiliary seat according to any of claims 12 to 15 wherein the wheel mechanism is connected to the frame at said hinge joints.

17. An auxiliary seat according to claim 16 wherein the backrest and the wheel mechanism are mechanically connected to one another to be moveable together between their respective operative position and their folded storage position.

18. An auxiliary seat according to claim 16 wherein at least one hinge joint includes a locking means to lock the backrest in the operative position or in the storage position.

19. An auxiliary seat according to claim 17 wherein at least one hinge joint includes a locking means to lock the backrest and the mechanically associated wheel mechanism in the operative position or in the storage position.

20. An auxiliary seat according to claim 18 or claim 19 wherein the locking means includes a pair of ratchet plates operated by a cam lever to move from a locked position in which the ratchets of each plate engage with each other, to an unlocked position in which the ratchets of each plate are out of engagement with each other to allow the backrest and/or wheel mechanism to pivot about the hinge joints.

21. An auxiliary seat according to any preceding claim wherein the frame is attached to the pushchair by a first clamping means extending from one side of the frame.

22. An auxiliary seat according to claim 21 wherein the first clamping means is attached to a first support strut which is hingedly attached to the frame.

23. An auxiliary seat according to claim 21 or claim 22 wherein the frame is further attached to the pushchair by a second clamping means extending from said one side of the frame.

24. An auxiliary seat according to claim 23 wherein the second clamping means is hingedly attached to the frame.

25. An auxiliary seat according to claim 23 or claim 24 wherein the first and second clamping means are attachable to a supplementary pushchair frame bar which includes further attachment means operable to fix the bar and seat attached thereto, to the conventional pushchair.

26. An auxiliary seat according to claim 23 or claim 24 wherein the first and second clamping means are attachable to a replacement pushchair frame bar which can be fitted in place of an existing section of frame of a conventional pushchair to fix the seat thereto.

27. An auxiliary seat according to any of claims 1 – 20 including at least one clamp to secure the add-on seat to a frame of a pushchair.

28. An auxiliary seat according to claim 27 wherein the at least one clamp is attached to a connection bar, and the frame is attached to the connection bar by at least one hinge connector to be pivotable relative to the connection bar.

29. An auxiliary seat according to claim 28 wherein the at least one clamp and/or the at least one hinge connector are slidable relative to the connection bar to allow the position of the frame to be adjusted relative to the pushchair.

30. An auxiliary seat according to claim 28 or 29 wherein the frame, at least one hinge connector and connection bar are releasably attached to the at least one clamp.

31. An auxiliary seat according to any of claims 28 to 30 wherein the at least one hinge connector includes a locking mechanism to lock the auxiliary seat in the operative position.

32. An auxiliary seat according to any preceding claim which is releasably attachable to said pushchair.

33. An auxiliary seat according to any preceding claim wherein the at least one wheel is detachable.

34. An auxiliary seat according to any preceding claim including locking mechanism to secure the auxiliary seat in the storage position.

35. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, the at least one wheel is in alignment with a rear wheel of the pushchair.

36. An auxiliary seat according to any preceding claim wherein the at least one wheel is positioned such that when the auxiliary seat is mounted on the pushchair in an operative position, an axle of the at least one wheel is coaxial with an axle of a rear wheel of the pushchair.

37. An auxiliary seat according to any preceding claim attachable to a pushchair to enable two children to be seated side-by-side and facing the same direction.

38. An auxiliary seat according to any preceding claim wherein the seat includes a safety harness to retain a child in position thereon.

39. An auxiliary seat according to any preceding claim including a rain cover attached to the seat to at least partially surround a child sitting on the seat.

40. An auxiliary seat according to any preceding claim including a sunshade attached to the seat to shade a child sitting on the seat.

41. An auxiliary seat according to any preceding claim including a toy steering wheel positionable in front of a child sitting on the seat.

42. An auxiliary seat according to any preceding claim including a toy hobby-horse style attachment positionable in front of a child sitting on the seat.

43. A pushchair incorporating an auxiliary seat according to any preceding claim.

44. An auxiliary seat substantially as hereinbefore described with reference to the accompanying drawings.

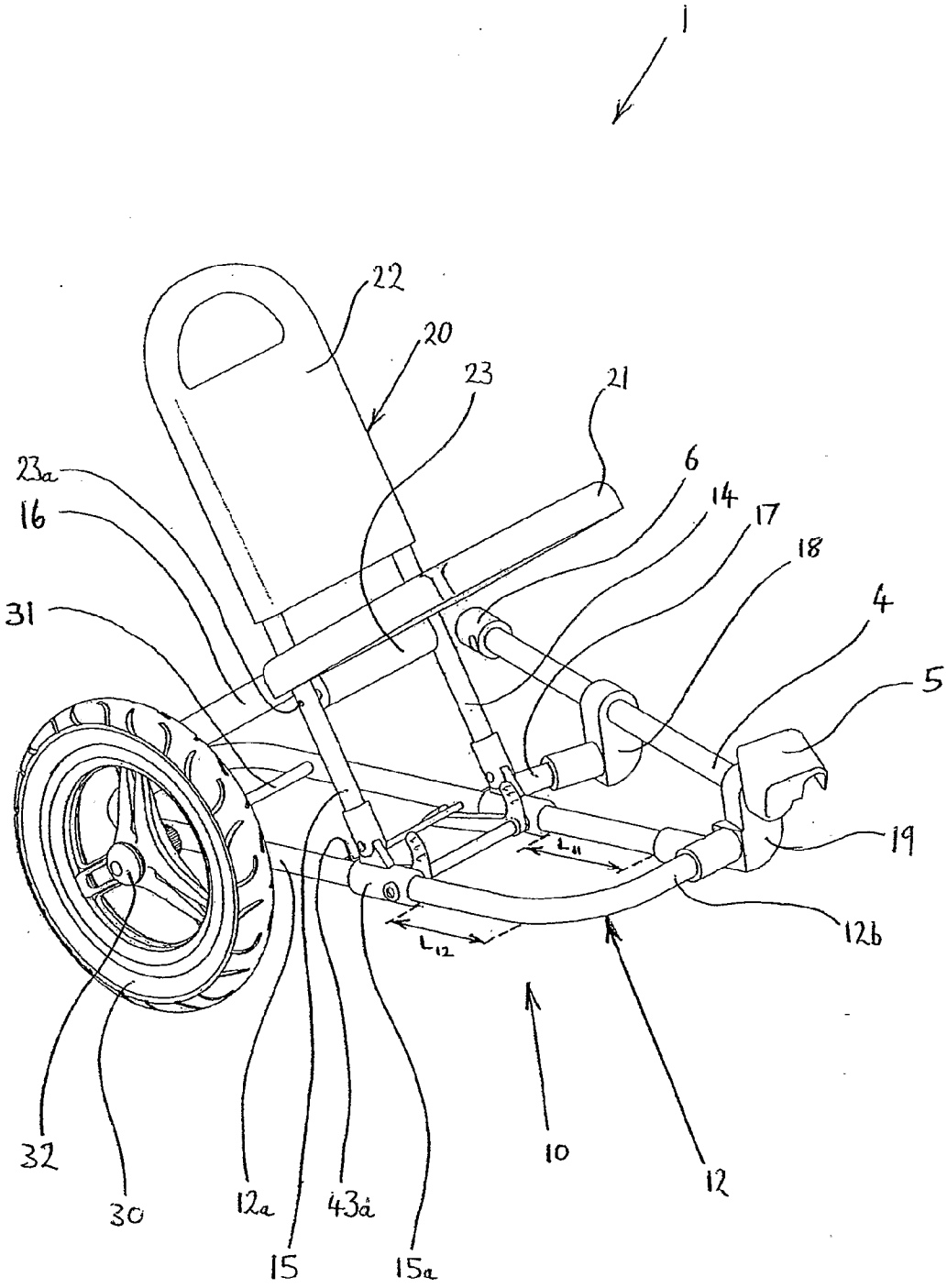


FIGURE 1

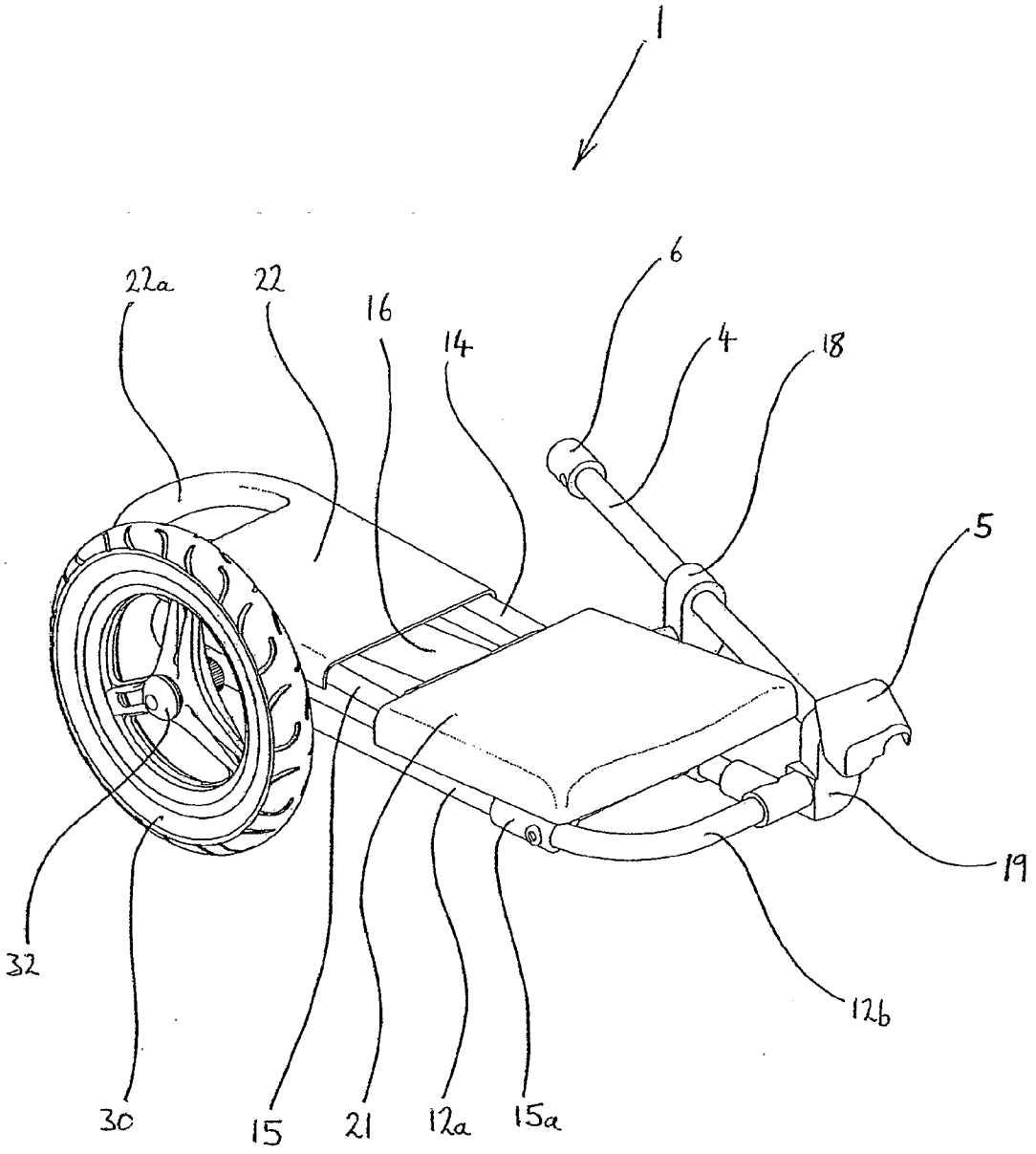


FIGURE 2.

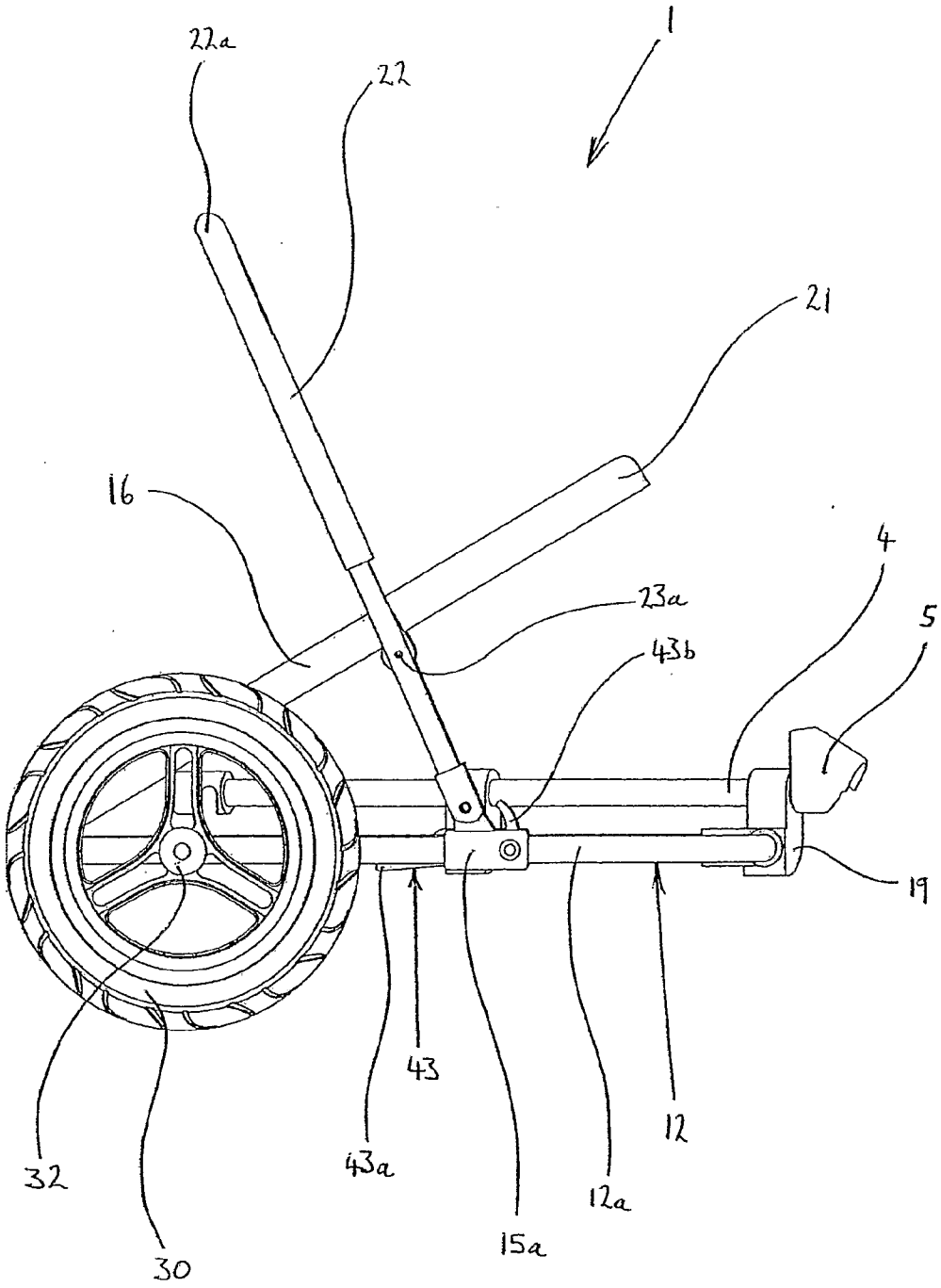


FIGURE 3

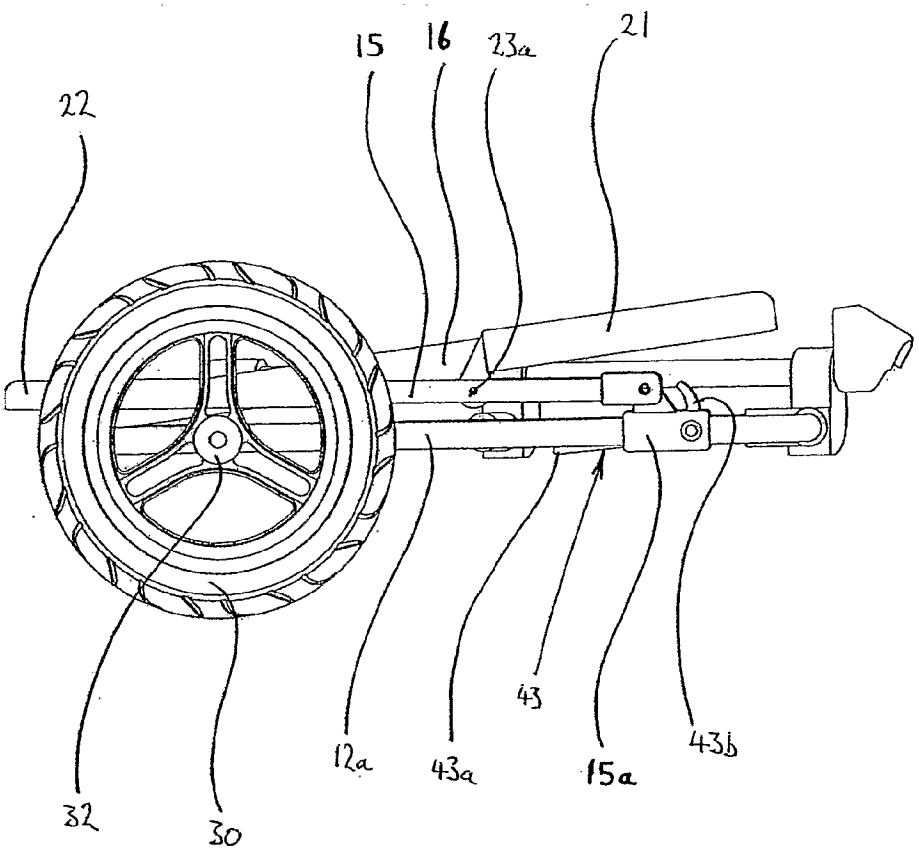


FIGURE 4

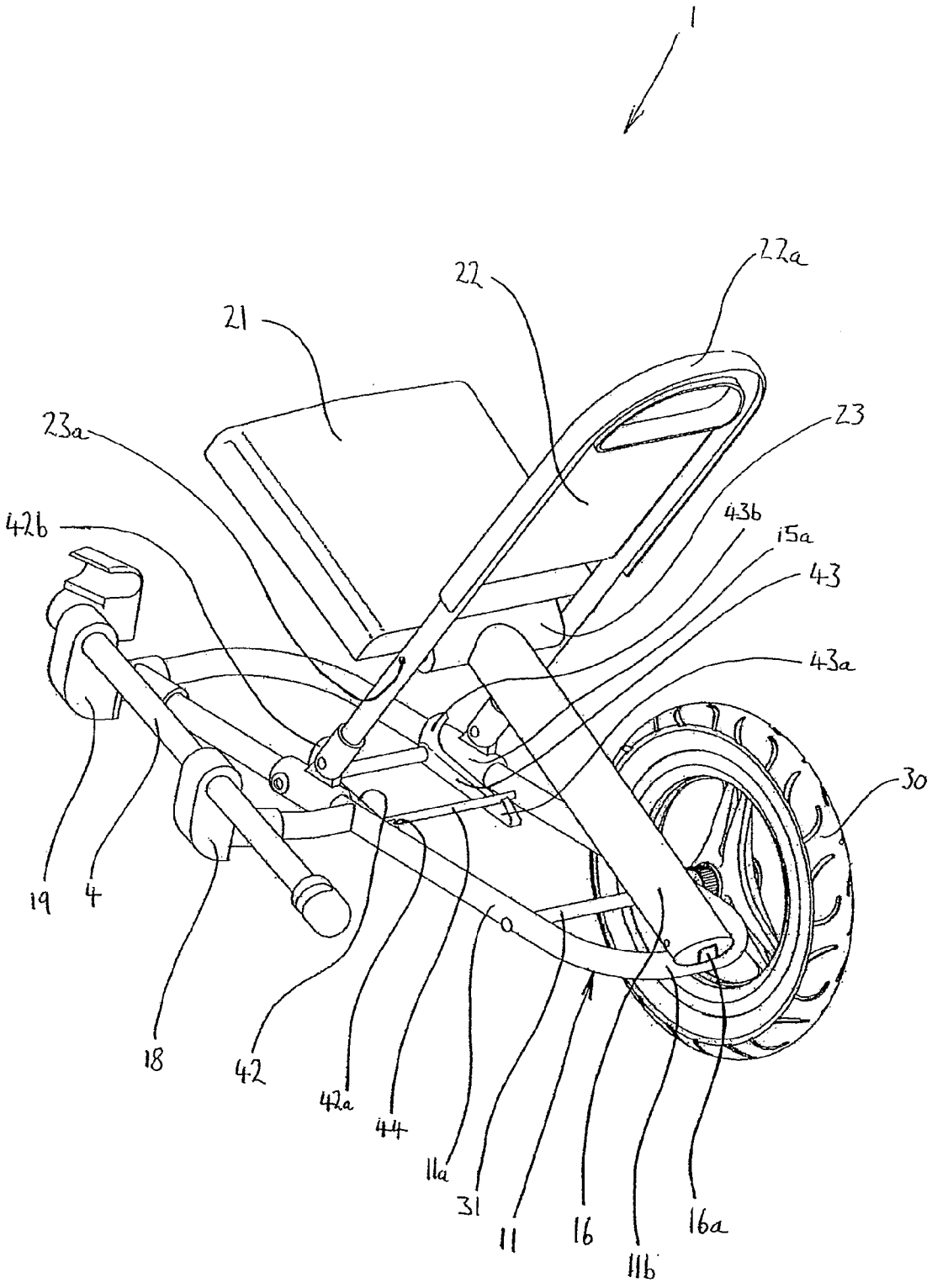

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16a
11b

FIGURE 5

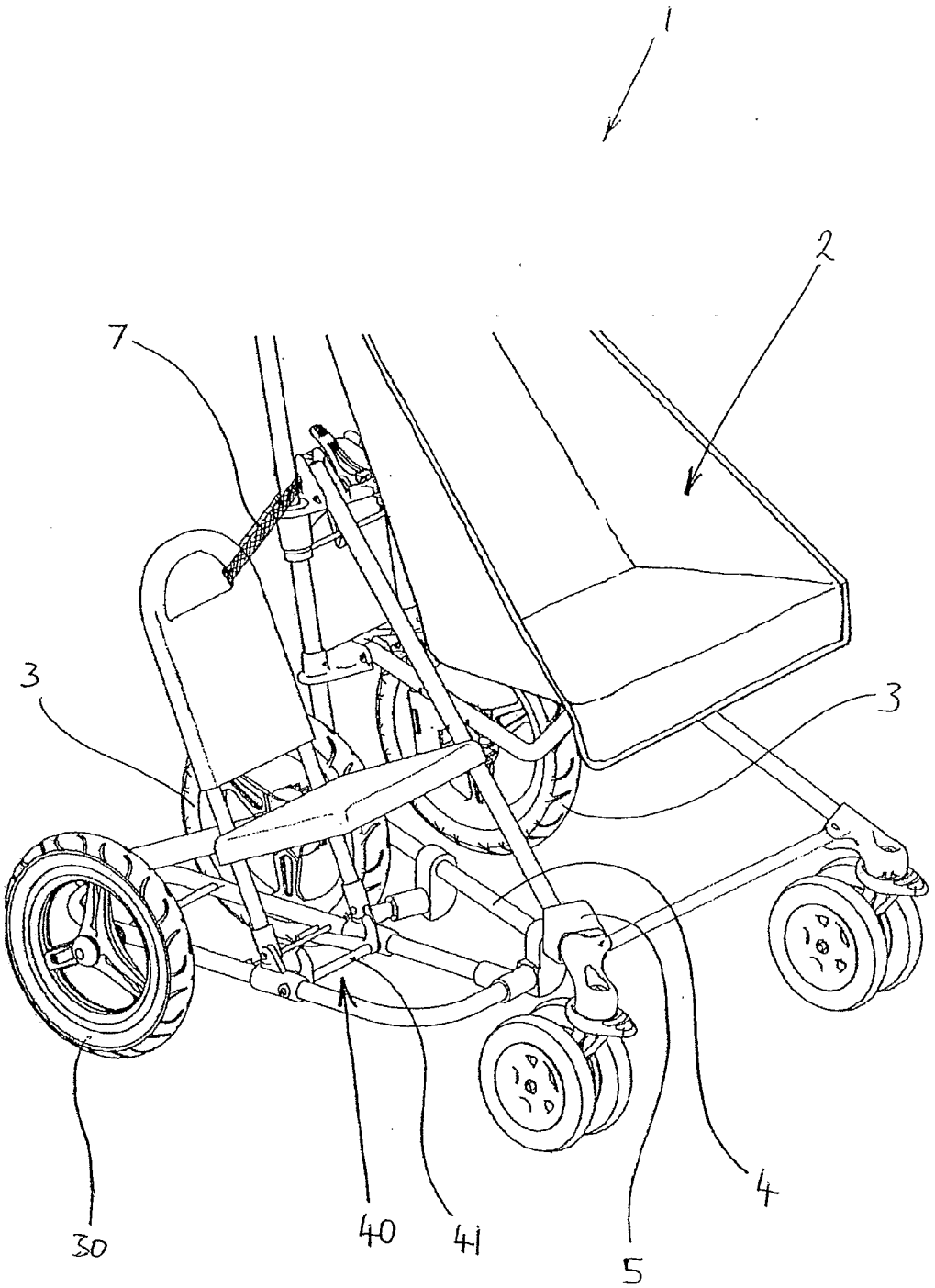


FIGURE 6.

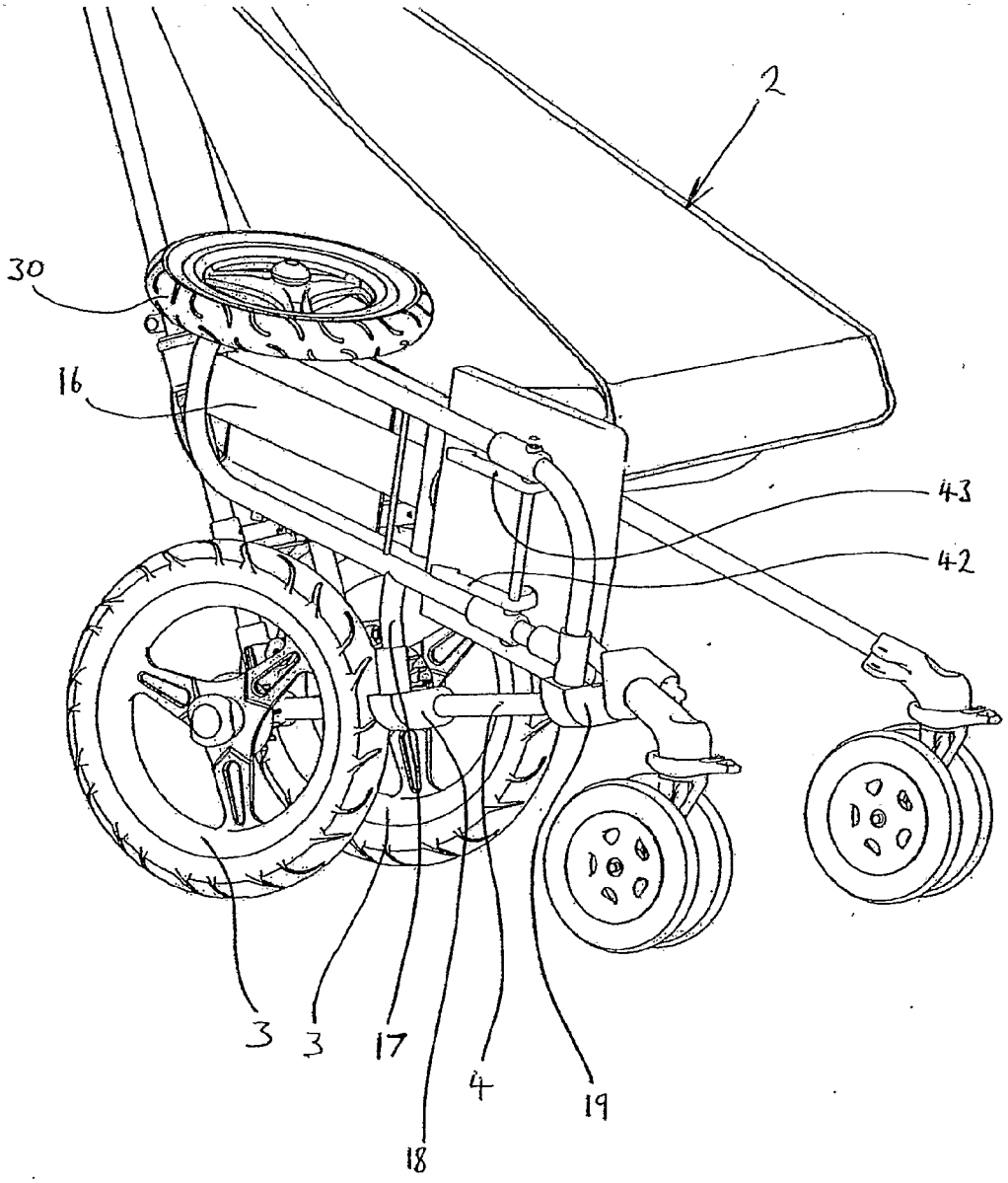


FIGURE 7

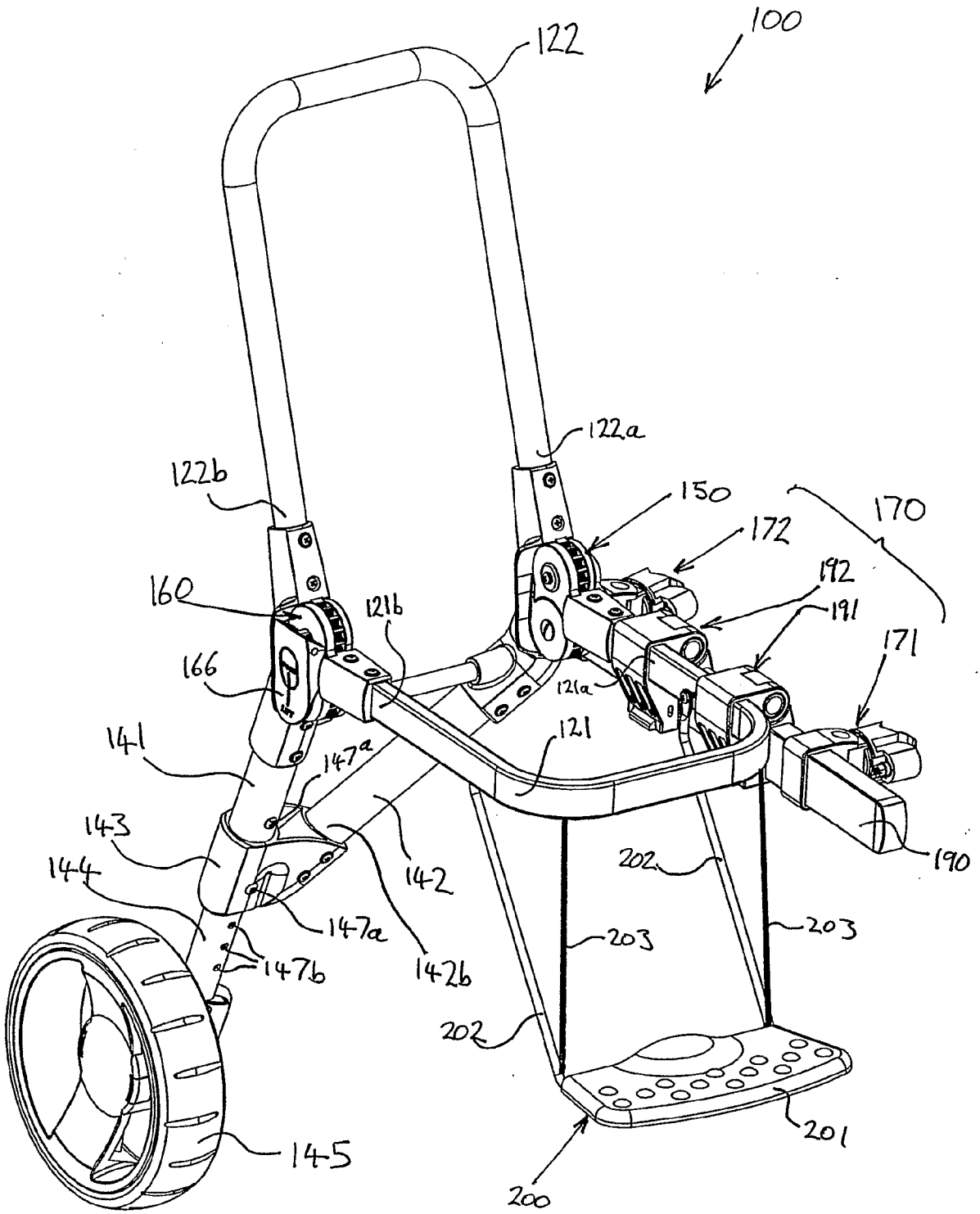

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FIGURE 8

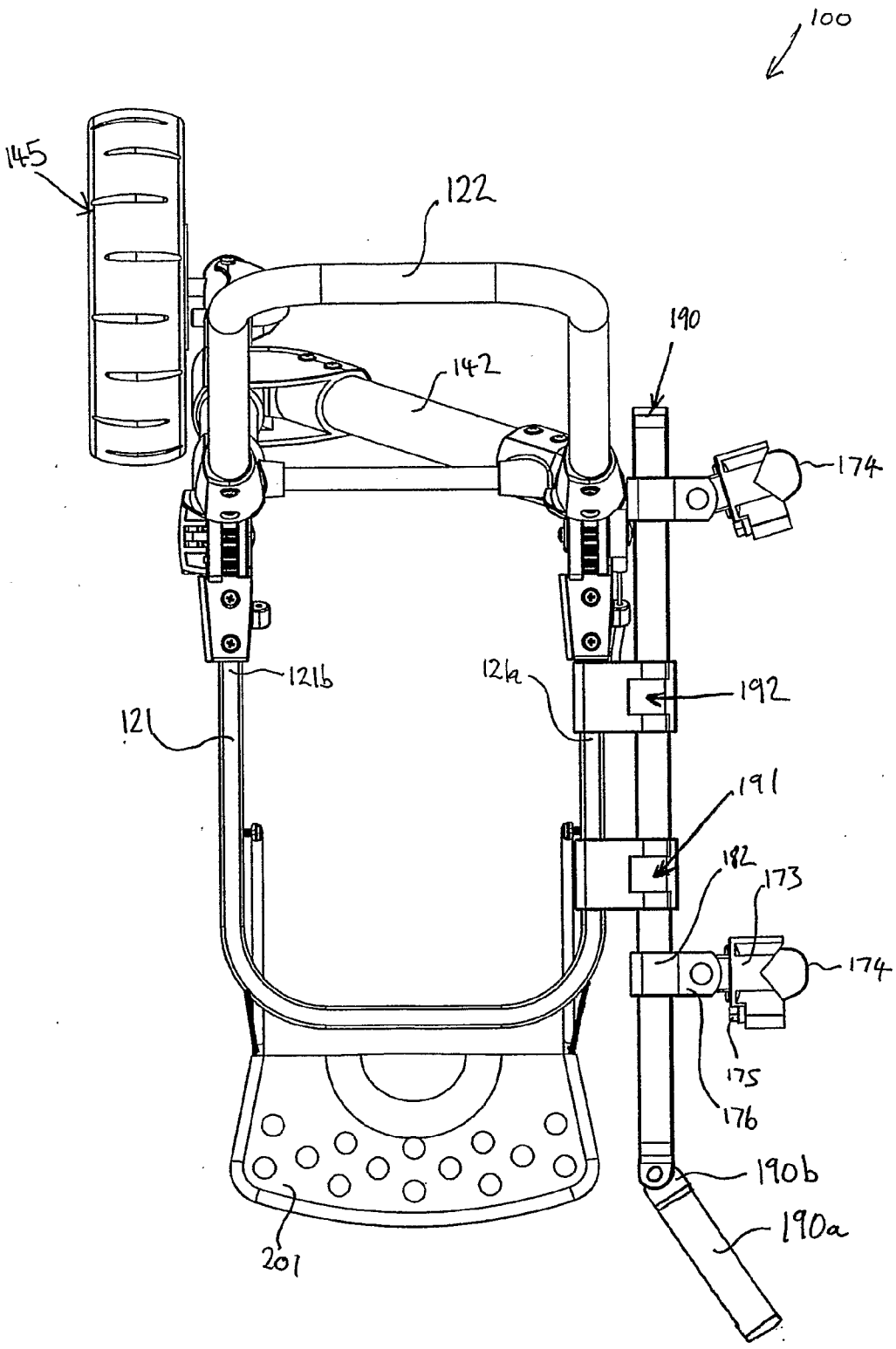

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FIGURE 9

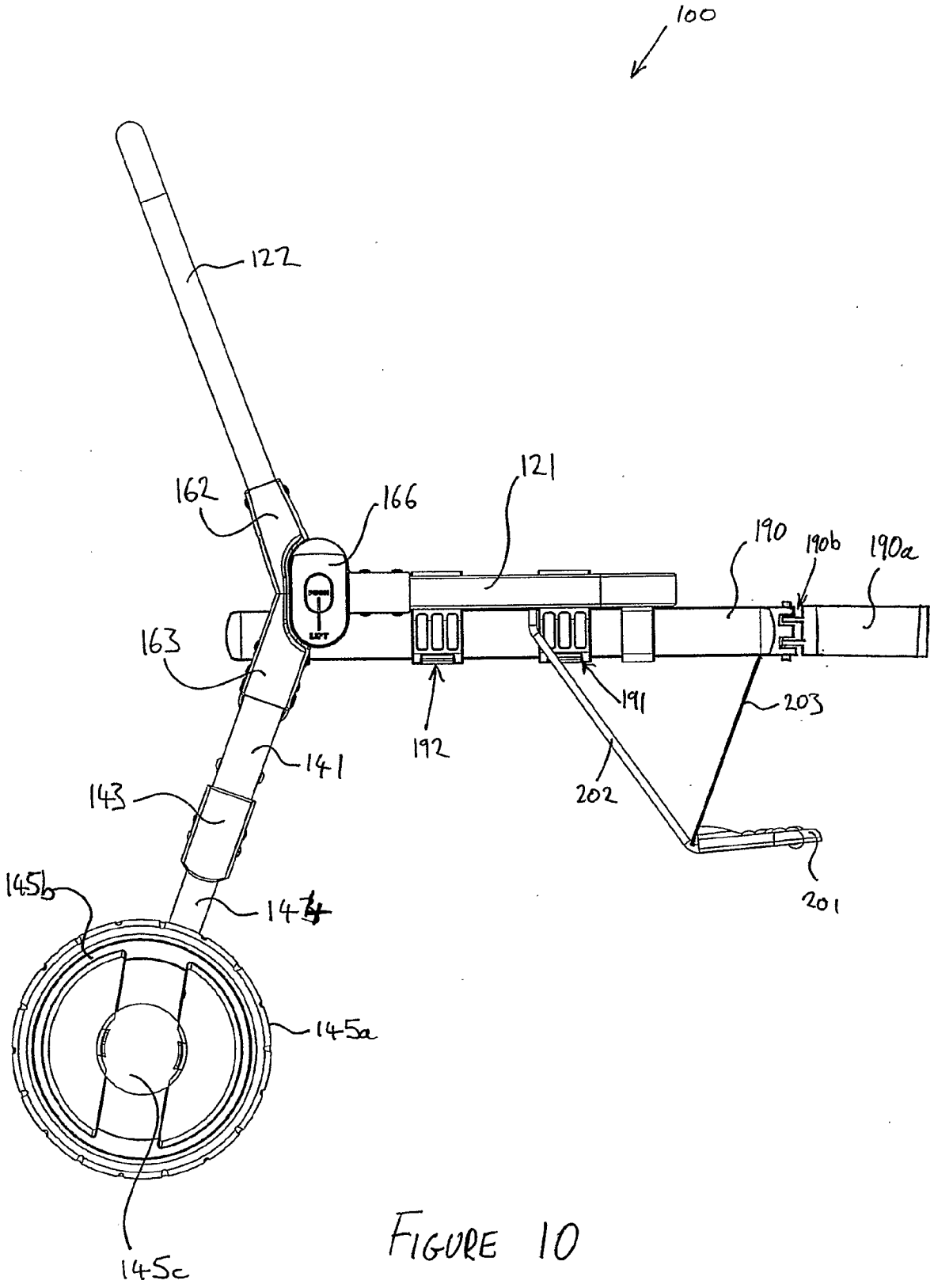

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FIGURE 10

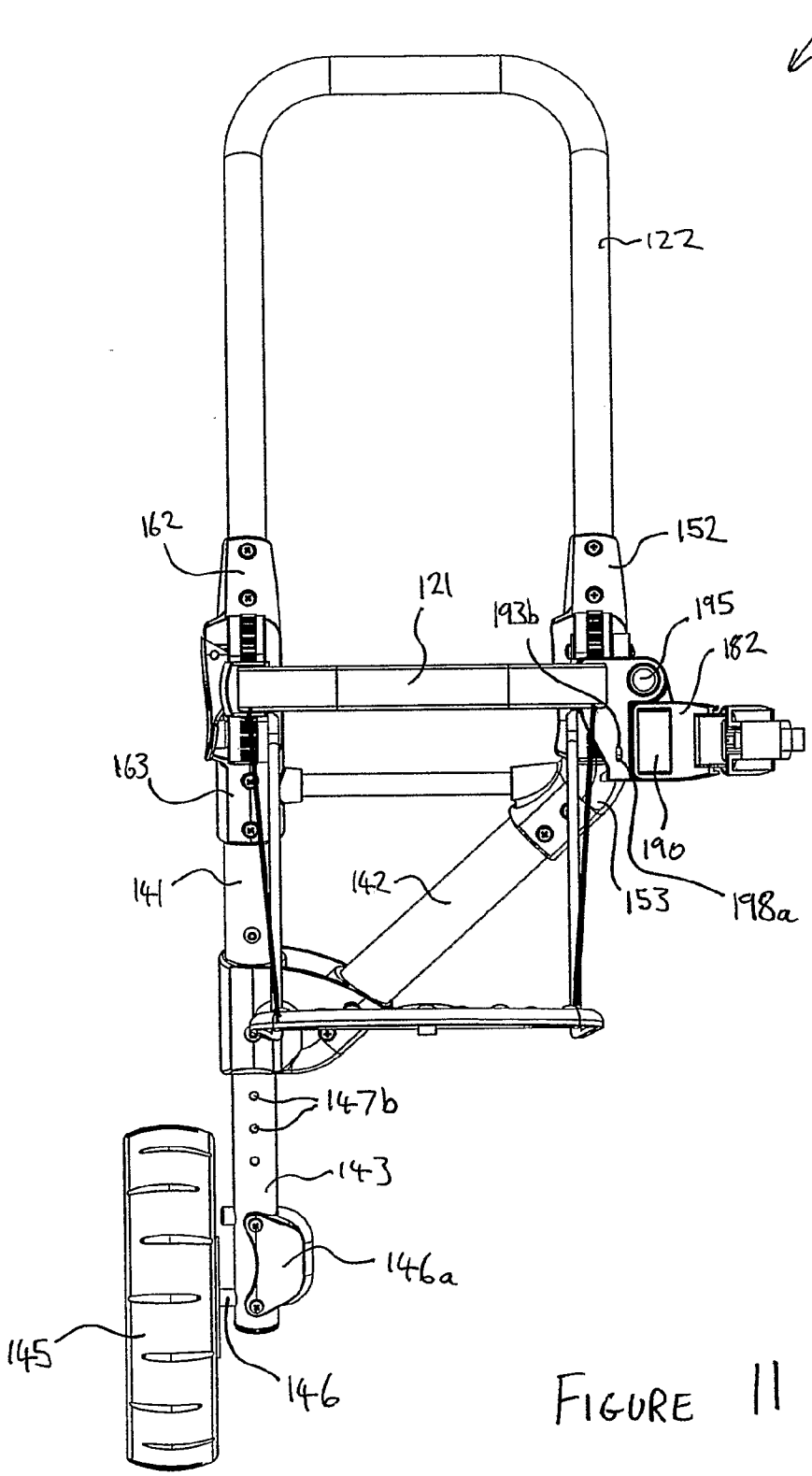

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FIGURE 11

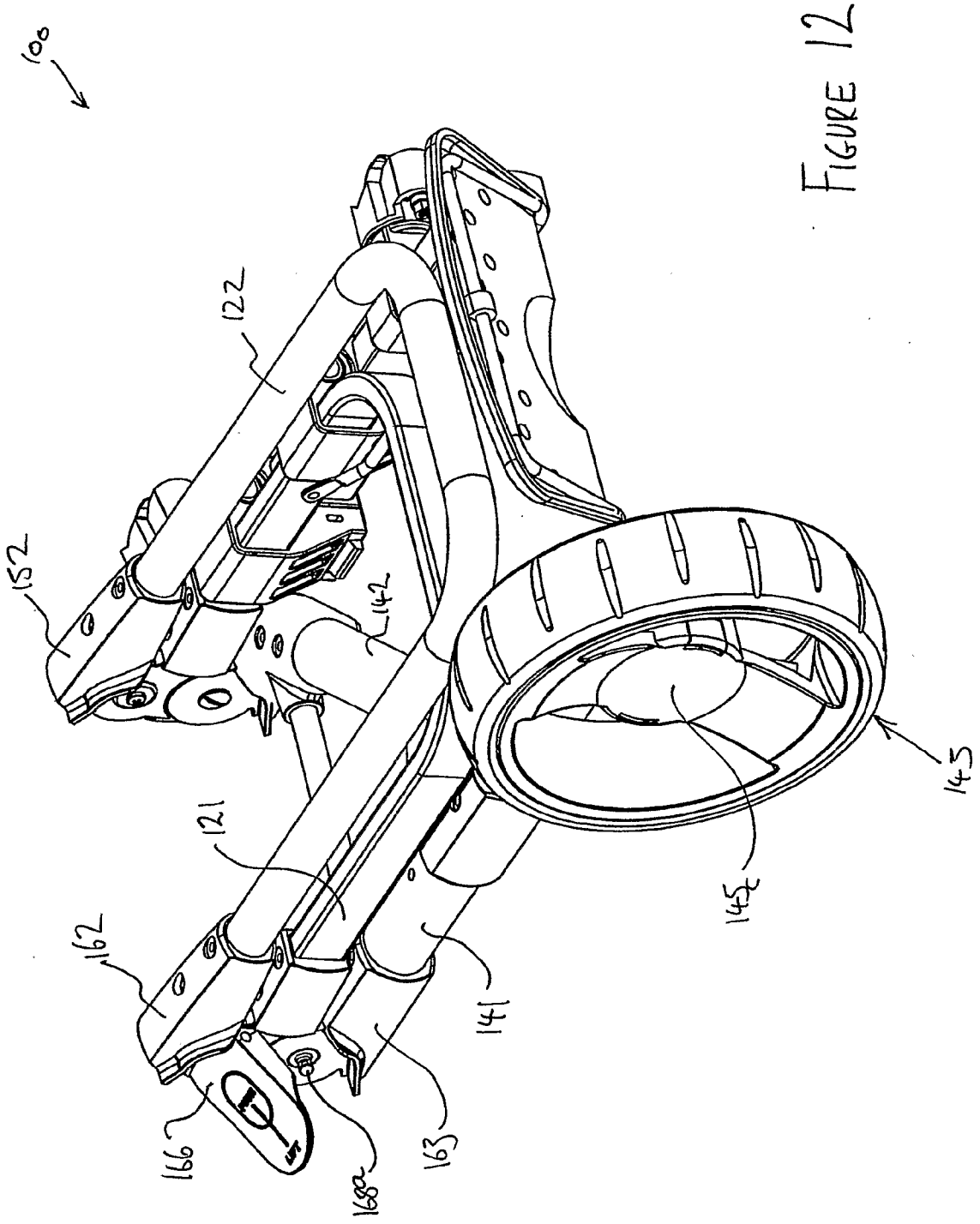


FIGURE 12

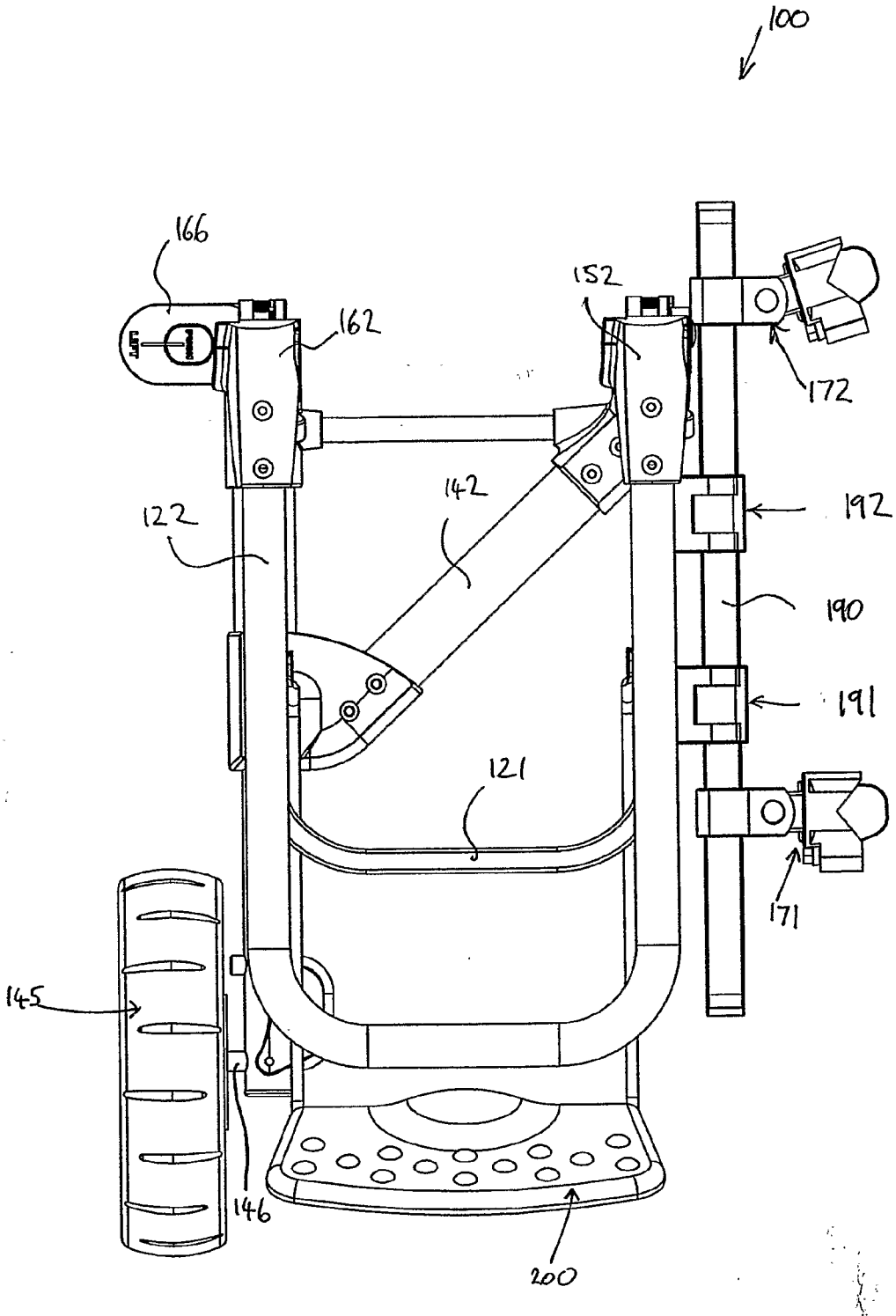


FIGURE 13

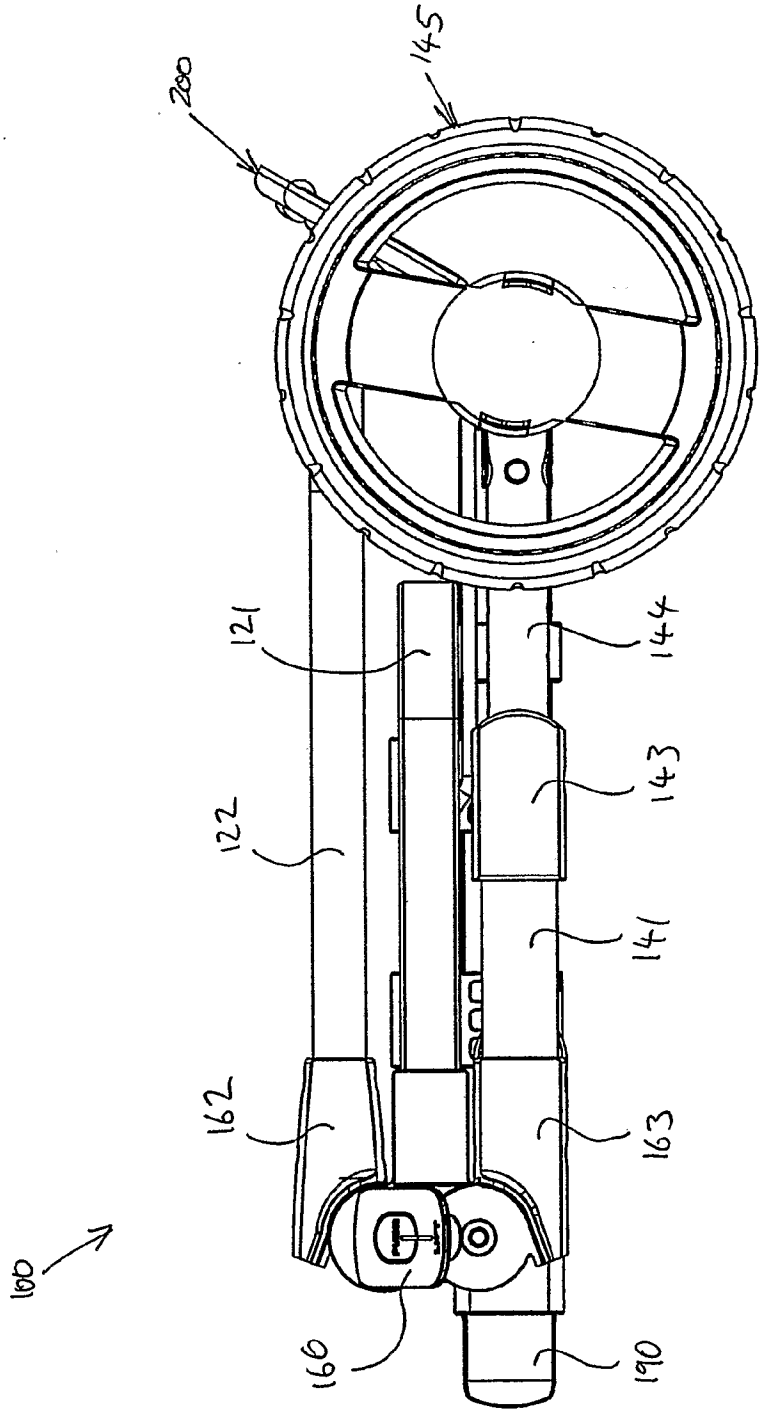


FIGURE 14

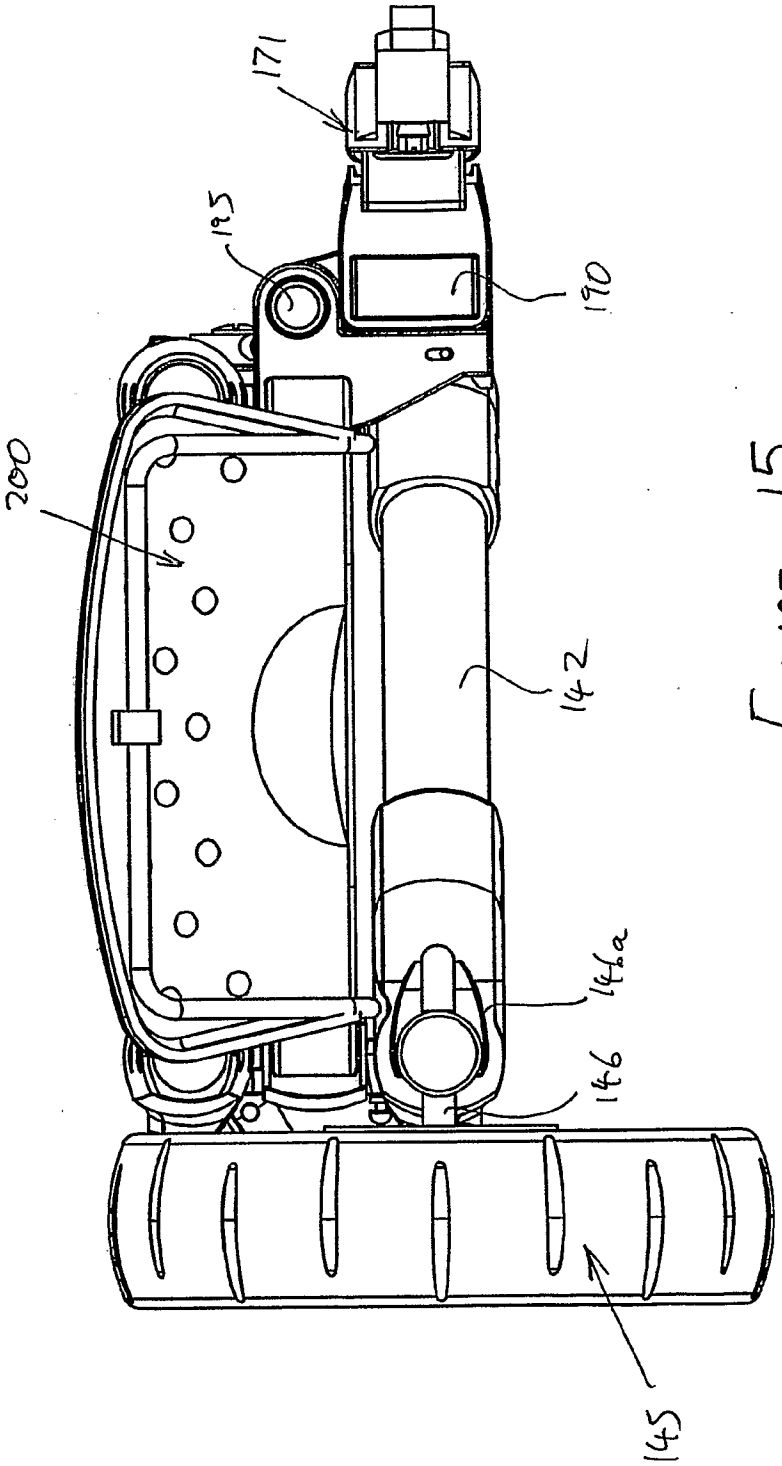


FIGURE 15

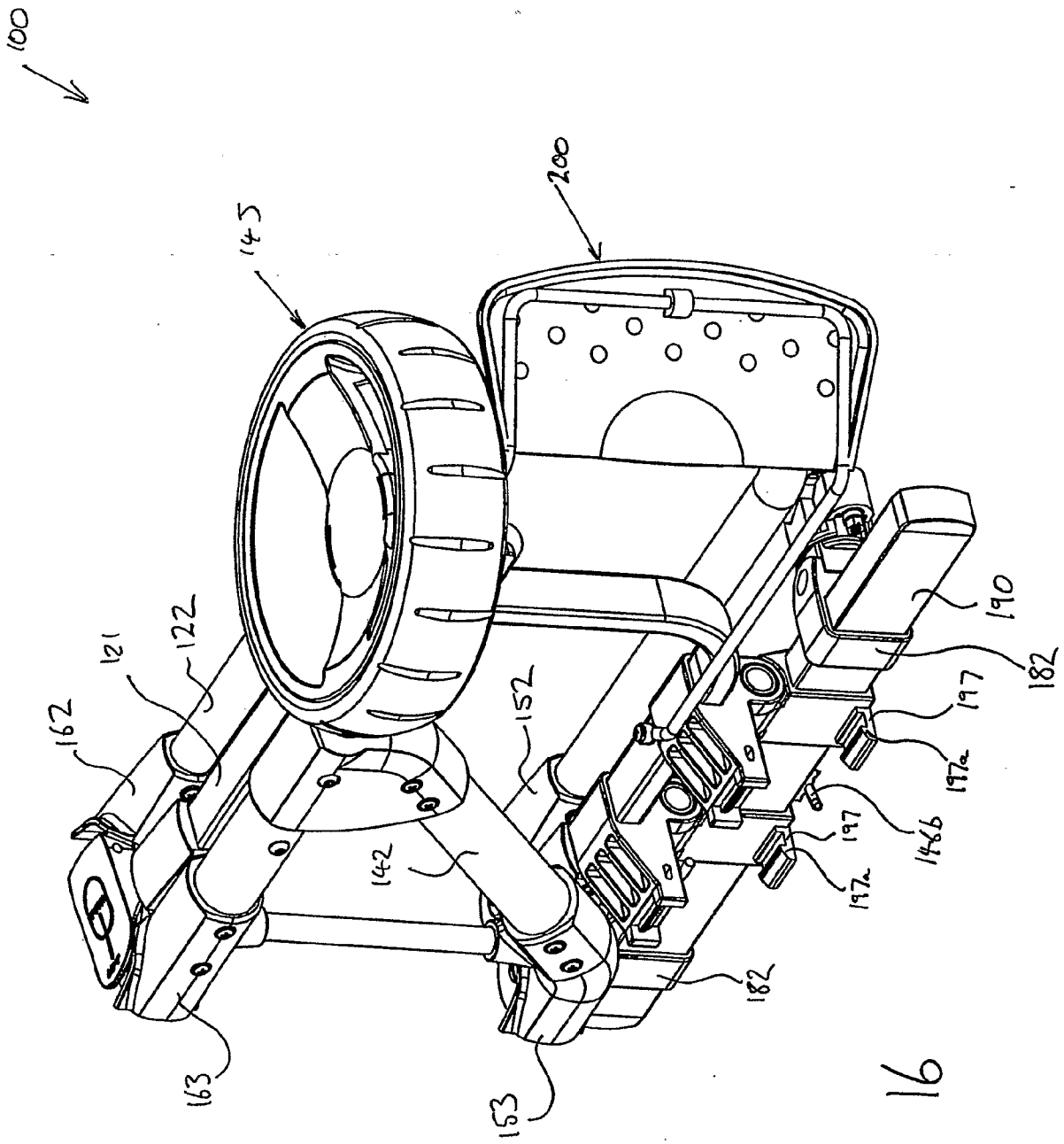

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FIGURE 16

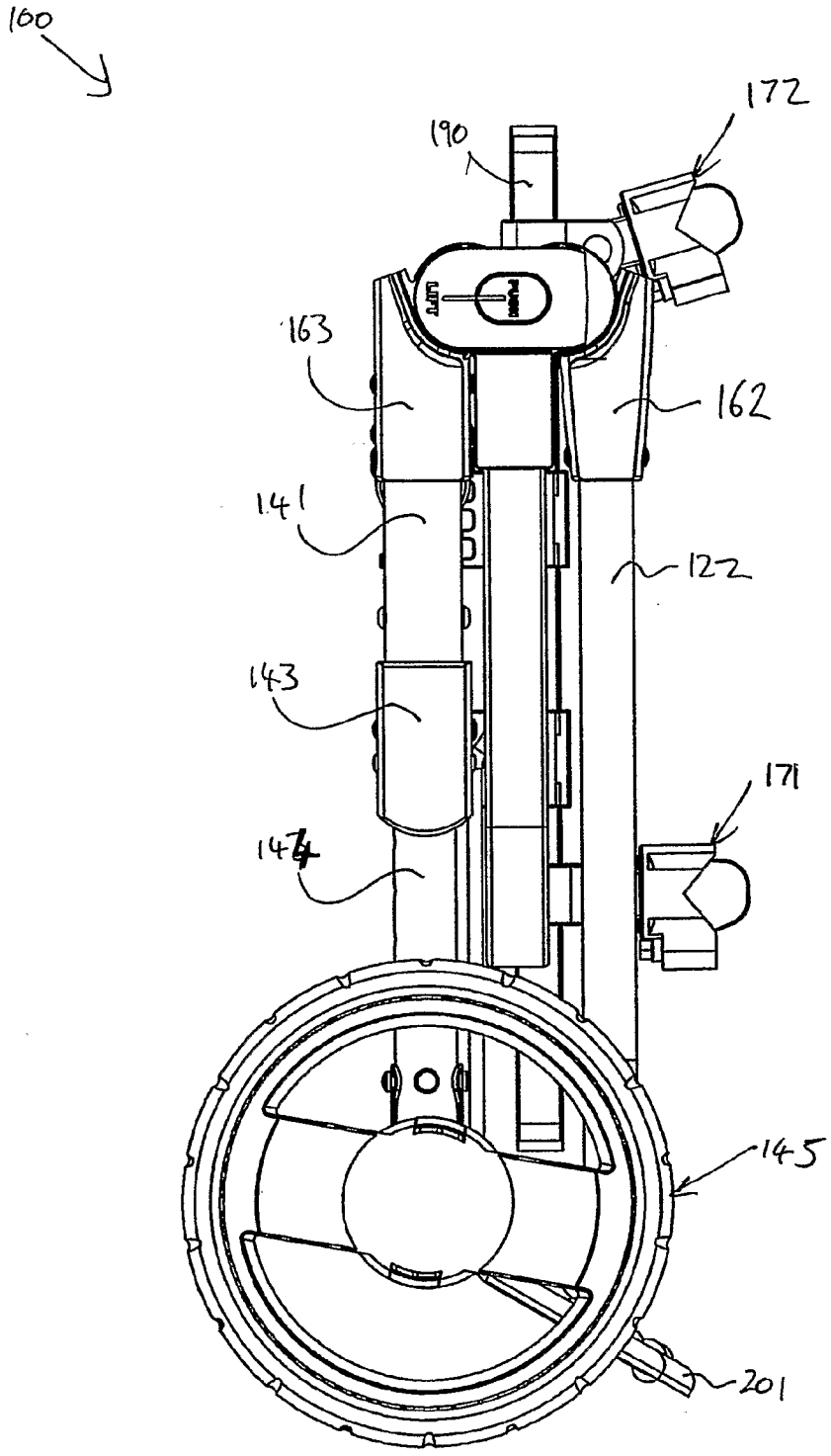


FIGURE 17

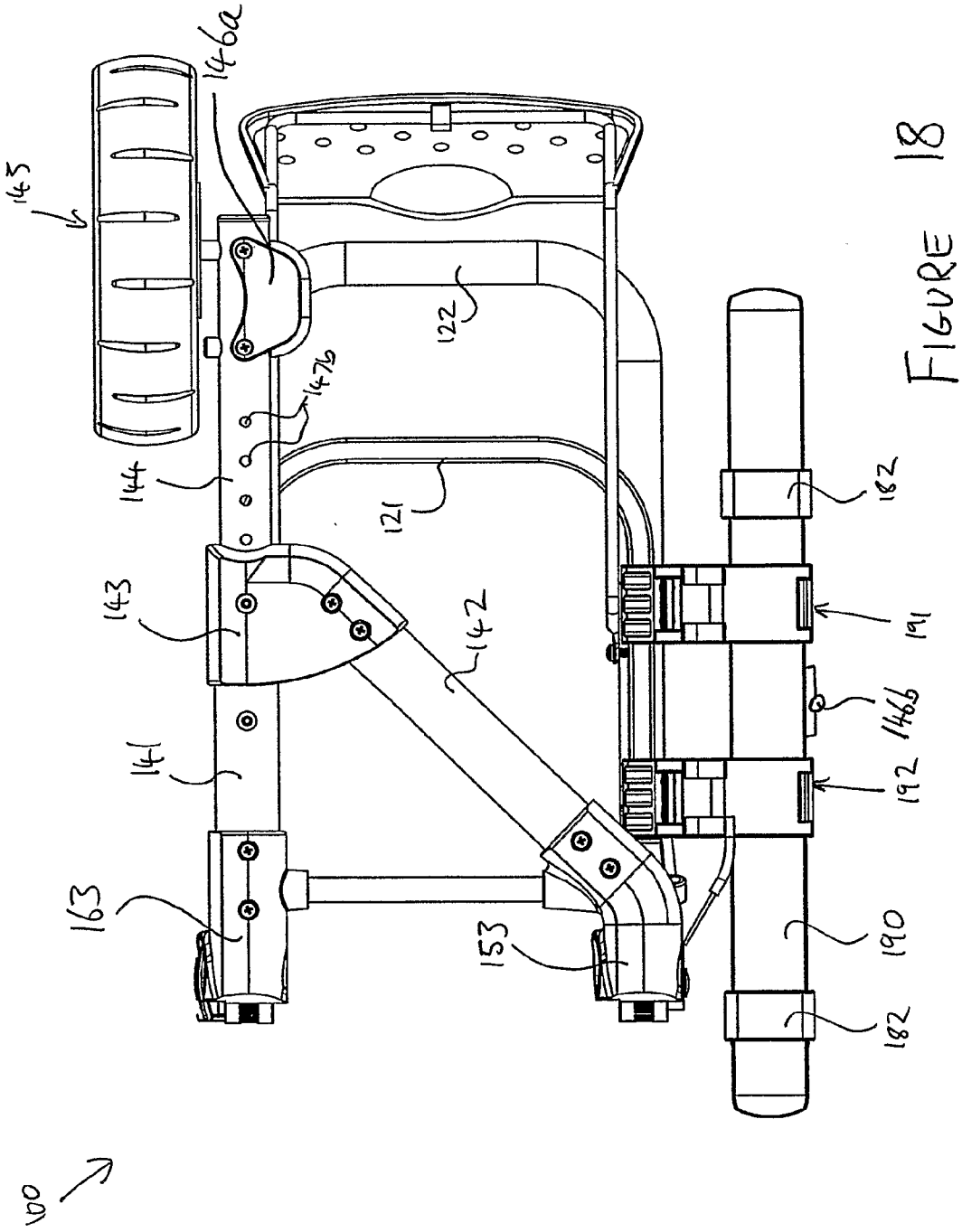

146a
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FIGURE 18

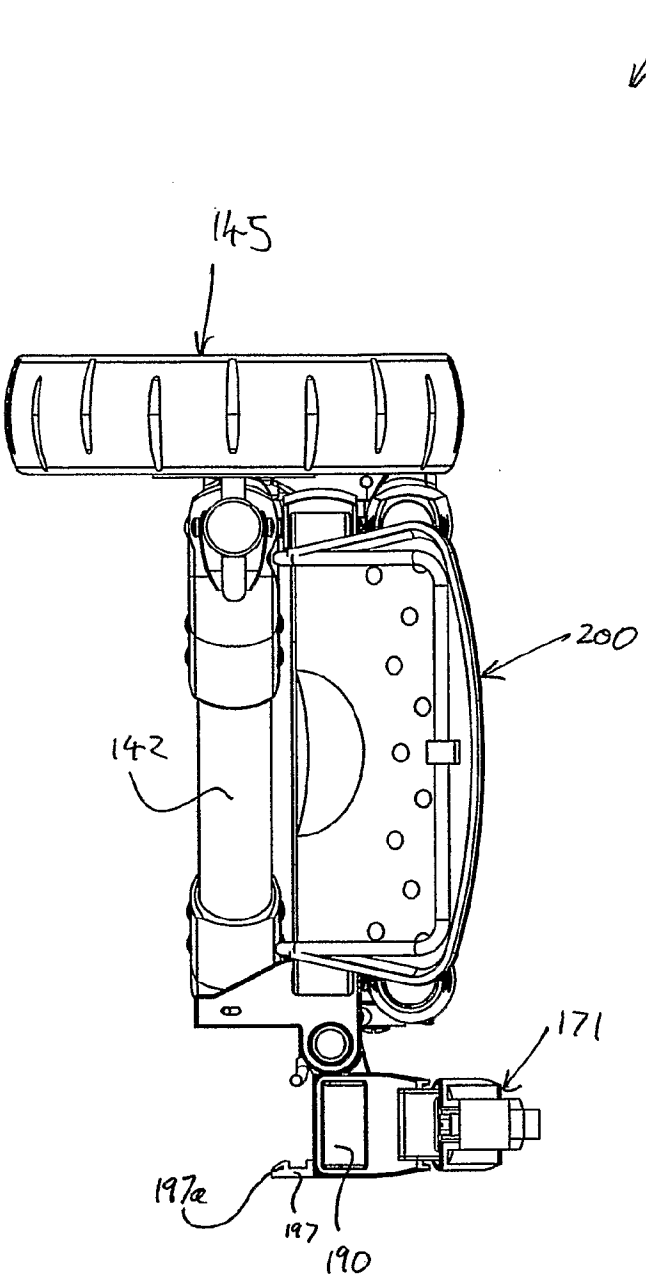


FIGURE 19

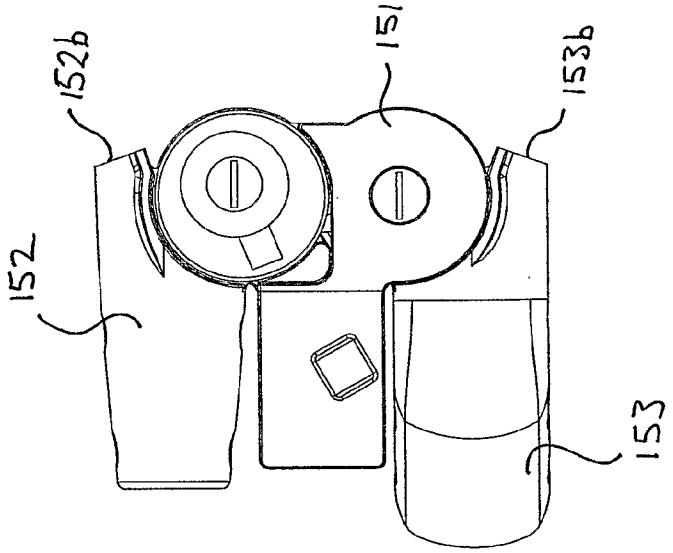


FIGURE 20B

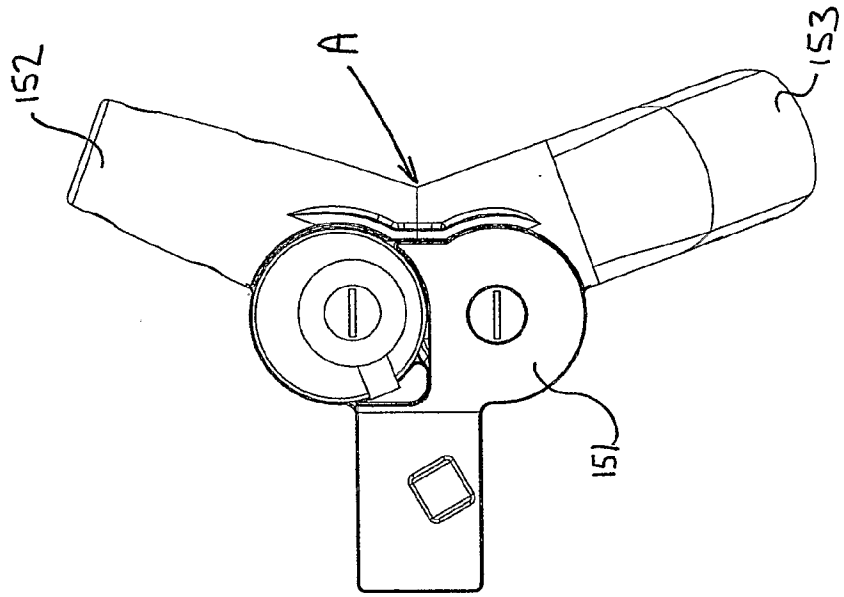


FIGURE 20A

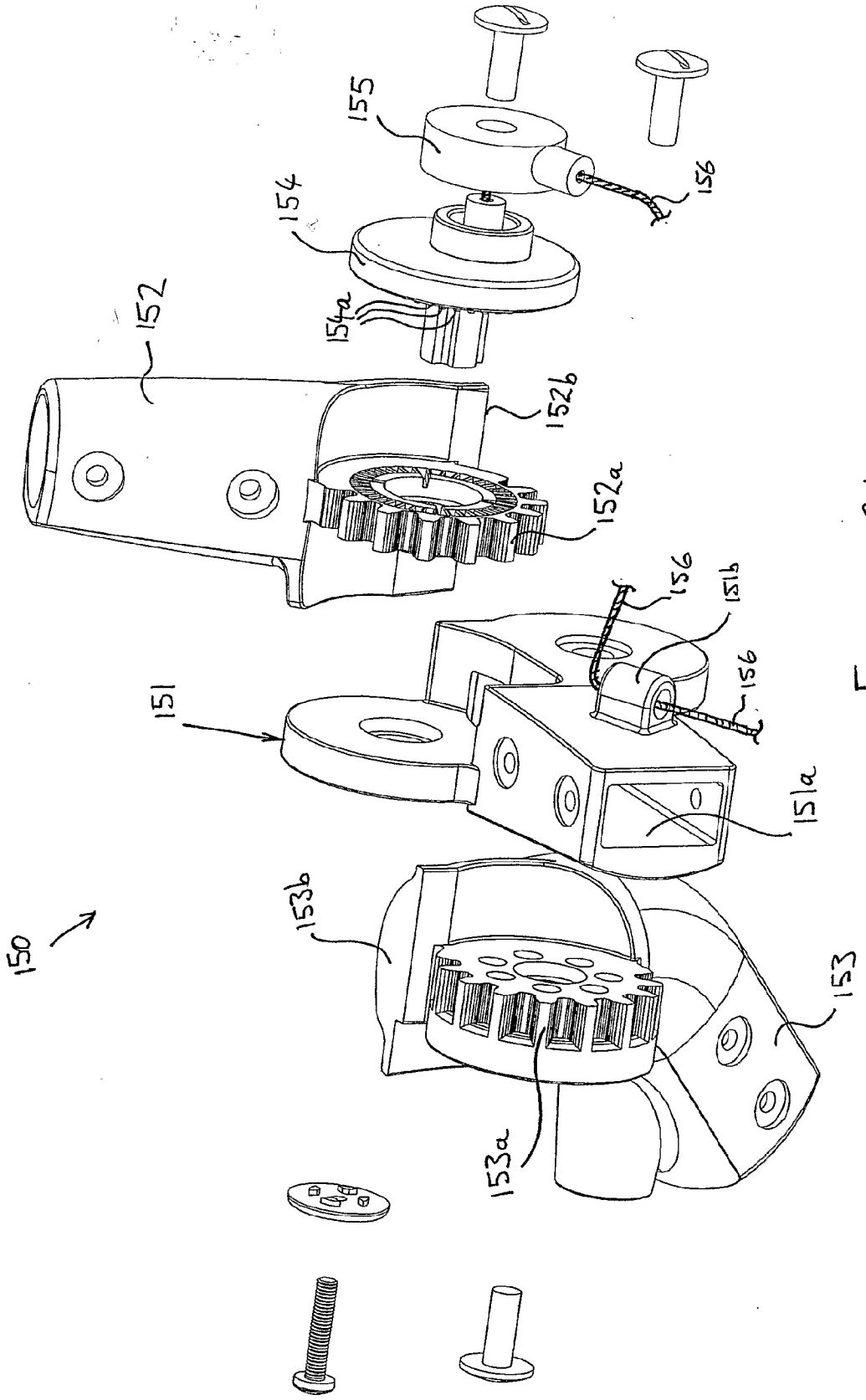

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FIGURE 21

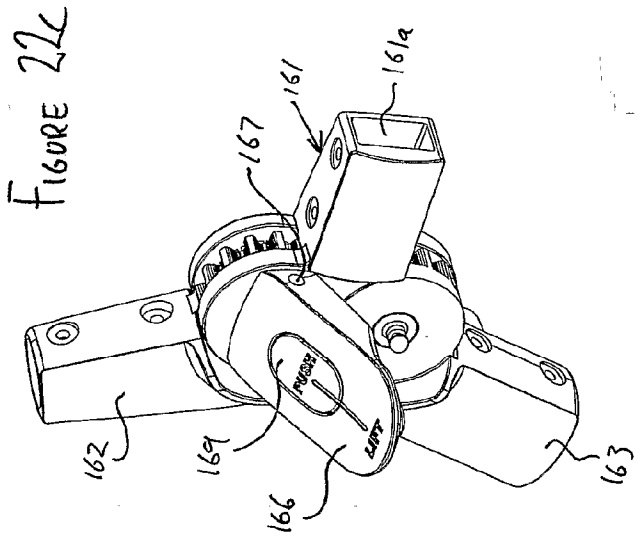


FIGURE 22C

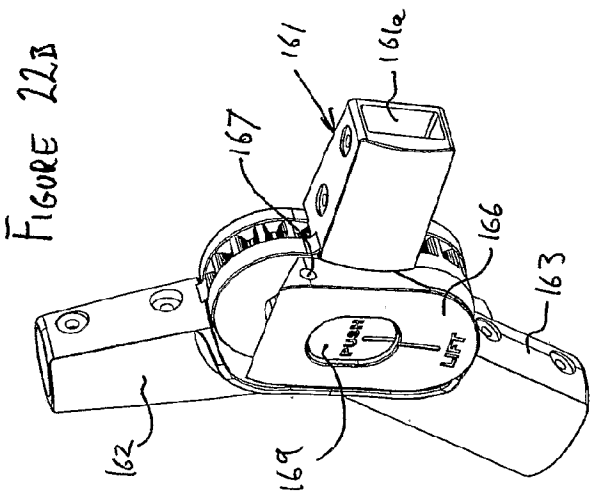


FIGURE 22B

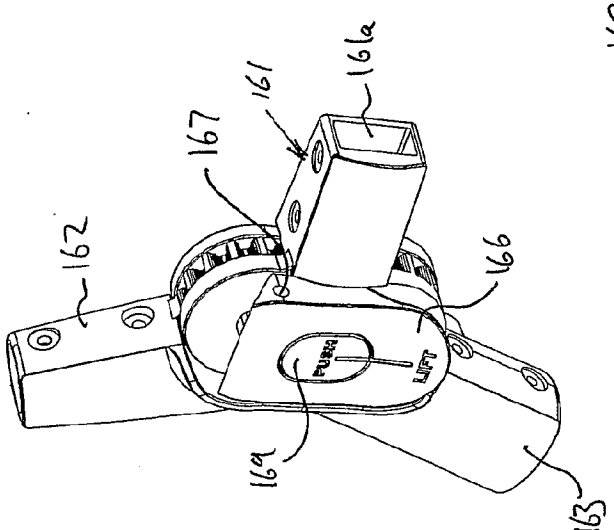


FIGURE 22A

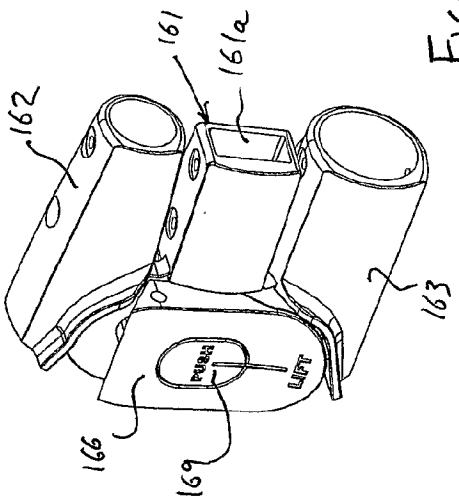


FIGURE 22E

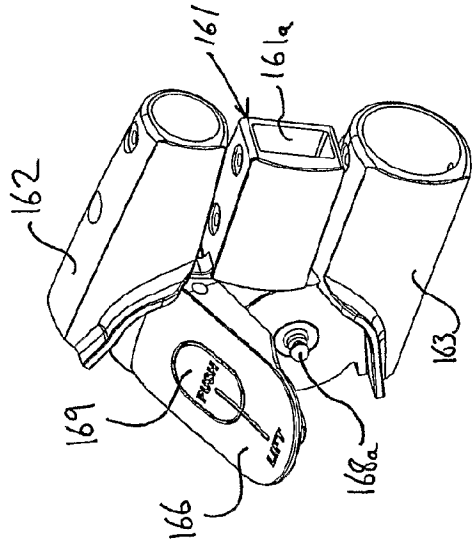


FIGURE 22D

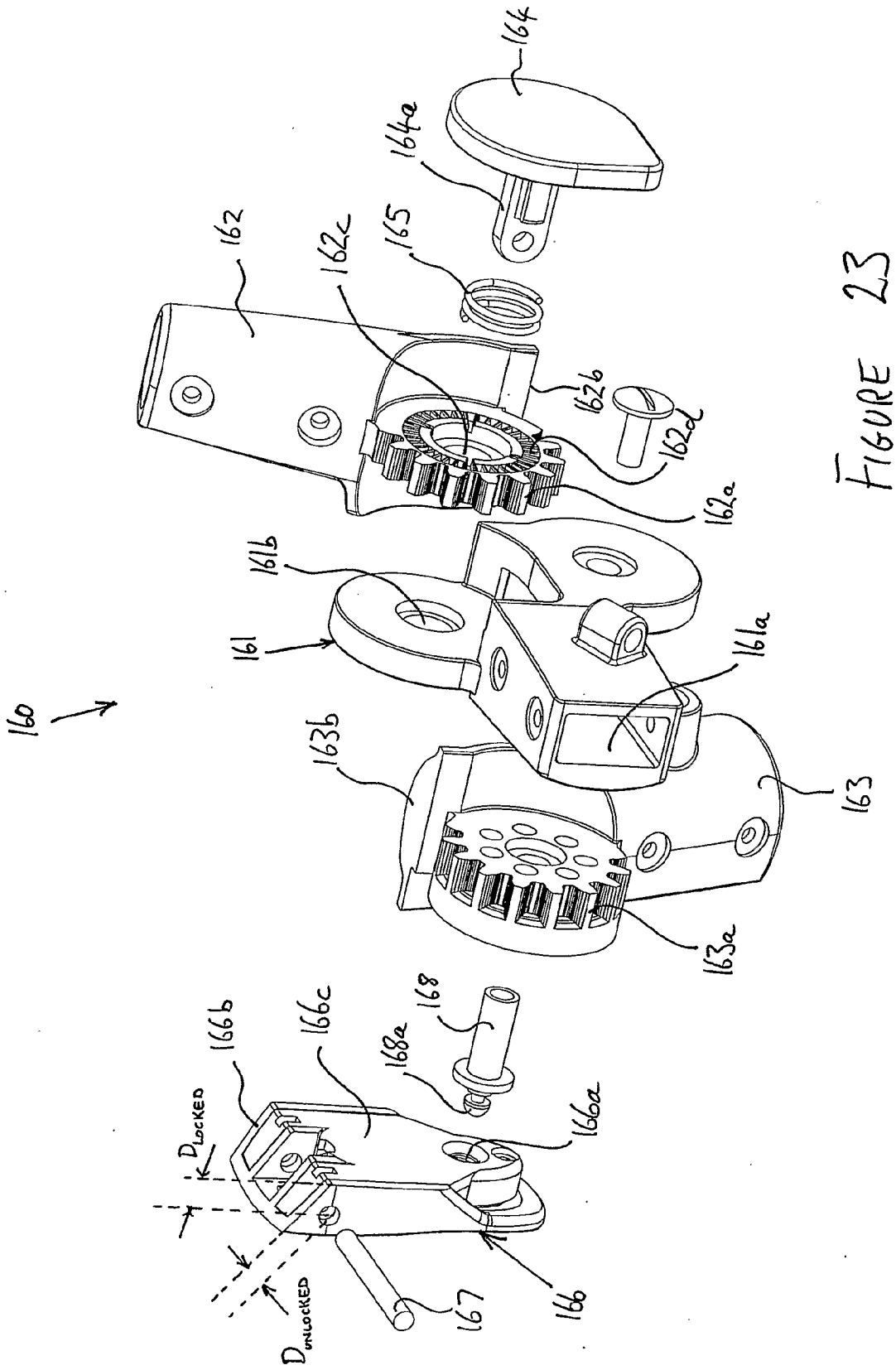

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FIGURE 23

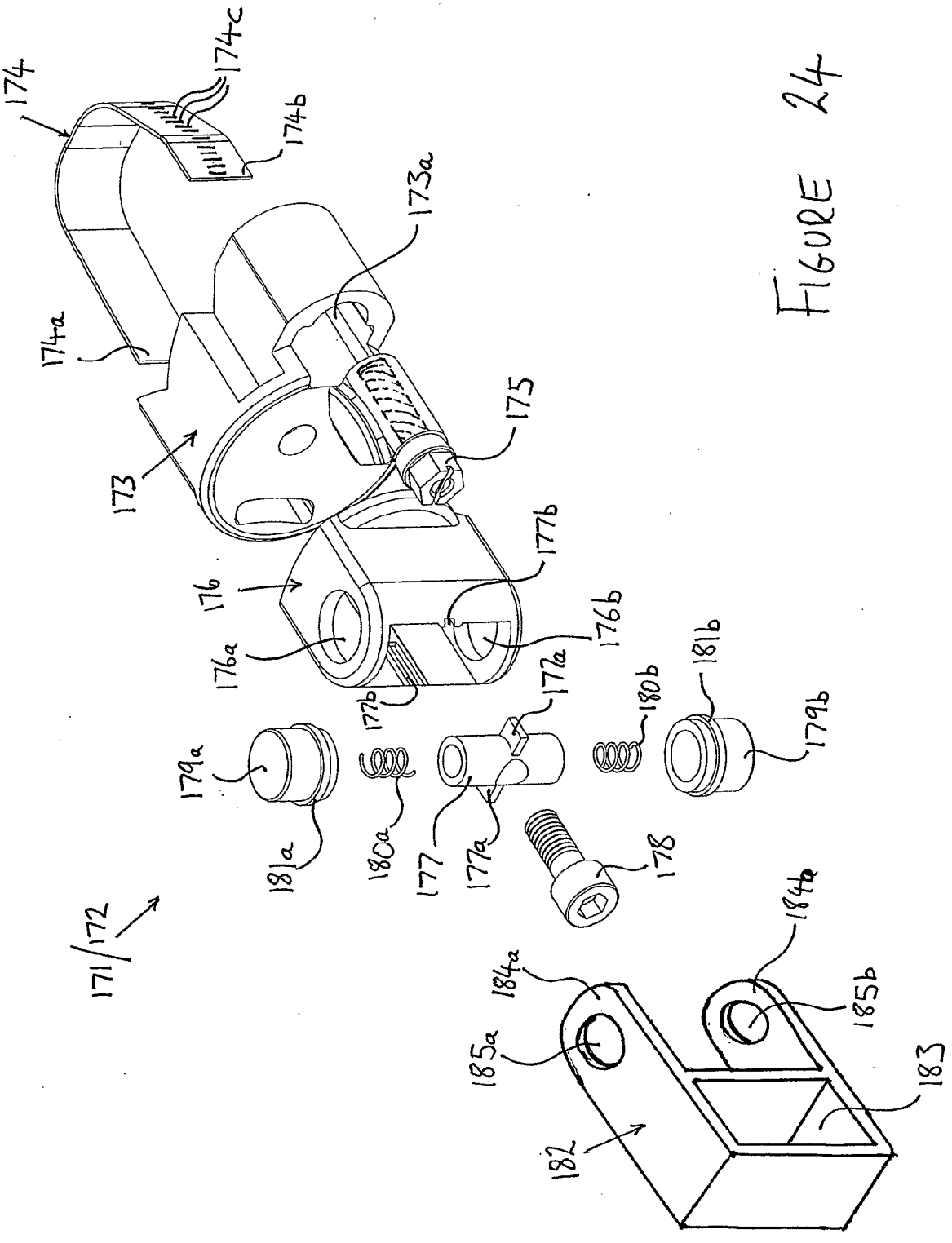

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FIGURE 24

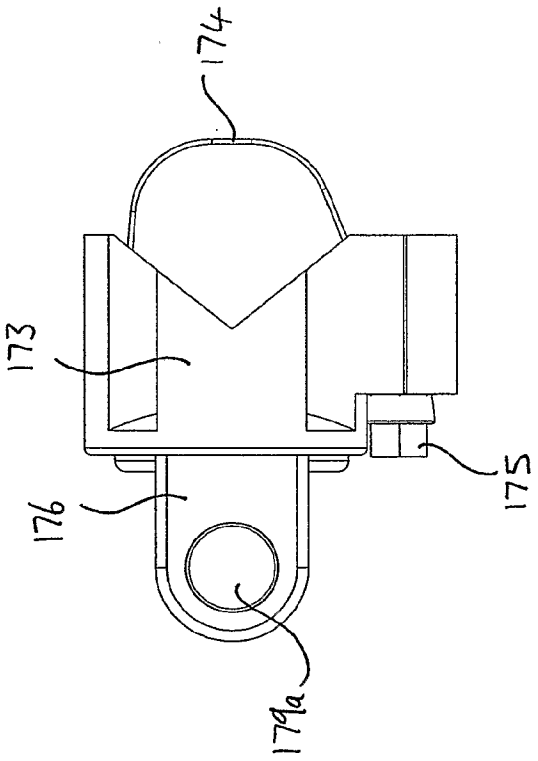


FIGURE 25

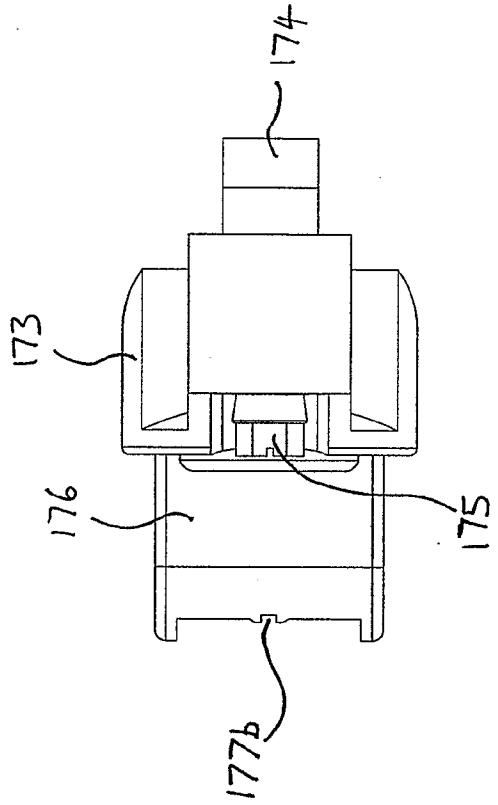


FIGURE 26

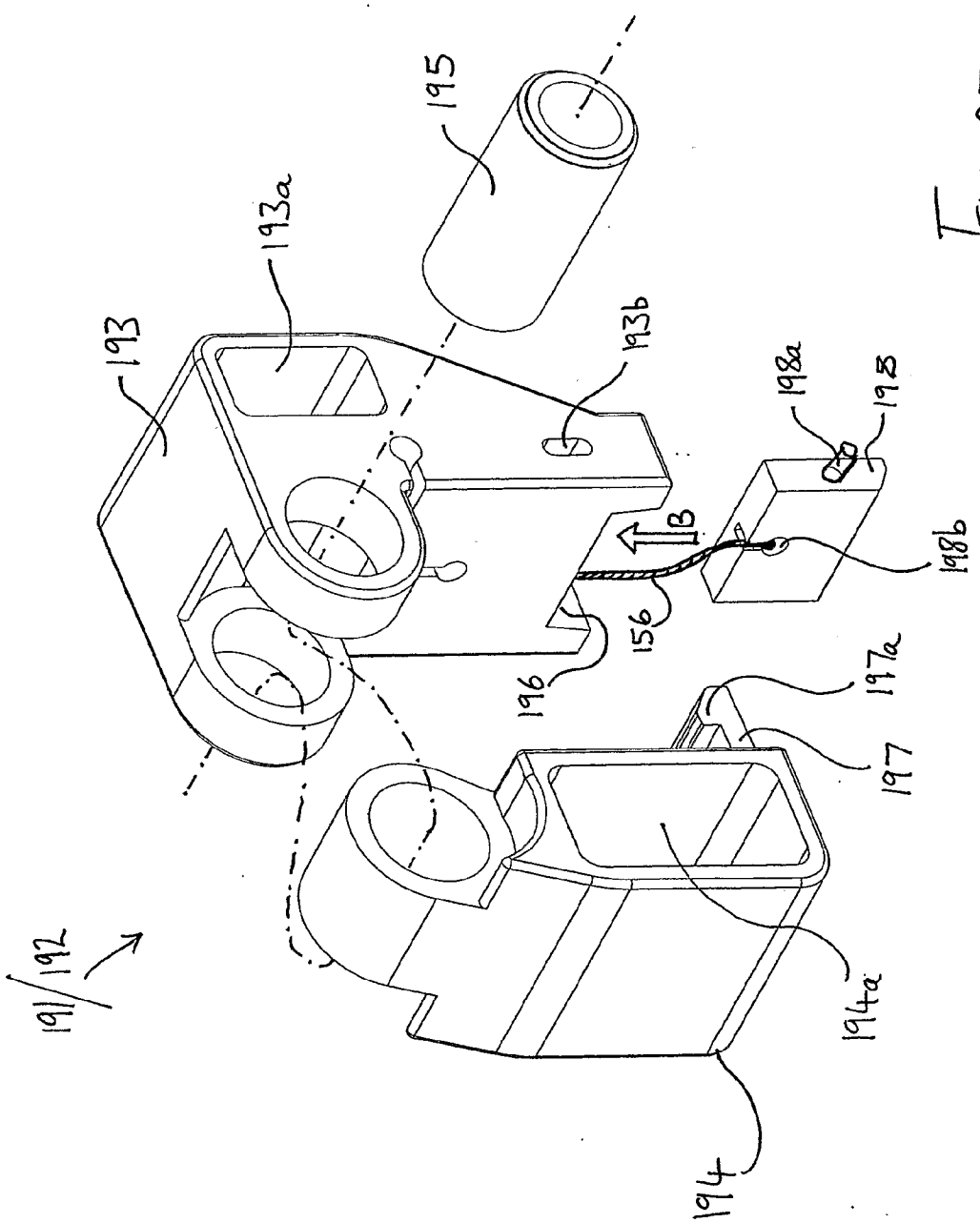

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FIGURE 27

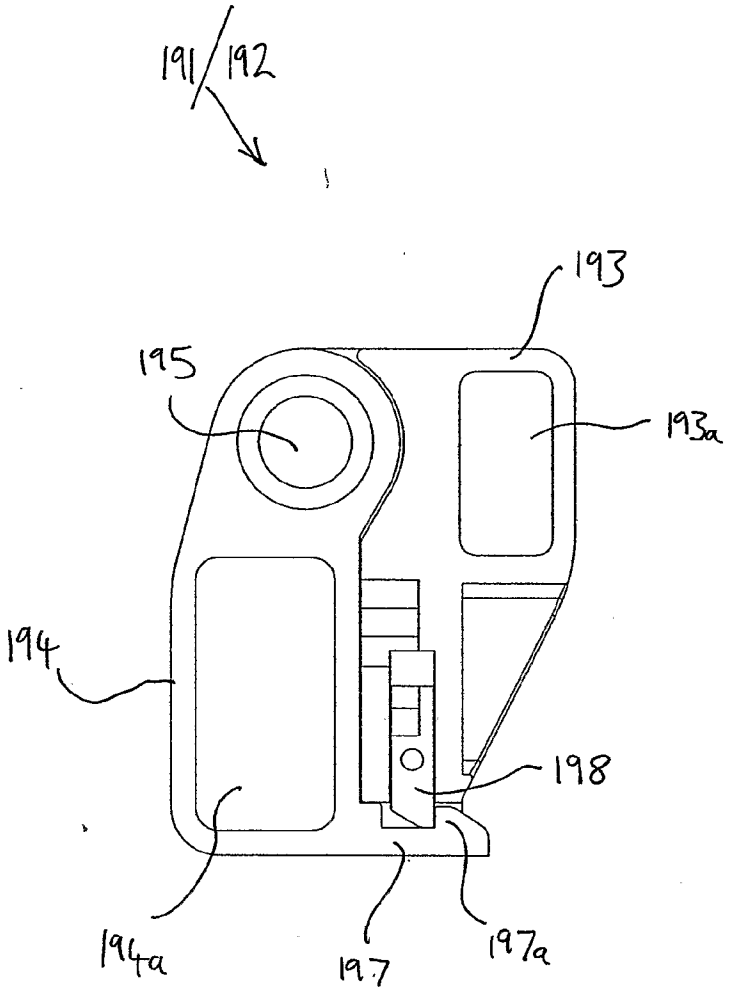


FIGURE 28

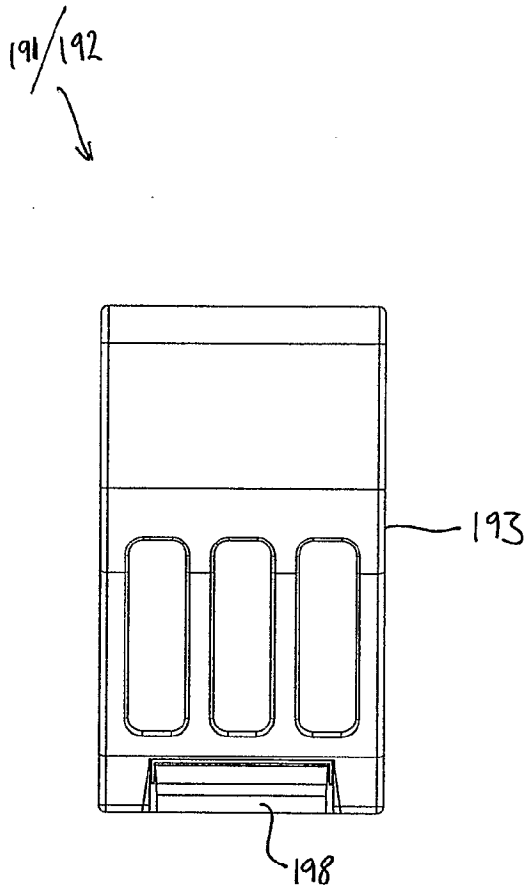


FIGURE 29

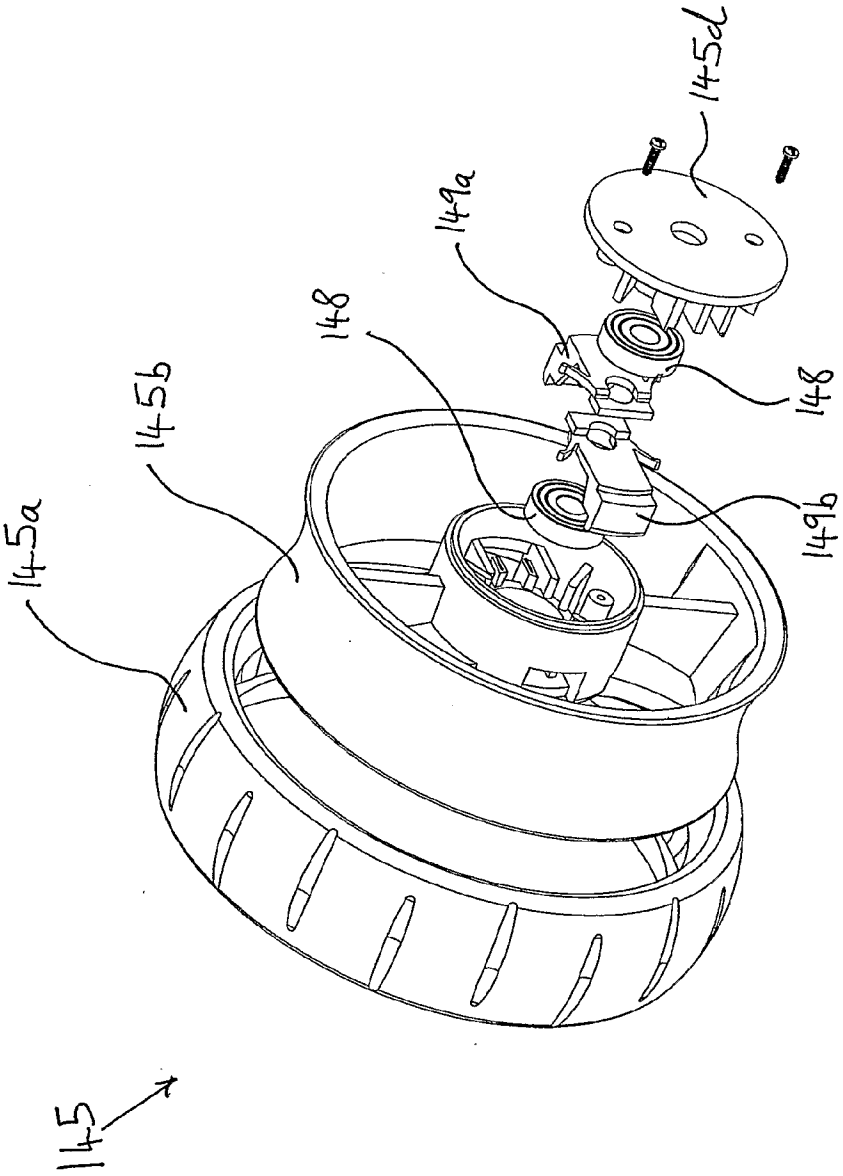


FIGURE 30

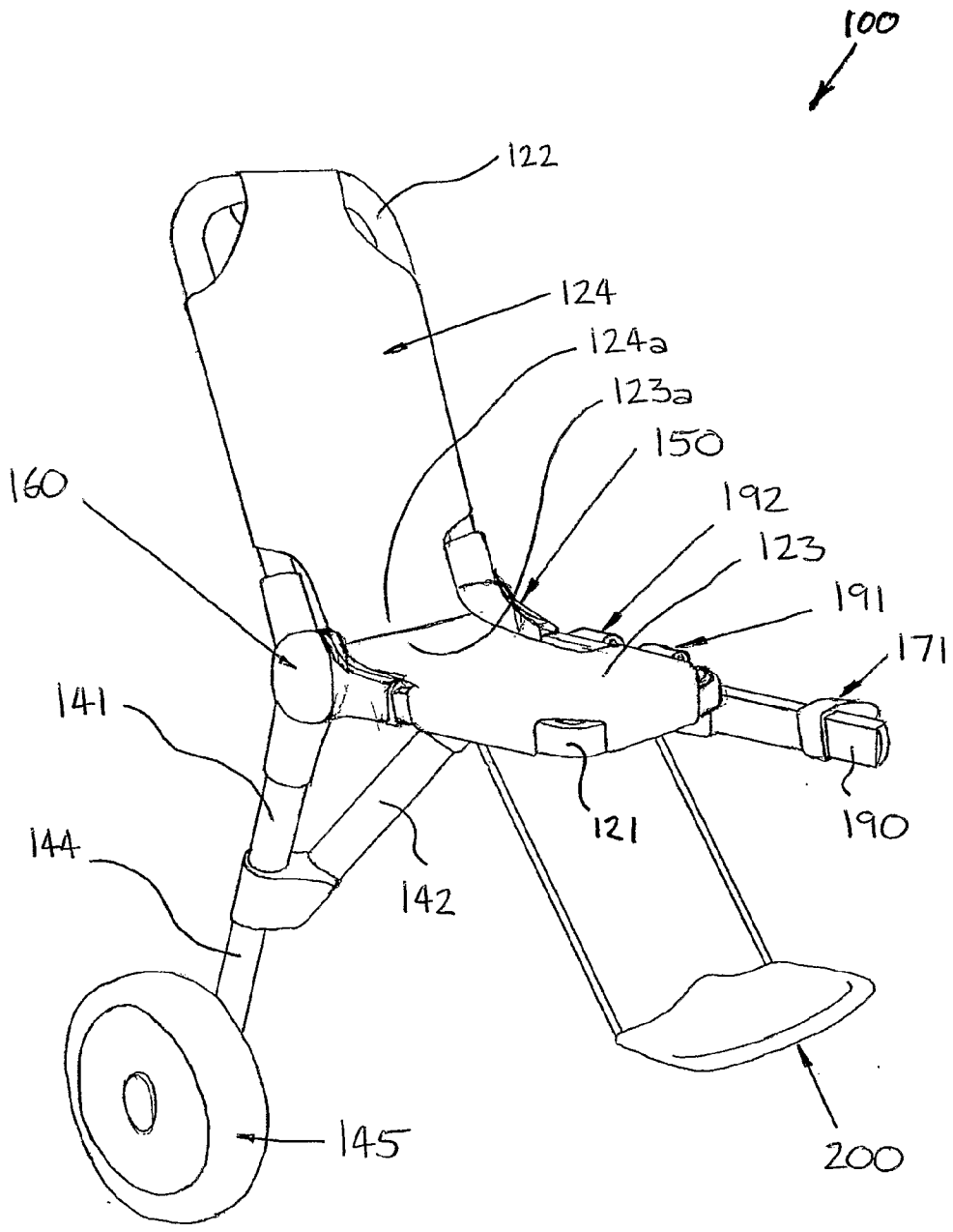

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FIGURE 31

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/GB2005/001276

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B62B9/00

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

B. FIELDS SEARCHED

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 000 645 A (SCHMIDT CARL O) 19 September 1961 (1961-09-19) abstract; figures 1,2,4,7	1,5, 9-12, 15-19, 21-28, 30-35, 37,43,44
Y	figures 1,2,4,7	2-4,6
Y	US 6 715 783 B1 (HANSON WAYNE H ET AL) 6 April 2004 (2004-04-06) abstract; figures 4,8,10	2-4,6
A	figures	1
A	DE 40 33 548 A1 (TROAX-AXO AB, HILLERSTORP, SE) 25 April 1991 (1991-04-25) abstract; figure 1	1-4

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 June 2005	15/06/2005

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Lindner, V

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Inte Application No
PCT/GB2005/001276

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 89 08 113 U1 (COMBIPRODUKT TEXTILVERARBEITUNGS GMBH, 5750 MENDEN, DE) 10 August 1989 (1989-08-10) abstract; figure 1	1-4
A	US 5 125 712 A (STAMOUTSOS ET AL) 30 June 1992 (1992-06-30) abstract; figures	1,38-42
A	US 2003/209885 A1 (SZMIDT LESZEK G ET AL) 13 November 2003 (2003-11-13) abstract; figures	1,38-42
A	DE 202 10 943 U1 (WEGNER, CHRISTIANE) 21 November 2002 (2002-11-21) abstract; figure 1	1

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

Inte Application No
PCT/GB2005/001276

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 3000645	A	19-09-1961	NONE		
US 6715783	B1	06-04-2004	AU	1353701 A	14-05-2001
			WO	0132493 A1	10-05-2001
DE 4033548	A1	25-04-1991	SE	468429 B	18-01-1993
			FR	2653401 A1	26-04-1991
			NO	904526 A ,B,	22-04-1991
			SE	8903477 A	21-04-1991
DE 8908113	U1	10-08-1989	NONE		
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(71) Applicant *(for all designated States except US)*: **DYNAMIC BRANDS, LLC** [US/US]; 8575 Magellan Parkway, Suite 1000, Richmond, VA 23227 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **ZEHFUSS, Mark** [US/US]; 5120 Austin Healey Drive, Glen Allen, VA 23059 (US).

(74) Agent: **PIKE, Bernard, G.**; Troutman Sanders LLP, Patent & Trademark Department, 600 Peachtree Street, N.E., Suite 5200, Atlanta, GA 30308-2216 (US).

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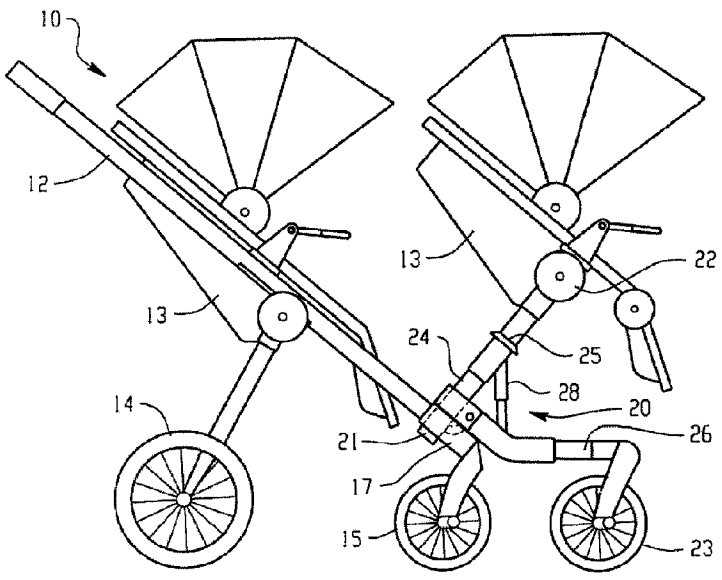


Fig. 3

(57) Abstract: The invention relates to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to reversibly convert a single stroller into a double stroller. More specifically, versions of the seat attachment relate to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. The seat may be supported in front of a permanent seat of the stroller.

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TITLE

SEAT ATTACHMENT FOR A STROLLER

INVENTOR

Mark Zehfuss

TECHNICAL FIELD

[0001] The invention is directed to a seat attachment for a stroller, single stroller and double strollers. Such a seat attachment may be used to convert a single stroller into a double stroller. More specifically, embodiments of the invention are directed to a seat attachment for a stroller capable of supporting a seat such as, but not limited to, a stroller seat, a baby seat, bassinet, a pram, a car seat, or a baby carrier, for example. Embodiments of the seat attachment are capable of reversibly converting a single stroller into a double stroller.

BACKGROUND

[0002] Parents with multiple young children may have difficulty transporting their children from place to place. Children are slow, easily distracted and, therefore, may lag behind their parents while the parents are trying to complete shopping tasks or get exercise in a limited amount of time. In response, many parents have purchased double strollers allowing the parent or other guardian to push two children simultaneously and thus allow them to more efficiently run errands, take walks, or jog. As such, a double stroller allows the parents or guardians more freedom than they would have with only a single stroller, especially while trying to manage two sleeping children.

[0003] Though double strollers have certain advantages, double strollers also have disadvantages. Double strollers are substantially larger than single strollers and are, therefore, more difficult to maneuver through doors and down aisles in stores. Typically, the benefits of being able to accommodate two children greatly offset these disadvantages. However, when the parent or guardian has only one child with them, the benefits of the double stroller are not realized but the disadvantages still exist.

[0004] Therefore, parents often buy two or more strollers to use at different times; a single stroller for times when they only have one child with them and a double stroller for

when they need a stroller that will accommodate two children. This often creates its own set of problems. The multiple strollers must be stored and there is seldom room for both a folded double stroller and a folded single stroller in the trunk of a typical car or back of a sport utility vehicle.

[0005] Stroller manufacturers have attempted to solve this problem by providing a place for a second child to stand on the back of a single stroller or attachments that provide another seat for the second child that hangs under and slightly behind the seat of the single stroller. This provides a second seat for a child but the child is tucked close to the back of the front seat which may be uncomfortable, reduce the capacity of the under seat storage, and prevent the parent from hanging a bag on the handle bars.

[0006] There exists a need for a single stroller that may be conveniently converted to a double stroller. There is also a need for a conversion kit that converts the single stroller into a full double stroller that is capable of accommodating two children without loss of convenience for the parent or guardian.

SUMMARY OF THE INVENTION

[0007] Strollers are typically single strollers (strollers having one seat for transporting one child) or may also be double strollers (strollers having two seats for transporting two children). Embodiments of the invention are directed to a seat attachment for a stroller comprising an connector portion capable of connecting directly to a stroller frame or to an attachment frame member connected to the stroller frame; and a seat support element capable of supporting a seat. In certain embodiments, the attachment for a stroller comprises an attachment frame member having a first end and a second end. The first end may be capable of connecting the seat attachment to a stroller frame and the second end may be capable of connecting to the seat support element. The seat support element is thus capable of supporting a seat on the strolle. In more specific embodiments, the seat may be supported in either a forward or backward position.

[0008] Another embodiment comprises a stroller and seat attachment for the stroller, wherein the stroller comprises an attachment frame member connected to the frame of the stroller and the seat attachment for the stroller comprises a connector portion. The attachment frame member and the connector portion comprise components that are capable of being securely connected together. In certain embodiments, the attachment frame member and the connector portion comprise components that are capable of being securely and releasably connected together. In this manner, the seat attachment may be attached to the

stroller and a seat, as defined above, may be connected to the seat attachment, thus reversibly converting the single stroller into a double stroller.

[0009] In a further embodiment, the seat attachment for the stroller further comprises at least one wheel. The wheel may be connected to the seat attachment by a wheel support frame which may be rigidly attached or may be pivotally attached to the seat attachment. The wheel support frame may be connected to any section of the seat attachment, preferably the wheel support frame is pivotally connected to the back portion of the seat attachment in an area adjacent to the connector portion or connected near the middle of the attachment portion.

[0010] Embodiments of the seat attachment for a stroller may further comprise a folding mechanism. The folding mechanism may comprise a sliding member slidingly connected to the attachment portion and a folding frame member or strut having a first end connected to the sliding member and a second end connected to the wheel support frame. The folding mechanism allows the wheel support frame to pivot from a first position (in-use position), to a second position (a folded position). The attachment for the stroller also may comprise a locking mechanism that secures the attachment to a stroller in the in-use position and unlocks the attachment to allow the attachment to be connected or removed from the stroller when in the folded position. The locking mechanism may be a small protrusion attached to the wheel support frame that engages a corresponding aperture in the stroller or the stroller attachment portion to secure the attachment to the stroller. In the folded position, the protrusion is not engaged in the aperture.

[0011] A further aspect is directed to a double stroller. The double stroller may comprise a frame, wherein the frame comprises a handle portion, a front wheel support portion, a back wheel support portion, and a folding mechanism. Embodiments of the double stroller comprise a stroller frame comprising wheels, the frame, a first seat and a connector portion connected to the frame. The double stroller may further comprise a seat attachment frame comprising a wheel, a second seat, and a second attachment portion capable of connecting to the connector portion of the stroller frame. The second attachment portion may be releasably connected to the connector portion. Further, the second seat may be releasably connected to the seat attachment frame and is capable of supporting the second seat in either a forward or backward position.

[0012] A further embodiment of the double stroller comprises a first seat attachment capable of releasably supporting a first child seat and a second seat attachment capable of releasably supporting a second child seat. The seat attachments may comprise two seat connector portions for supporting the seat on both sides.

[0013] An still further embodiment of the double stroller comprises at least one first seat attachment adjacent to the front wheel support portion and a second seat attachment adjacent to each folding mechanism and/or the handle portion. The first seat attachment may be above at least one front wheel connected to the wheel support portion.

[0014] A still further embodiment of the stroller comprises a frame, at least one front wheel, at least one rear wheel, a first stroller seat with at least one first attachment portion permanently attached to the frame; and at least one releasably connected second seat attachment portion capable of supporting a second seat in front of the first stroller seat. As in other embodiments, the seat attachment may comprise two seat connectors. Either or both seat attachment portions may be a single part with two seat connectors or two separate pieces each comprising a seat connector.

[0015] In any of the above embodiments, the stroller, double stroller or attachment may comprise one or more of the following features; a sleeve for removably receiving the attachment portion. The seat attachment portion may comprise a protrusion having a complementary shape to the sleeve for inserting into the sleeve. Further, the second seat may be integral to the seat attachment.

[0016] Aspects of the stroller, double stroller and attachment are presented in various embodiments, however one skilled in the art will understand various variation and interchangeability of the components of the various embodiments which are intended to be included in the scope of the invention.

BRIEF DESCRIPTION OF THE FIGURES

[0017] Figure 1 shows an embodiment of a single stroller;

[0018] Figure 2 shows an embodiment of a seat attachment to convert a single stroller into a double stroller;

[0019] Figure 3 shows the combination of the single stroller of Figure 1 attached to the seat attachment of Figure 2;

[0020] Figure 4 shows an embodiment of a seat attachment capable of supporting a car seat on an attachment of Figure 2;

[0021] Figure 5 shows a combination of the single stroller of Figure 1 attached to an embodiment of the attachment in the form of a tricycle-like riding device; and

[0022] Figure 6A shows an accessory attachment for supporting an accessory on a stroller; Figure 6B shows a bag or purse for attaching to the accessory attachment of Figure 6A.

[0023] Figure 7 shows an attachment for supporting a seat comprising one wheel.

[0024] Figure 8 shows an embodiment of a stroller reversibly that is capable of being converted from a single stroller to a double stroller comprising an attachment portion that does not comprise a wheel.

[0025] Figures 9A, 9B, 9C, 9D, 9E, and 9F show various configurations of the embodiments of the stroller shown in Figure 8.

DESCRIPTION

[0026] The invention relates to an accessory, attachment, or conversion kit (hereinafter "seat attachment") for a stroller. As discussed above, parents or guardians may find themselves in a situation wherein it is more convenient to transport two children in a stroller, but at the same time find it inconvenient to have both a single stroller and double stroller. Embodiments of the seat attachment solve this problem. In one aspect, an embodiment of the seat attachment for a stroller is capable of converting a single stroller into a double stroller. The seat attachment may support a seat such as, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. Therefore, the parent or guardian does not require both a single stroller and a double stroller. A stroller configured to receive a seat attachment for converting a single stroller into a double stroller provides convenience to the user. The single stroller may be connected to a double stroller by attaching the seat attachment to the single stroller and then attaching the second seat. As such, an embodiment of the seat attachment for converting a single stroller into a double stroller comprises at least one connector portion capable of connecting to a stroller frame and a seat support element capable of supporting a seat. The seat attachment may optionally comprise at least one wheel for additional support and stability, however, for more convenience, embodiments of the attachment do not include a wheel. In certain embodiments, a wheel may stabilize the double stroller, but in other embodiments of the attachment the wheel may not be desirable or necessary. Additional embodiments of the attachment comprise a cart, wagon, tricycle-like attachment, or other riding toy that may be connected to the stroller, for example. A tricycle-like attachment would allow a child to ride or be pushed in front of the stroller.

[0027] A side view of an embodiment a single stroller 10 is shown in Figure 1. As a note, Figure 1 shows only one side of the single stroller 10, however, most components include a complementary component on the other side of the single stroller but are not shown in Figure 1. The single stroller 10 comprises a frame 12 that supports seat 13. The frame 12 may, optionally, include at least one, preferably two, folding mechanism 16 that allows the stroller 10 to be folded to a more convenient size for storing or transporting the stroller 10.

[0028] In this embodiment, the seat 13 is shown as a typical stroller seat, however, other types of seats may be used in a single stroller. The seat 13 may be permanently affixed to the frame 12 or releasably connected such that it is capable of being removed and substituted with a different seat. As used herein, "releasably connected" or "releasably attached" means the connection is not a permanent connection and that the connection is capable being of connected and disconnected by the user of the stroller without requiring special tools or special skills. Releasable connections include, but are not limited to, buttons, snaps, friction fittings, interference fits, threaded connections, locking tabs, keyed connections, other fasteners, or the like. On stroller 10 of Figure 1, the frame 12 is supported on a pair of back wheels 14 and a pair of front wheels 15. In this embodiment, back wheels 14 are fixed and do not swivel or pivot on the frame. The pair of front wheels 15 on the single stroller 10 pivot to make turning the single stroller 10 easier and more convenient. Though, pivoting wheels may be preferred in certain strollers, strollers with fixed non-pivoting wheels are also common. It should be noted that a single stroller does not require pairs of front or rear wheels and either the front pair of wheels 15 or the back pair of wheels 14 may be substituted with a single wheel. Conventionally, many single strollers, including umbrella strollers, jogging strollers, all-terrain strollers, as well as other strollers may only include one front wheel. Embodiments of the seat attachment of the invention may be capable of converting any style of stroller to a double stroller, including strollers with one or two front wheels.

[0029] The embodiment of the stroller 10 comprises two attachment frame members 17. The connector portions are preferably on the front of the stroller to allow the seat attachment and the seat to be connected to the front of the stroller 10. The attachment frame members 17 allow a seat attachment such as the seat attachment for converting the single stroller 10 to a double stroller, as shown in Figure 3, to be connected to the stroller. Only one seat attachment is shown in Figure 3, the stroller 10 would use two seat attachments as shown in Figure 3 or one seat attachment comprising two seat support elements. The embodiment of the stroller 10 has a left side and right side attachment frame members 17. An embodiment

of a seat attachment of stroller 10 will comprise corresponding connector portions capable of connecting to the stroller frame at the attachment frame members 17. Though the seat attachment for the stroller is described in relation to a single stroller, the attachment may similarly be attached to a double stroller. Embodiments of the seat attachment may therefore be used to convert a double stroller into a triple stroller, if desired.

[0030] An embodiment of a seat attachment 20 of the invention is shown in Figure 2. The seat attachment of Figure 2 is in an unlocked and folded configuration. The seat attachment 20 comprises a pair of connector portions 21 capable of connecting to the attachment frame members 12, two seat attachment elements 22 capable of supporting a seat; and a wheel 23. In this embodiment, the connector portions are connected to the rear of the seat attachment 20 allowing the seat attachment 20 to be connected to the front of a stroller, such as stroller 10 shown in Figure 1. Other embodiments of the seat attachment may include more than one wheel, one connector portion, one seat support element, or combinations of these elements. In an embodiment of the stroller with one wheel, the attachment frame member may be on the forks of the front wheel, for example.

[0031] The seat attachment 20 comprises a wheel support frame 26 connecting the wheel 23 to the attachment frame member 24 of the attachment 20. Each attachment frame member 24 has a first and a second end. The first end is capable of connecting to a stroller frame and the second end is connected to the seat support element 22. The embodiment of the seat attachment 20 comprises a wheel support frame 26 that is pivotally connected to two attachment frame members 24. The wheel support frame 26 or the attachment frame 24 may span the width of the stroller between the two attachment frame members 17. The pivotal connection 27 allows the seat attachment to be folded and conveniently stored or transported but is not necessary for the invention. The pivotal connection is optional and provides more convenience, however, embodiments of the attachment may comprise a releasably connected wheel support frame or a rigid frame that may be incorporated to produce a seat attachment that has greater strength for use in situations wherein a stronger seat attachment may be desired such as with all-terrain or jogging strollers, for example. The wheel support frame may be connected at any point on the attachment frame, preferably the wheel support frame is connected near the connector portion 21 or near the middle of the attachment frame 24.

[0032] An embodiment of the seat attachment without a wheel may include connector portion 21 or attachment frame member 24, and seat attachment member 22, for example. In such an embodiment, there would be no need for pivotal connection 27, wheel support frame 26, sliding connector 25, or wheel 23.

[0033] The seat attachment 20 comprises a folding mechanism comprising a sliding connector 25 connected to a first end of strut 28. A second end of strut 28 is pivotally connected to wheel support frame 26. In such an embodiment, the sliding connector 25 may be moved between a first position and a second position on the attachment frame member 24. As the sliding connector 25 is moved, strut 28 pushes the wheel support frame 26 from an in-use position to a storage position. The storage position is more compact as shown in Figure 2. In addition, the embodiment of the seat attachment 20 comprises a locking mechanism 27 that is capable of securing the seat attachment 20 to a stroller, such as stroller 10 shown in Figure 1. The locking mechanism 29 is engaged by moving the sliding connector 25 to the in-use position in which the wheel support frame 28 and wheel 23 are extended. In an embodiment of the seat attachment 20 for the stroller 10, the wheel of the seat attachment 20 is pivotally connected to the connector portion and when the wheel is in the in-use position the releasable connection is locked and when the wheel 23 is moved to the storage position, the releasable connection is unlocked allowing the seat attachment 20 to be removed from stroller 10. The seat attachment 20 may be stored and stroller 10 may be conveniently used as a single stroller. As designed, the seat attachment 20 may be reconnected to stroller 10 for use as a double stroller. In any embodiment of the invention, the seat attachment portion may be secured into position on the stroller frame and a locking mechanism may be used with an embodiment with or without the wheel. Either the seat attachment or the stroller frame may comprise a locking mechanism for securing the stroller and seat attachment together. The locking mechanism may be any mechanism capable of securing the components together during use and may be a friction locking device, threaded connection, peg in a hole, or an interference locking device such as a pin in a hole or slot, for example. In embodiment 20 shown in Figure 2, the locking mechanism 29 pivots with wheel support frame 26 as the attachment 20 is moved from an unfolded position to a folded position. The locking mechanism 29 may slide into a hole or notch in the attachment frame member of stroller 10 shown in Figure 1. As such, the attachment 20 may be attached to stroller 10 by positioning attachment portion 21 of attachment 20 in slot 18 of attachment portion 17 of stroller 10. The sliding connector 25 may be moved to the in-use position, wheel support frame is moved and locking mechanism 29 is positioned into locking slot 19 of stroller 10.

[0034] The connector portion 21 of the embodiment of the seat attachment 20 has a cylindrical shape. The connector portion 21 may be inserted into a cylindrical recess 18 of the attachment frame member 17 of stroller 10 of Figure 1 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 3. Other embodiments of

the seat attachment may include any type of connector portion. The connector portion may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example. Other attachment mechanisms may be utilized to connect the seat attachment to the stroller such as, but not limited to, a U-shaped bracket, a U-bolt, a pipe clamp, O-shaped bracket, screw, bolt, or other clamping or attachment means. The attachment frame member of the stroller has a complimentary and cooperating shape that allows the connector portion to be secured to the attachment portion of the stroller.

[0035] In Figure 3, the seat attachment 20 of Figure 2 is shown connected to the single stroller 10 of Figure 1 forming a double stroller. The double stroller configuration is shown with two stroller seats 13 in an inline configuration, though the other configurations, such as a stroller seat and a bassinet or a pram may also be supported on the double stroller. Further, the seat support element of the seat attachment may be capable of supporting the front stroller seat in either a forward or backward position.

[0036] The embodiment of the stroller 10 is shown only as an example of one type of stroller, the frame of the stroller may be any of many possible configurations. Embodiments of the accessory of the invention may be configured to be used on any such configuration of a stroller. For example, a different embodiment of the baby stroller may not include two front wheels, may not include a folding mechanism or may only include only one folding mechanism. In addition, the baby stroller may include additional features not included in baby stroller 10. For example, the stroller may optionally comprise fixed front wheels, an entirely different frame configuration, or a storage basket underneath the seat of the stroller.

[0037] The seat support member may be any configuration capable of supporting the seat on the seat attachment. Another embodiment of a seat support member for use with a car seat or other baby seat is shown in Figure 4. The embodiment of the seat support member 40 of Figure 4 comprises a main support 41. The main support 41 comprises a cradle for supporting a central portion of the seat. Another portion of the seat may rest against support bar 42. In this embodiment, support bar 42 may be adjusted to accommodate seats of different shapes and sizes. Support bar 42 may be slid within aperture 43 and locked in place when in the desired position to support a certain seat. The seat is, therefore, supported on two main supports 41 and support bar 42. The seat may be further secured in the seat attachment member 40 by wrapping belts 44 and 45 around the seat and locking the belts in this position with a buckle or other securing means.

[0038] Another embodiment of a seat attachment for a stroller is shown in Figure 5. The combination 50 comprises stroller 10 and seat attachment 51. Seat attachment 51 is a tricycle-like attachment comprising an connector portion 52, a frame 53 with a seat support element 56, a seat 57, and wheel 55. The tricycle-like attachment may be attached to stroller 10 to allow one child to be pushed in the stroller 10 and one child to ride the seat attachment 51. The seat attachment may be other shapes also such as cars, trucks, or animal shapes, for example.

[0039] The embodiment of the stroller 10 of Figure 5 comprises an additional accessory attachment portion 58. The accessory attachment portion 58 attaches to a frame member of stroller 10. An embodiment of the accessory attachment portion 58 is shown on Figure 6A. This embodiment is particularly useful for attaching a bag or purse 64, as shown in Figure 6B, to stroller 10.

[0040] When using a stroller, parents or guardians typically carry other items, such as purses, grocery bags, cell phones, diapers, cleaning wipes, or other personal or baby related items. Some strollers have bottom storage baskets for placing such items. However, these storage baskets can be inconvenient to access or some light weight strollers do not include such storage. Therefore, users of the stroller may hang purses or shopping bags on the handle of the stroller. This is convenient in that the bag is easy to access, but the weight of the bag on the handle may cause the stroller to be unbalanced and increase the tendency of the stroller to topple backwards. A heavy bag hung from the handle of a stroller may cause the stroller to tip backwards even with a child in the seat. The problem is worse if the stroller is facing uphill, on uneven terrain, being pushed up a curb, or occupied by a small child. The attachment portion may be attached to the frame of a stroller by any of the clamping or attachment methods described above, for example. Preferably, accessory attachment 58 is attached near the center of gravity of the stroller 10 to avoid creating an unbalanced condition of the stroller. An embodiment of the accessory attachment 58 is shown in Figure 6A. Accessory attachment 58 is shown connected to stroller frame 12 of stroller 10 in Figure 1 near the folding mechanism. Embodiments of the accessory comprise a first end 61 for connecting to a stroller frame and a second end 62 for releasably connecting to the accessory. The first end 61 comprises an aperture 64 that may be connected to frame 12 of the stroller 10. In certain embodiments, the aperture 64 is on an angle – such that when the axis of the accessory attachment portion 58 is substantially horizontal. The accessory attachment 58 may, optionally, comprise a rib for securing the accessory to the accessory attachment 58.

The rib as shown in Figure 6A may be replaced with any other locking element or securing means including a friction fitting, a screwed fitting, interference fitting, for example.

[0041] One example of an accessory for attaching to an accessory attachment 58 is shown in Figure 6B. The accessory is a bag or purse 64. The accessory includes an attachment portion 65 that is capable of being secured to the attachment portion 62 on the accessory attachment 58. The bag or purse 64 may be secured on stroller 10 by securing attachment portion 65 to attachment portion 62. The attachment portion 65, as shown, slides over the cylindrical attachment portion 62 of accessory attachment 58. Attachment portion 65 may include an interior annular recess that receives rib 63 securing the bag or purse 58 to stroller 10. The bag or purse 64 is thus secured to the stroller 10 in a center portion of the stroller as viewed from the side. Therefore, the bag or purse 64 is conveniently secured to stroller 10 while not contributing to an unbalanced condition of the stroller 10.

[0042] A further embodiment of the stroller 80 is shown in Figure 8. Stroller 80 may be easily converted from a single stroller comprising one seat to a double stroller comprising two seats without addition of another wheel on the attachment. Stroller 80 comprises a frame 81 capable of supporting the stroller seat 86. In this embodiment, the frame 81 comprises a front wheel support portion 81a, a back wheel support portion 81b, and a handle portion 81c. The frame 81 of the embodiment of the stroller 80 further comprises a folding mechanism 81d that connects front wheel support portion 81a, a back wheel support portion 81b, and a handle portion 81c. The folding mechanism 81d allows the stroller to be folded in a more compact size for storing or transportation. Figure 8A shows stroller 80 in a folded configuration.

[0043] Stroller 80 further comprises at least one front wheel 82 (both front wheels 82 of stroller 80 may be seen in Figure 8A), at least one rear wheel 83 (both rear wheels 83 of stroller 80 may be seen in Figure 8A), a stroller seat 86, and a seat support portion 84 capable of supporting a second seat in front of the stroller seat. The stroller 80 may further comprise a storage basket 87. Seat support portion may be of any design capable of securely supporting a seat on the stroller. For example, the seat support portion 84 may be similar to seat support portion 20 shown in Figure 2 without the wheel 23, the strut 28, pivotal connection 27, and/or the wheel support frame 26. Preferably, the seat support portion is capable of supporting a seat such that a child in the seat is substantially above the frame of the stroller. This provides easier access to the seat, does not block access to the storage basket, allows more versatile configurations of the seats, allows more variety of seats to be

attached to the frame, and allows the parent or other guardian to more easily monitor and see the child in each seat.

[0044] Stroller 80 comprises a stroller seat 86. The stroller seat 86 is located adjacent to handle portion 81c. The stroller seat 86 may be fixedly attached or removably attached to frame 81. In embodiments of the stroller 80 wherein stroller seat 86 is removably attached to frame 81, the stroller seat 86 may be removed and replaced in a backward facing configuration, see Figure 9A, be replaced by a infant carrier 91 or car seat on seat support element 84, see Figure 9C, or replaced with a pram 92 on seat support element 84, see Figure 9D. Embodiments of the stroller 80 may comprise a second seat support element 89 adjacent to the handle portion 81c. A stroller 80 comprising a second seat support element 89 allows the seat to be easily removed and reconfigured to a different orientation or replaced with a different style seat.

[0045] Embodiment of the stroller 80 comprises a first seat support element 84. The seat support element 84 is connected to the stroller 80 front wheel support frame 81a. The seat support element 84 is adjacent to the front wheel support portion 81a of frame 81. The seat support element is capable of supporting a second stroller seat 85 in front of the stroller seat 86. This provides convenience and versatility to a user of stroller 80. Seat support element may be fixedly attached or removably attached to front wheel support portion 81a. The front seat 85 may be positioned substantially over the front wheels so the stroller remains stable. Preferably, the seats should be positioned such that the center of gravity of the stroller is between the front and rear wheels. If not an additional wheel may be placed on the attachment as previously described. Seat support element 84 comprises a seat connector 88. Seat connector 88 may be a multipurpose general connector that allows different seats to interchanged on the seat support element 84. Any style seat may be configured to connect to the seat connector, such as but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example.

[0046] An embodiment of the stroller attachment comprises a connector portion, and a seat support element. The connector portion is capable of connecting the seat attachment to the frame.

[0047] In the embodiment shown in Figure 8, stroller 80 comprises a first stroller seat 86 and a second stroller seat 85. Stroller seat 86 is shown in the forward facing configuration and second stroller seat 85 is shown in a backward facing configuration. The seat support element 84 is capable of supporting the seat above the front wheel 82 connected to the wheel

support portion 81a. Preferably, the front seat is located substantially over the front wheels and the back seat is located substantially over the rear wheels.

[0048] Though it can not be seen in the side view of Figure 8, a typical embodiment of the stroller will comprise two seat connector portions. One seat connector portion will support each side of the seat. The connector portion may be one piece or multiple parts.

[0049] Figures 9A through 9F show various configurations that are possible with the stroller of the invention. These configurations are not to be considered to be all available configurations of the stroller and one skilled in the art would recognize many additional possibilities based upon this specification and set of drawings. From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.

CLAIMS

1. A seat attachment for a stroller, comprising:

an attachment frame member comprising a connector portion capable of connecting to a stroller frame; and

a seat support element capable of supporting a seat;

2. The seat attachment of claim 1, comprising:

a wheel.

3. The seat attachment for a stroller of claim 2, further comprising a wheel support frame connecting the wheel to the attachment frame member.

4. The seat attachment for a stroller of claim 3, wherein the wheel support frame is pivotally connected to the attachment frame member.

5. The seat attachment for a stroller of claim 4, wherein the wheel support frame is pivotally connected near the middle of the attachment frame member.

6. The seat attachment for a stroller of claim 5, further comprising a folding mechanism.

7. The seat attachment for a stroller of claim 6, wherein the folding mechanism comprises a sliding connector slidingly connected to the attachment frame member and a strut having a first end connected to the sliding member and a second end connected to the wheel support frame.

8. The seat attachment for a stroller of claim 4, wherein the wheel support frame is capable of pivoting from a first position to a second position.

9. The seat attachment for a stroller of claim 8, wherein the first position is a locked and in-use position and the second position is an unlocked and folded position.

10. The seat attachment for a stroller of claim 1, wherein the seat is a baby seat, a car seat, a stroller seat, a bassinet, or a pram.

11. The seat attachment for a stroller of claim 1, wherein the attachment frame member has a first end and a second end.

12. The seat attachment for a stroller of claim 11, wherein the first end is capable of connecting to a stroller frame.

13. The seat attachment for a stroller of claim 12, wherein the second end is connected to the seat attachment member.

14. The seat attachment for a stroller of claim 1, wherein the seat support element is capable of supporting a seat in either a forward or backward position.

15. The seat attachment for a stroller of claim 1, further comprising a stroller seat, wherein the seat support element is capable of supporting the stroller seat in either a forward or backward position.

16. A double stroller, comprising:

a stroller frame comprising wheels, a frame, a first seat and an attachment frame member connected to the frame;

a seat attachment comprising a wheel, a second seat, and a connector portion capable of connecting to the attachment frame member.

17. The double stroller of claim 12, wherein the connector portion is capable of being releasably connected to the attachment frame member.

18. The double stroller of claim 12, wherein the second seat is releasably connected to the seat support element.

19. The double stroller of claim 18, wherein the seat support element is capable of supporting the second seat in either a forward or backward position.

20. A double stroller, comprising:

a first seat attachment capable of removably supporting a child seat; and

a second seat attachment capable of supporting a child seat.

21. The double stroller of claim 20, wherein each seat attachment comprises two seat connector portions.

22. The double stroller of claim 20, wherein the child seat is one of a stroller seat, a baby carrier, a bassinet, a pram, or a car seat.

23. The double stroller of claim 20, comprising a frame, wherein the frame comprises a handle portion, a front wheel support portion and a back wheel support portion.

24. The double stroller of claim 23, wherein a first seat attachment is adjacent to the front wheel support portion.

25. The double stroller of claim 24, wherein the first seat attachment is above at least one front wheel connected to the wheel support portion.

26. The double stroller of claim 25, wherein the second seat attachment is adjacent to the handle portion.

27. The double stroller of claim 23, further comprising a folding mechanism that connects the handle portion, the front wheel support portion, and the back wheel support portion.

28. A stroller, comprising:

a frame;

at least one front wheel;

at least one rear wheel;

a stroller seat; and

a seat attachment portion capable of supporting a second seat in front of the stroller seat.

29. The stroller of claim 28, wherein the seat attachment portion comprises two seat connectors.

30. The stroller of claim 29, wherein the seat attachment portion is removably connected to the frame.

31. The stroller of claim 30, wherein the seat attachment portion comprises two portions each comprising one seat connector.

32. The stroller of claim 30, wherein the frame comprises a sleeve for removably connecting the seat attachment portion to the frame.

33. The stroller of claim 28, wherein the second seat is one seat selected from a stroller seat, an infant carrier, a bassinet, a pram, or a car seat.

34. The stroller of claim 33, wherein the second seat is integral to the seat attachment portion.

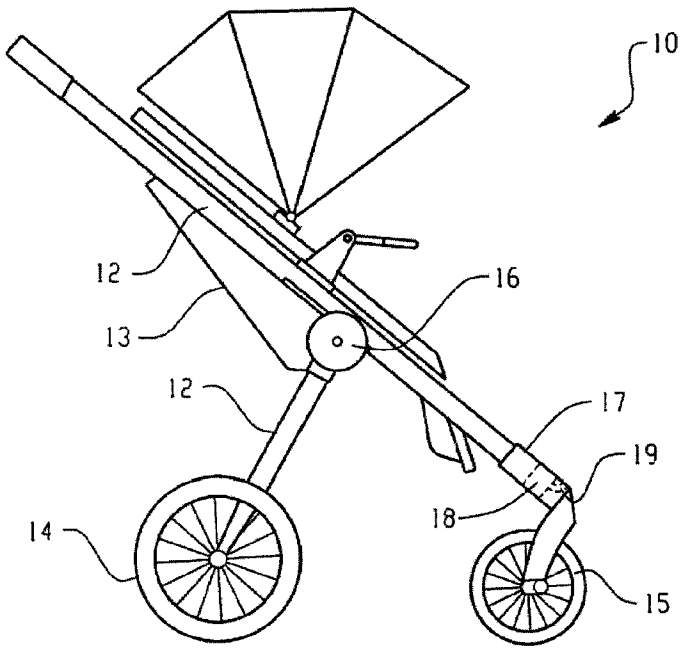


Fig. 1

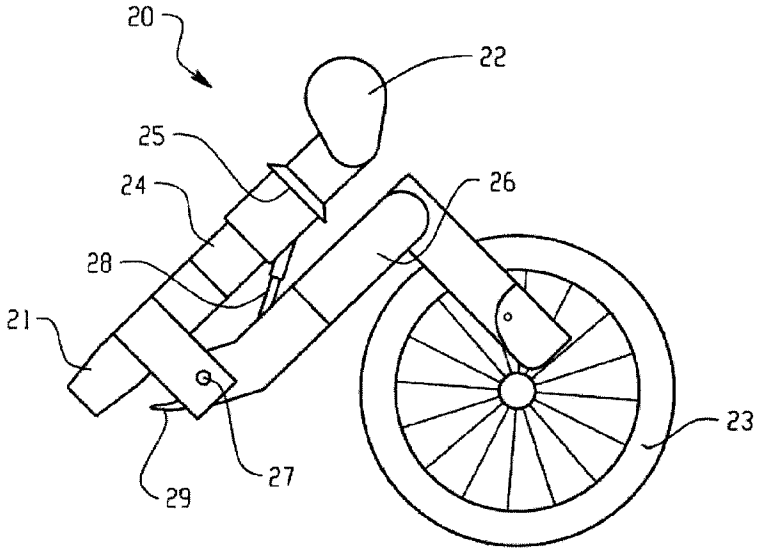


Fig. 2

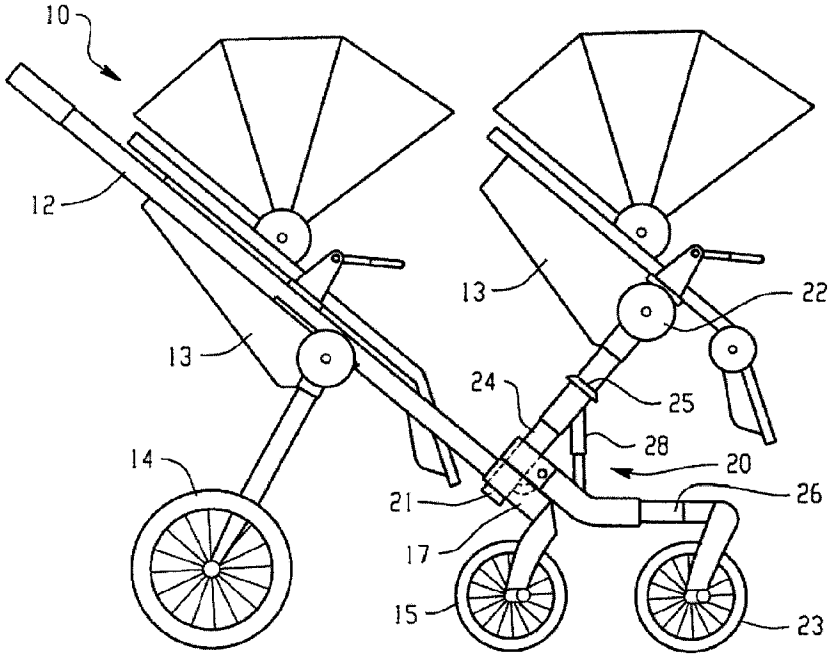


Fig. 3

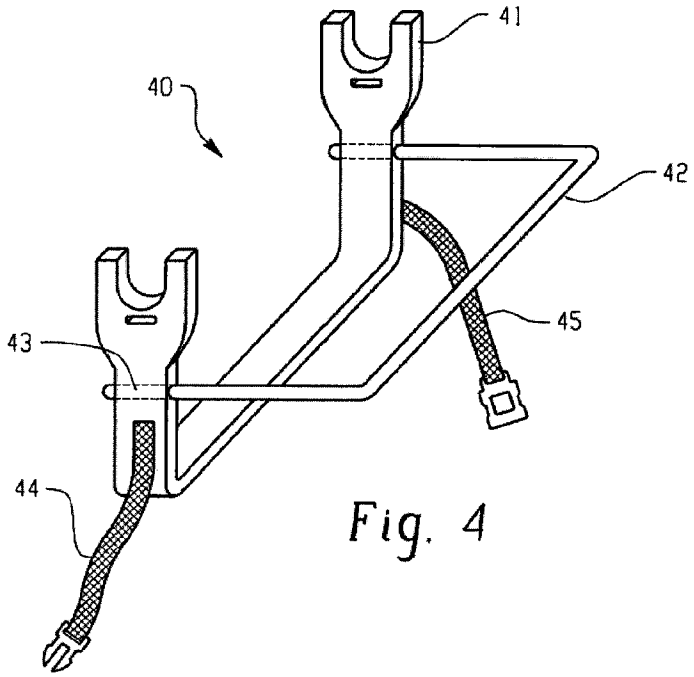


Fig. 4

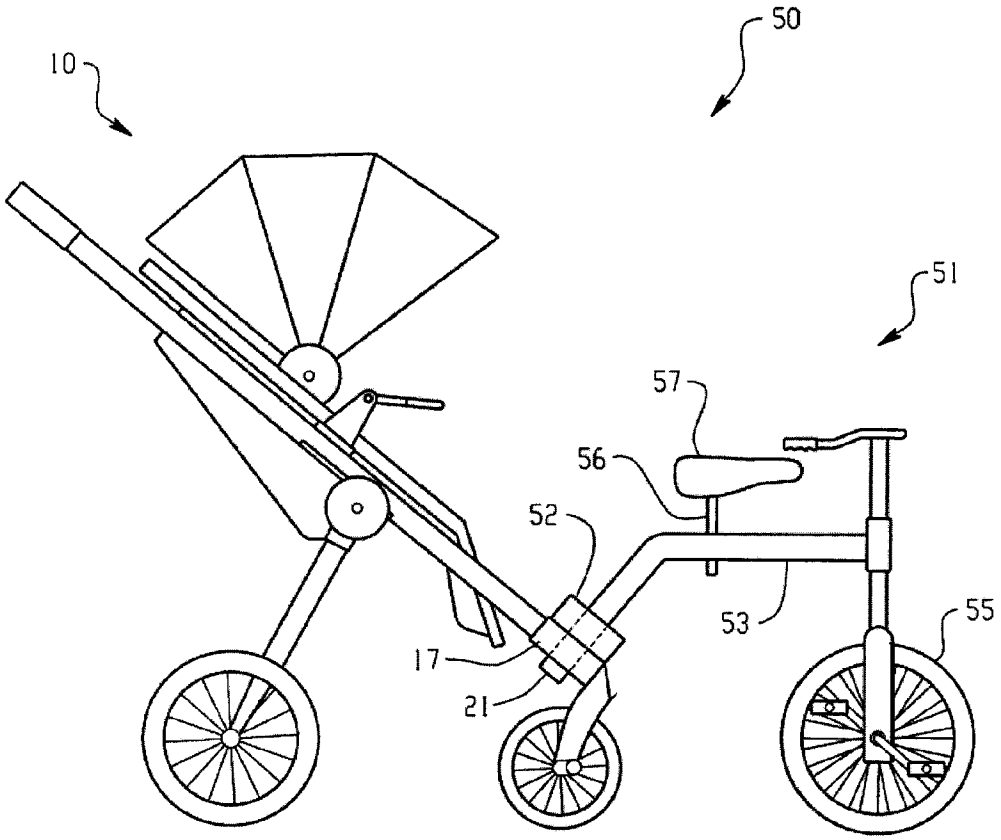


Fig. 5

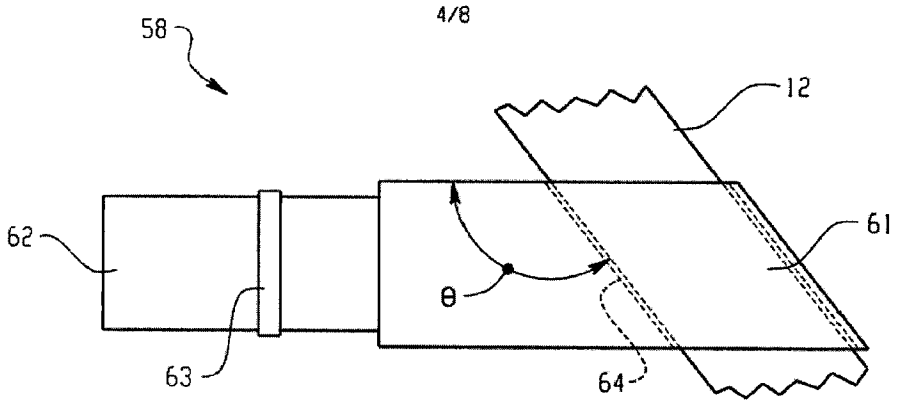


Fig. 6A

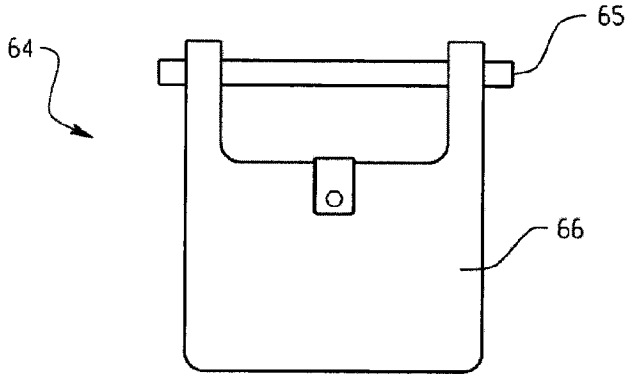


Fig. 6B

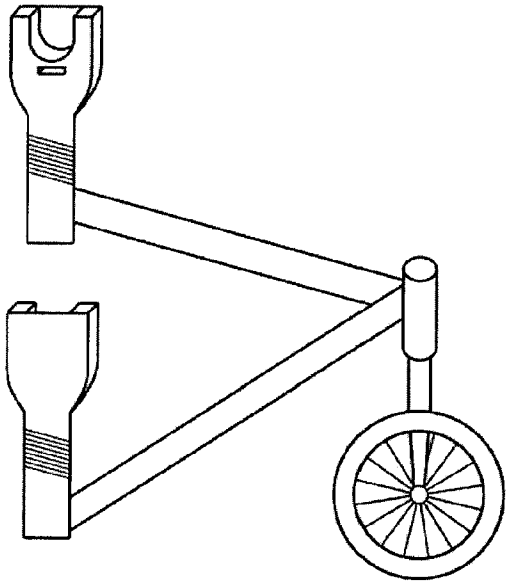


Fig. 7

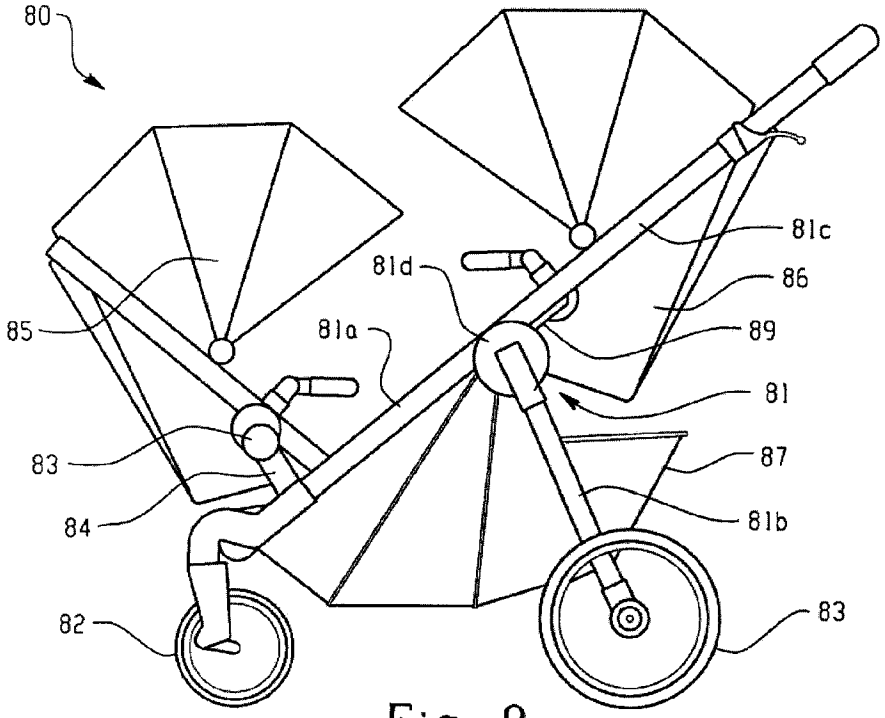

80
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Fig. 8

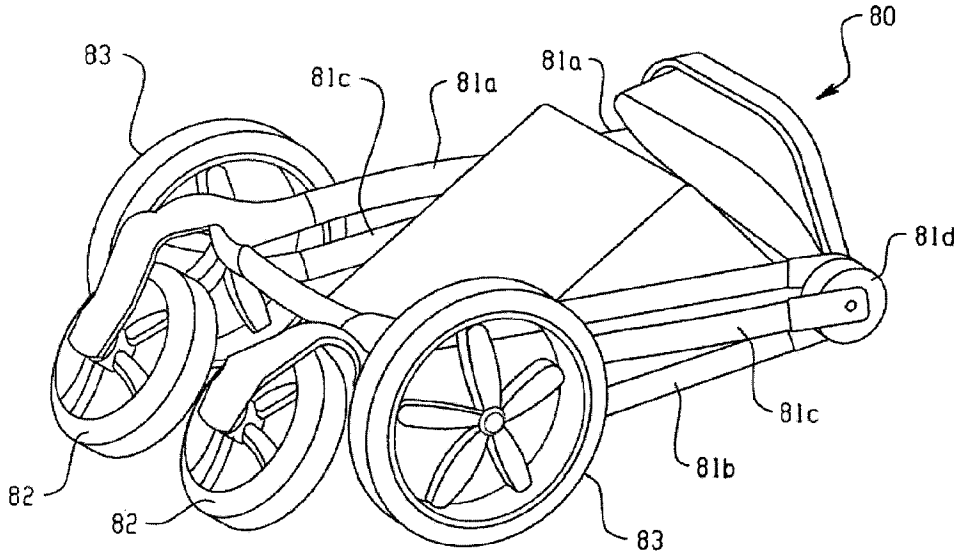

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Fig. 8A

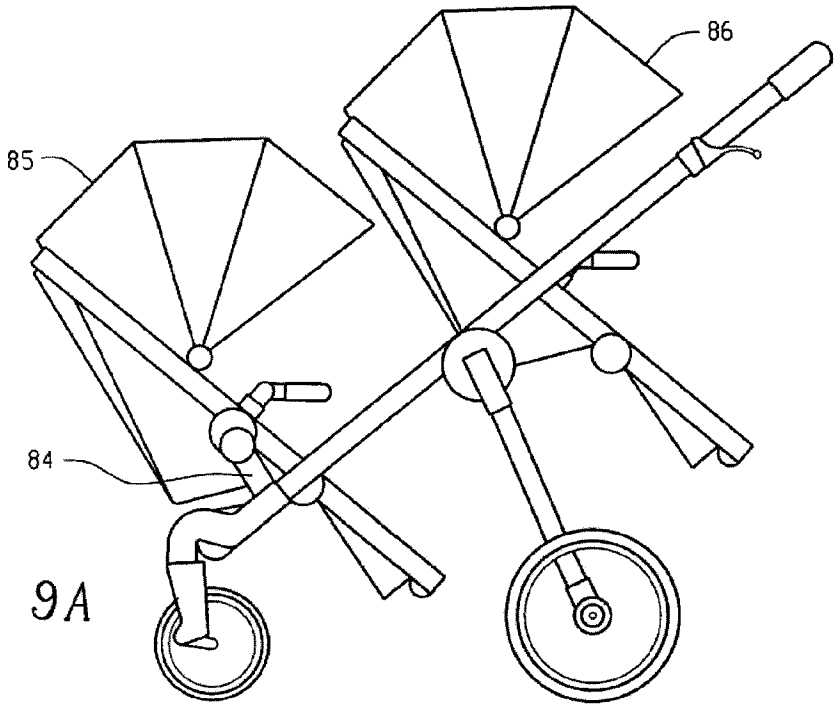


Fig. 9A

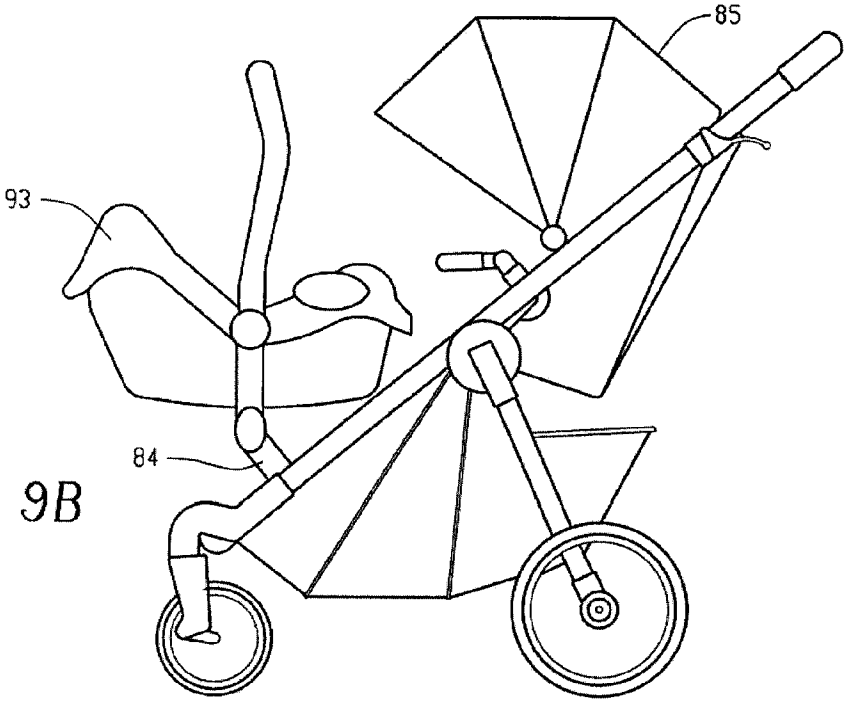


Fig. 9B

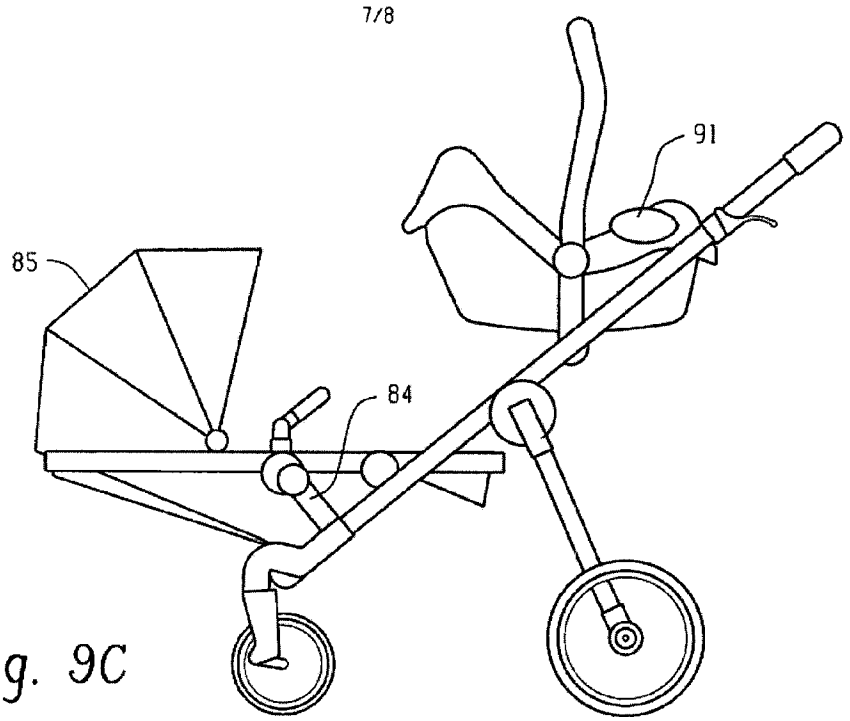


Fig. 9C

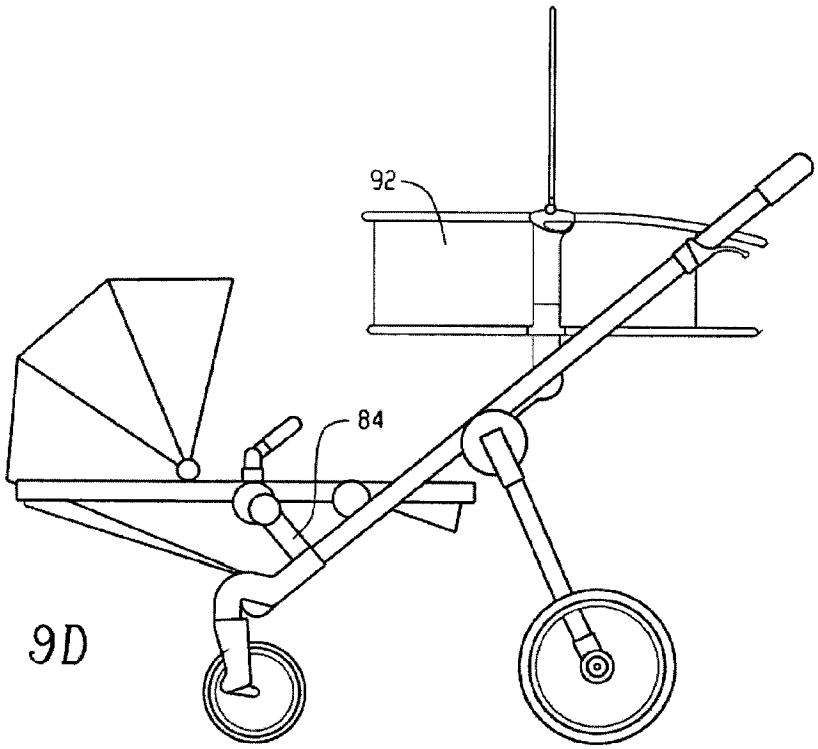


Fig. 9D

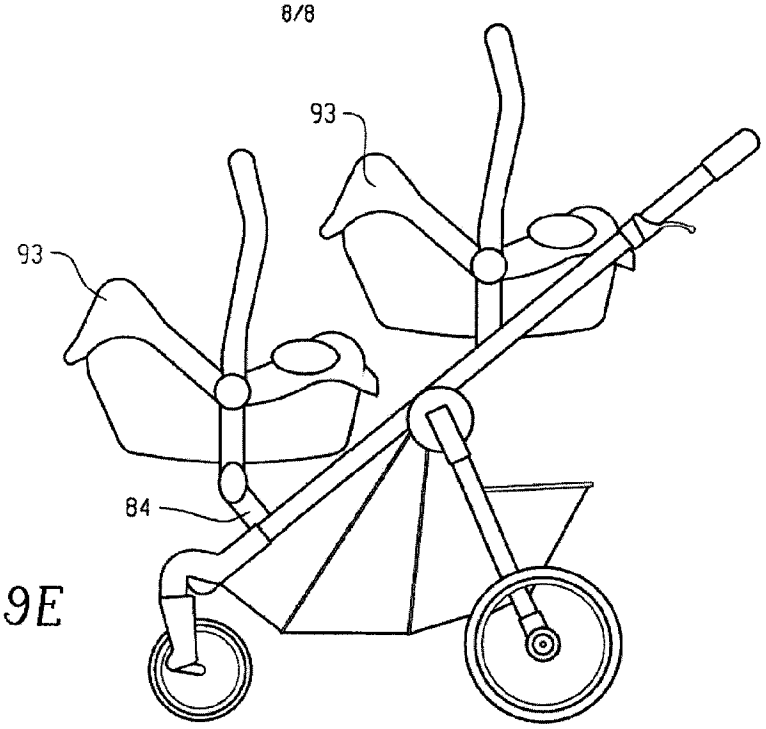


Fig. 9E

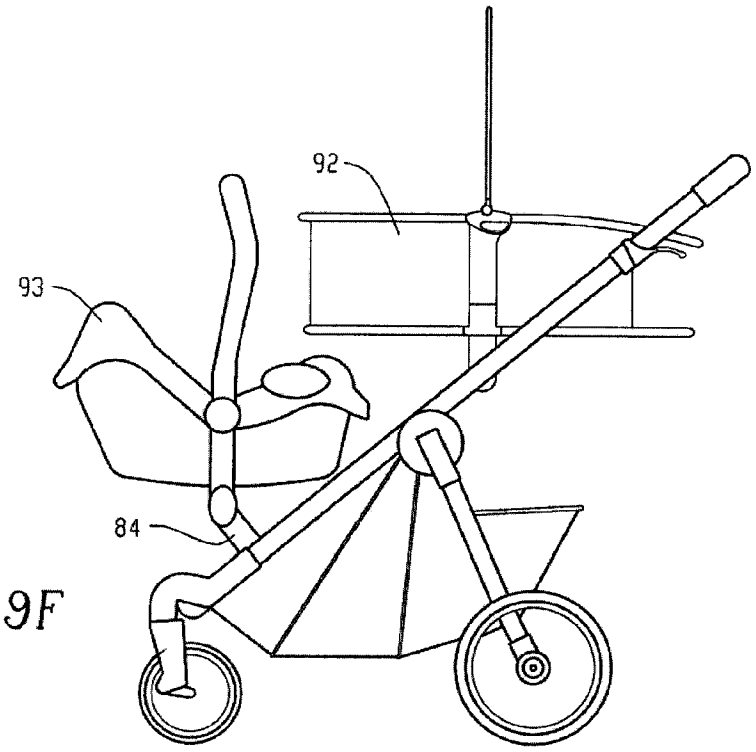


Fig. 9F

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/066817

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B62B 7/00 (2010.01)
USPC - 280/642
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - B62B 7/00; B62D 7/14, 63/00 (2010.01)
USPC - 280/642, 32.7, 47.131, 647, 648, 656, 657

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 practicable, search terms used)
PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2007/0114738 A1 (JONES et al) 24 May 2007 (24.05.2007) entire document	1-5, 8, 11-14 ---------- 6, 7, 9, 10, 15-27
X -- Y	US 2007/0001429 A1 (MACIEJCZYK) 04 January 2007 (04.01.2007) entire document	28-31, 33, 34 ---------- 6, 7, 9, 10, 15, 24-27, 32
Y	US 5,338,096 A (HUANG) 16 August 1994 (16.08.1994) entire document	16-27
Y	US 2003/0025304 A1 (HAEGGBERG) 06 February 2003 (06.02.2003) entire document	32

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 August 2010	29 JAN 2010
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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(71) Applicant: **WF INTERNATIONAL HOLDING B.V.** [NL/NL]; Kerkpad 1, NL-6675 BC Valburg (NL).

(72) Inventors: **GRIM, Walter**; c/o WF International Holding B.V., Kerkpad 1, NL-6675 BC Valburg (NL). **TOUSSAINT, Fredericus**; c/o WF International Holding B.V., Kerkpad 1, NL-6675 BC Valburg (NL).

(74) Agent: **JANSEN, C.M.**; V.O., Johan de Witlaan 7, NL-2517 JR Den Haag (NL).

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Published:

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

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(54) Title: STROLLER

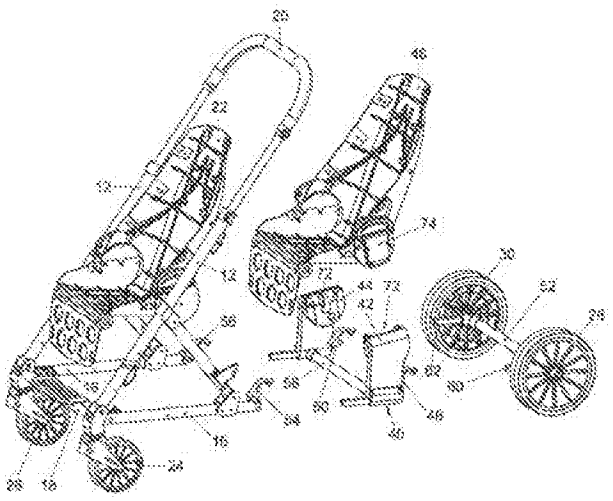


Fig. 8

(57) Abstract: A stroller (10) comprising a frame (12-20) which comprises a push bar (20), a seat (22) which is mounted on the frame, at least one front wheel assembly (24, 26) which is connected to the frame, at least two rear wheel assemblies (28, 30) which are connected to the frame, a distance between the front wheel assemblies and the rear wheel assemblies being referred to as first wheelbase. The rear wheel assemblies (28, 30) are detachably connected to the frame. The stroller (10) further comprises an adapter assembly (40) with at least one receiving unit (42, 44) for an accessory, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board. Rear wheel assemblies may be connected to the adapter assembly. The distance between the front wheel assemblies and the rear wheel assemblies connected to the adapter assembly is referred to as second wheelbase. The second wheelbase is greater than the first wheelbase.

WO 2014/042524 A1

Title: Stroller

FIELD

The invention relates to a stroller.

BACKGROUND OF THE INVENTION

Strollers are generally known and comprise a frame which comprises a push bar. Typically, a seat is mounted on the frame. Further, at least one front wheel assembly is connected to the frame. Most often, there are two front wheel assemblies which are pivotably connected to the frame. A front wheel assembly can comprise a single wheel or a pair of wheels arranged closely next to one another. The known strollers have at least two rear wheel assemblies which are connected to the frame. A rear wheel assembly also can comprise a single wheel or a pair of wheels arranged closely next to one another. In practice, a distance between a rotation axis of the at least one front wheel assemblies and a rotation axis of the rear wheel assemblies is referred to as the wheelbase. Often, for the purpose of putting the stroller in the trunk of a car, the rear wheel assemblies are detachably connected to the frame by means of a quick release, and the frame is collapsible, so that the stroller can be put away so as to take up relatively little space.

From practice, also strollers are known which comprise two seats. Variants are known where the seats, viewed in the driving direction, are arranged one behind the other (see to that end, for instance, EP 2 241 492 A2 and US 2010/0140902). US2010/0140902 mentions an additional frame with its own set of wheels, on which a second seat is fastened. The additional frame can be connected to the front of a normal stroller. In this condition, the known stroller has six wheels, which adversely affects the driving comfort and the maneuverability of the stroller. Moreover, it becomes practically impossible to get the thus extended stroller up onto a

sidewalk because the known stroller can hardly if at all be tilted backwards anymore. Other variants shown in that publication involve additional fastening brackets, which are already provided on the frame and with which a second seat can be mounted on the frame. However, this leads to a relatively unstable stroller as the frame is mainly dimensioned for use with one seat. Moreover, the additional fastening brackets lead to a higher cost price of the stroller which is not worthwhile when, in practice, it appears that no second seat needs to be attached, for instance because there will not be a second infant or because a second infant is born by the time the first infant is already able to walk.

For ES-2 253 093 and US2007/0045972, similar drawbacks hold true, i.e: (i) the driving comfort and the maneuverability of the stroller are not good due to the presence of six or eight wheel assemblies, and (ii) it is practically impossible to get the thus extended stroller up onto a sidewalk because the known stroller can hardly if at all be tilted backwards anymore. Moreover, the last-mentioned publications require the purchase of two strollers which are each independently useful for a single infant. Such a double purchase is of course costly and hence unfavorable from an economic viewpoint.

Also, a stroller is known where the seats, viewed in the driving direction, are arranged next to each other (see, to that end, for instance US2011/272925). It is true that with such a stroller the stability issues have improved compared to the variants known from US2010/0140902. With the stroller known from US2011/272925, the track width between the front wheel assemblies mutually and the rear wheel assemblies mutually can be increased in that the crossbars in the frame are of telescopic design. Such a construction is relatively costly. When it is uncertain whether there will be a second infant in the short term, the cost price of this stroller is a barrier. After all, there may not be a second infant or the second infant may be born by the time the first infant is no longer transported in a stroller. In those

circumstances a stroller with double seat is not needed and the telescopic provisions on the stroller remain unused. More than that, the telescopic provisions are then actually undesirable because they only add to the weight and the price of the stroller.

SUMMARY OF THE INVENTION

An object of the invention is to provide a stroller which is very suitable to be purchased for one infant, because its look, that is, the overall appearance, the weight, the dimensions, and the cost price substantially correspond to a normal single stroller. Another object of the invention is to provide a stroller which can be made suitable for fitting an accessory thereon, such as a second seat, so that, when there is a second infant, it can be transported with the same stroller. It is then envisaged that, also in the condition where two seats are provided, the stroller offers a good stability and also remains properly maneuverable and has a comfortable driving performance.

To that end, the invention provides a stroller comprising:

- a collapsible frame which comprises a push bar;
- a seat which is mounted on the frame;
- at least one front wheel assembly which is connected to the frame;
- at least two rear wheel assemblies which, in a first condition of the stroller, are connected to the frame, wherein a distance between a rotation axis of the at least one front wheel assembly and a rotation axis of the rear wheel assemblies is referred to as first wheelbase, wherein the rear wheel assemblies are detachably connected to the frame;
- an adapter assembly which is connectable to the frame when the rear wheel assemblies are detached from the

frame for bringing the stroller into a second condition, which adapter assembly comprises:

- a receiving provision for an accessory, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board;

and wherein the adapter assembly comprises:

- a fastening provision for the rear wheel assemblies; or:
- its own set of rear wheel assemblies,

wherein, in the second condition of the stroller, a distance between the rotation axis of the at least one front wheel assembly and a rotation axis of the rear wheel assemblies connected to the adapter assembly is referred to as second wheelbase, wherein the second wheelbase is greater than the first wheelbase and wherein the stroller in the condition where the adapter assembly is connected to the frame has only two rear wheel assemblies and one or two front wheel assemblies.

In this context, a front wheel assembly and a rear wheel assembly are understood to mean not only a single front wheel or a single rear wheel, respectively, but also one front wheel pair or one rear wheel pair, respectively. The wheels of a front wheel pair or rear wheel pair are arranged closely next to one another and always remain coaxial. When a front wheel pair or the rear wheel pair is pivotally connected to the frame, both wheels from the pair will pivot together.

Such a stroller has the advantage that initially it can be bought without adapter assembly in case of a first infant. In effect, a conventional stroller is then involved, albeit that the wheels, optionally in combination with the wheel crossbar, are detachable therefrom. The wheelbase and the track width of the thus purchased stroller are as is customary and the weight is also as is customary nowadays for a single stroller. The fact that the rear wheel assemblies are detachable is advantageous from a viewpoint

of space occupancy during storage of the stroller. This property is further enhanced in that the frame is collapsible in the usual manner. To the consumer, both in overall appearance and in cost price, the stroller without adapter assembly does not visibly differ from a normal stroller. When a second infant is born, or when a need arises to provide the stroller with an additional accessory, at a later stage, a cot, a car seat, a second seat, a baggage box and/or a basket can be purchased as accessories together with the adapter assembly. As the original rear wheel assemblies are removed from the stroller for placing the adapter set, and to the adapter set a replacement set of rear wheel assemblies is or will be connected, a stroller can be formed having a second wheelbase which is greater than the first wheelbase. This enlarged wheelbase provides the thus adapted stroller with additional stability against tilting in rearward direction. Further, the driving comfort remains particularly good because, as in conventional cases, only two rear wheel assemblies and one or two front wheel assemblies are involved. As, further, the adapter assembly and the accessory connected thereto are fastened behind the seat of the stroller that is already present, it remains possible to lift the front wheel assemblies with relatively little additional effort, so that the stroller can be brought with comparative ease from a lower level to a higher level, for instance from the roadway onto a sidewalk. Furthermore, the costs of an adapter assembly having, for instance, a second seat as an accessory can be kept considerably lower than the costs of a second stroller. At a relatively small investment – i.e. an investment that is considerably lower than that of a single stroller – a user can convert his originally normally priced single stroller into a double stroller with excellent driving properties and stability.

Further elaborations of the invention are described in the subclaims and will be further clarified in the following on the basis of an exemplary embodiment with references to the drawing.

BRIEF DESCRIPTION OF THE FIGURES

Fig. 1 shows a perspective view of an exemplary embodiment of a stroller in a first condition;

Fig. 2 shows detail II of Fig. 1;

Fig. 3 shows the exemplary embodiment of Fig. 1 in exploded view;

Fig. 4 shows detail IV of Fig. 3;

Fig. 5 shows an exemplary embodiment of the adapter assembly;

Fig. 6 shows a perspective exploded view of the exemplary embodiment of the stroller of Fig. 1 with the adapter assembly and a second seat as accessory;

Fig. 7 shows the exemplary embodiment of Fig. 6 in assembled condition;

Fig. 8 shows the exemplary embodiment of Fig. 1 in side view without adapter assembly and without seat; and

Fig. 9 shows the exemplary embodiment of Fig. 7 in side view with adapter assembly and with seat.

DETAILED DESCRIPTION

In the following, various embodiments of the invention are described. Here, reference is made to the exemplary embodiment which is shown in the figures. In this exemplary embodiment, various embodiments of the invention are embodied. However, the embodiments can also be embodied in a different manner than represented in the example shown. Therefore, the exemplary embodiment which is represented in the drawing serves only for clarification and the invention is not limited to the exemplary embodiment described.

In the most general terms, the invention provides a stroller 10, comprising a frame 12-20 which includes a push bar 20. On the frame 12-20, a seat 22 is mounted. To the frame 12-20 is connected at least one front

wheel assembly 24, 26. In the exemplary embodiment shown, these are two front wheel assemblies 24, 26 pivotable about two vertical pivots. In an alternative embodiment, however, a single centrally positioned front wheel assembly is also an option. It is also possible that a single front wheel assembly 24, 26 comprises a pair of wheels which are arranged closely next to one another and coaxially. The stroller 10 further comprises at least two rear wheel assemblies 28, 30 which are connected to the frame 12-20. As is the case with the front wheel assemblies 24, 26, it is also possible that a single rear wheel assembly 24, 26 comprises a pair of wheels which are arranged closely next to one another and coaxially. A distance between a rotation axis $L_{front\ wheels}$ of the at least one front wheel assembly 24, 26 and a rotation axis $L_{rear\ wheels}$ of the rear wheel assemblies 28, 30 is hereinafter referred to with the terminology "first wheelbase W_1" (see Fig. 8). The rear wheel assemblies 28, 30 are detachably connected to the frame 12-20. Characteristic of the stroller 10 according to the invention is that it comprises an adapter assembly 40 which is connectable to the frame 12-20 when and after the rear wheel assemblies 28, 30 have been detached from the frame 12-20. Fig. 1 shows the exemplary embodiment of the stroller 10 when it is in the first condition, i.e. in a condition with one seat 22 and no accessory 46 mounted thereon. The adapter assembly 40 is not yet present therein either.

In Fig. 3, the rear wheel assemblies 28, 30 are detached from the frame 12-20.

Figs. 5 and 6 show an example of an embodiment of an adapter assembly 40. The adapter assembly 40 comprises at least one receiving unit 42, 44 for an accessory 46, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board. The adapter assembly 40 further comprises a fastening provision 48, 50 for the rear wheel assemblies 28, 30. In an alternative embodiment of the invention, the adapter assembly 40 can comprise its own set of rear wheel assemblies. In this latter case, the

removed rear wheel assemblies 28, 30 are not used when the adapter assembly 40 and the accessory 46 are part of the stroller 10. A distance between the rotation axis $L_{front\ wheels}$ of the at least one front wheel assembly 24, 26 and a rotation axis $L_{adapter\ wheels}$ of the rear wheel assemblies 28, 30 connected to the adapter assembly 40, is referred to as second wheelbase W2 (see Fig. 9). Characteristically, the second wheelbase W2 is greater than the first wheelbase W1. This clearly appears from a comparison of the two conditions of the exemplary embodiment which are shown in the side views in Figs. 8 and 9. As a result, also when the accessory 46, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board, is part of the stroller 10, an excellent stability is obtained. The risk of the stroller 10 tilting inadvertently backwards is considerably reduced in that also when two infants are transported in the stroller, the common center of gravity of the infants is between the front wheel assemblies 24, 26 and the rear wheel assemblies 28, 30. As the stroller 10 only has three or four wheel assemblies, proper driving performance and good maneuverability are maintained. Owing to the presence of the at least one receiving unit 42, 44, the same adapter assembly 40 can be used for mounting various accessories 46 thereon. In the exemplary embodiment shown, as an accessory, a second seat 46 is shown. As stated, the adapter assembly 40 can also serve for fastening thereto a cot, a car seat, a baggage box, a basket or a step up board.

Fig. 7 shows the second condition of the stroller 10 in which the adapter assembly 40 is connected to the frame 12-20 and in which the rear wheel assemblies 28, 30 are connected to the adapter assembly 40. Further, in Fig. 7, the accessory 46, in an embodiment as second seat, is placed on the adapter assembly 40. In particular in Fig. 9, it is clearly visible that the center of gravity of an infant in the first seat 22 and the center of gravity of an infant in the second seat 46 is between the front wheel assemblies 24, 26

and the rear wheel assemblies 28, 30. Even if the foremost infant were to step from his/her front seat 22, the stroller 10 does not tilt backwards.

In one embodiment, of which an example is shown in the figures, the rear wheel assemblies 28, 30 can be connected to a wheel crossbar 52, which wheel crossbar 52 is detachably connectable to the frame 12-20 by a first snap connection 54, 56.

In an alternative embodiment, the rear wheel assemblies 28, 30 could also be provided with axle stubs which can be inserted into bearing openings in the frame 12-20. The embodiment with wheel crossbar 52 has the advantage of a quicker assembly and disassembly of the rear wheel assemblies 28, 30 as both rear wheel assemblies 28, 30 can be connected to the frame 12-20 and be detached from the frame 12-20 in one operation. What is more, the wheel crossbar 52 provides the frame 12-20 with additional strength in that it forms a cross connection. In an alternative variant, it is also possible that the adapter assembly comprises two separate adapter parts which are connected to the frame 12-20 and that to these separate adapter parts rear wheel assemblies are, or are to be, connected. These adapter parts could also form the two receiving units in which the accessory can be placed. However, in this variant also, it is important that after the adapter parts are mounted the wheelbase W2 is greater than the wheelbase W1 in the first condition of the stroller 10 without adapter parts.

In one embodiment, of which an example is shown in the figures, the wheel crossbar 52 can be detachably connectable to the adapter assembly 40 by the fastening provision 48, 50 which is designed as a second snap connection 48, 50. This second snap connection is clearly visible in Figs. 5 and 6.

In one embodiment, of which an example is shown in the figures, the adapter assembly 40 can comprise at least one receiving unit 42, 44 which is connected to an adapter assembly crossbar 58. The adapter assembly crossbar 58 may then be detachably connectable to the frame

12-20 by a snap connection 54, 56. In the exemplary embodiment shown, the adapter assembly 40 comprises two receiving units 42, 44. However, a single receiving unit is also possible or more than two receiving units are also an option.

In one embodiment, of which an example is shown in the figures, the snap connection 54, 56 for detachably connecting the adapter assembly crossbar 58 to the frame 12-20 can be formed by the first snap connection 54, 56 which also serves for connecting the wheel crossbar 52 to the frame 12-20. This is simple and favorable from a viewpoint of costs. However, in an alternative embodiment, also a snap connection of a different type could be used. An alternative snap connection can be formed by generally known telescopically extensible and compressible, slideable tubes, the outer tube provided with a series of spaced apart openings and the inner tube provided with a compressible ball biased towards an outermost position, which can snap into the openings. The advantage of the exemplary embodiment shown is a great stability with which a virtually clearance free connection is obtained.

According to a further elaboration of the invention, of which an example is shown in the figures, the first snap connection 54,56 can comprise two brackets 54, 56 pivotably connected to the frame 12-20. Each bracket 54, 56 comprises a substantially hook-shaped end 54a, 56a which has some elasticity and which can be snapped over the wheel crossbar 52 when the rear wheel assemblies 28,30 are mounted to the frame 12, 20. The brackets 54, 56 can further be snapped in a corresponding manner over the adapter assembly crossbar 58 when the adapter assembly 40 is mounted on the frame 12-20. The first snap connection 54, 56 thus has a double function, i.e. detachably connecting the rear wheel assemblies 28, 30 to the frame 12-20 and detachably connecting the adapter assembly 40 to the frame 12-20.

In one embodiment, of which an example is shown in the figures, the wheel crossbar 52 can comprise two parallel mounting bars 60, 62 extending perpendicularly to the wheel crossbar 52, and which are slideably receivable in associated openings 64, 66 in the frame 12-20 and which are slideably receivable in associated openings 68, 70 in the adapter assembly 40. These mounting bars 60, 62 provide a sturdy, demountable connection between the wheel crossbar 52 and the frame 12-20. Furthermore, the mounting bars 60, 62 provide a sturdy demountable connection between the wheel crossbar 52 and the adapter assembly 40.

According to an embodiment of the invention, of which an example is shown in the figures, the second snap connection 48, 50 can comprise two brackets 48, 50 pivotably connected to the adapter assembly 40. These brackets 48,50 too can each comprise a substantially hook-shaped end 48a, 50a having some elasticity and being snappable over the wheel crossbar 52 when the rear wheel assemblies 28, 30 are mounted on the adapter assembly 40.

By designing the second snap connection 48, 50 similarly to the first snap connection 54, 56 the user can learn the operation of the stroller 10 with minimal effort.

According to a further elaboration of the invention, of which an example is shown in the figures, it is possible that the at least one receiving unit 42, 44 comprises a receiving slot 72 in which a support bracket 74 is slideably receivable, which support bracket 74 is connected to the accessory 46 to be mounted, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board.

In one embodiment, of which an example is shown in the figures, the configuration of the adapter assembly 40 with the accessory 46 is designed such that in mounted condition, the accessory 46 is located behind the first seat 22.

Figs. 1, 3, 6, and 7 show the successive steps of the conversion of the stroller 10 from the first condition with one seat 22 to the second condition with a seat 22 and an accessory 46, in this case a second seat 46. In Fig. 1, the wheel crossbar 52 is still connected to the frame 12-20. The brackets 54, 56 of the first snap connection are already folded up so that the rear wheel assemblies 28, 30 can be detached with the wheel crossbar 52 from the frame 12-20. Clearly, in normal use of the stroller 10 in the first condition, these brackets 54, 56 are folded down and the hook-shaped end 54a, 56a is in engagement with the wheel crossbar 52. In Fig. 3, the mounting bars 60, 62 are pulled from the associated openings 64, 66 in the frame 12-20 and the wheel crossbar 52 with the rear wheel assemblies 28, 30 connected thereto is taken from the frame 12-20. Fig. 6 shows the adapter assembly 40, the accessory 46 in the embodiment of the second seat, and the wheel crossbar 52 with mounting bars 60, 62 in a condition prior to mounting. Next, Fig. 7 shows the stroller 10 in the second condition in which the adapter assembly 40, the accessory 46 and the rear wheel assemblies 28, 30 with the wheel crossbar 52 are mounted. As already stated hereinabove, instead of a seat, the accessory 46 could also be formed by a cot, a car seat, a baggage box, a basket or a step up board.

With the invention, a stroller 10 is provided with relatively low initial purchase costs. In the first condition, the stroller 10 has the properties of a normal single stroller, also as regards appearance, design, weight and costs. At relatively low cost, the stroller 10 is expandable into a double stroller 10 which has first rate driving performance and excellent stability, which is of great importance from a viewpoint of safety.

While the invention has been represented and described in detail with reference to the drawing, this drawing and the description should be considered to be merely an example. The invention is not limited to the embodiments described. Features that are described in subclaims can be

mutually combined. Reference numerals in the claims should not be construed as limitations of the claims but serve merely for clarification.

Claims

1. A stroller (10) comprising:
   - a collapsible frame (12-20) which comprises a push bar (20);
   - a seat (22) which is mounted on the frame (12-20);
   - at least one front wheel assembly (24, 26) which is connected to the frame (12-20);
   - at least two rear wheel assemblies (28, 30) which, in a first condition of the stroller (10), are connected to the frame (10-20), wherein a distance between a rotation axis ($L_{front\ wheels}$) of the at least one front wheel assembly (24, 26) and a rotation axis ($L_{rear\ wheels}$) of the rear wheel assemblies (28, 30) is referred to as first wheelbase (W_1), wherein the rear wheel assemblies are detachably connected to the frame (12-20);

characterized by

   - an adapter assembly (40) which is connectable to the frame (12-20) when the rear wheel assemblies (28, 30) are detached from the frame (12-20) for bringing the stroller (10) into a second condition, which adapter assembly (40) comprises:
     - at least one receiving unit (42, 44) for an accessory (46), such as, for instance, a second seat, a cot, a car seat, a baggage box, a basket or a step up board;

   and wherein the adapter assembly (40) comprises
     - a fastening provision (48, 50) for the rear wheel assemblies (28, 30); or
     - its own set of rear wheel assemblies,

wherein, in the second condition of the stroller (10), a distance between the rotation axis ($L_{front\ wheels}$) of the at least one front wheel assembly (24,26) and a rotation axis ($L_{adapter\ wheels}$) of the rear wheel assemblies (28, 30) connected

to the adapter assembly (40) is referred to as second wheelbase (W_2), wherein the second wheelbase (W_2) is greater than the first wheelbase (W_1), and wherein the stroller (10) in both the first condition and the second condition has only two rear wheel assemblies and one or two front wheel assemblies.

2. The stroller according to claim 1, wherein the rear wheel assemblies (28, 30) are connected to a wheel crossbar (52), which wheel crossbar (52) is detachably connectable to the frame (12-20) by a first snap connection (54, 56).

3. The stroller according to claim 2, wherein the wheel crossbar (52) is detachably connectable to the adapter assembly (40) by the fastening provision (48, 50) which is designed as a second snap connection (48, 50).

4. The stroller according to claims 2 or 3, wherein the adapter assembly (40) comprises at least one receiving unit (42, 44) which is connected to an adapter assembly crossbar (58), which adapter assembly crossbar (58) is detachably connectable to the frame (12-20) by a snap connection (54, 56).

5. The stroller according to claim 4, wherein the snap connection (54, 56) for detachably connecting the adapter assembly crossbar (58) to the frame (12-20) is the first snap connection (54, 56).

6. The stroller according to claim 5, wherein the first snap connection (54, 56) comprises two brackets (54, 56) pivotably connected to the frame (12-20), which each comprise a substantially hook-shaped end (54a, 56a) which has some elasticity and which is snappable over the wheel crossbar (52) when the rear wheel assemblies (28, 30) are mounted on the

frame (12-20), and which is snappable over the adapter assembly crossbar (58) when the adapter assembly (40) is mounted on the frame (12-20).

7. The stroller according to any one of claims 2-6, wherein the wheel crossbar (52) comprises two parallel mounting bars (60, 62) extending perpendicularly to the wheel crossbar (52), and which are slideably receivable in associated openings (64, 66) in the frame (12-20) and which are slideably receivable in associated openings (68, 70) in the adapter assembly (40).

8. The stroller according to claim 7, wherein the stroller (10) also has the features of claims 3 and 4, wherein the second snap connection (48, 50) comprises two brackets (48, 50) pivotably connected to the adapter assembly (40) and which each comprise a substantially hook-shaped end (48a, 50a) which has some elasticity and which is snappable over the wheel crossbar (52) when the rear wheel assemblies (28, 30) are mounted on the adapter assembly (40).

9. The stroller according to any one of the preceding claims, wherein the at least one receiving unit (42, 44) comprises a receiving slot (72) in which a support bracket (74) is slideably receivable, which support bracket (74) is connected to the accessory (46) to be mounted, such as a second seat, a cot, a car seat, a baggage box, a basket or a step up board.

10. The stroller according to any one of the preceding claims, wherein the configuration of the adapter assembly (40) with the accessory (46) is designed such that the accessory (46) in mounted condition is located behind the first seat (22).

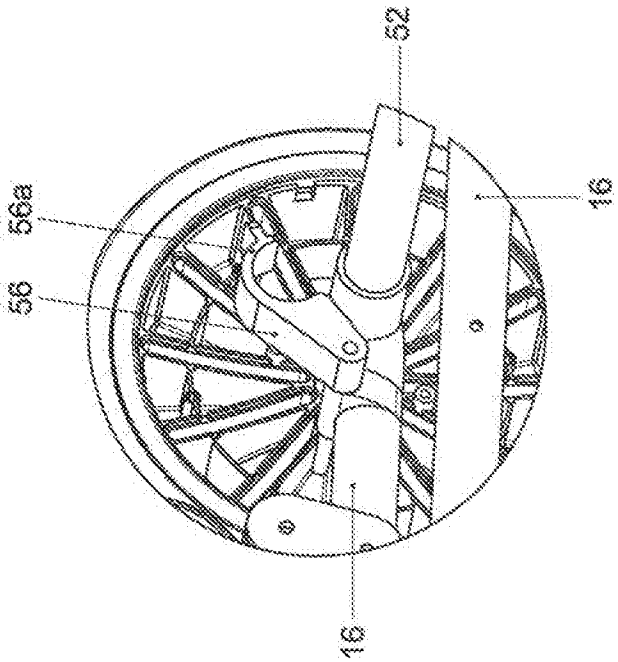


Fig. 2

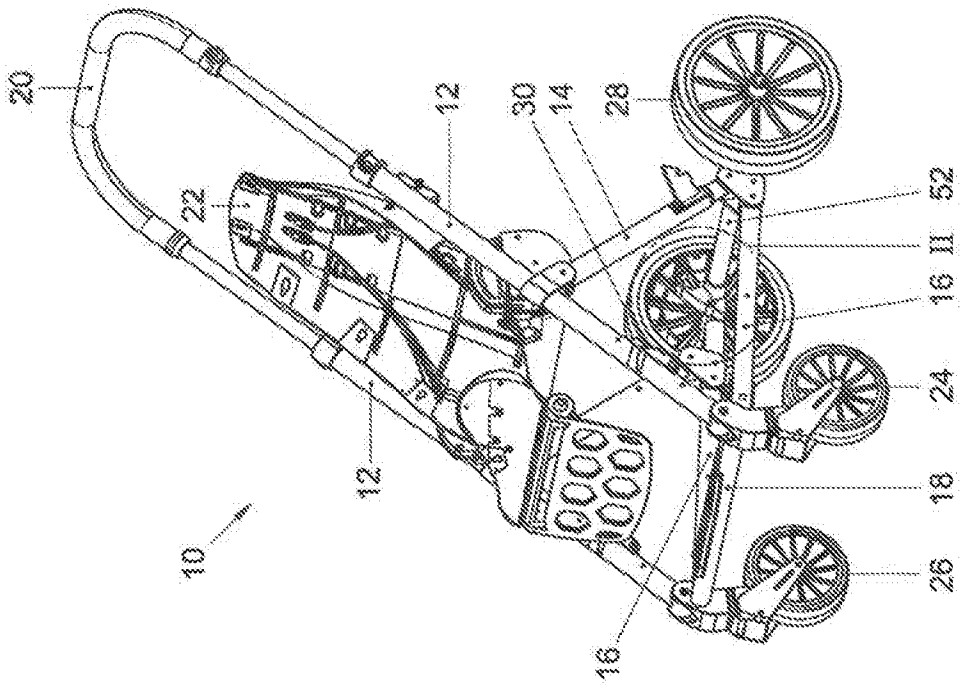


Fig. 1

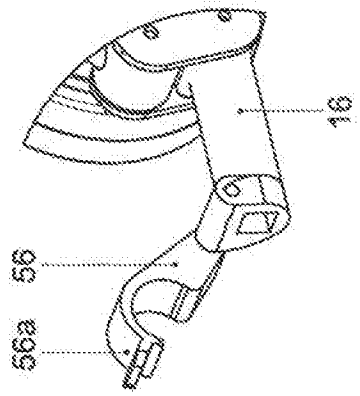


Fig. 4

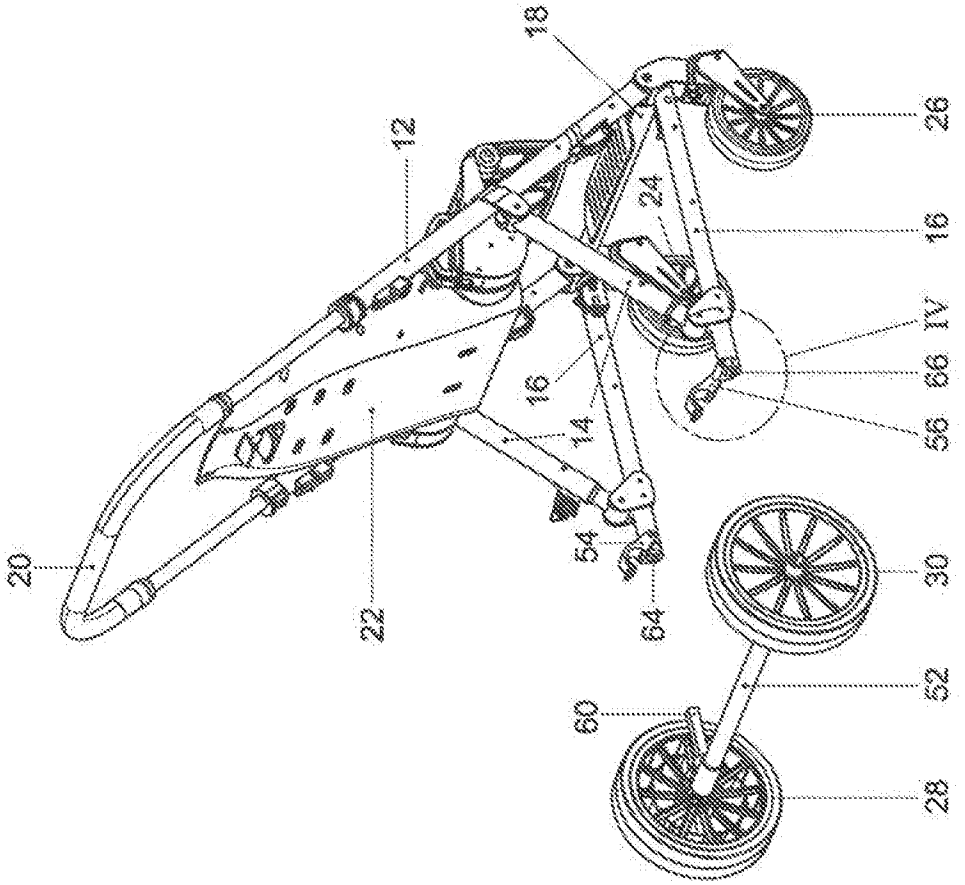


Fig. 3

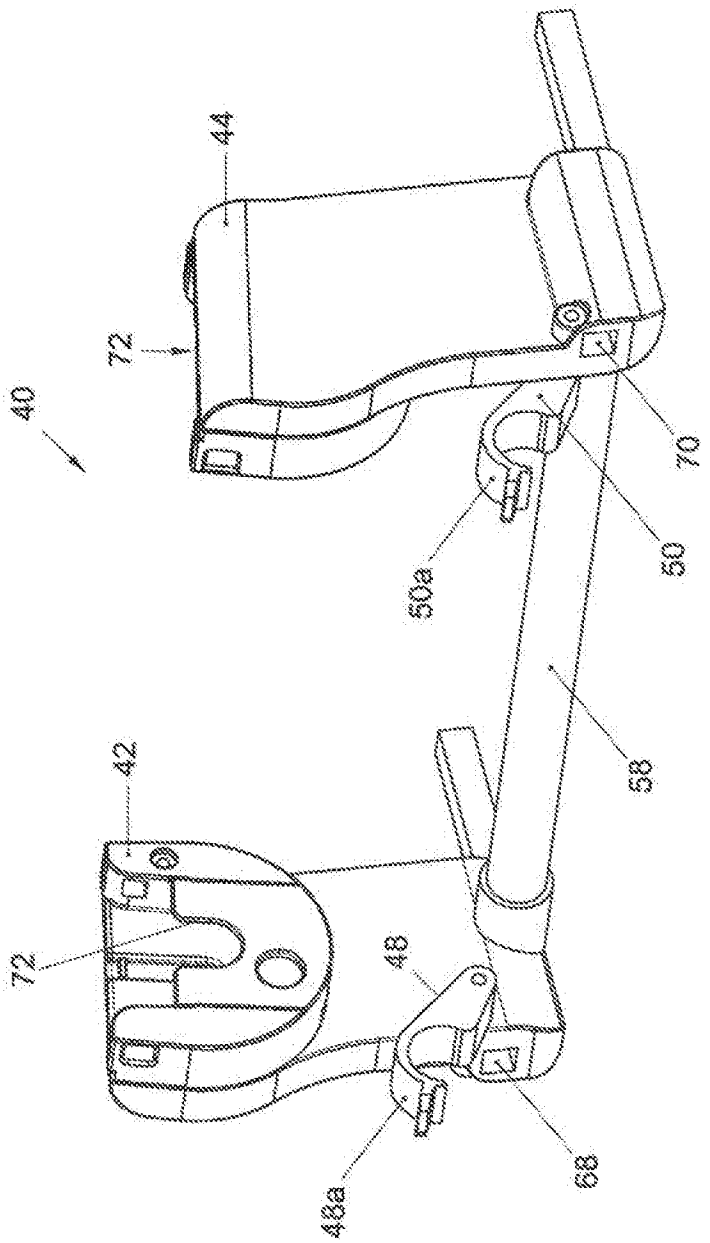


Fig. 5

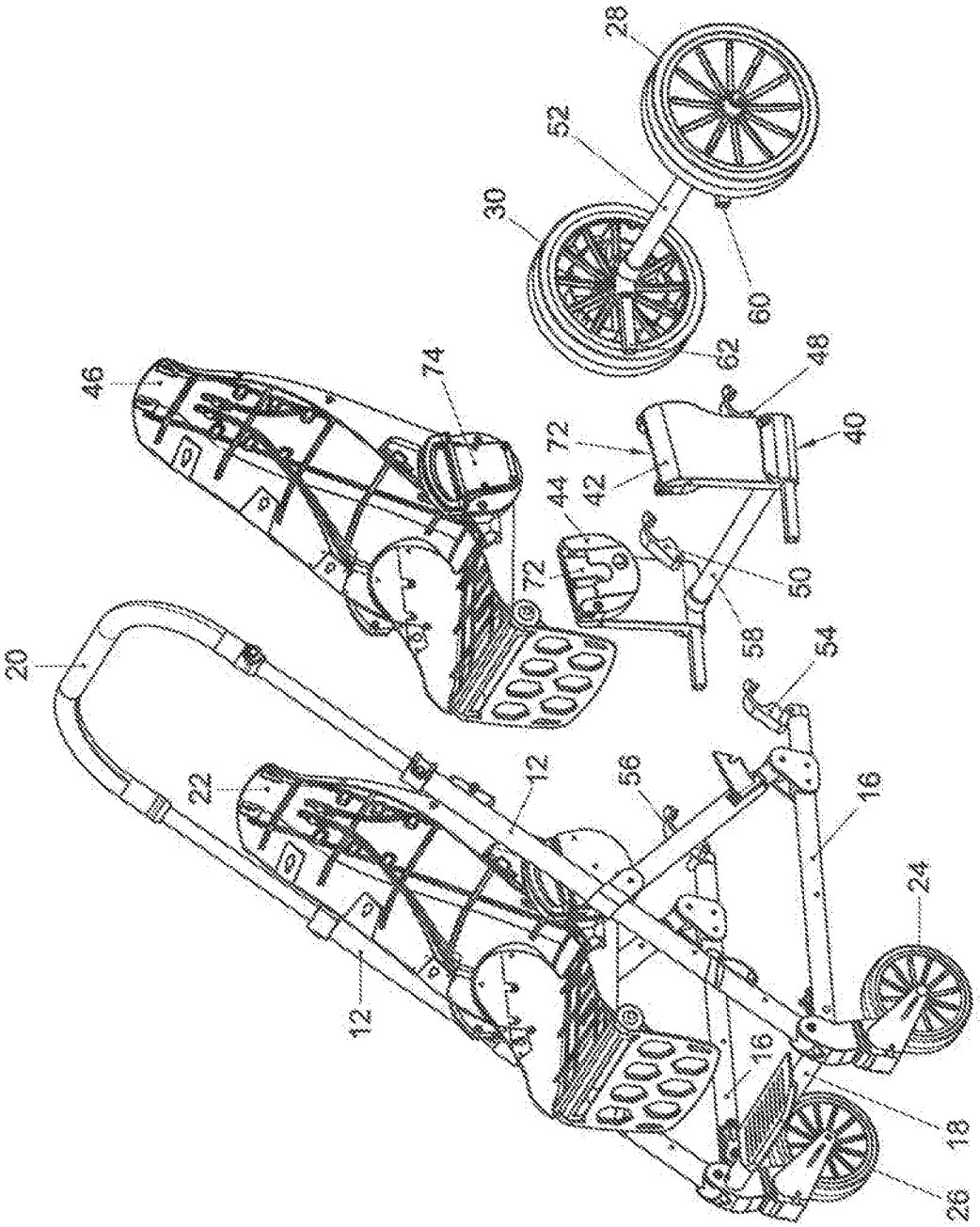

28
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Fig. 6

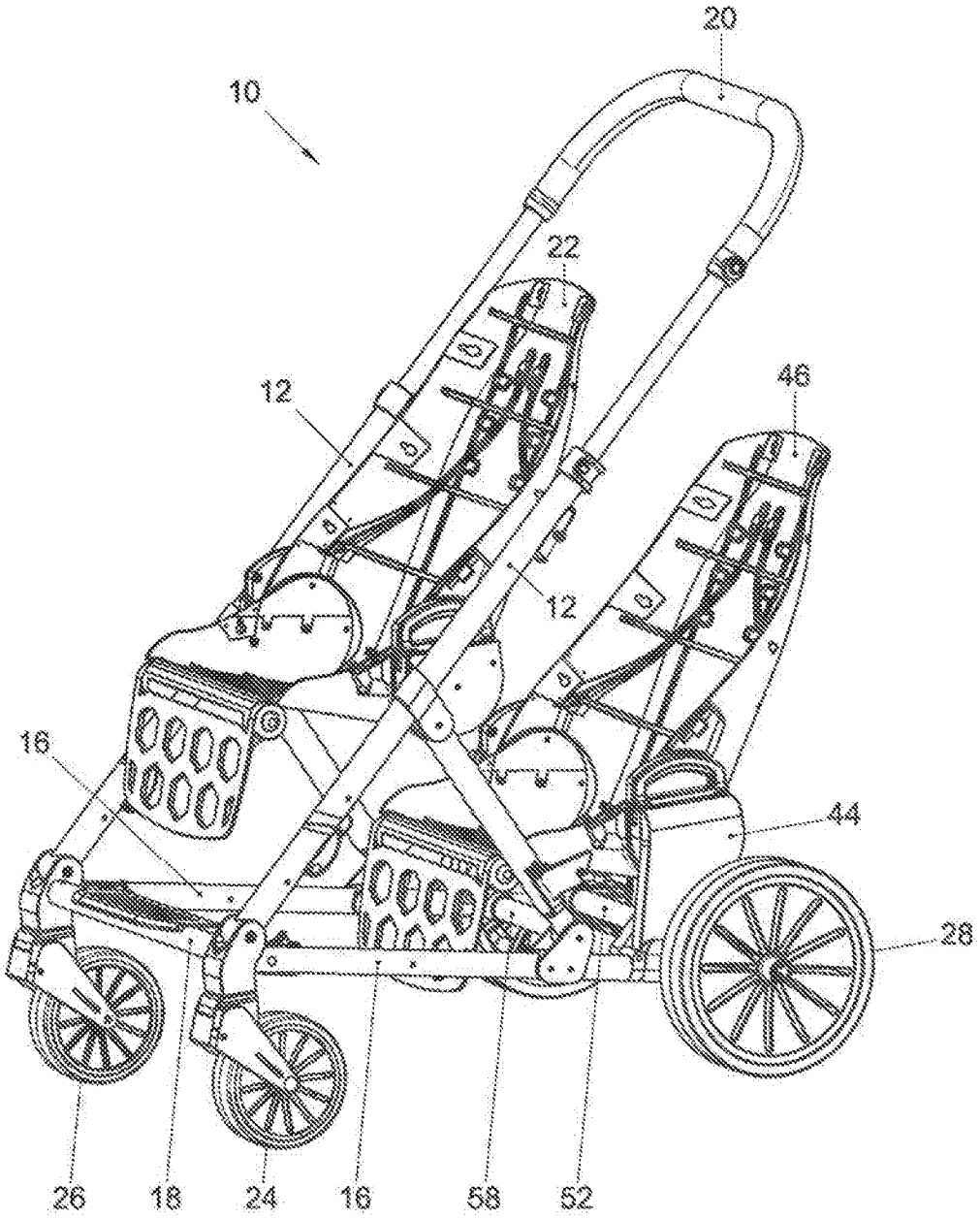


Fig. 7

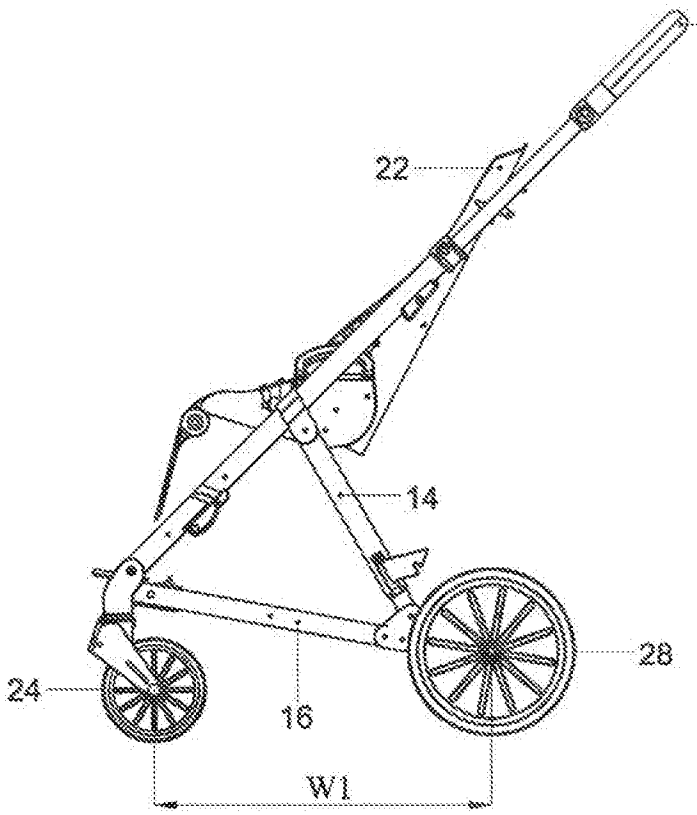


Fig. 8

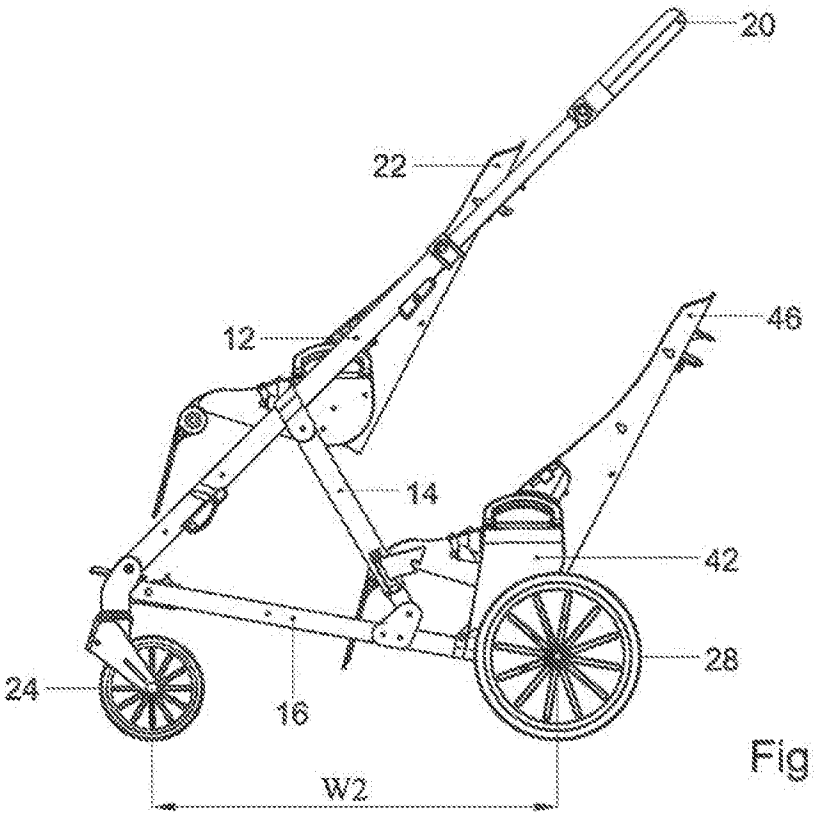


Fig. 9

INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2013/050651

A. CLASSIFICATION OF SUBJECT MATTER
INV. B62B9/28 B62B9/12
ADD.

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 practicable, 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.
X	ES 2 253 093 A1 (PLAY SA [ES]) 16 May 2006 (2006-05-16)	1-5,7,9, 10
A	the whole document	6,8

X	US 2007/045972 A1 (THOMPSON JULIE T [US] THOMPSON JULIE TABOR [US]) 1 March 2007 (2007-03-01)	1,10
A	paragraph [0037] - paragraph [0038]; figure 3	2-9

X	WO 2008/135974 A2 (KATZ GEVA [IL]; LAZAROVICH ORON [IL]) 13 November 2008 (2008-11-13)	1,10
A	abstract; figures 7, 8, 13-16, 19	2-9

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[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 January 2014	15/01/2014

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Wochinz, Reinmar

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INTERNATIONAL SEARCH REPORT

International application No
PCT/NL2013/050651

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008/179863 A1 (SCHONFELD JULIA DINAH [US]) 31 July 2008 (2008-07-31) paragraph [0008] - paragraph [0015]; figures 3-4c	1-10
A	US 6 443 467 B1 (BLACK DAVID A [US]) 3 September 2002 (2002-09-03) claims 1-13; figure 2	1-10
A	US 2008/315563 A1 (CRISP DAVID J [GB]) 25 December 2008 (2008-12-25) the whole document	1-10

Form PCT/ISA/210 (continuation of second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/NL2013/050651

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		WO 2007049071 A2	03-05-2007

Electronic Acknowledgement Receipt

EFS ID:	40013863
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	15-JUL-2020
Filing Date:	27-MAR-2020
Time Stamp:	19:11:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		34757-2430_Response_to_Restriction_Requirement.pdf	46693 c81deeb1db964f44853dc82b333da3d5c5fae500	yes	9

	Multipart Description/PDF files in .zip description			
	Document Description	**Start**	**End**	
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
	Claims	2	7	
	Applicant Arguments/Remarks Made in an Amendment	8	9	

Warnings:					
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2	Information Disclosure Statement (IDS) Form (SB08)	34757-2430_IDS-pt_1.pdf	1037544 c41c9e13599db6a17c47676de610ce80ab321989	no	13
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4	Non Patent Literature	Australian_OA_1.pdf	782981 da8a033352b5e23fe3ebe6f9ec7bd56f5a654ab8	no	5
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5	Non Patent Literature	Australian_OA_2.pdf	478318 00210fd07c715ae125a8fe46a5814a4426528a3e	no	4
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Information:					
6	Non Patent Literature	Canadian_OA.pdf	440250 82476058f5b12df32df2eb753a29700c48199529	no	3
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7	Non Patent Literature	Chinese_Office_Action.pdf	3521911 55b0c5b542efe2cfe1967e3e6bbcd02b3aeb2de2	no	11
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11	Non Patent Literature	CN_OA_11_18_2013.pdf	466002 255ac3bbd1df1a3788aebea193b2a16cdc133d6a	no	5
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12	Foreign Reference	CN1978264A.pdf	3232904 21b90be9cf217390fa35579039dc0d4cc88e196a	no	22
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13	Foreign Reference	CN2784272Y.pdf	1173849 21726a96d1df92eddca020222ab18c21d4c248c4	no	11
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14	Foreign Reference	CN2918181Y.pdf	2778756 cb73c1921150b7dc9b13a021c2e3a50688106b2d	no	20
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15	Foreign Reference	CN102256856A.pdf	3499499 e64504bf86281b46a305f8cadbd7492a1207b4e9	no	20
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16	Foreign Reference	CN103909960A.pdf	7876182 d8586754e5bc39d4fba5fd7291f0397549c995d8	no	47
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17	Foreign Reference	CN103921830A.pdf	3313950 805d174a327e155c81ed7c6c30be3eed7091559e	no	21
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18	Foreign Reference	CN201626448U.pdf	814922 ed0789727b10e7a3f42c0e9a146c676f874a9827	no	8
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19	Information Disclosure Statement (IDS) Form (SB08)	CN201646823U.pdf	874409 2b28cda01f10075b723b4fe4f8606caf6d12f312	no	8
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20	Non Patent Literature	EESR_EP17161947.pdf	1222579 a9a60ed4677dbd83f8c737d3ca89b8385d1fc617	no	9
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21	Non Patent Literature	EP_94_3_Comm_09831215_01_13_2016.pdf	452006 bb3423349a03fb3ecfb11457584636c33b43e3dc	no	5
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22	Foreign Reference	ES2253093A1.pdf	882087 d1aa964fe0890f92ae9e1ef3c28b3b8d40eb0515	no	9
Warnings:					
Information:					
23	Non Patent Literature	ESR_and_Search_Opinion_09831215.pdf	674009 d5fa66a68b7ea629779fe3cb4c5bc67c8d50c57b	no	7
Warnings:					
Information:					
24	Foreign Reference	GB2309203A.pdf	320674 2b20c5223941780006163c643b398f2500512d99	no	9
Warnings:					
Information:					
25	Non Patent Literature	IPRP.pdf	277865 b1e9cbc441f58ba484a3ecb1bdc5ff262cca2415	no	5
Warnings:					
Information:					
26	Non Patent Literature	ISRandWO.pdf	937978 8b848cc0f3df4919ea2b91e06266f17d88f39a27	no	6
Warnings:					
Information:					
27	Foreign Reference	WO2005105545A1.pdf	938811 c48d898c1e844cbaa428f82eb7245bd52027663a	no	26
Warnings:					
Information:					

28	Foreign Reference	WO2005105546A1.pdf	2515651 fe18a2ed56be47711bede67586c07a37c4f16228	no	69
Warnings:					
Information:					
29	Foreign Reference	WO2010065884A1.pdf	1210469 6e453232e81a0d362e1adab94c0abd08a23bb0e3	no	28
Warnings:					
Information:					
30	Foreign Reference	WO2014042524A1.pdf	3726452 68383d4470a604f786ec58ce326ce9d74f2247d0	no	26
Warnings:					
Information:					
		Total Files Size (in bytes):	48692297		

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/832,429	03/27/2020	Jon Hee Lee	34757-2430

CONFIRMATION NO. 8948

134811
Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

PUBLICATION NOTICE

OC000000118511983

Title:REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Publication No.US-2020-0223470-A1
Publication Date:07/16/2020

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

To: patentdocket@eversheds-sutherland.com,,
From: PAIR_eOfficeAction@uspto.gov
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Subject: Private PAIR Correspondence Notification for Customer Number 134811

Jul 17, 2020 03:55:10 AM

Dear PAIR Customer:

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UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 134811 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	NTC.PUB	07/16/2020	34757-2430

To view your correspondence online or update your email addresses, please visit us anytime at https://sportal.uspto.gov/secure/myportal/privatepair.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/832,429	Filing Date 03/27/2020	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	07/16/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/DENISE T LILES/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 09/22/2020

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	

ART UNIT	PAPER NUMBER
3618	

NOTIFICATION DATE	DELIVERY MODE
09/22/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@eversheds-sutherland.com

Office Action Summary	Application No. 16/832,429	Applicant(s) Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 7/15/2020.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/27/2020 is/are: a)☐ accepted or b)☑ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Amendment

2. The reply filed on 3/11/2019 cancelled claims 5, 13, and 20, and amended claims 1-4, 6, 11, and 18. Claims 1-4, 6-12, 14-19 are currently pending herein.

Election/Restrictions

3. Applicant's election without traverse of Species F (Fig.8A-H) in the reply filed on 7/15/2020 is acknowledged.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on 7/15/2020 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

5. Applicant is advised that the M.P.E.P. states the following with respect to large information disclosure statements (such as the one filed 7/15/2020): Although a concise explanation of the relevance of information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted. Concise explanations (especially those that point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more is highly relevant to patentability (M.P.E.P. § 609)

6. Therefore it is recommended that if any information that has been cited by Applicant in the disclosure statement is known to be material for patentability as defined by 37 CFR 1.56, Applicant should present a concise statement as to the relevance of that/those particular documents therein cited. The references cited by applicants in the IDS and listed on the numerous 1449s have been made of record.

7. While the statements filed clearly do not comply with the guidelines set forth in MPEP 2004 regarding both the number of references cited and the elimination of clearly irrelevant art and marginally cumulative information, compliance with these guidelines is not mandatory. Furthermore, 37 CFR 1.97 and 1.98 do not require that the information be material, rather they allow for submission of information regardless of its pertinence to the claimed invention. Also, there is no requirement to explain the materiality of the submitted references, however, the cloaking of a clearly relevant reference by inclusion in a long list of citations may not comply with Applicant's duty of disclosure, see Penn Yan Boats, Inc. V. Sea Lark boats Inc., 359 F. Supp. 948, aff'd 479 F. 2d. 1338.

Drawings

8. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first end” and “distal/second end” (Claim 6/14/18/12) and similarly in relation to the handle element “an end” (Claim 9/19) must all be shown and labeled or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

9. Claims 1 and 10 are is objected to because of the following informalities: "a first seat attachment adapter coupled the first" (Claim 1, line 16 & Claim 10, line 13) should most likely be rewritten as: "a first seat attachment adapter coupled **to** the first." Appropriate correction is required.

10. Claim 6 is objected to because of the following informalities: "the second seat" should most likely be rewritten as: "the first seat." Appropriate correction is required.

Claim Rejections - 35 USC § 112

11. The following is a quotation of 35 U.S.C. 112(b):

> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

> The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-20 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Regarding the claims, each independent claim recites "adjustable/rotatable with respect to" (Claim 1/10/17), which is unclear and therefore renders the claims indefinite. Appropriate correction is required.

13. Claims 6, 14, and 18 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Regarding claim 6/14/18, the claim recites the open-ended clause "configured to be removably coupled", which renders the claim indefinite, since it's not clear whether the claimed "coupling" is actually taking place or not. It has been held that the open-ended recitations stating that an element is capable to perform a function (e.g., "configured to", "adapted to", etc.) are not the positive limitations but only require the ability to so perform. They do not constitute a limitation in any patentable sense. See In re Hutchinson, 69 USPQ 138. Just because something is "configured to" do something (i.e. is "capable of" doing something), doesn't actually mean it does it. "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v.Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). The Office hereby notes that "configured to" does not explicitly denote how features(s) are constructed and/or associated with other claimed limitations; whereas the claim is amenable to two or more plausible claim constructions. If a claim is amenable to two or more plausible claim constructions, then

the claim may be deemed indefinite. See Ex parte Miyazaki, 89 USPQ2d 1207 (Bd. Pat. App. & Inter. 2008) (precedential). Applicant is required to use definitive and positive statements while reciting the structure and functions of the claimed apparatus (e.g. "a locking arm chamfer [that is configured to engage] --engaging-- the lock pin chamfer"). Appropriate correction is required.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. **Claims 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheng (US 7,475,900 B2)**.

[Claim 17] Regarding Claim 17, Cheng discloses:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421);

a first back wheel support frame (See, e.g., Fig. 4-8, 32); a second back wheel support frame (See, e.g., Fig. 4-8, 32); a first front wheel support frame (See, e.g., Fig. 4-8, 31); a second front wheel support frame (See, e.g., Fig. 4-8, 31);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 72) coupled to the stroller frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the first front wheel support frame (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the second front wheel support frame (See, e.g., Fig. 4-8); a first seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame (See, e.g., Fig. 4-8) and wherein a second seat (See, e.g., Fig. 4-8, 71) is removably coupled to the first seat attachment adapter and the second seat attachment adapter (See, e.g., Fig. 4-8)

[Claim 20] Regarding Claim 20, Cheng further discloses: further comprising: further comprising: a third seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the first upper tube support frame (See, e.g., Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the second upper tube support frame (See, e.g., Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Fig. 4-8, 420).

Claim Rejections - 35 USC § 103

16. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

18. This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

19. Claims 1-5, 7-13, 15, 16, and 19, are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng (US 7,475,900 B2) and further in view of Liao (US D593,459S)

[Claim 1] Regarding Claim 1, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a first front wheel support frame (See, e.g., Fig. 4-8, 31) adjustable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a second front wheel support frame (See, e.g., Fig. 4-8, 31) adjustable with respect to the second upper tube support frame (See, e.g., Fig. 4-8); a first back wheel support frame (See, e.g., Fig. 4-8, 32) rotatable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a second back wheel support frame (See, e.g., Fig. 4-8, 32) rotatable with respect to the second upper tube support frame (See, e.g., Fig. 4-8);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the stroller frame below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8) and wherein the second vertical position and the third vertical position are at a same vertical height (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the first front wheel support frame, and wherein the second seat attachment adapter is coupled to the second front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the first front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the second front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 2] Regarding Claim 2, the combination of Cheng in view of Liao further teaches: further comprising: a first seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the first front wheel support frame at the second vertical position (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the second front wheel support frame at the third vertical position

(See, e.g., Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing (See, e.g., Fig. 4-8) and the second seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Fig. 4-8).

[Claim 3] Regarding Claim 3, the combination of Cheng in view of Liao further teaches: wherein the first seat attachment housing extends into the first front wheel support frame (See, e.g., Liao: Fig.1-13) and the second seat attachment housing extends into the second front wheel support frame (See, e.g., Liao: Fig.1-13).

[Claim 4] Regarding Claim 4, the combination of Cheng in view of Liao further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end (See, e.g., Fig. 4-8, 410).

[Claim 5] Regarding Claim 5, the combination of Cheng in view of Liao further teaches: wherein the first end comprises a connector portion (See, e.g., Fig. 4-8, 410) and is coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Fig. 4-8).

[Claim 7] Regarding Claim 7, the combination of Cheng in view of Liao further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Fig. 4-8, 72).

[Claim 8] Regarding Claim 8, the combination of Cheng in view of Liao further teaches: further comprising: a third seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the stroller frame at the first vertical position (See, e.g., Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the stroller frame at

the first vertical position (See, e.g., Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Fig. 4-8).

[Claim 9] Regarding Claim 9, the combination of Cheng in view of Liao further teaches: further comprising a handle (See, e.g., Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 10] Regarding Claim 10, Cheng discloses:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a front wheel support frame (See, e.g., Fig. 4-8, 31) adjustable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a back wheel support frame (See, e.g., Fig. 4-8, 32) rotatable with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the front wheel support frame, and wherein the second seat attachment adapter is coupled to the front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 11] Regarding Claim 11, the combination of Cheng in view of Liao further teaches: wherein the front wheel support frame comprises a first front wheel support frame member (See, e.g., Fig. 4-8, 31) and a second front wheel support frame member (See, e.g., Fig. 4-8, 31).

[Claim 12] Regarding Claim 12, the combination of Cheng in view of Liao further teaches: wherein the back wheel support frame comprises a first back wheel support member (See, e.g., Fig. 4-8, 32) and a second back wheel support member (See, e.g., Fig. 4-8, 32).

[Claim 13] Regarding Claim 13, the combination of Cheng in view of Liao further teaches: further comprising: a first seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the front wheel support frame at the second vertical position (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 71) disposed adjacent the front wheel support frame at the third vertical position (See, e.g., Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Fig. 4-8).

[Claim 15] Regarding Claim 15, the combination of Cheng in view of Liao further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Fig. 4-8, 72).

[Claim 16] Regarding Claim 16, the combination of Cheng in view of Liao further teaches: further comprising: further comprising: a third seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the first upper tube support frame at the first vertical position (See, e.g., Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Fig. 4-8, 420) coupled to the second upper tube support frame at the first vertical position (See,

e.g., Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Fig. 4-8).

[Claim 19] Regarding Claim 19, Cheng further teaches: further comprising a handle (See, e.g., Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007))

20. **Claim 6, 14, and 18 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng and further in view of Cone, II al. (US 6,286,844 B1)**.

[Claim 6/14/18] Regarding Claim 6/14/18, Cheng further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) configured to be coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) [Claim 14/18] and a distal second end (See, e.g., Fig. 4-8, 71), wherein the second seat is configured to be coupled to the second end (See, e.g., Cheng: Fig. 4-8) [Claim 6/14/18].

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 250) having a first end connected to the stroller frame and a second end releasably coupled to a seat (See, e.g., Cone: Fig.1-13, 12).

Cone teaches that it is well known in the art of stroller seat design to provide a seat attachment adapters that releasably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng with a seat attachment adapter that has a distal second end that is releasably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be

connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, and can be found on the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/JAMES M DOLAK/
Primary Examiner, Art Unit 3618.

Notice of References Cited	Application/Control No. 16/832,429	Applicant(s)/Patent Under Reexamination Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-10730543-B2	08-2020	Lee; Jon Hee	B62B9/12	1/1
*	B	US-6286844-B1	09-2001	Cone, II; Richard E.	B62B9/28	280/47.41
*	C	US-7475900-B2	01-2009	Cheng; Huang-Yi	B62B7/08	280/47.38
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Searched*		
Symbol	Date	Examiner
B62B7/008,00,006,14,142,145	09/10/2020	JMD
B62B9/12,28,102	09/10/2020	JMD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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Search Notes		
Search Notes	Date	Examiner
Inventor Search	09/10/2020	JMD
EAST text search	09/10/2020	JMD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/15/2020								
	1	✓								
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	20	✓								

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16832439
Filing Date	2020-03-27
First Named Inventor	John Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	10293843	B2	2019-05-21	Naslain	
	2	10556610	B2	2020-02-11	Rolicki et al.	
	3	10449987	B2	2019-10-22	Gibson	
	4	9956979	B1	2018-05-01	Fernsten	
	5	9944305	B2	2018-04-17	Lee et al.	
	6	9924806	B2	2018-03-27	Penello et al.	
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	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

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	10	10207731	B2	2019-02-19	Taylor et al.	
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	12	6286844	B1	2001-09-11	Cone II, et al.	
	13	7475900	B2	2009--1-13	Cheng	
	14	D593459	S	2009-06-02	Liao	

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	1	20100140902	A1	2010-06-10	Zehfuss	Corresponds to CN 103921830 A.
	2	20140333039	A1	2014-11-13	Zehfuss	Corresponds to CN 102256856 A.

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	1	102256856	CN	A	2011-11-23	DYNAMIC BRANDS LLC	Corresponds to US 2014/0333039 A1.	
	2	103909960	CN	A	2014-07-09	KOLCRAFT ENTPR INC	Corresponds to US 2014/0191483 A1 (previoulsy submitted).	
	3	103921830	CN	A	2014-07-16	DYNAMIC BRANDS LLC	Corresponds to US 2010/0140902 A1.	
	4	201626448	CN	U	2010-11-10	GE LUO		
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	1	OFFICE ACTION issued in Chinese Application No. 201710169826.4, dated October 31, 2018, 11 pages.	

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Art Unit	3618
Examiner Name	James M. Dolak
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First Named Inventor	John Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

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☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Christopher J. Chan/	Date (YYYY-MM-DD)	2020-07-15
Name/Print	Christopher J. Chan	Registration Number	44070

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	16832429
Filing Date	2020-03-27
First Named Inventor	Jon Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	1707186	A	1929-03-26	Chatfield	
	2	3000645	A	1961-09-19	Schmidt	
	3	4542915	A	1985-09-24	Wheeler, III et al.	
	4	5201535	A	1993-04-13	Kato et al.	
	5	5338096	A	1994-08-16	Huang	
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	7	6045145	A	2000-04-04	Lan	
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	Attorney Docket Number	34757-2430

	9	6286844	B1	2001-09-11	Richard et al.	
	10	6378892	B1	2002-04-30	Hsia	
	11	6443467	B1	2002-09-03	Black	
	12	6513827	B1	2003-02-04	Barenbrug	
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	18	7249779	B2	2007-07-31	Ehrenreich et al.	
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	20	7320471	B2	2008-01-22	Maciejczyk	
	21	7367581	B2	2008-05-06	Yang	
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	31	7896384	B2	2011-03-01	Schonfeld	
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	42	8444171	B2	2013-05-21	Smith et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20010033069	A1	2001-10-25	Ivers	
	2	20020109321	A1	2002-08-15	Turner et al.	
	3	20030025304	A1	2003-02-06	Haeggberg	
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	7	20070001429	A1	2007-01-04	Maciejczyk	
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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	1978264	CN	A	2007-06-13	HAOHAIZI CHILDREN S ARTICLES C	(Abstract)	☒
	2	2784272	CN	Y	2006-05-31	GOODBABY CHILD PRODUCTS CO LTD	(Abstract)	☒
	3	2918181	CN	Y	2007-07-04	DONGGUAN LIAOBUQI DAILY PRODUC	(Abstract)	☒
	4	2253093	ES	A1	2006-05-16	PLAY SA	(Abstract)	☒
	5	2309203	GB	A	1997-07-23	JANE SA		☐
	6	2005/105545	WO	A1	2005-11-10	STEPHANIE ROHL		☐
	7	2005/105546	WO	A1	2005-11-10	STEPHANIE ROHL		☐
	8	2010/065884	WO	A1	2010-06-10	DYNAMIC BRANDS LLC		☐
	9	2014/042524	WO	A1	2014-03-20	WF INTERNATIONAL HOLDING BV		☐

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	European Search Report and Search Opinion for European Application No. 09831215, dated November 4, 2013 (7pgs).	
	2	Extended European Search report issued in EP Application No. 17161947.1, mailed August 29, 2017 (9 pages).	
	3	International Search Report and Written Opinion for International Application No. PCT/US2009/066817, dated January 29, 2010 (6 pages).	
	4	International Preliminary Report on Patentability for International Application No. PCT/US2009/066817, dated June 7, 2011 (5 pages).	
	5	Office Action from Australian Patent Application 2009322149, dated April 1, 2014 (5pgs).	
	6	Office Action from Australian Patent Application No. 2009322149, dated December 2, 2014 (4pgs).	
	7	Office Action from Canadian Patent Application No. 2,745,914, dated December 17, 2015 (3pgs).	
	8	Office Action from Chinese Patent Application No. 200980148829.3 dated October 31, 2012 (17pgs., including 8 pgs. English translation).	
	9	Office Action from Chinese Patent Application No. 200980148829.3, dated June 8, 2013 (11 pgs. including, 5 pgs. English translation).	
	10	Office Action from Chinese Patent Application No. 200980148829.3, dated November 18, 2013 (5pgs, including 2pg English translation).	

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	Examiner Name	James M. Dolak
	Attorney Docket Number	34757-2430

	11	Office Action from Chinese Patent Application No. 201410187239.4, dated September 6, 2015 (9pgs, including 4 pg. English translation)
	12	Office Action from European Patent Application No. 09831215, dated January 13, 2016. (5pgs)

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Examiner Signature	/JAMES M DOLAK/	Date Considered	09/10/2020

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

MOCKINGBIRD ET AL. EX1019

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16832429
Filing Date	2020-03-27
First Named Inventor	Jon Hee Lee
Art Unit	3618
Examiner Name	James M. Dolak
Attorney Docket Number	34757-2430

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Christopher J. Chan/	Date (YYYY-MM-DD)	2020-07-15
Name/Print	Christopher J. Chan	Registration Number	44070

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MOCKINGBIRD ET AL. EX1019

Bibliographic Data

Application No: 16/832,429

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /JAMES M DOLAK/ Examiner's Signature | Initials

Title: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/27/2020	280	3618	34757-2430
RULE			

APPLICANTS

BABY JOGGER, LLC, Richmond, VA,

INVENTORS

Jon Hee Lee, Highwood, IL, UNITED STATES

Megan Roe, Kalamazoo, MI, UNITED STATES

Stacy Noel Simpson, Portage, MI, UNITED STATES

Mark Zehfuss, Glen Allen, VA, UNITED STATES

CONTINUING DATA

This application is a CON of 15912901 03/06/2018 PAT 10730543

15912901 is a CON of 15225326 08/01/2016 PAT 9944305

15225326 has PRO of 62311224 03/21/2016

15225326 is a CIP of 14597420 01/15/2015 PAT 9403550

14597420 is a CON of 14261558 04/25/2014 PAT 8955869

14261558 is a CON of 12631375 12/04/2009ABN

12631375 has PRO of 61119920 12/04/2008

FOREIGN APPLICATIONS

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UNITED STATES

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/03/01 23:01
		(Simpson near2 (Stacy and Noel).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:36
		(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:36
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:35

		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:24
		S78 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		S27 and ((wheel and seat) same add$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
		S10 and (seat near2 (attach$4 and convert$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S1	0	("20100140902").PN.	USPAT; USOCR	OR	OFF	2011/11/10 17:53
S2	1	("20100140902").PN.	US-PGPUB;	OR	OFF	2011/11/10 17:55

			USPAT; USOCR			
S3	4	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:03
S4	8	("20030025304" | "20070001429" | "20070114738" | "5338096").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:10
S5	15	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:19
S6	1	("7320471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/21 11:26
S7	3	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:26
S8	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/27 15:43
S9	37,502,244	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:43
S10	1,861	S8 and S9	US-PGPUB; USPAT; USOCR;	OR	ON	2012/06/27 15:44

			FPRS; EPO; JPO; DERWENT			
S11	1,537	S10 and seat	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S12	827	S10 and (seat same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S13	427	S10 and (seat near2 attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:44
S14	51	S10 and (seat near2 (attach$4 and convert$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
S15	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:10
S16	37,502,315	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 19:17

			EPO; JPO; DERWENT			
S17	1,076	S15 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S18	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 19:17
S19	1,861	S18 and S16	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S20	35	S17 and S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:17
S21	2,902	S17 or S19	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 19:20
S22	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S23	37,502,315	@ad<="20081204"	US-PGPUB;	OR	ON	2012/06/28 23:15

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT			
S24	1,076	S22 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S25	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/28 23:15
S26	1,861	S25 and S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S27	2,902	S24 or S26	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S28	657	S27 and ((wheel and seat) same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S29	1	("6209892").PN.	US-PGPUB;	OR	OFF	2012/06/28 23:16

			USPAT; USOCR			
S30	44	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:16
S31	115	S28 and expand$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:20
S32	58	("5564786" | "0733889" | "6443467" | "0329579" | "5611560" | "3235279" | "0292933" | "6017051" | "0781495" | "2305719" | "1707186" | "4989890" | "6220621" | "6676140" | "1168896" | "2517443" | "20030075903" | "0647165").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:22
S33	33	("2769482" | "2857953" | "2993702" | "3235279" | "3309101" | "3330575" | "3738700" | "4725071" | "5018754" | "5263730" | "5338096" | "5417449" | "5653460" | "5664795" | "5911432" | "6045145" | "6068087" | "6378892" | "D321850" | "D359937").PN. OR ("6676140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:24
S34	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:25
S35	15	("1707186").URPN.	USPAT	OR	ON	2012/06/28 23:28
S36	14	("20030111825" | "5333893" | "6209892" | "6513827" | "6863286" | "7032922" | "7367581" | "7377537" | "D429664" | "D430076").PN. OR ("7475900").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:31
S37	44	S31 and (wheel near2 remov$4)	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/06/28 23:35

			EPO; JPO; DERWENT			
S38	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:36
S39	20	("4725071" | "5221106" | "5338096" | "5522121" | "5918892" | "6209892" | "6267406" | "6527294" | "D296540").PN. OR ("6752405").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:46
S40	15	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:48
S41	30	("0556168" | "1707186" | "1934396" | "20020033588" | "20050167951" | "20070252352" | "20080143082" | "20090026733" | "3383738" | "4083579" | "4805938" | "5221106" | "5333893" | "5522121" | "5769448" | "5918892" | "6431579" | "6527294" | "6601866" | "6752405" | "7481439" | "7516966" | "7597332" | "D484075" | "D595621" | "D598333").PN. OR ("7896384").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:49
S42	13	("3000645" | "4969656" | "5125712" | "5522121" | "5918892" | "6527294" | "6561526" | "6715783" | "6752405" | "6851693" | "6938906").PN. OR ("7677585").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:50
S43	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:51
S44	9	("3000645").URPN.	USPAT	OR	ON	2012/06/28 23:55
S45	1	("6702316").PN.	US-PGPUB;	OR	OFF	2012/06/29 00:04

			USPAT; USOCR			
S46	29	("20010040357" | "20020060444" | "20020093177" | "4852894" | "4921261" | "4989888" | "5490685" | "5641200" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205").PN. OR ("6702316").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/29 00:04
S47	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S48	37,502,608	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S49	1,076	S47 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S50	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S51	1,861	S50 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S52	2,902	S49 or S51	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2012/07/01 04:43

			EPO; JPO; DERWENT			
S53	476	S52 and cylindrical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S54	21	S52 and cylindrical near2 connect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 05:05
S55	29	("1506565" | "1885627" | "1954179" | "20040026895" | "20040164515" | "2220528" | "2334387" | "2482585" | "5395130" | "5454578" | "5501480" | "5536027" | "5904363" | "6022042" | "6331013" | "6443467" | "6443469" | "6685206" | "6685207" | "D327240" | "D405031" | "D486425").PN. OR ("7261308").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:10
S56	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:17
S57	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:18

S58	18	("2926880" | "3290050" | "3309101" | "4183580" | "4711489" | "4779883" | "5074616" | "5168601" | "5265931" | "5401076" | "5529325").PN. OR ("5704627").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:21
S59	23	("4542915" | "4854607" | "4986564" | "5033761").PN. OR ("5653460").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:22
S60	31	("2453631" | "2558372" | "4953887" | "5090724" | "5380262" | "5653460" | "5676386").PN. OR ("6155592").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:25
S61	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:27
S62	33	("0279778" | "1033324" | "2453631" | "3643292" | "3849834" | "3879146" | "4132429" | "4335900" | "4606550" | "4856809" | "4902027" | "4953880" | "5176395" | "5188389" | "5263730" | "5299825" | "5318318" | "5344171" | "5356171" | "5364119" | "5536027").PN. OR ("5647601").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:28
S63	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:29
S64	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:33
S65	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 15:09
S66	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:02
S67	1	("6443467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S68	2	("1707186").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S69	1	("7475900").PN.	US-PGPUB;	OR	OFF	2012/07/01 16:05

			USPAT; USOCR			
S70	1	("6752405").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S71	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S72	1	("7896384").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:15
S73	1	("6561526").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:16
S74	1	("5653460").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:17
S75	2,925	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:32
S76	37,571,828	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S77	1,873	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S78	2,516	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:35

S79	35	S78 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S80	1,080	S78 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S81	1	("20050082897").PN. OR ("8246020").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:44
S82	9	("20070085303" | "20080303232" | "20090033066" | "3784252" | "5257799" | "5794951" | "6086086" | "7367581" | "7377537").PN. OR ("8205906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:52
S83	31	("20010002745" | "20030067138" | "20050099025" | "20060237932" | "20070063474" | "20080067776" | "20090026817" | "2450051" | "4754987" | "5076599" | "5267744" | "5454577" | "5474316" | "5577746" | "5921571" | "5947497" | "5979921" | "6196572" | "6663126" | "6764087" | "6767028" | "6929274" | "6976697" | "7052026" | "7168761" | "7172206" | "7354058" | "7431324" | "7445222" | "7547029").PN. OR ("8262103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:58
S84	22	("20080211206" | "20090014985" | "20090078482" | "3605929" | "4362311" | "4861058" | "5020624" | "5421598" | "5921338" | "6135222" | "6220382" | "6378642" | "6439331" | "6659488" | "6793248" | "7044249" | "7080847" | "7364182" | "7571926" | "7591479" | "7832755").PN. OR ("8336904").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 18:03
S85	1	("8251382").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/14 15:15

S86	34	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 15:19
S87	32	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:50
S88	57	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:52
S89	3,003	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:09
S90	37,602,504	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/07/16 15:09

			EPO; JPO; DERWENT			
S91	1,876	S89 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:09
S92	2,544	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:11
S93	1,082	S92 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:11
S94	51	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20100140902-$ or US-20080303232-$ or US-20070085303-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:10

		8251382-$ or US-7377537-$).did. or (US-3000645-$ or US-2453631-$).did.				
S95	26	("20060131841" | "20070069505" | "20070210560" | "20080012268" | "20080224450" | "20080224451" | "20090160162" | "20100171289" | "20100201103" | "5947555" | "6045145" | "6270111" | "6331032" | "6715783" | "7032922" | "7367581" | "7475900" | "7677585" | "7753398" | "7775532" | "7798500" | "7938435" | "8061732" | "8128119" | "8157273" | "8205906").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:16
S96	1	("8240700").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 15:17
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S111	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/24 13:25
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S115	26	("4790548" | "5060967" | "5366274" | "5727848" | "5975225" | "6203054" |	US-PGPUB;	OR	ON	2013/07/24 18:30

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S117	55	("4736959" | "4743063" | "4872692" | "4878680" | "5201535" | "5676386").PN. OR ("5947555").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 10:09
S118	25	("20010040357" | "20020093177" | "20030075903" | "4921261" | "4989888" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205" | "6641164" | "6702316").PN. OR ("6923467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:03
S119	25	("4570956" | "4836573" | "4921261" | "4946180" | "5121940" | "5188380" | "5676386" | "5772279" | "5947555" | "6070890" | "6155592" | "6286844" | "6398233" | "6409205" | "6478327" | "D345720").PN. OR ("6641164").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 11:28
S120	2	("3000645").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:26
S121	9	("3000645").URPN.	USPAT	OR	ON	2013/07/25 15:27
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S123	1	("8029007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:30
S124	28	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:31

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S129	1	("7249779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/25 15:38
S130	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 15:38
S131	60	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/25 16:59

		5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$).did. or (US-3000645-$ or US-2453631-$).did.				
S132	7,295,614	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/29 18:38
S133	2,588	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S134	3,082	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/29 18:38
S135	1,082	S132 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:39
S136	1,877	S132 and S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/01/29 18:39

			DERWENT			
S137	5,616	S133 or S134	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S138	2,924	S132 and S137	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S139	1,012	S138 and stroller	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S140	901	S139 and seat$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:41
S141	757	S140 and (insert$4 or attach$4 or detach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/01/29 18:42
S142	107	S141 and ((double or tandem) same stroller)	US-PGPUB; USPAT;	OR	ON	2014/01/29 18:42

			USOCR; FPRS; EPO; JPO; DERWENT			
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S144	3	("2006/0290107").URPN.	USPAT	OR	ON	2014/01/30 14:24
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S146	8	("2010/0078916").URPN.	USPAT	OR	ON	2014/01/30 14:27
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S148	1	("8157273").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:20

S149	18	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:21
S150	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/30 16:23
S151	19	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 16:24
S152	23	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:17
S153	53	("20030192925" | "20050072821" | "2907372" | "3079162" | "3248125" | "3627342" | "3961803" | "3967833" | "4032173" | "4113306" | "4181356" | "4220351" | "4231587" | "4239259" | "4256325" | "4412688" | "4620711" | "4681340" | "4762256" | "4844504" | "4892327" | "5230523" | "5333769" | "5398951" | "5411729" | "5431478" | "5468009" | "5478096" | "5662339" | "5806924" | "5829826" | "5964470" | "5987665" | "6045145" | "6231056" | "6250654" | "6375213" | "6811178" | "6910696" | "D254610" | "D345720" | "D358058" | "D365925" | "D402235" | "D508443").PN. OR ("7497461").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 17:56
S154	6	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/30 18:00
S155	23	("20010013689" | "20040032103" | "20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243260" | "20090295128" | "4398748" | "4836573" | "6446990" | "6478327" | "6572134" | "7497461" | "7513512" | "7658399" | "7686322" | "7712765" | "7775532" | "7832755" | "7878527" | "7938435").PN. OR ("8231136").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 10:54
S156	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/01/31 12:58

S157	14	("20040094923" | "20070057486" | "20080012268" | "20080231022" | "20090127827" | "20090243261" | "20120098219" | "4398748" | "4836573" | "6446990" | "6478321" | "6478327" | "6572134" | "7712765").PN. OR ("8458880").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/31 12:59
S158	1	("7938435").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/31 13:26
S159	34	("4157839" | "5558357" | "5676386" | "5772279" | "5794951" | "5863061" | "5865447" | "5876046" | "5947555" | "6241274" | "6286844" | "6331032" | "6409205" | "6428034" | "6478327" | "6533309" | "6666473" | "6893040" | "7032922" | "7267359" | "7377537" | "7431395" | "7475900" | "7681894" | "7766366").PN. OR ("7938435").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:41
S160	17	("20050098983" | "2842374" | "6357784" | "7118121" | "7267359" | "7367581" | "7441794" | "7527283").PN. OR ("7766366").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 12:56
S161	105	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:14
S162	52	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/03 13:21
S168	1	("20140217706").PN.	US-PGPUB;	OR	OFF	2014/09/24 10:03

			USPAT; USOCR			
S169	3,175	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 10:24
S170	7,324,421	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:24
S171	1,878	S169 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S172	64	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 10:25
S173	3,686,032	@pd>="20140129"	US-PGPUB; USPAT; USOCR;	OR	ON	2014/09/24 10:56

			FPRS; EPO; JPO; DERWENT			
S174	1	S171 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:56
S175	13	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 10:57
S176	1	("7,497,461").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:01
S177	94	S169 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 11:08
S178	12	("20070296182" | "20100117315" | "5820144" | "6086086" | "6513827" | "6715783" | "7032922" | "7066542" | "7364183" | "7377537" | "7455362" | "8061732").PN. OR ("8764048").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:25
S179	15	("3797848" | "4832361" | "5074575" | "6116624" | "6446990" | "6508605" | "6530591" | "6824161" | "6830254" | "6851700" | "6951342" | "7021650" | "7273225" | "7401803" | "7513512").PN. OR ("8696016").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 11:41
S180	1	("7,938,435").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:47

			USPAT; USOCR			
S181	1	("20080231022").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:47
S182	2	("2008/0231022").URPN.	USPAT	OR	ON	2014/09/24 11:48
S183	1	("7,766,366").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:51
S184	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:52
S185	1	("6,513,827").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S186	0	(2006/0131841).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:53
S187	1	("20060131841").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S188	1	("20060001226").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:54
S189	1	("7,320,471").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S190	1	("6,045,145").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S191	1	("20080224451").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:55
S192	1	("7,481,439").PN.	US-PGPUB;	OR	OFF	2014/09/24 11:57

			USPAT; USOCR			
S193	1	("7,367,581").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:57
S194	1	("8,029,007").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S195	1	("6,923,467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S196	1	("20070090619").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:58
S197	1	("6,851,693").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 11:59
S198	1	("20010033069").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S199	1	("7,249,779").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:00
S200	57	("1218943" | "1347384" | "1408729" | "1560288" | "20010035626" | "20030151225" | "2305719" | "2435733" | "2468933" | "2798727" | "3314494" | "3738700" | "3954283" | "4015297" | "4825484" | "4958842" | "5125674" | "5190306" | "5558357" | "5562300" | "5590896" | "5692760" | "5709400" | "5820146" | "5884922" | "5975551" | "6164666" | "6231056" | "6237995" | "6340168" | "6409190" | "6460866" | "6595536" | "6601862" | "6623023" | "6676140" | "6688614" | "7029015").PN. OR ("7249779").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:02
S201	2,665	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 12:02

S202	79	S201 and S173	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2014/09/24 12:03
S203	2	S202 and S170	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 12:03
S204	1	("5338096").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:24
S205	1	("20030025304").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S206	1	("20070001429").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:25
S207	1	("20070085303").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S208	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 13:26
S209	1	("7681894").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:33
S210	14	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/09/24 14:33
S211	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/09/24 14:34
S212	41	("7249779" | "3000645" | "7677585" | "7377537" | "20060001226" | "8029007" | "20080231022" | "7766366" | "6443467" |	US-PGPUB;	OR	ON	2014/09/24 14:56

		"6561526" | "20080224451" | "6513827" | "7475900" | "7497461" | "20070114738" | "1707186" | "6752405" | "6851693" | "7938435" | "6676140" | "6045145" | "6923467" | "20030025304" | "20070001429" | "5338096" | "6045145" | "20070090619" | "6209892" | "6378892" | "7896384" | "8157273" | "8251382" | "8262103" | "8336904" | "20010033069" | "20060131841" | "7320471" | "7367581" | "7481439" | "6286844").PN.	USPAT; USOCR			
S219	19	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2015/04/20 13:53
S220	22	("7249779" | "20060001226" | "20080231022" | "7766366" | "8029007" | "20080224451" | "6513827" | "4797461" | "7497461" | "6851693" | "7938435" | "6045145" | "6923467" | "8905427" | "20070090619" | "20010033069" | "20060131841" | "6286844" | "7320471" | "7367581" | "7481439" | "8882134").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 13:58
S221	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:02
S222	68,470,442	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:02
S223	1,214,191	@pd>="20140924"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:03
S224	3,292	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:04
S225	2,741	(297/130,232,243,463.1).CCLS.	US-PGPUB;	OR	OFF	2015/04/20 14:04

			USPAT; USOCR			
S226	5,977	S224 or S225	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S227	2,929	S226 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S228	2	S227 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:04
S229	88	("0119331" | "1138802" | "1269379" | "1707186" | "1890469" | "20040251063" | "20070045975" | "20090115151" | "20090160162" | "20100038887" | "20100140902" | "20110175330" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" | "6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8398143" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("8905427").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:04
S230	84	(B62B7/00).CPC.	US-PGPUB;	OR	ON	2015/04/20 14:08

			USPAT; USOCR; FPRS; EPO; JPO			
S231	796	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S232	666	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S233	894	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S234	1,003	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S235	450	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S236	3,236	S230 S231 S232 S233 S234 S235	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:12
S237	2,104	S236 and S222	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:13
S238	70	S237 and (seat$3 same revers$4)	US-PGPUB; USPAT;	OR	ON	2015/04/20 14:14

			USOCR; FPRS; EPO; JPO			
S239	77	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070069505-$ or US-20080231022-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7681894-$ or US-8955869-$ or US-8905427-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:14
S240	58	S238 not S239	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/04/20 14:14
S241	1	("8882134").PN.	US-PGPUB;	OR	OFF	2015/04/20 14:15

			USPAT; USOCR			
S242	87	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:16
S243	1	("6361111").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S244	1	("20040251063").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:19
S245	1	("6527294").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20
S246	1	("20070045975").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/04/20 14:20

S247	27	("20060001226" | "20070045975" | "20080296872" | "20090033066" | "5301970" | "5520433" | "5601302" | "5709400" | "5845924" | "6099022" | "6193263" | "6203054" | "6209892" | "6398233" | "6446990" | "6540250" | "6715783" | "7377537" | "7475900" | "7753398").PN. OR ("8029014").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2015/04/20 14:30
S249	2,790	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S250	3,337	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 10:16
S251	102	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S252	824	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S253	686	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S254	947	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S255	1,031	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S256	520	(B62B9/12).CPC.	US-PGPUB; USPAT;	OR	ON	2015/12/07 10:17

			USOCR; FPRS; EPO; JPO			
S257	3,385	S251 S252 S253 S254 S255 S256	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S258	1,888,686	@pd>="20150420"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S259	6,070	S249 or S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S260	49	S258 and S249	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S261	93	S258 and S259	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S262	45	S258 and S250	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:17
S263	44	S262 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:18
S264	105	S258 and S257	US-PGPUB; USPAT; USOCR;	OR	ON	2015/12/07 10:19

			FPRS; EPO; JPO			
S265	94	S264 not S263	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S266	93	S265 not S260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2015/12/07 10:19
S267	1	("8936261").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S268	64	("20040164593" | "20060261565" | "20070045975" | "20070069505" | "20070187914" | "20080054579" | "20080150247" | "20080179848" | "20080303232" | "20090033066" | "20090102162" | "20090256323" | "20100013281" | "20100102535" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110204600" | "20110291389" | "20110304124" | "20120025492" | "20120153583" | "20120242062" | "20120261961" | "20130113188" | "4872692" | "5018405" | "5676386" | "5722682" | "5947555" | "6513827" | "6530591" | "6581957" | "6851700" | "7032922" | "7267359" | "7377537" | "7401803" | "7681894" | "7686323" | "7753397" | "7753398" | "7789402" | "7798500" | "7938435" | "8029014" | "8033555" | "8157286" | "8205906" | "8240700" | "8251382" | "8322744" | "8366127" | "8454049" | "8465045" | "8469388" | "8474854" | "8480116" | "8485546" | "8544873" | "8550489" | "8596669").PN. OR ("8936261").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 12:33
S269	18	("1671774" | "1707186" | "20050167951" | "20070194545" | "20100052277" | "20110163519" | "20120118516" | "7032922" | "7871100" | "8157273" | "8251382" | "8585075" | "8651502" | "8727370" | "D686541").PN. OR ("9010773").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 13:12

S270	1	("6,286,844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/12/07 18:14
S271	110	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S272	855	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S273	694	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S274	989	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S275	1,052	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S276	540	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S277	3,473	S271 S272 S273 S274 S275 S276	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:45
S278	3,353	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB;	OR	OFF	2016/02/12 12:46

			USPAT; USOCR			
S279	2,802	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 12:46
S280	279,114	@pd>="20151207"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:47
S281	21	S277 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S282	16	S278 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S283	12	S279 and S280	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S284	17	S281 not (S282 or S283)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/02/12 12:53
S285	2	("20070069504" | "7401803").PN. OR ("9242665").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:16
S286	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/02/12 13:18

		"20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.				
S287	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 13:19
S288	1	("4343124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:17
S289	1	("4340124").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:18
S290	1	("20140361517").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/02/12 15:50
S291	111	(B62B7/00).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S292	864	(B62B7/008).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44

S293	699	(B62B7/14).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S294	993	(B62B7/142).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S295	1,054	(B62B9/102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S296	542	(B62B9/12).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S297	3,486	S291 S292 S293 S294 S295 S296	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:44
S298	3,358	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S299	2,805	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 16:45
S300	6,106	S298 or S299	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:45
S301	83,034	@pd>="20160212"	US-PGPUB; USPAT; USOCR;	OR	ON	2016/03/25 16:45

			FPRS; EPO; JPO			
S302	8	S300 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 16:59
S303	6	S297 and S301	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2016/03/25 17:01
S304	13	("20080231022" | "20090243261" | "20130113188" | "6513827" | "7267359" | "7377537" | "7798500" | "7938435" | "8061732" | "8733784" | "8764048" | "8777253" | "8955869").PN. OR ("9260128").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:03
S305	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "20140191483" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" | "6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" |	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:04

		"8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "D326748" | "D431798").PN. OR ("9260127").URPN.				
S306	1	("20150123440").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:20
S307	1	("8955869").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:22
S308	32	("20010033069" | "20060001226" | "20060131841" | "20070090619" | "20080224451" | "20080231022" | "6045145" | "6286844" | "6513827" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7475900" | "7481439" | "7497461" | "7681894" | "7766366" | "7938435" | "8029007" | "8033554" | "8061732" | "8231136" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048").PN. OR ("8955869").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:22
S309	2	"39773911".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:27
S310	32	("4657269" | "4836573" | "5184835" | "5338096" | "5664795" | "5911432").PN. OR ("6045145").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:33
S311	28	("1203729" | "1321009" | "20020036391" | "20050023783" | "20070075525" | "20070216138" | "20070222167" | "20090315300" | "20100072732" | "2769482" | "4923208" | "5338096" | "5417449" | "5664795" | "5722682" | "5740989" | "5887935" | "6045145" | "6378892" | "6676140" | "7011318" | "7445229" | "8282119" | "D587635" | "D614540").PN. OR ("8857830").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:37
S312	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 17:37
S313	1	"41399621".FMID.	US-PGPUB;	OR	ON	2016/03/25 17:41

			USPAT; FPRS			
S314	6	("2009/0302578").URPN.	USPAT	OR	ON	2016/03/25 17:42
S315	70	("20030020259" | "20040094935" | "20060226635" | "20060290107" | "20070075525" | "20070085303" | "20070114738" | "20070267833" | "20080001370" | "20080179863" | "20080224432" | "20090039620" | "20090236826" | "20090302578" | "20100038886" | "20100038887" | "20100072731" | "20100140902" | "20100201089" | "20100282800" | "20100301585" | "20110175330" | "20120098219" | "20120098237" | "20120169021" | "20130049331" | "20130234419" | "20130264787" | "20130270800" | "20140159346" | "20140312586" | "20140346756" | "4542915" | "4725071" | "5338096" | "5417449" | "5664795" | "6086087" | "6267406" | "6676140" | "6702316" | "6843498" | "6877761" | "7451999" | "7699325" | "7971884" | "8070180" | "8146926" | "8157273" | "8205894" | "8282109" | "8322745" | "8398143" | "8444171" | "8480115" | "8684395" | "8714582" | "8757646" | "8807588" | "8844964" | "8857829" | "8905427" | "8915516" | "D321850" | "D359937" | "D375706" | "D429664" | "D430076" | "D431212" | "D636300").PN. OR ("9227650").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:43
S316	108	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 17:54

		6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$).did. or (US-3000645-$ or US-2453631-$).did.				
S317	1	("20090290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:56
S318	1	("20060290107").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 17:58
S319	1	("4542915").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 18:07

S320	2	"47750100".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/25 21:54
S321	1	("6209892").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/25 23:02
S322	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/25 23:02
S323	60	("3829113" | "4729572" | "4768795" | "4861105" | "5056865" | "5076599" | "5146656" | "5322343" | "5676386" | "5727798" | "5820144" | "5887889").PN. OR ("6209892").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/28 11:14
S324	0	(A stroller, comprising a stroller frame a plurality of wheels, including front and rear wheels a first seat coupled to the stroller frame at a first vertical position closer to a handle of the stroller frame and configured to hold a first child in the stroller a second seat attachment coupled to the stroller frame at a second vertical position substantially below the first vertical position and closer to the front wheels and comprising a left seat support element, wherein the left seat support element comprises a first connector portion releasably connected to the stroller frame closer to left front wheel and a left seat connector releasably connecting a second seat in either a forward or backward position and a right seat support element, wherein the right seat support element comprises a second connector portion releasably connected to the stroller frame closer to a right front wheel and a right seat connector releasably connecting the second seat in either a forward or backward position between the left and right seat support connectors and the second seat releasably connected to the left seat connector and the right seat connector and configured to hold a second child in the stroller while the first seat holds the first child).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:20
S325	0	(stroller frame wheel seat first vertical position handle child attach$4 coupl$3 left	US-PGPUB;	AND	ON	2016/03/28 13:42

		seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	USPAT; USOCR; FPRS; EPO; JPO			
S326	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left seat support element, first connector portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:42
S327	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward position).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S328	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support element portion releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S329	0	(stroller frame wheel seat vertical position handle attach$4 coupl$3 left support$4 releas$4 connect$4 forward backward).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:43
S330	3	(stroller frame wheel seat vertical position handle attach$4 left support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:44
S331	14	(stroller frame wheel seat vertical position handle attach$4 support$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:45
S332	15	(stroller frame wheel seat vertical position handle attach$4 releas$4 connect$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:46
S333	1	S332 not S331	US-PGPUB; USPAT;	AND	ON	2016/03/28 13:46

			USOCR; FPRS; EPO; JPO			
S334	18	(stroller frame wheel seat vertical position handle attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S335	3	S334 not S332	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:47
S336	25	(stroller frame wheel seat vertical position$4 attach$4 releas$4).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S337	7	S336 not S334	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2016/03/28 13:48
S338	1	"41399621".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2016/03/28 13:48
S339	1	("20160339940").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/08 16:58
S340	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:22
S341	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:23
S342	5,184,262	@pd>="20160325"	US-PGPUB;	OR	ON	2017/06/08 17:31

			USPAT; USOCR; FPRS; EPO; JPO			
S343	5,004	S340 or S341	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S344	254	S342 and S343	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:33
S346	4	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:52
S347	14	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:15
S348	1	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/12 08:16
S349	66	("1707186" | "20010033069" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "3000645" | "4542915" | "5338096" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:35

		"6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128").PN.				
S350	111	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20090243261-$ or US-20130049331-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:36

		8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$).did. or (US-3000645-$ or US-2453631-$).did.				
S351	4	S349 not S350	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:41
S352	34	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:44
S353	96	("1269379" | "1707186" | "1890469" | "20020158444" | "20040251063" | "20070045975" | "20080122200" | "20080224451" | "20090115151" | "20090160162" | "20090289440" | "20100038887" | "20100140902" | "20110175330" | "20140265258" | "3053493" | "3223431" | "3612603" | "3726536" | "4222132" | "4349938" | "4391453" | "4403807" | "4684148" | "4725071" | "4805938" | "4834415" | "4834452" | "4858947" | "4872692" | "4969656" | "5018754" | "5033761" | "5064209" | "5167425" | "5221106" | "5230523" | "5338096" | "5522121" | "5653460" | "5664795" | "5772235" | "5887935" | "5918892" | "6086087" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:46

		"6099022" | "6267406" | "6357784" | "6361111" | "6375213" | "6431579" | "6527294" | "6536842" | "6585284" | "6676140" | "6679506" | "6752405" | "6843498" | "6935652" | "6938906" | "6938954" | "7025364" | "7364183" | "7367581" | "7516966" | "7597332" | "7896384" | "8128103" | "8157273" | "8220822" | "8282120" | "8297642" | "8398143" | "8905427" | "D296540" | "D300310" | "D305316" | "D321850" | "D328047" | "D348489" | "D360392" | "D370437" | "D382516" | "D404344" | "D430512" | "D431212" | "D452191" | "D568794" | "D593458" | "D595621" | "D598333").PN. OR ("9517787").URPN.				
S354	8	"48223173".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 09:47
S355	10	("2013/0113185").URPN.	USPAT	OR	ON	2017/06/12 09:48
S356	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 09:52
S357	22	("1707186").URPN.	USPAT	OR	ON	2017/06/12 09:53
S358	0	S350 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 09:56
S359	0	S350 and (cover$4 same2 door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:00
S360	17	S350 and (cover$4 same attach$4)	US-PGPUB; USPAT; USOCR;	OR	ON	2017/06/12 10:00

			FPRS; EPO; JPO			
S361	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:08
S362	56	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:08
S363	3	S349 and door	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:13
S364	1	("9517787").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:19
S365	1	("9517789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S366	1	("9561817").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:20
S367	1	("9493179").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:21
S368	3,453	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S369	2,353	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S370	5,004	S368 or S369	US-PGPUB; USPAT;	OR	ON	2017/06/12 10:22

			USOCR; FPRS; EPO; JPO			
S371	23	S370 and (cover$4 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:22
S372	5	S370 and (cavit$3 same door)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:23
S373	35	("2917316" | "2993702" | "3110504" | "3248125" | "3309101" | "5579556" | "5622375" | "5664795" | "5725238" | "6086087" | "6276759" | "6312005" | "D319493" | "D444738" | "D450265").PN. OR ("6447001").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:23
S374	40	S370 and (cavit$3 same cover$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/12 10:24
S375	1	("5522121").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:28
S376	25	("0461069" | "1318850" | "1352647" | "1688148" | "1707186" | "4805938").PN. OR ("5522121").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:29
S377	1	("6449801").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:29
S378	1	("20070114738").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 10:30
S379	2	"38052732".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/06/12 10:30

S380	41	("20010033069" | "20020135142" | "20030025304" | "20030127835" | "20040164510" | "20070090619" | "5463853" | "5622375" | "5625923" | "5725238" | "5882022" | "5909887" | "5967190" | "6098492" | "6422634" | "6447001" | "6453921" | "6530591" | "6540238" | "6557878" | "6698772" | "6827356" | "6893028" | "7159829" | "7290776").PN. OR ("8029007").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:30
S381	13	("20040164510" | "20070090619" | "20120098237" | "20130234419" | "20130264787" | "20160001805" | "3061328" | "5622375" | "6422634" | "6530591" | "7004272" | "8029007").PN. OR ("9545941").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:31
S382	91	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:33
S383	42	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" |	US-PGPUB;	OR	ON	2017/06/12 10:46

		"4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	USPAT; USOCR			
S384	15	("20050242548" | "20070052271" | "4518139" | "4681340" | "6022077" | "6536842").PN. OR ("7364183").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 10:49
S385	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 12:09
S386	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:13
S387	91	("0706448" | "1480451" | "1508500" | "1952467" | "20010013689" | "20040212161" | "20060085953" | "20070085302" | "20070120404" | "20090029784" | "20090181780" | "20110278810" | "20120023662" | "20120060326" | "20120235450" | "20130334781" | "20140042729" | "20150008659" | "20150042056" | "20150042076" | "20150175189" | "2708585" | "2961248" | "3564626" | "4476649" | "5099528" | "5201535" | "5562548" | "5676386" | "5772279" | "5846136" | "5947555" | "5987665" | "5988670" | "6250654" | "6286844" | "6471597" | "6671926" | "6872146" | "6893040" | "7037205" | "7100724" | "7354352" | "7377537" | "7445559" | "7475942" | "7497461" | "7607734" | "7681894" | "7686323" | "7694996" | "7766366" | "7905791" | "7938435" | "8029014" | "8251382" | "8292750" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16

		"8550556" | "8672341" | "8746794" | "8851505" | "8944927" | "8955869" | "9085312" | "D156930" | "D371094" | "D377466" | "D408768" | "D442895" | "D452195" | "D475951" | "D481976" | "D498713" | "D498714" | "D519063" | "D604055" | "D622640" | "D623429" | "D667229" | "D682562" | "D684789" | "D687352" | "D743304").PN. OR ("9421992").URPN.				
S388	20	("20010040357" | "20080106070" | "20100127480" | "20110181026" | "20160144879" | "5257799" | "5645293" | "6102432" | "6312005" | "7281732" | "7641216" | "8141895" | "8240698" | "8585075" | "8696015" | "8696016" | "8998241" | "9050993" | "9421991" | "9540028").PN. OR ("9637155").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:16
S389	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:21
S390	9	("20120326474" | "4306749" | "4634177" | "4915446" | "5947556" | "6286844" | "6595583" | "8251382" | "8678498").PN. OR ("9346378").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:54
S391	28	("20030015895" | "20090066130" | "20090295207" | "4306749" | "4750783" | "5385387" | "5478135" | "5562548" | "5586351" | "5997098" | "6017088" | "6170911" | "6299249" | "6331032" | "6336682" | "6347832" | "6428099" | "6428100" | "6443522" | "6554358" | "6705676" | "6793280" | "6921359" | "6979057" | "7090294").PN. OR ("8678498").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 12:55
S392	54	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" | "7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:08

S393	15	("20080231022" | "5773379" | "5947555" | "6286844" | "6893040" | "7032922" | "7267359" | "7475900" | "7658399" | "7681894" | "7766366" | "7938435" | "8033555" | "D621306").PN. OR ("8851505").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S394	58	("20010013689" | "20050264062" | "20060214397" | "20070257458" | "20070296182" | "20080136127" | "20080231023" | "20100219616" | "20100230933" | "20120025492" | "4834403" | "5028061" | "5201535" | "5203577" | "5257799" | "5277472" | "5364137" | "5564778" | "5567008" | "5676386" | "5772279" | "5794951" | "5947555" | "6086086" | "6089653" | "6286844" | "6318807" | "6446990" | "6572134" | "6595583" | "6793280" | "6802514" | "6863286" | "6942294" | "6983986" | "7032922" | "7070197" | "7207628" | "7370913" | "7377537" | "7681894" | "7686322" | "7694996" | "7753398" | "8029014" | "8070228" | "8172253" | "8282120" | "8382150").PN. OR ("8651502").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:09
S395	76	("3779655" | "4191397" | "4216974" | "4412688" | "4602889" | "4634177" | "4645371" | "4834403" | "5028061" | "5257799" | "5527096" | "5772279" | "5865447" | "6286844").PN. OR ("6513827").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:12
S396	49	("4915401" | "5133567" | "5277472" | "5564778" | "5644816" | "5676386" | "5772279").PN. OR ("5865447").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:13
S397	88	("0763771" | "0921361" | "1167525" | "2509972" | "2982562" | "3029087" | "3083997" | "3596986" | "4306749" | "4345791" | "4371206" | "4385769" | "4501032" | "4545613" | "4634177" | "4664396" | "4733909" | "4861105" | "4915446" | "4943113" | "4984813" | "4998307" | "5052750" | "5058283" | "5203577" | "5277472" | "5385387" | "D294777" | "D305583" | "D322001" | "D325132").PN. OR ("5567008").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:14
S398	92	("2982562" | "3100651" | "3290050" | "3330575" | "3784252" | "4072318" | "4378946" | "4412688" | "4428598" | "4478427" | "4606550" | "4762364" |	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:16

		"4815764" | "5004253" | "5074575").PN. OR ("5201535").URPN.				
S399	119	("1727335" | "2435733" | "2508905" | "2509103" | "2574743" | "2722966" | "2805076" | "2864429" | "3083997" | "3116069" | "3549164" | "3829113" | "4108468" | "4412689" | "4537414" | "4570956" | "4697845" | "4743063" | "4750783" | "4762331" | "4768795" | "4786064" | "4822064" | "4832354" | "4834403" | "4861105" | "4874182" | "4915401" | "4921261" | "5121940" | "5133567" | "5197753" | "5201535" | "5203577" | "5234224" | "5265931" | "5364137" | "5375869" | "5385386" | "5499831" | "5527096" | "5564778" | "5567008" | "5601297" | "5676386" | "5707106" | "5727798" | "5772279" | "5865447" | "5876046" | "5974555").PN. OR ("6286844").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S400	82	S397 not S399	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:23
S401	20	("20040164593" | "3145442" | "5865447" | "5947555" | "6446314" | "7032922").PN. OR ("7681894").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:28
S402	59	("20020175498" | "20020195797" | "20030111825" | "20040046364" | "20050098982" | "20060071452" | "20060237949" | "5772235" | "5823564" | "7032922").PN. OR ("7267359").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2017/06/12 13:30
S403	1	("5201535").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:32
S404	1	("6286844").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/12 13:47
S405	3,477	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S406	2,369	(B62B9/12,28,102).CPC.	US-PGPUB;	OR	ON	2017/11/13 16:13

			USPAT; USOCR; FPRS; EPO; JPO			
S407	5,040	S405 or S406	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:13
S408	1,329,175	@pd>="20170608"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S409	44	S407 and S408	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/11/13 16:16
S410	3	"37808038".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2017/11/13 17:27
S423	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 10:50
S424	39	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 10:51
S425	8	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S426	18	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 10:52

			FPRS; EPO; JPO; DERWENT			
S427	3	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2019/04/15 10:52
S428	151	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$ or US-3000645-$).did. or (US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 11:03

		8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$ or US-8733784-$).did. or (US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$ or US-9260127-$).did. or (US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$ or US-8851505-$).did. or (US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S429	55	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:25
S430	3	S424 S425 S426 S427	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	AND	ON	2019/04/15 12:25

S431	80	("1707186" | "20010033069" | "20020109321" | "20060001226" | "20060131841" | "20060290107" | "20070090619" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN. OR ("9944305").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:26
S432	3,809	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S433	2,627	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S434	5,496	S432 or S433	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:29
S435	7,949,590	@pd>="20171113"	US-PGPUB; USPAT; USOCR;	OR	ON	2019/04/15 12:29

			FPRS; EPO; JPO			
S436	308	S434 and S435	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/04/15 12:30
S437	2	("20100140902" | "20140333039").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:52
S438	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:54
S439	7	S438 not S428	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:55
S440	11	("20060214395" | "20070085303" | "20090302578" | "4763911" | "5356172" | "5395154" | "5593173" | "6431647").PN. OR ("8596670").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/15 12:58

S441	12	("2007/0085303").URPN.	USPAT	OR	ON	2019/04/15 13:05
S443	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:37
S444	1	("7377537").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/15 14:47
S445	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:08
S446	1	("7481439").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:09
S447	21	("4222132" | "4805938" | "4969656" | "5064209" | "5653460" | "5887935" | "5918892" | "6155592" | "6523840" | "6527294" | "6752405" | "D360392").PN. OR ("7481439").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10
S448	94	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20130154215" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6935652" | "6938906" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:10

		"7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128119" | "8157273" | "8262107" | "8276935" | "D326748" | "D431798").PN. OR ("8882134").URPN.				
S449	28	("1707186" | "4222132" | "4288089" | "4354689" | "4805938" | "4969656" | "5064209" | "5076599" | "5522121" | "5653460" | "5918892" | "6086087" | "6527294" | "6752405").PN. OR ("6938906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:13
S450	56	("20030080536" | "20040075229" | "20040124611" | "20040173997" | "20050127640" | "20050242549" | "20090295128" | "20100038886" | "20100230933" | "4697823" | "4846494" | "4921261" | "4946180" | "5121940" | "5338096" | "5454575" | "5624152" | "5669623" | "5687984" | "5752738" | "6189914" | "6193263" | "6209892" | "6267406" | "6409205" | "6478327" | "6702316" | "6938906" | "6964429" | "6981709" | "7017937" | "7040694" | "7284797" | "7445230" | "7513512" | "7614640" | "7770911" | "8087680" | "8100429" | "8186705" | "8186706" | "8205894" | "8282119" | "8328208" | "8388016" | "8398098" | "8414012" | "D344474" | "D345128" | "D352923" | "D430076" | "D452192" | "D455679" | "D510549" | "D593459").PN. OR ("8641077").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:14
S451	32	("6896286" | "D369992" | "D519422" | "D558099" | "D566013" | "D578045" | "D579827").PN. OR ("D593459").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:15
S452	66	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/04/28 23:18

		"6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.				
S453	1	("D593459").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/04/28 23:25
S454	3,861	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S455	2,688	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S456	5,586	S454 or S455	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:51
S457	969,007	@pd>="20190415"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:57
S458	58	S456 and S457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 00:59
S459	27	("20040189076" | "20050029855" | "20110175306" | "20170247044" | "20170361861" | "4577355" | "5240265" | "5246272" | "5669625" | "5681084" | "5749627" | "5806877" | "6322097" | "6530591" | "6676140" | "6830254" | "6951342" | "8070180" | "8172322" |	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		"8596670" | "8616638" | "8690250" | "8899615" | "8991929" | "9227650" | "9868456" | "D811949").PN.				
S460	167	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2019/08/23 01:02

		5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S461	22	S459 not S460	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2019/08/23 01:02
S462	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2019/08/23 01:04
S464	4,053	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR;	OR	ON	2020/02/28 20:49

			FPRS; EPO; JPO			
S465	2,834	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S466	5,847	S464 or S465	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 20:49
S467	1,751,101	@pd>="20190823"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S468	97	S466 and S467	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/02/28 21:02
S469	97	("1239498" | "1322788" | "1418929" | "1832770" | "20020125662" | "20040011884" | "20050253348" | "20050253431" | "20050264064" | "20060290107" | "20070001410" | "20070075510" | "20070114738" | "20070257526" | "20080042476" | "20080224451" | "20090072520" | "20090302556" | "20090302578" | "20100032925" | "20100072731" | "20100109270" | "20100109293" | "20100140902" | "20100148553" | "20100314925" | "20110074195" | "20110101742" | "20110115264" | "20120080244" | "20120181779" | "20130154215" | "20140191483" | "20150021872" | "3173396" | "3831960" | "4310167" | "4433869" | "4893826" | "4936629" | "5022669" | "5158319" | "5301968" | "5417449" | "5556118" | "5581843" | "5653460" | "5664795" | "5722594" | "6086087" | "6135222" | "6267406" | "6312005" | "6394470" | "6454286" | "6540239" | "6698788" | "6702306" | "6877762" | "6935652" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 21:03

		"6938906" | "6981709" | "7059625" | "7261308" | "7338122" | "7481439" | "7497449" | "7559606" | "7597332" | "7740313" | "7770970" | "7780184" | "7789413" | "7832756" | "7854435" | "7887129" | "7891732" | "7938433" | "7971897" | "7992889" | "8029007" | "8070179" | "8128118" | "8128119" | "8157273" | "8262107" | "8276935" | "8882134" | "9056622" | "9260127" | "D326748" | "D431798").PN. OR ("10556610").URPN.				
S470	21	("20100140902" | "20130087993" | "20130154241" | "20150159414" | "20160046315" | "7789402" | "7832755" | "8033554" | "8231136" | "8602441" | "8905427" | "8955869" | "8967647" | "9050987" | "9399477" | "9403550" | "9493179" | "9517787" | "9616912" | "9637154" | "D747669").PN. OR ("10449987").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/02/28 22:17
S471	1	("20180201293").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/02/28 22:19
S472	7,365,969	@ad<="20081204"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:01
S473	172	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/01 23:02

		D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-				

		9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S474	94	S472 and S473	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/03/01 23:02
S475	15	"37454081".FMID.	US-PGPUB; USPAT; FPRS; JPO	OR	ON	2020/03/01 23:04
S476	16	("2010/0072732").URPN.	USPAT	OR	ON	2020/03/01 23:07
S484	1	("10730543").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:15
S485	0	("202000223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S486	1	("20200223470").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/10 14:16
S487	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:19
S488	4,211	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB;	OR	ON	2020/09/10 14:24

			USPAT; USOCR; FPRS; EPO; JPO			
S489	2,957	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S490	6,047	S488 or S489	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S491	1,552,888	@pd>="20200228"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:24
S492	69	S490 and S491	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2020/09/10 14:34
S493	98	("10023218" | "10207731" | "10293843" | "10449987" | "10556610" | "1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20100140902" | "20140191483" | "20140333039" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:43

		"8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652" | "9840168" | "9849903" | "9884640" | "9924806" | "9944305" | "9956979" | "D593459").PN. OR ("10730543").URPN.				
S494	45	(Baby near2 Jogger).AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 14:47
S495	173	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20080303232-$ or US-20070085303-$ or US-20060131841-$ or US-20060001226-$ or US-20080224451-$ or US-20010033069-$ or US-20030025304-$ or US-20070187914-$ or US-20070069505-$ or US-20080231022-$ or US-20100301585-$ or US-20100013281-$ or US-20150360709-$ or US-20070069504-$ or US-20100072732-$ or US-20090302578-$ or US-20130113188-$ or US-20130049331-$ or US-20160001805-$ or US-20040164593-$ or US-20070075525-$).did. or (US-20130087993-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:56

		7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$ or US-7320471-$ or US-7032922-$ or US-7367581-$ or US-8029007-$ or US-7699325-$ or US-6827356-$ or US-8398098-$ or US-7766366-$ or US-6286844-$ or US-6513827-$ or US-8764048-$ or US-8061732-$).did. or (US-8733784-$ or US-8696016-$ or US-8231136-$ or US-8458880-$ or US-7249779-$ or US-7311323-$ or US-8444171-$ or US-8033554-$ or US-7681894-$ or US-8955869-$ or US-8905427-$ or US-8882134-$ or US-8029014-$ or US-7789402-$ or US-7658399-$ or US-5167425-$ or US-8936261-$ or US-9010773-$ or US-9119483-$ or US-9200746-$ or US-9199659-$ or US-9108659-$ or US-9073563-$ or US-9242665-$ or US-7401803-$ or US-9227650-$ or US-9260128-$).did. or (US-9260127-$ or US-8857830-$ or US-2769482-$ or US-4542915-$ or US-6715783-$ or US-9108654-$ or US-9630642-$ or US-9517787-$ or US-9327752-$ or US-6561526-$ or US-8967171-$ or US-9517789-$ or US-9561817-$ or US-5522121-$ or US-9545941-$ or US-9056622-$ or US-9403550-$ or US-8899615-$ or US-7364183-$ or US-9637155-$ or US-9421992-$ or US-9545940-$ or US-9346378-$ or US-8678498-$ or US-4915446-$ or US-4634177-$ or US-4306749-$).did. or (US-8851505-$ or US-8651502-$ or US-6893040-$ or US-6446990-$ or US-5865447-$ or US-5772279-$ or US-5567008-$ or US-8657326-$ or US-8491000-$ or US-6155740-$ or US-5947555-$ or US-7267359-$ or US-9776652-$ or US-9771095-$ or US-9725106-$ or US-9701333-$ or US-8585075-$ or US-8596670-$ or US-9956979-$ or US-9944305-$ or US-9924806-$ or US-9884640-$ or US-9849903-$ or US-9840168-$ or US-10207731-$ or US-10023218-$ or US-6938906-$).did. or (US-D593459-$ or US-				

		D621306-$ or US-8328208-$ or US-7513512-$ or US-10293843-$ or US-10556611-$ or US-10556610-$ or US-10449987-$ or US-10730543-$).did. or (US-3000645-$ or US-2453631-$ or US-1707186-$).did.				
S496	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" | "6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:57
S497	4	S496 not S495	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 14:58
S499	84	("1707186" | "20010033069" | "20020109321" | "20030025304" | "20060001226" | "20060131841" | "20060290107" | "20070001429" | "20070085303" | "20070090619" | "20070114738" | "20080224451" | "20080231022" | "20090302578" | "20140191483" | "20160046315" | "3000645" | "4542915" | "5201535" | "5338096" | "5567008" | "6045145" | "6209892" | "6286844" | "6378892" |	US-PGPUB; USPAT; USOCR	OR	ON	2020/09/10 21:06

		"6443467" | "6513827" | "6561526" | "6676140" | "6752405" | "6851693" | "6923467" | "7249779" | "7311323" | "7320471" | "7367581" | "7377537" | "7401803" | "7475900" | "7481439" | "7497461" | "7677585" | "7681894" | "7766366" | "7832755" | "7896384" | "7938435" | "8029007" | "8029014" | "8033554" | "8061732" | "8157273" | "8231136" | "8251382" | "8262103" | "8336904" | "8444171" | "8458880" | "8585075" | "8596670" | "8696016" | "8733784" | "8764048" | "8882134" | "8905427" | "8936261" | "9010773" | "9108654" | "9108659" | "9119483" | "9199659" | "9200746" | "9227650" | "9242665" | "9260127" | "9260128" | "9517787" | "9561817" | "9701333" | "9725106" | "9771095" | "9776652").PN.				
S500	41	(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:39
S501	10	(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:43
S502	25	(Roe near2 Megan).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/09/10 23:56
S503	5	(Simpson near2 (Stacy and Noel)).in.	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2020/09/11 00:00

			EPO; JPO; DERWENT			
S504	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 15:29
S505	1	("9260127").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2020/09/15 23:58

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing, to an open configuration allowing access to the first adapter receiving cavity from the top side of the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity	US-PGPUB; USPAT	AND	ON	2017/11/13 16:51

		extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S163	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/02/03 17:17
S164	0	(seat attachment stroller separate left right attachment portion connector portion removably connecting frame adjacent front wheel seat support element removably connecting seat forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:35
S165	0	(seat attach$4 stroller separate left right portion connect$4 remov$4 frame adjacent front wheel support$4 element forward backward position).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S166	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:46
S167	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/02/04 09:47

S213	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S214	1	(seat attach$4 stroller separate left right connect$4 remov$4 frame wheel support$4).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S215	19	(seat attach$4 stroller left right connect$4 remov$4 frame wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:26
S216	19	(seat$3 attach$4 stroller left right connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S217	68	(seat$3 attach$4 stroller connect$4 remov$4 fram$3 wheel).clm.	US-PGPUB; USPAT	AND	ON	2014/09/24 14:29
S218	5	("20020036391" | "20070069505" | "20070187914" | "4753453" | "4779883").PN. OR ("8033554").URPN.	US-PGPUB; USPAT	OR	ON	2014/09/24 14:32
S248	4	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2015/04/20 14:14
S411	0	(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving cavity from the top side of	US-PGPUB; USPAT	AND	ON	2017/11/13 16:52

		the first seat attachment housing a second seat attachment housing disposed along a second portion of the stroller frame and comprising a second adapter receiving cavity extending through the second seat attachment housing and a second door rotatably coupled to the second seat attachment housing along a second top end of the second adapter receiving cavity, wherein the second door rotates from a second closed configuration, preventing access to the second adapter receiving cavity from a top side of the second seat attachment housing, to a second open configuration allowing access to the second adapter receiving cavity from the top side of the second seat attachment housing a first removable seat attachment adapter removably coupled to the first seat attachment housing and a second removable seat attachment adapter removably coupled to the second seat attachment housing).CLM.				
S412	0	(stroller frame wheel seat attachment housing first adapter receiving cavity extending through housing first door rotatably coupled to housing closed configuration preventing access to cavity from top side open configuration allowing access to cavity first removable seat attachment adapter removably coupled to housing and second removable seat attachment adapter removably coupled to housing).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:55
S413	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity extend$4 door rotat$4 closed configuration prevent$4 access$4 open configuration allow$4 access).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 16:56
S414	1	(stroller frame wheel seat attach$4 hous$4 adapter receiv$4 cavity door rotat$4 closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:21
S415	1	(stroller wheel seat attach$4 hous$4 cavity door closed configuration prevent$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S416	1	(stroller wheel seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:22
S417	1	(stroller seat attach$4 hous$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:23
S418	1	(stroller seat$3 attach$4 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24

S419	1	(stroller seat$3 cavity door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S420	3	(stroller seat$3 door clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:24
S421	2	(stroller seat$3 cavit$3 clos$4 access$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S422	21	(stroller seat$3 cavit$3 clos$4).CLM.	US-PGPUB; USPAT	AND	ON	2017/11/13 17:26
S442	5	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/04/15 11:03
S463	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2019/08/23 01:02
S477	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/03/01 23:02
S478	0	(A stroller, comprising a stroller frame comprising a first upper tube support frame a second upper tube support frame a first front wheel support frame rotatable with respect to the first upper tube support frame a second front wheel support frame rotatable with respect to the second upper tube support frame a first back wheel support frame rotatable with respect to the first upper tube support frame a second back wheel support frame rotatable with respect to the second upper tube support frame a plurality of wheels comprising at least one front wheel and a plurality of back wheels a first seat coupled to the stroller frame at a first vertical position of the stroller frame a first seat attachment housing disposed along the first front wheel support frame a first seat attachment adapter removably coupled to the first seat attachment housing stroller frame at a second vertical position of the stroller frame that is below the first vertical position a second seat attachment housing disposed along the second front wheel support frame a second seat attachment adapter removably coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position wherein the first seat is coupled along the first upper tube support	US-PGPUB; USPAT	AND	ON	2020/03/11 23:05

		frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position).CLM.				
S479	1	(stroller frame wheel first seat first vertical position attachment housing adapter removably coupled below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:07
S480	1	(stroller frame wheel seat vertical position attach$4 hous$4 adapt$4 remov$4 coupl$4 below).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S481	4	(stroller frame wheel seat attach$4 hous$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:10
S482	11	(stroller frame wheel seat attach$4 adapt$4 remov$4 coupl$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:11
S483	33	(stroller frame wheel seat attach$4 adapt$4 remov$4).CLM.	US-PGPUB; USPAT	AND	ON	2020/03/11 23:12
S498	2	"Term Removed" or "Term Removed"	US-PGPUB; USPAT	OR	ON	2020/09/10 14:56

9/16/2020 2:39:13 PM
C:\Users\jdolak\Documents\EAST\Workspaces\16832429_updatedparent.wsp

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Application	Document	Mailroom Date	Attorney Docket No.
16832429	CTNF	09/22/2020	34757-2430
	892	09/22/2020	34757-2430
	1449	09/22/2020	34757-2430
	1449	09/22/2020	34757-2430

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PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
John Hee Lee, et al.	)	Confirmation No.: **8948**
	)	
Application No.: **16/832,429**	)	Art Unit: **3618**
	)	
Filed: **March 27, 2020**	)	Examiner: **James M. Dolak**
	)	
For: **Removable Seat Attachment for a Stroller**	)	Attorney Docket No.: **34757-2430**
	)	
	)	
	)	

AMENDMENT AND RESPONSE TO NON-FINAL OFFICE ACTION

Via EFS-Web
Mail Stop Amendment
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Examiner Dolak:

This Amendment and Response is submitted in response to the Non-Final Office Action mailed September 22, 2020. A Petition for Two Month Extension of Time and fee are concurrently filed with this paper. In light of the amendments and remarks included herein, it is respectfully asserted that all pending claims are patentable, and it is respectfully requested that this application be allowed.

Amendments to the Drawings are described on page 2.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper.

Remarks begin on page 9 of this paper.

I hereby certify that this correspondence is being electronically filed via EFS-WEB to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, Attn: Examiner Dolak, GAU 3618, on January 25, 2021.

/Christopher J. Chan/
Christopher J. Chan
Reg. No. 44,070

AMENDMENTS TO THE DRAWINGS

Applicant submits replacement drawings for FIGs. 8A-8H (5 pages), marked as "Replacement Sheets".

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions and listing of claims for this application.

1. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first front wheel support frame ~~adjustable~~ adjusted with respect to the first upper tube support frame;

a second front wheel support frame ~~adjustable~~ adjusted with respect to the second upper tube support frame;

a first back wheel support frame ~~rotatable~~ rotated with respect to the first upper tube support frame; and

a second back wheel support frame ~~rotatable~~ rotated with respect to the second upper tube support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first front wheel support frame;

a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second front wheel support frame;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position and wherein the second vertical position and the third vertical position are at a same vertical height.

2. (Original) The stroller of claim 1, further comprising:

a first seat attachment housing disposed adjacent the first front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the second front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

3. (Original) The stroller of claim 2, wherein the first seat attachment housing extends into the first front wheel support frame and the second seat attachment housing extends into the second front wheel support frame.

4. (Original) The stroller of claim 2, wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end.

5. (Original) The stroller of claim 4, wherein the first end comprises a connector portion and is coupled to one of the first seat attachment housing and the second seat attachment housing.

6. (Currently Amended) The stroller of claim 4, wherein the second seat is ~~configured to be~~ removably coupled to the second end.

7. (Original) The stroller of claim 1, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

8. (Original) The stroller of claim 1, further comprising:

a third seat attachment adapter coupled to the stroller frame at the first vertical position; and

a fourth seat attachment adapter coupled to the stroller frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

9. (Original) The stroller of claim 1, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

10. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a front wheel support frame ~~adjustable~~ adjusted with respect to the first upper tube support frame;

a back wheel support frame ~~rotatable~~ rotated with respect to the first upper tube support frame; and

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame;

a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the front wheel support frame;

a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the front wheel support frame;

wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position.

11. (Original) The stroller of claim 10, wherein the front wheel support frame comprises a first front wheel support frame member and a second front wheel support frame member.

12. (Original) The stroller of claim 10, wherein the back wheel support frame comprises a first back wheel support member and a second back wheel support member.

13. (Original) The stroller of claim 10, further comprising:

a first seat attachment housing disposed adjacent the front wheel support frame at the second vertical position;

a second seat attachment housing disposed adjacent the front wheel support frame at the third vertical position;

wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second seat attachment adapter is coupled to the second seat attachment housing.

14. (Currently Amended) The stroller of claim 13, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion ~~configured to be~~ coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is ~~configured to be~~ removably coupled to the second end.

15. (Original) The stroller of claim 10, wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram.

16. (Original) The stroller of claim 10, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame at the first vertical position; and

a fourth seat attachment adapter coupled to the second upper tube support frame at the first vertical position;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

17. (Currently Amended) A stroller, comprising:

a stroller frame comprising:

a first upper tube support frame;

a second upper tube support frame;

a first back wheel support frame;

a second back wheel support frame;

a first front wheel support frame;

a second front wheel support frame;

a plurality of wheels comprising at least one front wheel and a plurality of back wheels;

a first seat coupled to the stroller frame at a first vertical position of the stroller frame;

a first seat attachment housing disposed adjacent the first front wheel support frame:

a second seat attachment housing disposed adjacent the second front wheel support frame;

a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first seat attachment housing;

a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second seat attachment housing;

wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter.

18. (Currently Amended) The stroller of claim 17, wherein each of the first seat attachment adapter and the second seat attachment adapter comprises:

a first end comprising a connector portion configured to be coupled to one of the first seat attachment housing and the second seat attachment housing; and

a distal second end, wherein the second seat is ~~configured to be~~ removably coupled to the second end.

19. (Original) The stroller of claim 17, further comprising a handle comprising a first end coupled to the first upper tube support frame and a distal second end coupled to the second upper tube support frame.

20. (Original) The stroller of claim 17, further comprising:

a third seat attachment adapter coupled to the first upper tube support frame; and

a fourth seat attachment adapter coupled to the second upper tube support frame;

wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter.

REMARKS

Applicant and the undersigned thank Examiner Dolak for the careful review of this application. Applicant's election of species directed to FIGs. 8A-8H, without traverse and without prejudice to filing continuation and/or divisional applications, has been accepted by the Examiner. In the present Non-Final Office Action, claims 1-20 are rejected.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant amends independent claims 1, 10, and 17, and dependent claims 6, 14, and 18, to clarify the scope of the claimed subject matter. The amendments to the claims are supported by the specification and drawings as-filed and do not introduce new matter. Upon entry of these amendments, claims 1-20 remain pending in the application. In view of these amendments and remarks, Applicant respectfully asserts that the rejections are now made moot and reconsideration and allowance of the application is respectfully requested.

Unless explicitly stated otherwise, none of the amendments to the claims were made for reasons substantially related to the statutory requirements for patentability. Furthermore, unless otherwise stated, the amendments to the claims were made simply to express that which had been implicit in the claims as originally worded and therefore, are not narrowing amendments that would create any prosecution history estoppel.

I. Request for Examiner Interview

Prior to the mailing of any further Office Actions, Applicant requests the courtesy of an examiner interview via telephone to discuss any remaining issues of patentability. The Examiner is invited to contact the Applicant's attorney, Christopher J. Chan, at 404.853.8049 to schedule the interview.

II. Drawing Objections

Applicant submits replacement pages for drawing FIGs. 8A-8H to clarify indication of certain claimed subject matter. The "first end" of the adapter is indicated as element 84A, the second/distal end of the adapter is indicated as 84B, and the "first end" of the handle is indicated as element 81g in the enclosed drawings labeled, "Replacement Sheets". No new matter is believed to be added. The drawing objections are believed to be traversed.

III. Claim Objections

The Office Action objected to claims 1, 6, and 10 for certain alleged informalities. Without admitting to the propriety of the rejections and to facilitate examination of the application, claims

1, 6, and 10 are amended to clarify the scope of the claimed subject matter. Further, the claim 6 objection to "second seat" is believed to be in error, and the term "second seat" is believed to be correct. *See* Applicant's specification, p. 14, lines 3-8. The objections are believed to be traversed.

IV. Claim Rejections Under 35 U.S.C. §112

The Office Action rejected claims 1-20 for allegedly being indefinite. Without admitting to the propriety of the rejections and to facilitate examination of the application, claims 1, 6, 10, 14, 17, and 18 are amended to clarify the scope of the claimed subject matter. For example, claims 6, 14, and 18 are amended to omit the phrase "configured to be". Further, claims 1 and 10 are amended to clarify the terms "adjusted" and "rotated", and omit the respective terms "adjustable" and "rotatable". Contrary to the Office Action rejection, claim 17 appears to lack the particular claim language that claims 1 and 10 were indicated as including. The rejections are believed to be traversed.

V. Claim Rejections Under 35 U.S.C. §102 and §103

In the Office Action, claims 17 and 20 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 7,475,900 B2 to Cheng ("Cheng"). The Office Action also rejected claims 1-5, 7-13, 15, 16, and 19 under 35 U.S.C. §103(a) as allegedly unpatentable over Cheng in view of U.S. Patent No. D593,459S to Liao ("Liao"). Claims 6, 14, and 18 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Cheng in view of U.S. Patent No. 6,286,844 B1 to Cone *et al.* ("Cone"). Applicant traverses the rejections of the pending claims.

Without admitting to the propriety of the rejections and to facilitate examination of the application, Applicant's independent claim 1 is amended to clarify the scope of the claimed subject matter. For example, claim 1 is amended to include the elements of, "a first seat attachment adapter coupled to the first front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first front wheel support frame; a second seat attachment adapter coupled to the second front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second front wheel support frame" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8.

Further, claim 10 is amended to include the elements of, "a first seat attachment adapter coupled to the front wheel support frame at a second vertical position of the stroller frame that is

below the first vertical position, wherein the first seat attachment adapter is removable from the front wheel support frame; a second seat attachment adapter coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the front wheel support frame" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8.

Moreover, claim 17 is amended to include the elements of, "a first seat attachment adapter coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position, wherein the first seat attachment adapter is removable from the first seat attachment housing; a second seat attachment adapter coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position, wherein the second seat attachment adapter is removable from the second seat attachment housing" (underlining supplied solely to indicate newly amended text). Support for the amendments can be found in the Applicant's originally filed application at p. 13, line 18 to p. 14, line 8.

By contrast, the stroller frames in the cited references Cheng and Liao only include fixed adapter-type structures, that is, not removable and fixed to the respective strollers. For example, the supporting bases 410 and 420 in Cheng do not appear to be removable and are fixed to the ends of the respective supports for the front seat and rear seats, respectively.

Since each and every element of the Applicant's amended independent claims 1, 10, and 17 is neither taught nor suggested by the cited references, either alone or in combination with each other, then claims 1, 10, and 17 should be allowable over the cited references.

VI. Dependent Claims 2-9, 11-16, and 18-20

Applicant submits that the above-identified dependent claims are allowable because the independent claims from which they ultimately depend are patentable over the cited references. The additional cited reference, namely Liao, does not cure the deficiencies of the cited reference Cheng. Applicant also respectfully traverses the Office Action's assertions about these claims and submits that the recitations of these dependent claims are of patentable significance. Applicant

respectfully requests that the Examiner reconsider and withdraw the pending rejections of claims 2-9, 11-16, and 18-20.

VII. NO WAIVER

All of Applicant's arguments presented herein are without prejudice or disclaimer. Additionally, Applicant has merely discussed example reasons that the pending claims are allowable. Other reasons may exist and Applicant reserves the right to discuss these additional reasons in a later response or on appeal, if appropriate, in this or another related application. By not responding to additional statements made by the Office Action, such as what is taught by each cited reference or alleged to have been obvious in view of the cited references, Applicant does not acquiesce to the Office Action's additional statements. The example reasons discussed by Applicant are sufficient to overcome the mentioned rejections.

CONCLUSION

The foregoing is submitted as a full and complete response to the Non-Final Office Action dated September 22, 2020. Applicant and the undersigned thank Examiner Dolak for the consideration of these amendments and remarks. In view of the amendments to the claims and the submitted remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections. Applicant further submits that the application is now in condition for allowance and earnestly solicits timely notice of the same. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the undersigned at the telephone number below.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this response. However, in the event that additional extensions of time are necessary to allow consideration of this response, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 19-5029.

Respectfully submitted,

/Christopher J. Chan/

Christopher J. Chan
Reg. No. 44,070

DATE: **JANUARY 25, 2021**

EVERSHEDS SUTHERLAND (US) LLP
999 Peachtree Street NE
Atlanta, Georgia 30309-3996
Telephone: (404) 853-8049
Facsimile: (404) 853-8806

Attorney Docket No.: **34757-2430**

Electronic Patent Application Fee Transmittal

Application Number:	16832429
Filing Date:	27-Mar-2020
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Filer:	Christopher Chan/LaYonda Prue
Attorney Docket Number:	34757-2430

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	1252	1	640	640
Miscellaneous:				
			Total in USD ($)	**640**

Electronic Acknowledgement Receipt

EFS ID:	41726867
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	25-JAN-2021
Filing Date:	27-MAR-2020
Time Stamp:	14:00:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$640
RAM confirmation Number	E20211OE00279372
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Extension of Time	34757-2430_EOT.pdf	165901 d2255861655c93a64851b21cd3019db345a25794	no	2
Warnings:					
Information:					
2		34757-2430_Response_to_NFOA.pdf	70416 c557db9a0b96ef84bd94db316346cb2ee373c65d	yes	13

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Drawings-only black and white line drawings	2	2
Claims	3	8
Applicant Arguments/Remarks Made in an Amendment	9	13

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	30783 d3a28fa2a00de1b828f48e1b79523f2d970992db	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	267100	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/22 (10-20)
Approved for use through 11/30/2020. OMB 0651-0031
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): 34757-2430

Application Number: 16/832,429

Filed: 2020-03-27

For: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Art Unit: 3618

Examiner: DOLAK, JAMES M

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$220	$110	$55	$
☑ Two months (37 CFR 1.17(a)(2))	$640	$320	$160	$ 640.00
☐ Three months (37 CFR 1.17(a)(3))	$1,480	$740	$370	$
☐ Four months (37 CFR 1.17(a)(4))	$2,320	$1,160	$580	$
☐ Five months (37 CFR 1.17(a)(5))	$3,160	$1,580	$790	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 195029.

☑ Payment made via EFS-Web.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant.

☑ attorney or agent of record. Registration number 44,070.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Christopher J. Chan/ — Signature

2021-01-25 — Date

Christopher J. Chan — Typed or printed name

404-853-8049 — Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

☐ * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 16/832,429	Filing Date 03/27/2020	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $460 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	01/25/2021	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/GYZELL P JOHNSON SMITH/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

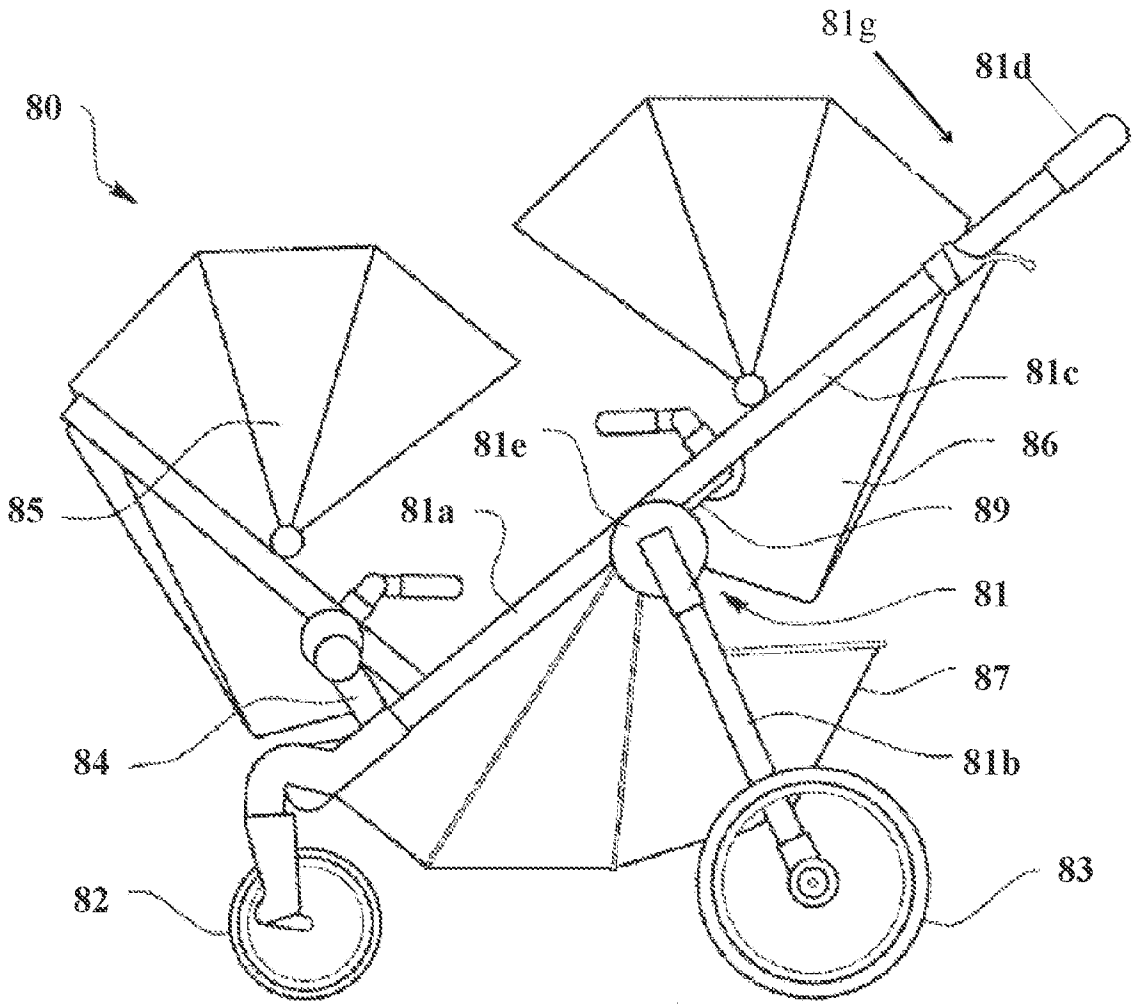


FIGURE 8A

REPLACEMENT DRAWING

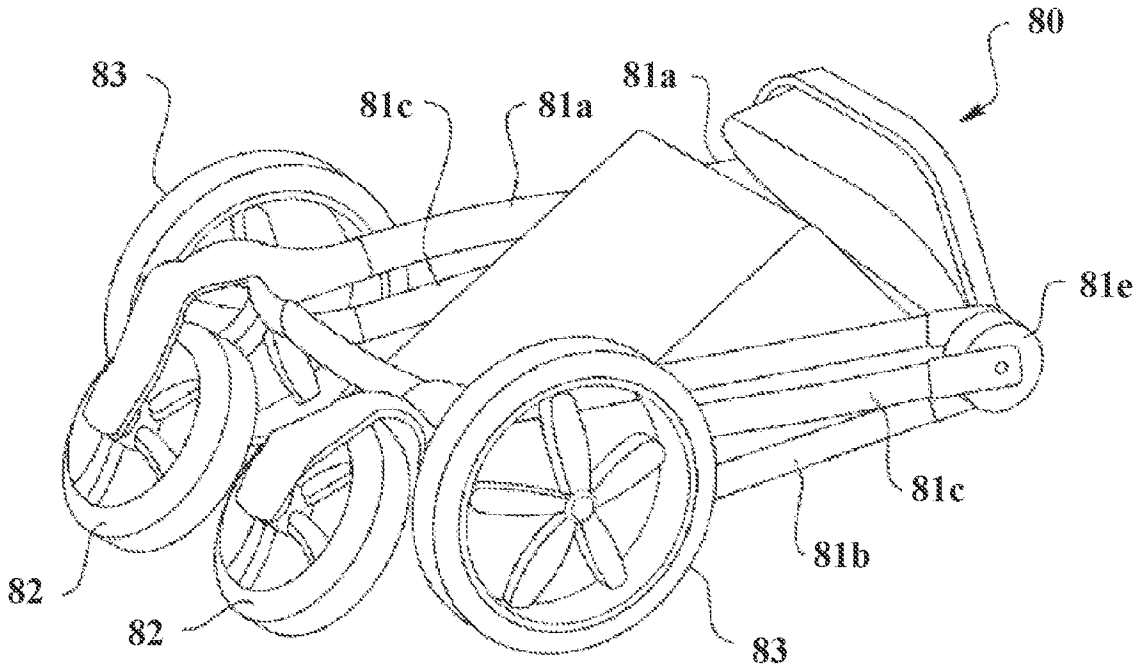


FIGURE 8B

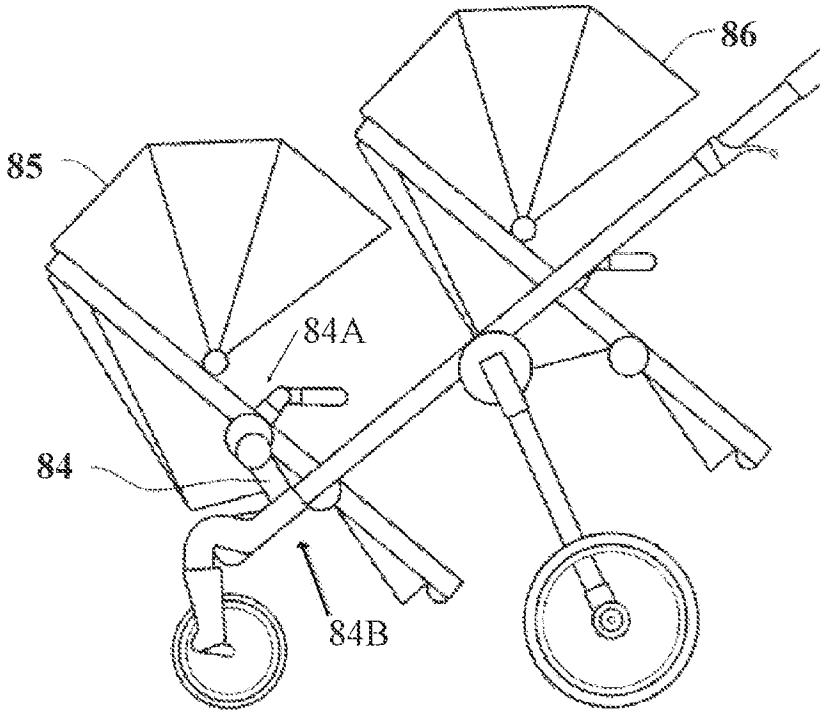


FIGURE 8C

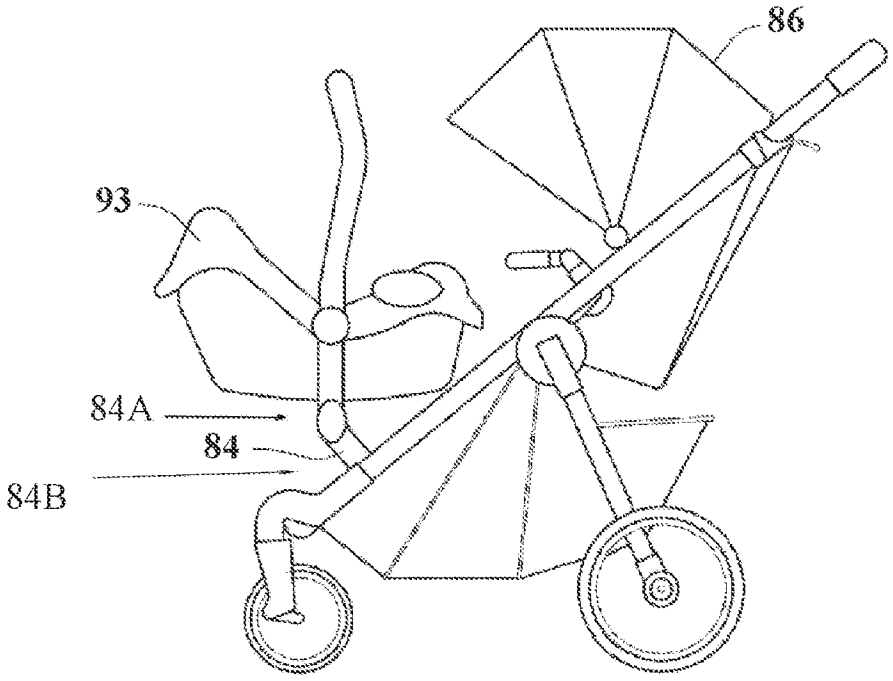


FIGURE 8D

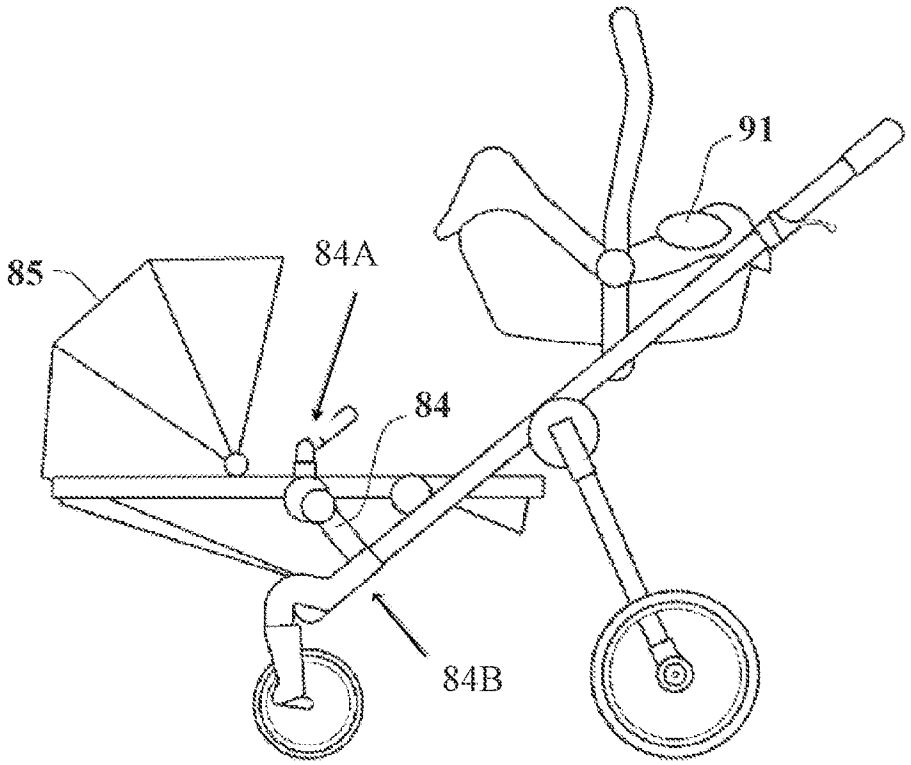


FIGURE 8E

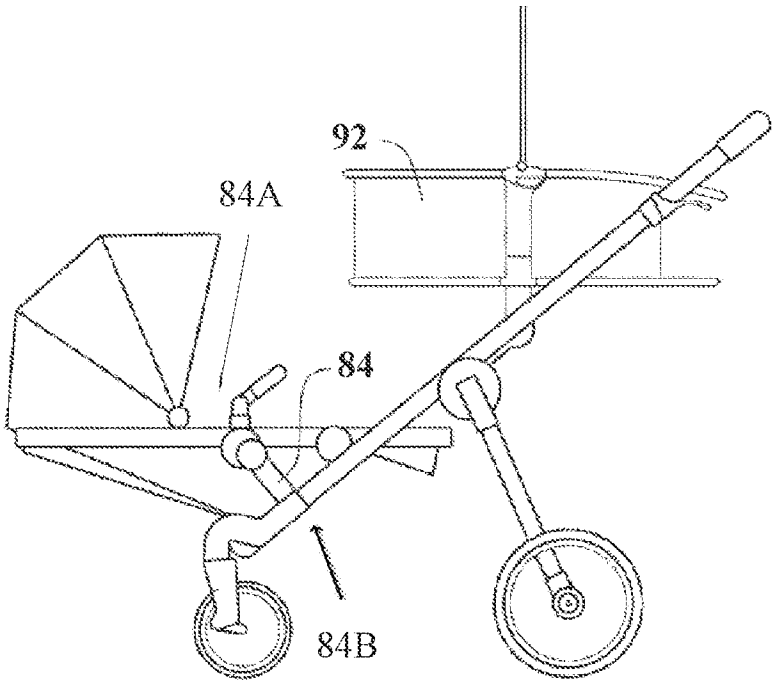


FIGURE 8F

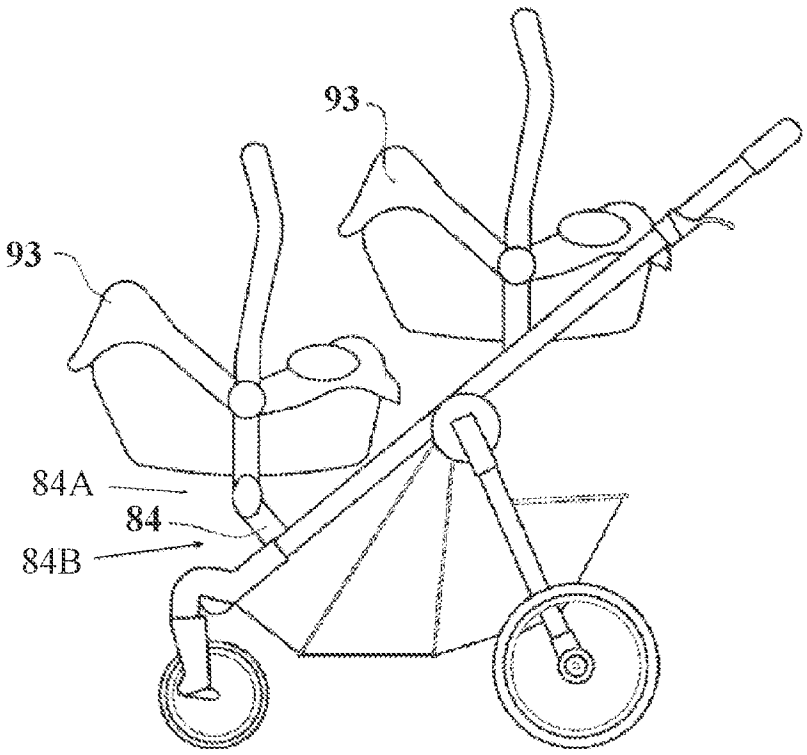


FIGURE 8G

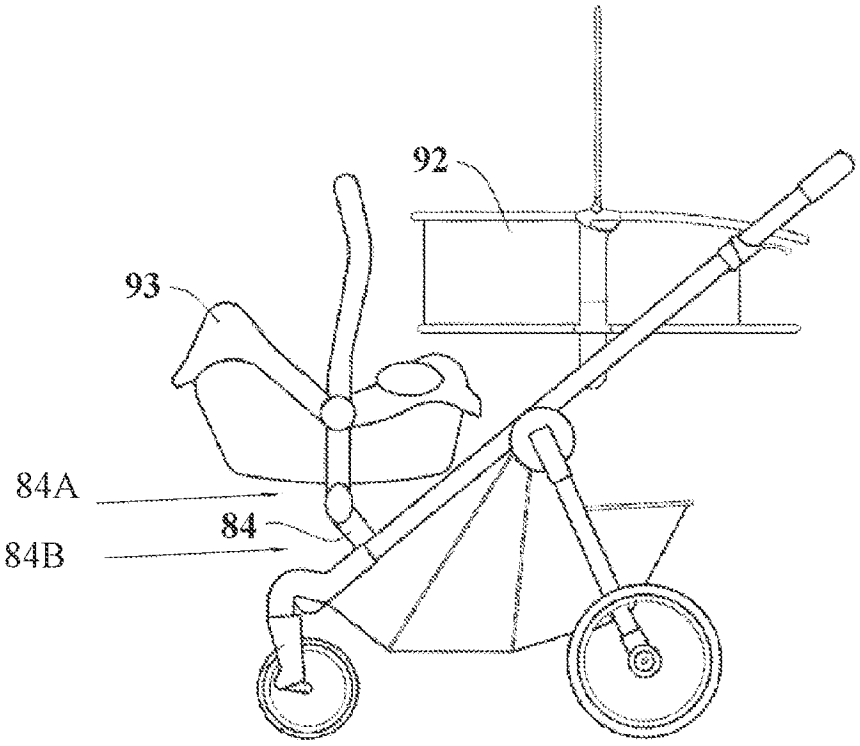


FIGURE 8H

Electronic Acknowledgement Receipt

EFS ID:	41801973
Application Number:	16832429
International Application Number:	
Confirmation Number:	8948
Title of Invention:	REMOVABLE SEAT ATTACHMENT FOR A STROLLER
First Named Inventor/Applicant Name:	Jon Hee Lee
Customer Number:	134811
Filer:	Christopher Chan/LaYonda Prue
Filer Authorized By:	Christopher Chan
Attorney Docket Number:	34757-2430
Receipt Date:	01-FEB-2021
Filing Date:	27-MAR-2020
Time Stamp:	15:45:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Drawings-only black and white line drawings	34757-2430_Replacement_Drawings.pdf	440643 c71439dd3ee10d9800e36da61a8a2af6028ac017	no	5

Warnings:

Information:	
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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/832,429	03/27/2020	Jon Hee Lee	34757-2430	8948

134811 7590 04/28/2021

Eversheds Sutherland (US) LLP/NWL
999 Peachtree Street
Suite 2300
Atlanta, GA 30309

EXAMINER	
DOLAK, JAMES M	

ART UNIT	PAPER NUMBER
3618	

NOTIFICATION DATE	DELIVERY MODE
04/28/2021	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 16/832,429	Applicant(s) Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 1/25/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1-20 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1-20 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☑ Claim(s) 1-20 are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 3/27/2020 and 2/01/2021 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☑ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to Amendment

2. The reply filed on 1/25/2021 amended claims 1, 6, 10, 14, 17, and 18. Claims 1-20 are currently pending herein.

Response to Arguments

3. Applicant's arguments with respect to claim(s) 1-20 have been considered but are moot because the new ground of rejection does not rely on any reference applied in the prior rejection of record for any teaching or matter specifically challenged in the argument.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*,

686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

5. Claims 1-20 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-13, of U.S. Patent No. 10,730,543. Although the claims at issue are not identical, they are not patentably distinct from each other because the differences are minor.

Drawings

6. The previous objections to the drawings are withdrawn in light of the amendments, the objections that remain are detailed below.

Claim Objections

7. The previous objections to the drawings are withdrawn in light of the amendments, the objections that remain are detailed below.

Claim Rejections - 35 USC § 112

8. The previous rejections of Claims 1-5 under 35 USC 112 are withdrawn in light of the amendments, the rejections that remain are detailed below.

9. The following is a quotation of 35 U.S.C. 112(b):

> (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

> The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-20 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Regarding the claims, each independent claim recites "adjusted/rotated with respect to" (Claim 1/10/17), which is unclear and therefore renders the claims indefinite. Appropriate correction is required.

11. Claim 18 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards

as the invention. Regarding claim 18, the claim recites the open-ended clause "configured to be removably coupled" (line 3), which renders the claim indefinite, since it's not clear whether the claimed "coupling" is actually taking place or not. It has been held that the open-ended recitations stating that an element is capable to perform a function (e.g., "configured to", "adapted to", etc.) are not the positive limitations but only require the ability to so perform. They do not constitute a limitation in any patentable sense. See In re Hutchinson, 69 USPQ 138. Just because something is "configured to" do something (i.e. is "capable of" doing something), doesn't actually mean it does it. "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v.Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). The Office hereby notes that "configured to" does not explicitly denote how features(s) are constructed and/or associated with other claimed limitations; whereas the claim is amenable to two or more plausible claim constructions. If a claim is amenable to two or more plausible claim constructions, then the claim may be deemed indefinite. See Ex parte Miyazaki, 89 USPQ2d 1207 (Bd. Pat. App. & Inter. 2008) (precedential). Applicant is required to use definitive and positive statements while reciting the structure and functions of the claimed apparatus (e.g. "a locking arm chamfer [that is configured to engage] --engaging-- the lock pin chamfer"). Appropriate correction is required.

Claim Rejections - 35 USC § 103

12. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the

time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under pre-AIA 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

15. **Claims 17, 18, and 20 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng and further in view of Cone, II al. (US 6,286,844 B1)**.

[Claim 17] Regarding Claim 17, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421);

a first back wheel support frame (See, e.g., Fig. 4-8, 32); a second back wheel support frame (See, e.g., Fig. 4-8, 32); a first front wheel support frame (See, e.g., Fig. 4-8, 31); a second front wheel support frame (See, e.g., Fig. 4-8, 31);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 72) coupled to the stroller frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the first front wheel support frame (See, e.g., Fig. 4-8); a second seat attachment housing (See, e.g., Fig. 4-8, 410) disposed adjacent the second front wheel support frame (See, e.g., Fig. 4-8); a first seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the first seat attachment housing at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 71) coupled to the second seat attachment housing at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame (See, e.g., Fig. 4-8) and wherein a second seat (See, e.g., Fig. 4-8, 71) is removably coupled to the first seat attachment adapter and the second seat attachment adapter (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first/second seat attachment adapter is removable from the first/second seat attachment housing.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with first/second seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) removable from a first/second seat attachment housing (See, e.g., Cone: Fig.1-13, 267+269+304).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a stroller frame seat attachment housing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng with seat attachment adapters that removably connect to the stroller frame housings such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 18] Regarding Claim 18, the combination of Cheng in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) configured to be coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) and a

distal second end (See, e.g., Cheng: Fig. 4-8, 71), wherein the second seat is coupled to the second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1-13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) having a first end connected to a stroller frame (See, e.g., Cone: Fig.1-13, 251+267) and a second end releasably coupled to a seat (See, e.g., Cone: Fig.1-13, 12+252).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that releasably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng with a seat attachment adapter that has a distal second end that is releasably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 20] Regarding Claim 20, the combination of Cheng in view of Cone further teaches: further comprising: further comprising: a third seat attachment adapter

(See, e.g., Cheng: Fig. 4-8, 420) coupled to the first upper tube support frame (See, e.g., Cheng: Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the second upper tube support frame (See, e.g., Cheng: Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420).

16. **Claims 1-16 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng in view of Liao (US D593,459S) and further in view of Cone, II al. (US 6,286,844 B1)**.

[Claim 1] Regarding Claim 1, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a first front wheel support frame (See, e.g., Fig. 4-8, 31) adjusted with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a second front wheel support frame (See, e.g., Fig. 4-8, 31) adjusted with respect to the second upper tube support frame (See, e.g., Fig. 4-8); a first back wheel support frame (See, e.g., Fig. 4-8, 32) rotated with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a second back wheel support frame (See, e.g., Fig. 4-8, 32) rotated with respect to the second upper tube support frame (See, e.g., Fig. 4-8);

a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the stroller frame below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8) and wherein the second vertical position and the third vertical position are at a same vertical height (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the first front wheel support frame, and wherein the second seat attachment adapter is coupled to the second front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the first front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the second front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters

coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

The combination of Cheng in view of Liao fails to explicitly teach: wherein the first/second seat attachment adapter is removable from the first/second front wheel support frame.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with first/second seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) removable from a first/second stroller frame (See, e.g., Cone: Fig.1-13, 251+267+269+304).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view Liao with seat attachment adapters that removably connect to the stroller frame such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base,

etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 2] Regarding Claim 2, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: a first seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the first front wheel support frame at the second vertical position (See, e.g., Cheng: Fig. 4-8); a second seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the second front wheel support frame at the third vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing (See, e.g., Cheng: Fig. 4-8) and the second seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Cheng: Fig. 4-8).

[Claim 3] Regarding Claim 3, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first seat attachment housing extends into the first front wheel support frame (See, e.g., Liao: Fig.1-13) and the second seat attachment housing extends into the second front wheel support frame (See, e.g., Liao: Fig.1-13).

[Claim 4] Regarding Claim 4, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter has a first end and a distal second end (See, e.g., Cheng: Fig. 4-8, 410).

[Claim 5] Regarding Claim 5, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first end comprises a connector

portion (See, e.g., Fig. 4-8, 410) and is coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8).

[Claim 6] Regarding Claim 6, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) and a distal second end (See, e.g., Cheng: Fig. 4-8, 71), wherein the second seat is coupled to the second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1-13) for a stroller (See, e.g., Cone: Fig. 1-13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) having a first end connected to a stroller frame (See, e.g., Cone: Fig.1-13, 251+269) and a second end releasably coupled to a seat (See, e.g., Cone: Fig.1-13, 12).

Cone teaches that it is well known in the art of stroller seat design to provide a seat attachment adapters that releasably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng in view of Liao with a seat attachment adapter that has a distal second end that is removably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or

without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 7] Regarding Claim 7, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Cheng: Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Cheng: Fig. 4-8, 72).

[Claim 8] Regarding Claim 8, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: a third seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the stroller frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the stroller frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8).

[Claim 9] Regarding Claim 9, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising a handle (See, e.g., Cheng Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 10] Regarding Claim 10, Cheng teaches:

A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.) comprising: a first upper tube support frame (See, e.g., Fig. 4-8, 411+421); a second upper tube support frame (See, e.g., Fig. 4-8, 411+421); a front wheel support frame (See, e.g., Fig. 4-8, 31) adjusted with respect to the first upper tube support frame (See, e.g., Fig. 4-8); a back

wheel support frame (See, e.g., Fig. 4-8, 32) rotated with respect to the first upper tube support frame (See, e.g., Fig. 4-8); and a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising at least one front wheel (See, e.g., Fig. 4-8, 33) and a plurality of back wheels (See, e.g., Fig. 4-8, 34);

a first seat (See, e.g., Fig. 4-8, 71) coupled along the first upper tube support frame and the second upper tube support frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8);

a first seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the front wheel support frame at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8); a second seat attachment adapter (See, e.g., Fig. 4-8, 410) coupled to the front wheel support frame at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8);

wherein a second seat (See, e.g., Fig. 4-8, 72) is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position (See, e.g., Fig. 4-8).

Cheng fails to explicitly teach: wherein the first seat attachment adapter is coupled to the front wheel support frame, and wherein the second seat attachment adapter is coupled to the front wheel support frame.

However, Liao teaches a similar stroller with seat attachment (See, e.g., Liao: Fig.1-13) wherein a first seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13), and wherein a second seat attachment adapter is coupled to the front wheel support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide seat attachment adapters coupled to the front wheel support frame of the stroller. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by Cheng modified with the seat attachment adapters coupled to the front wheel support frame such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to mount the front stroller seat at a position that is lower to the ground level thereby not requiring a parent to hoist the heavy baby seat up as high off the ground when mounting/dismounting from the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

The combination of Cheng in view of Liao fails to explicitly teach: wherein the first/second seat attachment adapter is removable from the first/second front wheel support frame.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1 -13) for a stroller (See, e.g., Cone: Fig. 1 -13, 214) with first/second seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) removable from a first/second stroller frame (See, e.g., Cone: Fig.1-13, 251+267+269+304).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view Liao with seat attachment adapters that removably connect to the stroller frame such as taught by

Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 11] Regarding Claim 11, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the front wheel support frame comprises a first front wheel support frame member (See, e.g., Cheng: Fig. 4-8, 31) and a second front wheel support frame member (See, e.g., Cheng: Fig. 4-8, 31).

[Claim 12] Regarding Claim 12, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the back wheel support frame comprises a first back wheel support member (See, e.g., Cheng: Fig. 4-8, 32) and a second back wheel support member (See, e.g., Cheng: Fig. 4-8, 32).

[Claim 13] Regarding Claim 13, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: a first seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the front wheel support frame at the second vertical position (See, e.g., Cheng: Fig. 4-8); a second seat attachment housing (See, e.g., Cheng: Fig. 4-8, 71) disposed adjacent the front wheel support frame at the third vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat attachment adapter is coupled to the first seat attachment housing and the second

seat attachment adapter is coupled to the second seat attachment housing (See, e.g., Cheng: Fig. 4-8).

[Claim 14] Regarding Claim 14, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein each of the first seat attachment adapter and the second seat attachment adapter comprises: a first end comprising a connector portion (See, e.g., Cheng: Fig. 4-8, 71) coupled to one of the first seat attachment housing and the second seat attachment housing (See, e.g., Cheng: Fig. 4-8) and a distal second end (See, e.g., Cheng: Fig. 4-8, 71), wherein the second seat is coupled to the second end (See, e.g., Cheng: Fig. 4-8).

Cheng fails to explicitly teach: wherein the distal second end is removably coupled to the second seat.

However, Cone teaches a similar seat attachment (See, e.g., Cone: Fig. 1-13) for a stroller (See, e.g., Cone: Fig. 1-13, 214) with seat attachment adapters (See, e.g., Cone: Fig.1-13, 216) having a first end connected to a stroller frame (See, e.g., Cone: Fig.1-13, 251+269) and a second end removably coupled to a seat (See, e.g., Cone: Fig.1-13, 12).

Cone teaches that it is well known in the art of stroller seat design to provide seat attachment adapters that removably connect to a seat and a stroller frame. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view of Liao with a seat attachment adapter that has a distal second end that is removably coupled to the seat such as taught by Cone, for the purpose of conveniently and beneficially allowing a user to disassemble the system easily (e.g., by disconnecting the seat from the stroller with

or without the adapter still connected to the seat), and additionally presenting a seat that can be connected to a separate stroller or similar baby system (e.g., car base, highchair base, etc.). Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

[Claim 15] Regarding Claim 15, the combination of Cheng in view of Liao and further in view of Cone further teaches: wherein the first seat is one of a baby seat, a car seat, a stroller seat, a bassinet, a baby carrier, or a pram (See, e.g., Cheng: Fig. 4-8, 71) and the second seat is one of a second baby seat, a second car seat, a second stroller seat, a second bassinet, a second baby carrier, or a second pram (See, e.g., Cheng: Fig. 4-8, 72).

[Claim 16] Regarding Claim 16, the combination of Cheng in view of Liao and further in view of Cone further teaches: further comprising: further comprising: a third seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the first upper tube support frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); and a fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8, 420) coupled to the second upper tube support frame at the first vertical position (See, e.g., Cheng: Fig. 4-8); wherein the first seat is removably coupled to the third seat attachment adapter and the fourth seat attachment adapter (See, e.g., Cheng: Fig. 4-8).

17. **Claim 19 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Cheng in view of Cone and further in view of Liao (US D593,459S).**

[Claim 19] Regarding Claim 19, the combination of Cheng in view of Cone further teaches: further comprising a handle (See, e.g., Cheng: Fig. 4-8, 10+24) comprising a first end and a distal second end (See, e.g., Cheng: Fig. 4-8).

The combination of Cheng in view of Cone fails to explicitly teach: where the handle first end is coupled to the first upper tube support frame and the distal second end is coupled to the second upper tube support frame.

However, Liao teaches a similar stroller with seat attachments (See, e.g., Liao: Fig.1-13) wherein a handle (See, e.g., Liao: Fig.1-13) is provided along an end of a first upper tube support frame and an end of a second upper tube support frame (See, e.g., Liao: Fig.1-13).

Liao teaches that it is well known in the art of stroller seat design to provide a handle coupled to upper tube support frames where the second seat is mounted. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system taught by the combination of Cheng in view of Cone modified with the handle coupled to the upper tube support frames such as taught by Liao, for the purpose of conveniently and beneficially allowing a user to push the stroller from a position where the handle adds the greatest mechanical advantage to the system thereby not requiring a parent to struggle to move the stroller. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398,416 (2007)).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, and can be found on the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES M DOLAK/
Primary Examiner, Art Unit 3618.

Examiner-Initiated Interview Summary	**Application No.** 16/832,429	**Applicant(s)** Lee et al.		
	Examiner JAMES M DOLAK	**Art Unit** 3618	**AIA (First Inventor to File) Status** No	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
JAMES M DOLAK	Primary Examiner	Telephonic
Chris Chan	Attorney	

Date of Interview: 01 February 2021

Issues Discussed:

Drawings

The Examiner informed Applicant's representative that the drawing amendments indicated on page two of the amendment filed 1/25/2021 were not included with the amendment. The Applicant indicated that they would be re-filed in due course.

/JAMES M DOLAK/ Primary Examiner, Art Unit 3618	

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Notice of References Cited	Application/Control No. 16/832,429	Applicant(s)/Patent Under Reexamination Lee et al.	
	Examiner JAMES M DOLAK	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-10899377-B2	01-2021	Eggert-Crowe; Colin F.	B62B7/14	1/1
*	B	US-10926785-B2	02-2021	Ambar; David	B62B7/08	1/1
	C					
	D					
	E					
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	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Searched*		
Symbol	Date	Examiner
B62B7/008,00,006,14,142,145	09/10/2020	JMD
B62B9/12,28,102	09/10/2020	JMD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor Search	09/10/2020	JMD
EAST text search	09/10/2020	JMD
Updated Search	04/11/2021	JMD

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/832,429	Lee et al.
	Examiner	Art Unit
	JAMES M DOLAK	3618

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	09/15/2020	04/21/2021							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
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	16	✓	✓							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2020/03/01 23:01
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		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2017/06/08 17:36
		(Lee near2 (Jon and Hee)).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:36
		(Zehfuss near2 Mark).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2017/06/08 17:35

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		@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:35
		S27 and ((wheel and seat) same add$7)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
		S10 and (seat near2 (attach$4 and convert$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/27 15:46
L1	4,376	(B62B7/008,00,006,14,142,145).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/30 23:34

L2	3,084	(B62B9/12,28,102).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/30 23:34
L3	6,260	L1 or L2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/30 23:34
L4	2,482,108	@pd>="20200910"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/31 00:02
L5	118	3 and 4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	ON	2021/03/31 00:02
L6	20	("20010013689" | "20020005628" | "20030201617" | "20070194545" | "20100127480" | "20100230933" | "20100244408" | "20100259021" | "20110298198" | "20130087993" | "20150042056" | "20160046315" | "20170313339" | "6086086" | "6209892" | "8061732" | "8474854" | "8696016" | "9085312" | "9399477").PN. OR ("10899377").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2021/03/31 00:21
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S4	8	("20030025304" | "20070001429" | "20070114738" | "5338096").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/21 11:10
S5	15	("3223431" | "3915493" | "3917312" | "4886209" | "5184835").PN. OR ("5338096").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:19
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S7	3	("5653460" | "6045145" | "6378892").PN. OR ("7320471").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/21 11:26
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S27	2,902	S24 or S26	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
S28	657	S27 and ((wheel and seat) same attach$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:15
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S32	58	("5564786" | "0733889" | "6443467" | "0329579" | "5611560" | "3235279" | "0292933" | "6017051" | "0781495" | "2305719" | "1707186" | "4989890" | "6220621" | "6676140" | "1168896" | "2517443" | "20030075903" | "0647165").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:22
S33	33	("2769482" | "2857953" | "2993702" | "3235279" | "3309101" | "3330575" | "3738700" | "4725071" | "5018754" | "5263730" | "5338096" | "5417449" | "5653460" | "5664795" | "5911432" | "6045145" | "6068087" | "6378892" | "D321850" | "D359937").PN. OR ("6676140").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:24
S34	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:25
S35	15	("1707186").URPN.	USPAT	OR	ON	2012/06/28 23:28
S36	14	("20030111825" | "5333893" | "6209892" | "6513827" | "6863286" | "7032922" | "7367581" | "7377537" | "D429664" | "D430076").PN. OR ("7475900").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:31
S37	44	S31 and (wheel near2 remov$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/06/28 23:35
S38	22	("3738600" | "3876046" | "4570956" | "4750783" | "5188389" | "5234224" | "5499831" | "5536027" | "5562300" | "5876046" | "6189914" | "6193263" | "6209892" | "6290290" | "6302412" | "6398233" | "6550802" | "D397316" | "D481975" | "D486427" | "D497844").PN. OR ("D508443").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:36

S39	20	("4725071" | "5221106" | "5338096" | "5522121" | "5918892" | "6209892" | "6267406" | "6527294" | "D296540").PN. OR ("6752405").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:46
S40	15	("0522608" | "1707186" | "3223431" | "3524655" | "3997180" | "4620686" | "4632409" | "4836573" | "6267406" | "6752405" | "7364183").PN. OR ("8157273").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:48
S41	30	("0556168" | "1707186" | "1934396" | "20020033588" | "20050167951" | "20070252352" | "20080143082" | "20090026733" | "3383738" | "4083579" | "4805938" | "5221106" | "5333893" | "5522121" | "5769448" | "5918892" | "6431579" | "6527294" | "6601866" | "6752405" | "7481439" | "7516966" | "7597332" | "D484075" | "D595621" | "D598333").PN. OR ("7896384").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:49
S42	13	("3000645" | "4969656" | "5125712" | "5522121" | "5918892" | "6527294" | "6561526" | "6715783" | "6752405" | "6851693" | "6938906").PN. OR ("7677585").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:50
S43	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/28 23:51
S44	9	("3000645").URPN.	USPAT	OR	ON	2012/06/28 23:55
S45	1	("6702316").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/06/29 00:04
S46	29	("20010040357" | "20020060444" | "20020093177" | "4852894" | "4921261" | "4989888" | "5490685" | "5641200" | "5676386" | "5794951" | "5947555" | "6189914" | "6209892" | "6241274" | "6286844" | "6302412" | "6331032" | "6398233" | "6409205").PN. OR ("6702316").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/29 00:04
S47	2,446	(297/130,232,243,463.1).CCLS.	US-PGPUB;	OR	OFF	2012/07/01 04:43

			USPAT; USOCR			
S48	37,502,608	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S49	1,076	S47 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S50	2,837	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 04:43
S51	1,861	S50 and S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S52	2,902	S49 or S51	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 04:43
S53	476	S52 and cylindrical	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/07/01 04:43

			DERWENT			
S54	21	S52 and cylindrical near2 connect$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2012/07/01 05:05
S55	29	("1506565" | "1885627" | "1954179" | "20040026895" | "20040164515" | "2220528" | "2334387" | "2482585" | "5395130" | "5454578" | "5501480" | "5536027" | "5904363" | "6022042" | "6331013" | "6443467" | "6443469" | "6685206" | "6685207" | "D327240" | "D405031" | "D486425").PN. OR ("7261308").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:10
S56	28	("0122730" | "0937625" | "1212221" | "20070114738" | "2836224" | "3000645" | "4288124" | "4779883" | "4805938" | "4863217" | "5312122" | "5622375" | "5653460" | "5704627" | "5848797" | "6378892" | "6530591" | "6746079" | "6851693" | "7226059" | "7481439" | "7597332" | "7677585").PN. OR ("8128103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:17
S57	36	("1486118" | "2769482" | "2993702" | "3253860" | "3497234" | "3612603" | "4155588" | "4181356" | "4288124" | "4381870" | "4596405" | "4632409" | "4711489" | "4813742" | "4946180" | "5161811" | "5201535" | "5213360" | "5374073" | "5401076" | "5547205" | "5848797" | "5988657" | "6135479" | "6276709" | "D340140").PN. OR ("6561526").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:18
S58	18	("2926880" | "3290050" | "3309101" | "4183580" | "4711489" | "4779883" | "5074616" | "5168601" | "5265931" | "5401076" | "5529325").PN. OR ("5704627").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:21
S59	23	("4542915" | "4854607" | "4986564" | "5033761").PN. OR ("5653460").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:22

S60	31	("2453631" | "2558372" | "4953887" | "5090724" | "5380262" | "5653460" | "5676386").PN. OR ("6155592").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:25
S61	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:27
S62	33	("0279778" | "1033324" | "2453631" | "3643292" | "3849834" | "3879146" | "4132429" | "4335900" | "4606550" | "4856809" | "4902027" | "4953880" | "5176395" | "5188389" | "5263730" | "5299825" | "5318318" | "5344171" | "5356171" | "5364119" | "5536027").PN. OR ("5647601").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:28
S63	5	("2453631").URPN.	USPAT	OR	ON	2012/07/01 05:29
S64	16	("1560802" | "5076579" | "5123670" | "5188389" | "5224720" | "5301963" | "5476275" | "5669624" | "5695208" | "6017051" | "6036220").PN. OR ("6443467").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/07/01 05:33
S65	1	("7677585").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 15:09
S66	1	("6676140").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:02
S67	1	("6443467").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S68	2	("1707186").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S69	1	("7475900").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:05
S70	1	("6752405").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:14
S71	1	("8157273").PN.	US-PGPUB;	OR	OFF	2012/07/01 16:14

			USPAT; USOCR			
S72	1	("7896384").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:15
S73	1	("6561526").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:16
S74	1	("5653460").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/07/01 16:17
S75	2,925	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:32
S76	37,571,828	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S77	1,873	S75 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:32
S78	2,516	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/13 17:35
S79	35	S78 and S77	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36

S80	1,080	S78 and S76	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/02/13 17:36
S81	1	("20050082897").PN. OR ("8246020").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:44
S82	9	("20070085303" | "20080303232" | "20090033066" | "3784252" | "5257799" | "5794951" | "6086086" | "7367581" | "7377537").PN. OR ("8205906").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:52
S83	31	("20010002745" | "20030067138" | "20050099025" | "20060237932" | "20070063474" | "20080067776" | "20090026817" | "2450051" | "4754987" | "5076599" | "5267744" | "5454577" | "5474316" | "5577746" | "5921571" | "5947497" | "5979921" | "6196572" | "6663126" | "6764087" | "6767028" | "6929274" | "6976697" | "7052026" | "7168761" | "7172206" | "7354058" | "7431324" | "7445222" | "7547029").PN. OR ("8262103").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 17:58
S84	22	("20080211206" | "20090014985" | "20090078482" | "3605929" | "4362311" | "4861058" | "5020624" | "5421598" | "5921338" | "6135222" | "6220382" | "6378642" | "6439331" | "6659488" | "6793248" | "7044249" | "7080847" | "7364182" | "7571926" | "7591479" | "7832755").PN. OR ("8336904").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/13 18:03
S85	1	("8251382").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/02/14 15:15
S86	34	("20080150247" | "20080179848" | "20080224451" | "20080303232" | "20090102162" | "20090121455" | "20090256323" | "20100001492" | "20100109272" | "20100127480" | "4645371" | "5028061" | "5257799" | "5364137" | "5676386" | "5772279" | "5865447" | "5947555" | "6286844" | "6446990" | "6513827" | "6991248" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 15:19

		"7032922" | "7296820" | "7314247" | "7367581" | "7377537" | "7584985" | "7658399" | "7681894" | "7686323" | "7694996" | "7712765" | "7753398").PN. OR ("8251382").URPN.				
S87	32	("4836573" | "4892327" | "5028061" | "5069474" | "5257799" | "5460430" | "5887935" | "5921574" | "6099022" | "6523853" | "6594840" | "6739649" | "7281732").PN. OR ("7377537").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:50
S88	57	("20020093177" | "20020109320" | "20030075903" | "20030080536" | "20030111825" | "20040032103" | "20040094922" | "20040124610" | "20040124611" | "20040245747" | "20050093259" | "20050127640" | "20050242535" | "20050242549" | "20060119079" | "20070001429" | "20070108710" | "20070194545" | "20080157491" | "20090127827" | "5333893" | "5676386" | "5772279" | "5794951" | "5833261" | "5947555" | "6086087" | "6209892" | "6286844" | "6331032" | "6398233" | "6409205" | "6513827" | "6530591" | "6626452" | "6641164" | "6702316" | "6793280" | "6802514" | "6863286" | "6893031" | "6923467" | "6983986" | "6986518" | "7017921" | "7032922" | "7070197" | "7370913" | "7377537" | "7419181" | "7445229" | "7475900" | "7513512" | "7600775" | "7614641" | "7938435" | "D430076").PN. OR ("8328208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/02/14 17:52
S89	3,003	(280/650,657,647,648,658,639,642,643).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:09
S90	37,602,504	@ad<="20081204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:09
S91	1,876	S89 and S90	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/07/16 15:09

			EPO; JPO; DERWENT			
S92	2,544	(297/130,232,243,463.1).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/16 15:11
S93	1,082	S92 and S90	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT	OR	ON	2013/07/16 15:11
S94	51	(US-20100052277-$ or US-20070114738-$ or US-20070001429-$ or US-20060290107-$ or US-20030075903-$ or US-20100140902-$ or US-20080303232-$ or US-20070085303-$).did. or (US-5338096-$ or US-6045145-$ or US-3223431-$ or US-6378892-$ or US-5653460-$ or US-6209892-$ or US-5201535-$ or US-4620711-$ or US-6676140-$ or US-6017051-$ or US-1707186-$ or US-7475900-$ or US-7938435-$ or US-D508443-$ or US-7497461-$ or US-4570956-$ or US-6923467-$ or US-6752405-$ or US-8157273-$ or US-7896384-$ or US-7677585-$ or US-8128103-$ or US-7597332-$ or US-7481439-$ or US-6851693-$ or US-5848797-$).did. or (US-3000645-$ or US-8070180-$ or US-7832755-$ or US-7261308-$ or US-5704627-$ or US-5794951-$ or US-5647601-$ or US-2453631-$ or US-6443467-$ or US-8205906-$ or US-8262103-$ or US-8336904-$ or US-8371606-$ or US-8251382-$ or US-7377537-$).did. or (US-3000645-$ or US-2453631-$).did.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:10
S95	26	("20060131841" | "20070069505" | "20070210560" | "20080012268" | "20080224450" | "20080224451" | "20090160162" | "20100171289" | "20100201103" | "5947555" | "6045145" | "6270111" | "6331032" | "6715783" | "7032922" | "7367581" | "7475900" | "7677585" | "7753398" | "7775532" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:16

		"7798500" | "7938435" | "8061732" | "8128119" | "8157273" | "8205906").PN.				
S96	1	("8240700").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/07/23 15:17
S97	231	("1598778" | "1709527" | "20050012306" | "20050242549" | "20060001226" | "20060131840" | "20060131841" | "20060152059" | "20060157945" | "20060219374" | "20060261576" | "20090127827" | "20090127828" | "20090243260" | "20100038886" | "2616719" | "2783053" | "3112042" | "3168330" | "3227484" | "3390893" | "3459435" | "3504926" | "3556546" | "3561787" | "3653681" | "3799567" | "3989295" | "4007947" | "4023825" | "4046401" | "4111454" | "4126331" | "4191397" | "4232897" | "4248443" | "4317581" | "4322093" | "4335900" | "4362315" | "4365819" | "4378946" | "4412688" | "4415180" | "4513974" | "4542915" | "4564212" | "4591176" | "4602395" | "4606550" | "4610460" | "4632420" | "4632421" | "4660850" | "4706986" | "4733882" | "4741056" | "4741551" | "4763911" | "4763919" | "4768795" | "4770437" | "4805928" | "4807928" | "4817982" | "4819958" | "4832361" | "4856809" | "4886289" | "4892327" | "4906017" | "4907818" | "4924725" | "4930697" | "4953887" | "4968092" | "5028061" | "5056805" | "5074575" | "5087066" | "5110150" | "5143398" | "5181735" | "5184835" | "5201535" | "5205577" | "5205579" | "5238292" | "5244228" | "5246272" | "5257799" | "5362089" | "5388852" | "5398951" | "5417449" | "5417450" | "5427402" | "5431478" | "5437493" | "5441163" | "5454584" | "5460395" | "5460398" | "5472224" | "5478102" | "5489138" | "5511259" | "5511441" | "5524503" | "5527090" | "5605409" | "5622377" | "5645293" | "5649737" | "5664795" | "5669623" | "5669624" | "5669625" | "5676386" | "5718444").PN. OR ("5722682" | "5727798" | "5741021" | "5752738" | "5765855" | "5765856" | "5769447" | "5772235" | "5775718" | "5795091" | "5810432" | "5845666" |	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/23 15:17