

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* INVACARE CORPORATION

---

Appeal 2008-4324  
Reexamination Control 90/007,491  
United States Patent 6,196,343 B1  
Technology Center 3900

---

Decided: November 19, 2008

---

Before LEE E. BARRETT, ROMULO H. DELMENDO, and  
KEVIN F. TURNER, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

Patent Owner (Appellant) appeals under 35 U.S.C. §§ 134(b) and 306 from a final rejection of claims 1, 2, 4-6, and 8 (Appeal Brief filed June 29, 2007, hereinafter “App. Br.”; Final Office Action mailed July 5, 2006). We have jurisdiction under 35 U.S.C. §§ 134(b) and 306.

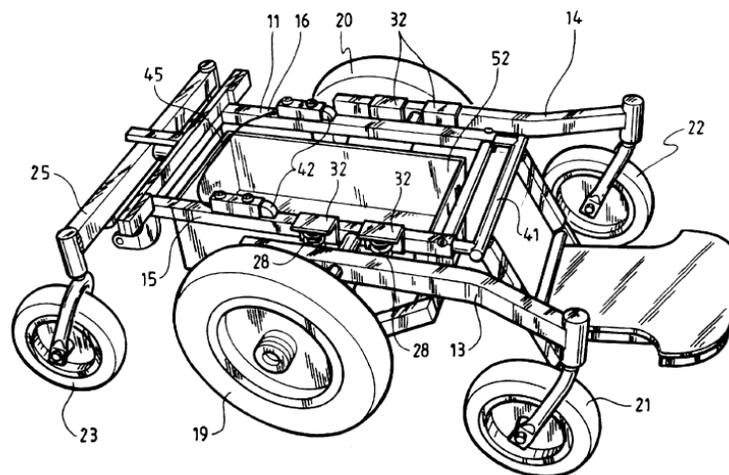
We AFFIRM.

### STATEMENT OF THE CASE

This proceeding arose from a third party request for *ex parte* reexamination filed by Sunrise Medical, Inc. (Sunrise), Carlsbad, CA, on March 31, 2005, of United States Patent 6,196,343 B1 (hereinafter the “‘343 Patent”), entitled “Mid-Wheel Drive Wheelchair” and issued to Maris Strautnieks on March 6, 2001. The real party in interest of the present appeal is Invacare Corp., Elyria, OH, the owner of the ‘343 Patent as recorded in the United States Patent and Trademark Office (Reel 019009, Frame 0134) on March 14, 2007 (App. Br. 2).

Sunrise states that the '343 Patent is involved in patent infringement litigation and that it is one of the defendants in *Invacare Corp. v. Sunrise Medical Holdings, Inc. et al.*, Case No. 1:04CV1439 (N.D. Ohio, filed July 27, 2004) (Request for Reexamination at 1).

The invention relates to “an improved mid-wheel drive wheelchair which incorporates a novel suspension structure” (col. 1, ll. 3-5). The claimed invention is best illustrated in Figures 1 and 2, reproduced below:



**FIG 1**

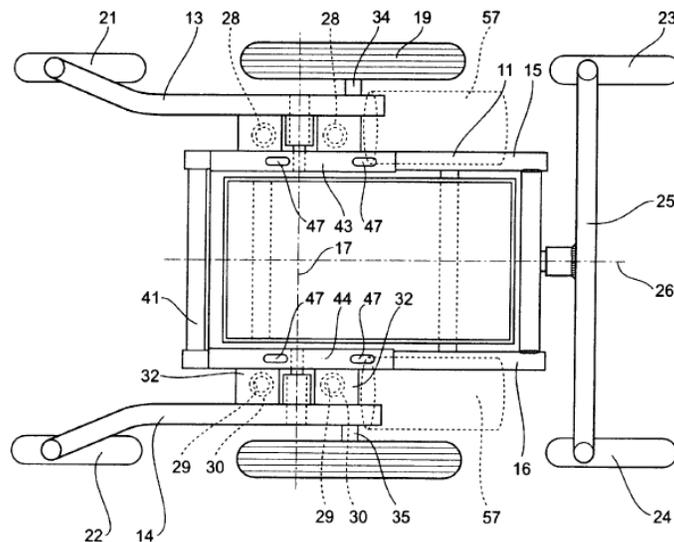


FIG 2

Figures 1 and 2 of the '343 Patent depict a front perspective view and a plan view, respectively, of the underframe of a mid-wheel drive wheelchair in accordance with a preferred embodiment of the invention recited in the appealed claims, wherein the relevant elements are: a central base frame 11; a pair of leading pivot arms 13, 14; a common transverse pivot axis 17; mid-drive wheels 19, 20; a pair of ground engaging front castor wheels 21, 22; spring means 28, 29; and a pair of transversely spaced apart ground engaging rear castor wheels 23, 24. An important feature of the suspension is that pivot arms 13, 14 can pivot independently about the axis 17.

Claim 1 on appeal reads as follows (bracketed drawing reference numerals inserted; *see* Figures 1 and 2):

1. A mid-wheel drive wheelchair [10] comprising:
  - a central base frame [11],
  - a seat or chair frame [12] attachable to said base frame [11],
  - a pair of leading pivot arms [13, 14] pivotally supported on opposite sides of said base frame [11] for independent

pivotal movement relative to the base frame [11] about a common transverse pivot axis [17], each said pivot arm [13, 14] extending forwardly of the front end of the base frame [11],

a mid-drive wheel [19, 20] mounted for rotation on each of said pivot arms [13, 14] adjacent its trailing end, with the axle of each drive wheel being located a short distance rearwardly of the common transverse pivot axis [17] of said pivot arms [13, 14],

a pair of ground engaging front castor wheels [21, 22] respectively mounted at the leading ends of said pivot arms [13, 14],

spring means [28, 29] respectively acting between each said pivot arm [13, 14] and an adjacent side portion of the base frame [11], said spring means [28, 29], in use, being arranged to resist pivotal movement of its associated said pivot arm [13, 14] and to allow said base frame [11] to tilt under spring pressure with respect the pivot arms [13, 14], and

a pair of transversely spaced apart ground engaging rear castor wheels [23, 24] movable supported with respect to said base frame [11].

The prior art references relied upon to reject the claims on appeal are:

Schaffner	6,176,335 B1	Jan. 23, 2001
Degonda	5,964,473	Oct. 12, 1999
Goertzen	5,575,348	Nov. 19, 1996
Meier	5,540,297	Jul. 30, 1996
Booth	4,128,137	Dec. 5, 1978
Rodaway	3,917,312	Nov. 4, 1975

The Examiner rejected the claims under 35 U.S.C. § 103(a) as follows: (i) claims 1, 4, and 5 as unpatentable over the combined teachings of Degonda, Booth, and Meier; (ii) claim 2 as unpatentable over the combined teachings of Degonda, Booth, Meier, and Schaffner; (iii) claim 6 as unpatentable over the combined teachings of Degonda, Booth, Meier, and

Rodaway; and (iv) claim 8 as unpatentable over the combined teachings of Degonda, Booth, Meier, and Goertzen (Final Office Action 2-5).

We first address the status of the claims on appeal. The Examiner states: “Though claims 1, 2, 4-6 and 8 stand finally rejected, only claim 1 is on appeal” (Examiner’s Answer mailed September 24, 2007, hereinafter “Ans.,” 2). The Examiner’s statement is incorrect. Appellant expressly indicated: “Because rejected dependent claims 2, 4-6, and 8 depend from claim 1, the patentability of these claims is respectfully submitted to stand at least in part with claim 1 because they incorporate all the limitations of claim 1” (App. Br. 5, n. 2). Furthermore, Appellant repeatedly urged “that the rejection of claims 1, 2, and 4-6 and claim 8 . . . is improper” (App. Br. 35; Reply Brief filed February 19, 2008, 5). Notwithstanding the Examiner’s error, Appellant has not been prejudiced because it has understood that claims 2, 4-6, and 8 stand finally rejected and has argued for the patentability of these claims based on the same arguments in support of claim 1 (App. Br. 5, n. 2; October 1, 2008 Hearing Transcript 2-3). Thus, consistent with Appellant’s arguments, we confine our discussion to the Examiner’s rejection of claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

The Examiner's rejection states that Degonda describes an embodiment of “a mid-wheel-drive wheelchair that can have one of two forward directions illustrated by arrows A and B” (Ans. 3). The Examiner further found (Ans. 3-4):

With direction B as the forward direction, the mid-wheel-drive wheelchair comprises: a base frame 62; a seat frame 30 (see Figs. 1 and 4) attached to the base frame 62 and supporting seat 2 (see Figs. 1, 4 and 16; the seat is shown generically as element 64 in Fig. 12); a leading arm 61 secured to the base frame 62 by a pivotal connection 63 providing pivotal

movement about a transverse pivot axis, the leading arm 61 extending forwardly of the front end of the base frame (see Fig. 12); mid-drive wheels 66 located on opposite sides of the base frame 62 and secured to the trailing end of the leading arm 61, with the axle 67 of the drive wheels 66 spaced a short distance rearward of the pivotal connection 63 (see Fig. 12); front castors 68 secured to the leading end of the leading arm 61 (see column 8, lines 38-41 and 43-45); a spring 72 acting between the leading arm 61 and the base frame 62; and rear castors 69 movably secured to the base frame 62 (see column 8, lines 41-45).

The Examiner's position is that although the wheelchair shown in Degonda's Figure 12 "lacks separate leading arms pivoted to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors" (Ans. 4), the teachings of Booth and Meier would have led one of ordinary skill in the art to "modify Degonda . . . by replacing the single leading arm 61 (which supports both mid-drive wheels and both front castors) with separate leading arms pivoted to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors because this insures that all ground contacting wheels remain in contact with the ground at all times . . ." (Ans. 5).

Appellant, on the other hand, contends that the references "teach away from the Final Rejection's proposed combination" (App. Br. 9). According to Appellant, "the Final Rejection's alleged motivation for modifying the primary reference was already expressly noted by the primary reference (*i.e.*, Degonda) as being accomplished by its own structure (*i.e.*, the primary reference was in this respect complete and that there would be no reason to add or substitute parts)" (App. Br. 26). Appellant further argues that even if a *prima facie* case of obviousness has been established, the relied upon

evidence of nonobviousness (e.g., commercial success) confirms the patentability of claim 1 (App. Br. 26-34).

## ISSUES

Thus, the issues arising from the contentions of the Examiner and Appellant are:

Did the Examiner err in concluding that a person having ordinary skill in the art would have found it prima facie obvious to provide Degonda's wheelchair as shown in Figure 12 with dual pivot arms, each arm being provided with a front castor wheel and spring suspension system in view of the teaching of an independent suspension in Booth?

If not, did the Examiner err in concluding that the objective evidence of nonobviousness did not overcome the prima facie case?

## FINDINGS OF FACT

### BACKGROUND:

1. Oral arguments were heard on October 1, 2008, a transcript of which is entered into the record.
2. The '343 Patent discusses certain prior art as follows (col. 1, ll. 29-46):

In recent times, wheelchairs have been designed with a mid-wheel drive configuration which employs a pair of rear wheels, a pair of intermediate drive wheels, and a pair of anti-tipping front wheels which are normally held clear of the ground, for the purpose of improving the chair's turning ability and manoeuvrability. Common to mid-wheel drive chairs is a "teeter-totter" motion which occurs when the wheelchair rocks forward over the drive wheels. This motion will

normally occur when the vehicle is going down inclines, stopping, or slowing. Any unsafe forward tilting or tipping movement of the chair is avoided by virtue of the front anti-tipper wheels which ensure that the chair does not topple. It is also known for the anti-tipper wheels to be located at the rear of the base frame of the wheelchair (rather than at the front thereof), with the pair of front castor wheels being mounted to, remain in permanent contact with the ground. An example of this is shown in U.S. Pat. No. 5,540,297.

3. The '343 Patent then states (col. 1, ll. 47-55):

It has now been found that considerable improvement in wheelchair ride and comfort, as well as wheelchair manoeuvrability, can be achieved by employing a wheel-chair having a mid-wheel drive configuration in association with a pair of front castor wheels and a pair of rear castor wheels which remain in constant contact with the ground, and wherein the front and mid-drive wheel on each side of the chair frame are independently sprung with respect to the base frame of the wheelchair.

4. The '343 Patent states (col. 1, ll. 56-61):

It is the main object of the present invention therefore to provide a mid-wheel drive wheelchair which has a novel underframe which includes three sets of ground engaging wheels and which incorporates a very simple and inexpensive suspension arrangement for improving rider comfort, stability and manoeuvrability of the wheelchair.

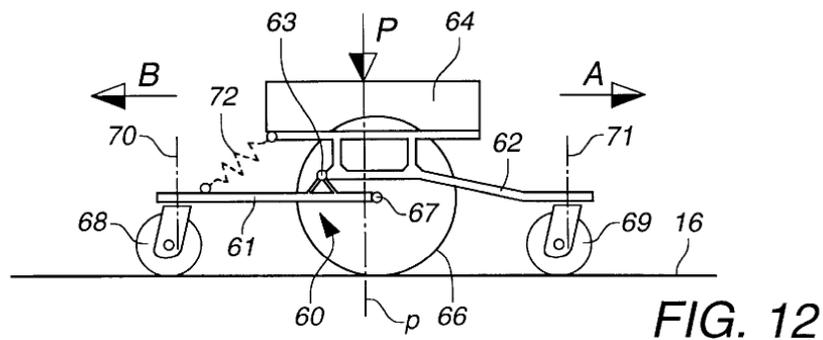
5. The '343 Patent further explains (col. 3, ll. 49-56):

It is a feature of the present invention that the front castor wheels 21, 22, the mid-drive wheels 19, 20 and the rear castor wheels 23, 24, remain substantially in constant contact with the ground regardless of its unevenness, with the sets of front and rear castor wheels 21, 22 and 23, 24 providing vastly increased stability and

balance for the wheelchair and its occupant particularly when the wheelchair is traveling over a steep incline or decline.

THE DEGONDA REFERENCE:

6. Degonda's Figure 12 is reproduced below:



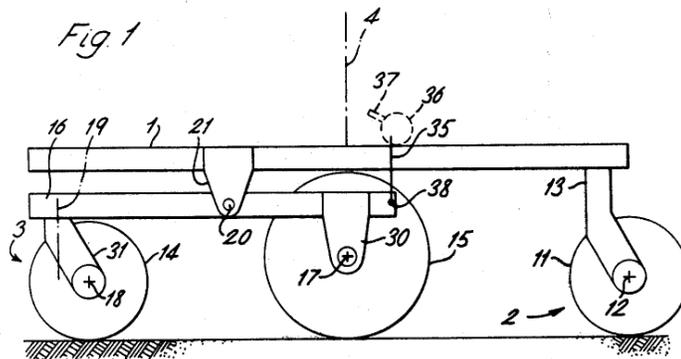
7. Degonda's Figure 12 depicts a chassis for a wheelchair which can be oriented with the direction of the front of the seat corresponding to arrow A or arrow B, as a function of the application, the type of propulsion used, and the dynamic effect (col. 8, ll. 30-33), where the rejection is based on the direction of arrow B.
8. Figure 12 shows an articulated chassis 60 comprising a first chassis portion 61 and second chassis portion 62 connected by an articulation 63 with a horizontal transverse axle, a support means 64, two main wheels 66 turning around a main common axle 67, "one or more contact wheels 68 near one end of the seat" (emphasis added), "one or more contact wheels 69" (emphasis added) on the other end of the seat, and spring 72 (col. 4, ll. 11-15; col. 8, l. 25 to col. 9, l. 33).

9. Degonda teaches that the disclosed wheelchair “is *easy to manipulate* and can surmount obstacles such as thresholds, curbs, or rough terrain, and which is effortless, reliable and *comfortable* to use because of its relatively simple construction” (emphasis added; col. 2, ll. 26-31).
10. Degonda further teaches: “[S]ince the first chassis portion comprises main wheels and *at least one* contact wheel, that is, the front or rear contact wheel or *wheels*, depending upon the design, it is the vehicle element which remains *stable* on the supporting surface, while *the resultant of the forces applied to it falls into the supporting polygon defined by the [main and contact] wheels*” (emphases added; col. 2, ll. 51-57).
11. Degonda teaches that wheels defining a “diamond-shaped arrangement reduces bulk, allows lightweight construction, and provides excellent steering” (col. 3, ll. 43-45).
12. Degonda also states that “[i]n general, all the wheels remain permanently on the ground, maintained by static forces which vary very little when the ground is uneven, at least *if there is only one contact wheel 68, 69 at each extremity* (in the diamond-shaped disposition)” (col. 9, ll. 8-12).
13. Degonda further teaches that “an energy storage means such as a spring 72 can easily be added, connecting the two chassis portions 61 and 62 (by means of a support 64 in the example in the drawing) to modify the static and dynamic behavior of the chair” (col. 9, ll. 20-24).

14. Degonda's Figures 9 and 10 show a manually controlled wheelchair with two front castor wheels 48, two main wheels 46, and two rear contact wheels 49.

THE BOOTH REFERENCE:

15. Booth's Figure 1 is reproduced below:



16. Booth's Figure 1 depicts a diagrammatic side elevation of a suspension of a peripatetic vehicle (particularly an invalid chair or wheelchair) comprising a plate 1 carrying a wheel unit 2 and a bogie system comprising two bogie units 3 (col. 1, ll. 4-13, 43-44, and 54-56).
17. Booth teaches that the disclosed suspension allows "all ground contacting wheels 11, 14 and 15 of the vehicle [to] remain in contact with the ground at all times" even when clearing an obstacle 25 (col. 2, ll. 26-31; Figures 2-4).
18. Booth further teaches: "Generally, single wheels where shown in the construction could be replaced by wheel units comprising

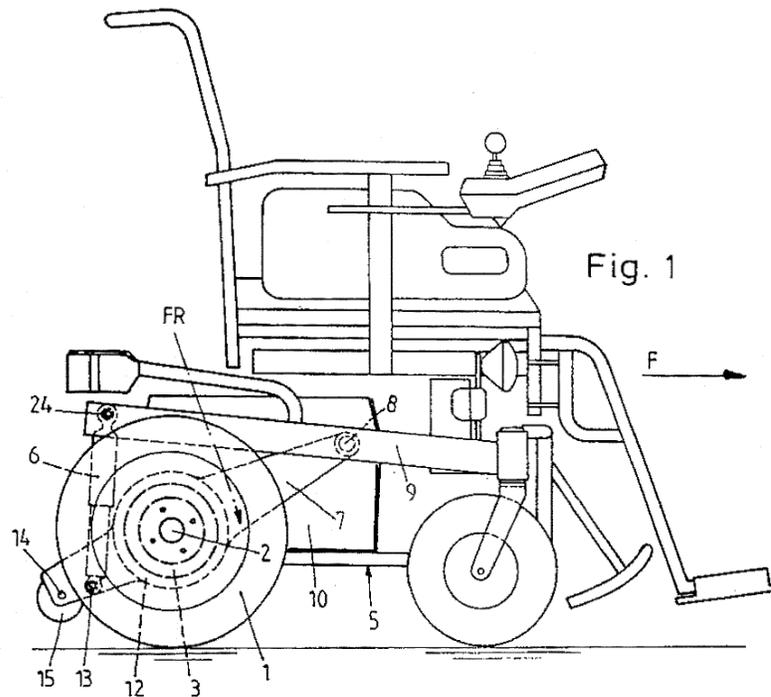
pairs of wheels, wheels arranged in bogie-type constructions, etc.” (col. 2, ll. 54-58).

19. Booth describes previously known prior art wheelchairs as follows (col. 1, ll. 27-38):

One such vehicle has four wheels, mounted at the four corners of a square, and the normal direction of travel of the vehicle lies along a diagonal of that square. *The front wheel is a sprung castered wheel*, the back is unsprung castered, and the two remaining wheels are driven and are mounted on fixed, aligned axles; steering is effected by differential driving of the two fixed-axle wheels. *The spring mounting of the front caster gives the vehicle some obstacle-mounting ability, but this ends when the resilience in the spring is taken up.* Another disadvantage of such a vehicle is that the distribution of weight is concentrated heavily upon main driving wheels; this leads to high power consumption whenever either of those wheels surmounts an obstacle. [Emphases added.]

THE MEIER REFERENCE:

20. Meier’s Figure 1 is reproduced below:



21. Meier's Figure 1 depicts an elevational view of the side of a wheelchair, wherein, inter alia, 1 is a rear wheel on either side of the wheelchair, 6 is a spring member or shock absorber, 7 is a rocker arm, 8 is a horizontal axis, and 9 is an underframe longitudinal bar (col. 2, ll. 16-17; col. 2, l. 33 to col. 3, l. 65).
22. Meier's Figure 3 is reproduced below:



26. Mr. Goertzen acknowledges that he is an employee (Director of Research and Development) at Invacare Corporation, the real party in interest of this appeal (Goertzen Declaration 1, ¶1).

27. Mr. Geortzen declares (Goertzen Declaration 3, ¶9):

9. Insuring that all the ground contacting wheels remain in contact with the ground at all times would not motivate one having ordinary skill in the art at the time the invention of the '343 patent was made to modify the chair shown in Figure 12 of the Degonda patent in the way the examiner states, because the configuration of the chair shown in Figure 12 of the Degonda patent already discloses that all the ground contacting wheels remain in contact with the ground at all times.

28. Mr. Geortzen further avers (Goertzen Declaration 4-6, ¶¶13-16):

13. The Booth patent discloses a suspension that includes a plate, a wheel unit, and two bogie units. The bogie units and entire suspension of Booth do not include any springs. The Booth patent discloses that spring mounting of a front castor is disadvantageous. The bogie units in Booth do not extend forwardly of the base frame.

14. If a designer of wheelchair suspensions at the time of the invention of the '343 patent were to modify the chair shown in Figure 12 of Degonda in view of the teachings of the Booth patent, the resulting chair could not include separate leading pivot arms extending forwardly of the base frame pivotally mounted to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors, because the Degonda and Booth patents both do not disclose separate leading pivot arms extending forwardly of the base frame pivotally attached to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors.

15. If a person that designed wheelchair suspensions at the time the invention of the '343 Patent was made were to modify the chair shown in Figure 12 of Degonda in view of the teachings of the Booth patent, the resulting chair would not include spring means acting between a pivot arm and an adjacent side portion of the base frame, because the Booth patent discloses that using springs is disadvantageous and the Booth bogie units and suspensions do not have springs.

16. The Meier and Booth patents take different approaches to providing a wheelchair suspension system. The Meier patent discloses an independent arrangement where each rear drive wheel is independently sprung from the frame having the front casters (e.g., Meier Fig. 1). The Booth patent discloses a dependent arrangement where the drive wheel and front casters are each mounted under the frame on the same bogie or pivot arm (e.g., Booth Fig. 1). The disclosures of the Meier and Booth patents take mutually exclusive paths to wheelchair suspension systems: one an independent arrangement (Meier) and the other a dependent arrangement (Booth). Also, the Meier patent discloses the use of springs and the Booth patent discloses that springs are a disadvantage in the context of prior art and omits their use in any disclosed embodiment. Therefore, it would be difficult to combine the teachings of the Meier and Booth patents because they take different, mutually exclusive, approaches to wheelchair suspension systems.

29. Regarding the combination of Meier with Degonda, Mr. Goertzen declares (Goertzen Declaration 4, ¶12):

If a person that designed wheelchair suspensions at the time of the '343 patent was made were to modify the chair shown in Figure 12 of Degonda in view of the teachings of the Meier patent, the resulting chair would not include leading pivot arms that support both the drive wheel and the front castor. Rather, the wheelchair designer at the time the invention of the '343 patent was

made would follow the teachings of the Meier patent and mount the drive wheels separate and apart from the front castors. Meier does not disclose mounting the drive wheels on the same pivot arm as a castor. The front castors in Meier are mounted on fixed front arms separate and apart from the arms to which the drive wheels are mounted.

THE SWANGER DECLARATION:

30. Appellant also filed a “DECLARATION UNDER 37 C.F.R. § 1.132 of DR. LEE A. SWANGER” executed by Lee Allen Swanger, Ph.D. (hereinafter “Swanger Declaration,” App. Br. Evidence Appendix, Tab 2).
31. Dr. Swanger states that he is a Principal Engineer and Miami Office Director of Exponent, Inc., an engineering and scientific services company (Swanger Declaration 1, §1).
32. Appellant asserts that Dr. Swanger “is not an employee of Patent Owner and has no vested interest in the outcome of this proceeding” (App. Br. 20).
33. Dr. Swanger further states that he has been retained by counsel for Invacare to provide testimony (Swanger Declaration 2, §2).
34. Dr. Swanger does not state the nature and/or the amount of compensation received for his testimony.
35. Dr. Swanger declares that he is “at least ordinarily skilled in the art of vehicle suspensions in general and wheelchair suspensions particularly” (Swanger Declaration 2, §1).
36. Dr. Swanger declares that Degonda’s “triangular arrangement of wheels is like a three-legged stool; all three wheels of a

triangular arrangement will be in simultaneous contact with the ground” (Swanger Declaration 3, §4).

37. Regarding Booth, Dr. Swanger avers (Swanger Declaration 4, §5; emphasis added):

*The bogie wheel arrangement is designed to share a load between a pair of wheels, while allowing both wheels to remain in ground engagement. There is no spring used with a bogie suspension, and the sharing of the load between the wheels is equal if the wheel axles are equidistant from the bogie central pivot axis. If the pivot axis is offset from the mid-point between the two wheels, the wheel closer to the pivot will bear a proportionately larger share of the load.*

*The Booth ‘137 patent discloses a suspension with independent bogies on either side of the wheelchair. Booth’s Figure 6 clarifies this point, which is spelled out in the written specification. Booth’s bogie arrangement without springs will of necessity apply a significant load to the leading wheels on the bogies, and the mid-drive wheels will not bear a significant majority of the load of the wheelchair plus occupant. Booth ‘137 also teaches a single castered rear wheel attached to the main frame of the wheelchair, without suspension. Booth indicates that his wheelchair will maintain all (five) wheels in contact with the ground during operation, is capable of executing a tight radius turn via the powered mid-drive wheels, and that the wheelchair has directional stability due to the fact that the mid-drive wheels are not castered.*

The Booth ‘137 patent does not disclose the use of any springs with its bogie system. In the context of a prior vehicle suspension example, Booth refers to limitations of springs in its background section and then goes on to describe other disadvantages of the vehicle. Booth describes that springs offer some obstacle mounting ability, but this ability ends when the resilience in the spring is taken up. Hence, the ability of Booth’s

bogie system to traverse obstacles would be interfered with by use of springs, especially when the resilience of the springs is taken up because it would prematurely limit the bogie's travel.

The Booth '137 differs from the Strautnieks '343 patented device in that Booth has no spring suspension, has no leading pivot arms that extend forward of the main frame, does not have a pair of rear wheels that are movable supported with respect to the main frame, and does not have its mid-drive wheels pivoted a short distance rearward of a common pivot point.

38. Dr. Swanger opines (Swanger Declaration 6, §7): “Since Booth does not teach springs to impart a force with bogie frames aligned with the main chassis of the wheelchair and since Booth describes springs as a disadvantage to a bogie-type system, the optional spring 72 of Degonda would have to be eliminated.”
39. Dr. Swanger states (Swanger Declaration 6, §7):

Degonda states that either of his triangular wheel arrangements, either forward or aft, may be in ground contact, and that the triangular configuration promotes all three wheels of either triangle being in simultaneous ground contact. Thus I find that there is not motivation for combining the independent suspension of Booth with Degonda, since Degonda clearly states that he has addressed the problem of simultaneous wheel ground engagement.

#### THE SULLIVAN AFFIDAVIT:

40. Appellant also filed an “AFFIDAVIT” executed by Mark Sullivan. (hereinafter “Sullivan Affidavit,” App. Br. Evidence Appendix, Tab 4).

41. Mr. Sullivan states that he is Vice President Rehab Category of Invacare Corp. (Sullivan Aff. ¶2).
42. Mr. Sullivan characterizes “[t]he invention described in claim 1” of the ‘343 Patent as one that “provides maneuverability and obstacle climbing capability in a six wheel, mid-wheel drive power wheelchair” (Sullivan Aff. ¶10).
43. Mr. Sullivan further characterizes the invention in claim 1 of the ‘343 Patent as one that “maintains all six wheels in substantially constant contact with the ground meaning that during normal operation all six of the wheels are on the ground the vast majority of the time . . .” (Sullivan Aff. ¶10.)
44. Mr. Sullivan estimates that Invacare’s market share of Consumer powered mid-wheel drive wheelchairs (no special controls and/or rehabilitation systems) was roughly 20% in 2001 (Sullivan Aff. ¶6-7).
45. Mr. Sullivan also states that in 2001, the market share of a competitor (Pride Mobility Product Corp.) for Custom powered mid-wheel drive wheelchairs (special controls and/or rehabilitation systems) approached 100% and that Invacare sold only 14 such Custom powered mid-wheel drive wheelchairs (Sullivan Aff. ¶5-7).
46. Mr. Sullivan also avers that market shares increased to roughly 28% for Consumer powered wheelchairs and 56% for Custom powered wheelchairs in 2003 (Sullivan Aff. ¶11).
47. In 2004, market share for Custom powered wheelchairs is said to have risen to over 70% (Sullivan Aff. ¶11).

48. Mr. Sullivan states (Sullivan Aff. ¶12):  
[I]n 2000, prior to incorporating the invention into its designs, Invacare sold only 2,036 mid-wheel drive wheelchairs in the United States. Two years later, after incorporating the six-wheel substantially on-the-ground design made possible by the invention into its wheelchairs, Invacare sold over 58,000 units in the United States.
49. Mr. Sullivan did not describe the specifics of Invacare's mid-wheel drive wheelchairs sold prior to the commercialization of the wheelchair of the invention.
50. Mr. Sullivan did not discuss the specifics of the commercial product that embodies the claimed invention (e.g., the specifics of the electronic controls, power system, seat design and comfort, or the like).
51. Mr. Sullivan asserts that Pride, a competitor, "is now copying Invacare's six-wheel substantially on-the-ground design (as described in claim 1) in all of its newly released mid-wheel drive wheelchairs" (Sullivan Aff. ¶13).

**THE BERTRAND DECLARATIONS:**

52. Appellant also filed two declarations captioned "DECLARATION UNDER 37 C.F.R. § 1.132" executed by John Bertrand (hereinafter "Bertrand Declaration," App. Br. Evidence Appendix, Tabs 5 and 6).
53. Mr. Bertrand states that he is a Patent Specialist at Invacare Corp. (Bertrand Declaration ¶1).

54. Mr. Bertrand attaches as Exhibit 2 total marketing and advertising costs spent by Invacare from 1998 to 2005 on wheelchair products that are within the scope of the claimed invention (Bertrand Declaration, ¶¶6-7; Exhibit 2).
55. Exhibit 2 of the Bertrand Declaration shows that total marketing and advertising costs remained approximately the same during 1998-2005 (*id.*).

**THE LIPKA DECLARATION:**

56. Appellant also filed a “DECLARATION UNDER 37 C.F.R. § 1.132” of Daniel D. Lipka (hereinafter “Lipka Declaration,” App. Br. Evidence Appendix, Tab 7).
57. Mr. Lipka states that he is a Certified Rehabilitation Technology Supplier at Miller Sales, Rental & Service, Inc., which is a “durable medical equipment dealer that sells, among other things, power wheelchairs by all major manufacturers including Invacare Corp., Sunrise Medical, Inc., Pride Mobility Inc., and Permobil AB” (Lipka Declaration ¶¶1 and 4).
58. Mr. Lipka declares that “[w]ith the introduction of the claimed invention, power wheelchair sales started to quickly shift away from rear-drive wheel power wheelchairs to mid-drive wheel power wheelchairs” and that “[t]oday, approximately 75% or more of Miller’s power wheelchair sales involve mid-drive wheel power wheelchairs having the claimed suspension or an equivalent” ( Lipka Declaration ¶11).
59. Mr. Lipka states (Lipka Declaration ¶13):

13. Marketing and advertising by power wheelchair manufacturers do not play as dominant a role in the sales or commercial success of a particular power wheelchair as do other factors. One major factor includes the technology of the power wheelchair, particularly whether the wheelchair is a rear-drive wheel or a mid-drive wheel design such as that claimed in the '343 patent. Other factors are whether a power wheelchair fits into an insurance reimbursable category and a professional sales force that is technically knowledgeable with respect to the power wheelchair's specifications and the particular needs of the wheelchair customer.

SWANGER DECLARATION II:

60. Appellant filed an additional "DECLARATION UNDER 37 C.F.R. § 1.132 of DR. LEE A. SWANGER" executed by Lee Allen Swanger (hereinafter Swanger Declaration II, App. Br. Evidence Appendix, Tab 8).
61. Dr. Swanger asserts that Pride Mobility Jazzy 600 wheelchair, which is a product made by a competitor of Invacare, was introduced into the marketplace after the '343 Patent issued (Swanger Declaration II ¶3).
62. Dr. Swanger states that Pride Mobility Jazzy 600 includes every element recited in appealed claim 1 (*id.*).
63. At oral argument, Appellant's counsel provided three sets of a color copy of the appendix to Swanger Declaration II (a copy of one set appended to this Decision).

## PRINCIPLES OF LAW

On appeal to this Board, Appellant must show that the Examiner erred in finally rejecting the claims. *Cf. In re Kahn*, 441 F.3d 977, 985-986 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)); *see also* 37 C.F.R. § 41.37(c)(1)(vii).

While the term “means” in a claim inheres a presumption that the inventor intended to invoke 35 U.S.C. § 112, ¶6, “[t]his presumption can be rebutted when the claim, in addition to functional language, recites structure sufficient to perform the claimed function in its entirety.” *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1367, 1375 (Fed. Cir. 2003).

It is well settled that the United States Patent and Trademark Office (PTO) is obligated to give claim terms their broadest reasonable interpretation, taking into account any enlightenment by way of definitions or otherwise found in the specification. *In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007) (“[T]he PTO must give claims their broadest reasonable construction consistent with the specification . . . Therefore, we look to the specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation.”).

“Section 103 forbids issuance of a patent when ‘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.’” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1734 (2007).

*KSR* reaffirmed the analytical framework set out in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which states that an objective obviousness analysis includes: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; and (3) resolving the level of ordinary skill in the pertinent art. *KSR*, 127 S. Ct. at 1734. Secondary considerations such as commercial success, long felt but unsolved needs, or failure of others “‘might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.’” *Id.* (quoting *Graham*, 383 U.S. at 17-18).

*KSR* explained:

For over a half century, the Court has held that a “patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men.” . . . This is a principal reason for declining to allow patents for what is obvious. The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.

*KSR*, 127 S. Ct. at 1739. Thus, “when a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 127 S. Ct. at 1740. And, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.*

*KSR* disapproved a rigid approach to obviousness (*i.e.*, an analysis limited to lack of teaching, suggestion, or motivation). *KSR*, 127 S. Ct. at 1741 (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”). See also *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006) (“Our suggestion test is in actuality quite flexible and not only permits, but requires, consideration of common knowledge and common sense”); *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1291 (Fed. Cir. 2006) (“There is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art. We do not have a rigid test that requires an actual teaching to combine . . .”).

A “person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art” and the level of ordinary skill in the art may be best reflected in the references of record. *In re GPAC*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

“When the PTO shows *prima facie* obviousness, the burden then shifts to the applicant[s] to rebut.” *In re Mayne*, 104 F.3d 1339, 1342 (Fed. Cir. 1997).

“[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

“[C]ase law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in

order to provide the motivation for the current invention.” *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004).

A party asserting commercial success must establish a nexus between the commercial success and the claimed invention. *In re Huang*, 100 F.3d 135, 139 (Fed. Cir. 1996)(“Even assuming that Huang had sufficiently demonstrated commercial success, that success is relevant in the obviousness context only if there is proof that the sales were a direct result of the unique characteristics of the claimed invention – as opposed to other economic and commercial factors unrelated to the quality of the patented subject matter.”). Furthermore, the commercial success must be attributed to the material difference between the claimed invention and the closest prior art. *Asyst Technologies, Inc. v. Emtrak, Inc.*, No. 2007-1554, slip op. at 9-10 (Fed. Cir. Oct. 10, 2008) (“While the evidence shows that the overall system drew praise as a solution to a felt need, there was no evidence that the success of the commercial embodiment . . . was attributable to the . . . only material difference between [the prior art] and the patented invention.”).

The scope of the “[o]bjective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.” *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971); *accord In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983). The objective evidence is not commensurate in scope (coextensive) with the claimed subject matter if the claims are broader in scope than the scope of the objective evidence, *e.g.*, if the product included elements or features not recited in the claims which may be responsible for the commercial success or praise. *See Joy Technologies Inc. v. Manbeck*, 751 F. Supp. 225, 229-30 (D.D.C. 1990) (and cases cited therein), *aff'd*, 459 F.2d 226 (Fed. Cir. 1992).

Mere allegations or conclusory statements in a specification or affidavit do not take the place of *factual* evidence. *See, e.g., In re Lindner*, 457 F.2d 506, 508 (CCPA 1972) (“The affidavit and specification do contain allegations that synergistic results are obtained with all the claimed compositions, but those statements are not supported by any factual evidence . . . [M]ere conclusory statements in the specification and affidavits are entitled to little weight when the Patent Office questions the efficacy of those statements.”).

“[E]vidence of secondary considerations does not always overcome a strong prima facie showing of obviousness.” *Asyst*, slip op. at 10 (citing *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1372 (Fed. Cir. 2007)).

## ANALYSIS

### *Claim Construction*

We start with claim construction. Appellant asserts that the recitation “spring means . . . arranged to resist pivotal movement of its associated said pivot arm and to allow said base frame to tilt under spring pressure with respect the pivot arms” appearing in claim 1 “is intended to be governed under 35 U.S.C. § 112, ¶ 6” (App. Br. 4; Fact 3). Appellant, however, fails to explain why the term “spring” fails to recite enough structure such that the strictures of 35 U.S.C. § 112, ¶ 6 necessarily applies.<sup>1</sup> Nevertheless, when pressed at oral argument, Appellant’s counsel stated that Appellant was no longer relying on the argument that the claimed subject matter patentably

---

<sup>1</sup> *Altiris*, 318 F.3d at 1375 (“presumption [that “means” invokes the strictures of 35 U.S.C. § 112, ¶6] can be rebutted when the claim, in addition to functional language, recites structure sufficient to perform the claimed function in its entirety.”).

distinguishes over the prior art on the basis of 35 U.S.C. § 112, ¶6. (Hearing Transcript 10-11). Accordingly, we construe the claim element “spring means . . . arranged to resist pivotal movement of its associated said pivot arm and to allow said base frame to tilt under spring pressure with respect the pivot arms” to read on any spring that is capable of performing the recited functions.

*Scope and Content of the Prior Art:*

Degonda, like Patentee, discloses a mid-wheel drive wheelchair that is comfortable, stable, and maneuverable (Facts 2-14). Specifically, in Figure 12, Degonda describes a chassis for a mid-wheel drive wheelchair including: a first chassis portion 61 (corresponding to Appellant’s “pivot arm”) that is pivotally supported on a second portion 62 (corresponding to Appellant’s “central base frame”) for pivotal movement relative to the second chassis portion 62 about articulation 63 (corresponding to Appellant’s “pivot axis”) and that extends forwardly of the second portion 62; a pair of mid-drive wheels 67, which contact the ground, mounted on the first chassis portion 61 about axle 67, which is “located a short distance rearwardly” of articulation 63; front, ground-contacting wheel 68 mounted at the leading end of first portion 61; spring 72 acting between first chassis portion 61 and second chassis portion 62; and rear, ground-contacting wheel 69 (Facts 6-8). Thus, Degonda discloses a diamond-shaped wheel configuration in which four wheels (one front, two mid-drive, and one rear) contact the ground at all times (Facts 10 and 11).

Booth, like Patentee, describes a wheelchair with an independent suspension system that allows “all ground contacting

wheels. . . of the vehicle [to] remain in contact with the ground at all times” (Facts 5 and 17). In particular, Booth discloses a wheelchair including a suspension system comprising a plate 1 (corresponding to Appellant’s “central base frame”) carrying a wheel unit 2 (corresponding to Appellant’s “ground engaging rear castor wheel[.]”) and a bogie system comprising two bogie units 3 (corresponding to Appellant’s “pair of leading pivot arms pivotally supported on opposite sides of said base frame for independent pivotal movement relative to the base frame about a common transverse pivot axis, each said pivot arm extending forwardly of the front end of the base frame, . . . [and] a pair of ground engaging front castor wheels respectively mounted at the leading ends of said pivot arms”) (Facts 15 and 16). Booth further teaches that “[g]enerally, single wheels where shown in the construction could be replaced by wheel units comprising pairs of wheels, wheels arranged in bogie-type constructions, etc.” (Fact 18).

*Differences between the Prior Art and Claim 1 at Issue:*

The only argued differences between Degonda and the subject matter of claim 1 are: (1) the wheelchair associated with the chassis of Degonda’s Figure 12 includes only one forwardly extending pivot arm (first portion 61 is part of a rigid platform that supports the batteries) for pivotal movement relative to the base frame, whereas claim 1 recites a “pair of leading pivot arms pivotally supported on opposite sides of said base frame for independent pivotal movement relative to the base frame about a common transverse pivot axis”; (2) Degonda’s wheelchair has only one ground engaging front wheel, whereas claim 1 recites “a pair of ground engaging

front castor wheels respectively mounted at the leading ends of said pivot arms”; and (3) Degonda shows only one spring acting between the pivot arm and the base frame, whereas claim 1 recites a “spring means respectively acting between each said pivot arm and an adjacent side portion of the base frame.” Although claim 1 recites “a pair of transversely spaced apart ground engaging rear castor wheels movably supported with respect to said base frame,” and Degonda shows only one rear wheel, Degonda describes that there may be “one or more” rear contact wheels (col. 8, ll. 40-41, Fact 8). Thus, a pair of rear wheels is not argued to be a difference.

The only differences between the wheelchair of Booth and the subject matter of claim 1 are: (1) Booth’s pair of frame members 16 (i.e., pivot arms) do not “extend[] forwardly of the front end of the base frame,” which corresponds to plate 1 in Booth’s Figure 1 (note that frame member 16 and plate 1 have ends that stop at the same point); (2) Booth’s chassis does not include any “spring means respectively acting between each said pivot arm and an adjacent side portion of the base frame . . .”; and (3) Booth’s chassis includes only one rear castor wheel instead of the claimed “pair of transversely spaced apart ground engaging rear castor wheels . . . .”

Although Dr. Swanger states that Booth “does not have its mid-drive wheels pivoted a short distance rearward of a common pivot point” (Swanger Declaration 4, §5; Fact 37), we do not find this to be a difference because the relative term “short distance,” absent a special definition, reads on the distance from element 17 to element 20 in Booth. *In re Icon Health*, 496 F.3d at 1379 (“[T]he PTO must give claims their broadest reasonable construction consistent with the specification . . . Therefore, we look to the

specification to see if it provides a definition for claim terms, but otherwise apply a broad interpretation.”).

*The Level of Ordinary Skill in the Art:*

A “person of ordinary skill in the art is a hypothetical person who is presumed to know the relevant prior art” and the level of ordinary skill that that person possesses is reflected in the references of record. *In re GPAC*, 57 F.3d at 1579. The relevant art includes at least the design of wheelchair underframe assemblies or chassis including suspensions. One of ordinary skill in the art is presumed to have sufficient skill to apply design principles of one wheelchair chassis including suspension to another chassis including suspension.

*Obviousness of Claimed Subject Matter:*

As discussed, Degonda teaches the general geometry of a suspension system having mid-drive wheels mounted on a pivot arm a short distance rearwardly of the pivot between the pivot arm and the chassis, front and rear wheels, and a spring acting between the pivot arm and the chassis. However, Degonda does not describe the Figure 12 chassis as having a “pair of leading pivot arms pivotally supported on opposite sides of said base frame for independent pivotal movement relative to the base frame about a common transverse pivot axis,” i.e., Degonda does not disclose a pair of independently pivotal pivot arms. Booth teaches a wheelchair suspension system having a pair of independently pivotable pivot arms which has the advantage of allowing “all ground contacting wheels 11, 14 and 15 of the

vehicle [to] remain in contact with the ground at all times” even when clearing an obstacle 25 (Fact 17).<sup>2</sup>

A person having ordinary skill in the art would have had good reason to modify Degonda’s single pivot arm suspension as shown in Figure 12 with two independent suspensions as taught by Booth – one on either side of second portion 62 (*i.e.*, base frame) – in order to obtain Booth’s advantage of a chassis that allows all the ground contacting wheels to remain in contact with the ground at all times, even in the event of clearing an obstacle. The advantage of using independent front suspension systems in Booth, namely to allow all ground-contacting wheels to remain in contact with the ground at all times, is identical to that of Patentee (Fact 5). With respect to the use of two front castor wheels, one on each pivot arm, such a wheel arrangement would necessarily follow when Degonda’s wheelchair is modified with two independent suspensions as shown in Booth, each of Booth’s suspensions having a front castor wheel. This is not inconsistent with Degonda, which teaches that the chassis may have “*one or more* contact wheels 68” (Facts 8, 10, and 14). Likewise, the use of two identical independent suspensions in Degonda would necessarily result in the use of two springs 72 – one on each pivot arm.

Thus, we conclude that the modification of the single front wheel/suspension configuration as shown in Degonda’s Figure 12 to a dual front wheel configuration including “a pair of leading pivot arms pivotally supported on opposite sides of said base frame for independent pivotal movement relative to the base frame about a common transverse pivot axis”

---

<sup>2</sup> We find no difference between the bogeys in Booth and the pivot arms recited in claim 1.

with “a pair of ground engaging front castor wheels respectively mounted at the leading ends of said pivot arms” and “spring means respectively acting between each said pivot arm and an adjacent side portion of the base frame” would have been obvious under 35 U.S.C. § 103(a) to one of the ordinary skill in the art in view of Booth. “[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 127 S. Ct. at 1740.

Alternatively, since obviousness is based on the collective teachings of the references, it may be helpful in verifying the obviousness conclusion to consider whether one of ordinary skill would have had a reason to modify Booth in view of the teachings of Degonda. In a way this may be easier to analyze since Booth teaches independent suspensions. “[T]he test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” *In re Keller*, 642 F.2d at, 425. “The question is whether it would have been obvious to one of ordinary skill in the art, working with the . . . [prior art] references before him, to do what the inventors herein have done . . . .” *Id.* at 425. Also, the collective teachings of the references do not depend on the order in which the references are modified. *See In re Bush*, 296 F.2d 491, 496 (CCPA 1961) (“In a case of this type where a rejection is predicated on two references each containing pertinent disclosure which has been pointed out to the applicant, we deem it to be of no significance, but merely a matter of exposition, that the rejection is stated to be on A in view of B instead of on B in view of A, or to term one reference primary and the other secondary.”).

Degonda teaches that a spring 72 connecting the two chassis portions 61 and 62 modifies the static and dynamic behavior of the chair (Facts 13 and 14). Hence, a person having ordinary skill in the art would have been led to modify Booth's suspension system to include a spring that acts between each of Booth's frame members 16 and plate 1 to modify and thus control the static and dynamic behavior of the wheelchair. Booth states in the description of the prior art that "[t]he spring mounting of the front caster gives the vehicle some obstacle-mounting ability, but this ends when the resilience in the spring is taken up" (col. 1, ll. 31-34; Fact 19), but this does not teach away from using a spring as Appellant's experts say (Facts 28 and 37) because the statement is made with respect to prior art with a single front caster, not with respect to the described dual pivot arm independent suspension. While Booth's frame member 16 does not extend forwardly of plate 1, as shown in Figure 1, a person having ordinary skill in the art would have found it obvious to use a shorter plate 1 in view of Degonda's Figure 12 since the extra length serves no function. Also, while Booth's wheelchair includes only one rear wheel, it would have been obvious to provide two rear wheels as shown in Degonda's Figure 9 for improved weight distribution and stability (Fact 14). Accordingly, we conclude that one of ordinary skill in the wheelchair suspension art would have been motivated to modify Booth in view of the teachings of Degonda to arrive at the subject matter of claim 1.

We need not discuss Meier because it is cumulative to Degonda and Booth, at least with respect to appealed claim 1.

Appellant argues that a person having ordinary skill in the art would have had no reason to modify the wheelchair chassis of Degonda's Figure 12

because the prior art is already “complete and whole” in terms of the Examiner’s stated reason (to keep all ground contacting wheels on the ground at all times) for combining the references (App. Br. 11, 20-21). We disagree.

Appellant’s argument appears to be based on a rigid application of the so-called teaching-suggestion-motivation test. Section 103(a) is not limited to situations in which the prior art reference explicitly states that prior art is incomplete and thus requires modification. In other words, the reason for modifying the prior art or combining the references need not be expressly stated. Rather, the reason may be implicit or be based on common sense. *KSR*, 127 S. Ct. at 1741 (“The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”); *DyStar*, 464 F.3d at 1367 (“Our suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense”); *Alza*, 464 F.3d at 1291 (“There is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art. We do not have a rigid test that requires an actual teaching to combine . . .”).

In this case, Degonda states that “[i]n general, all the wheels remain permanently on the ground, maintained by static forces which vary very little when the ground is uneven, at least if there is only one contact wheel 68, 69 at each extremity (in the diamond-shaped disposition)” (emphasis added; Fact 12). Booth, however, teaches that the disclosed bogie systems (i.e., independent suspension systems) have the advantage that all ground-contacting wheels remain in contact with the ground “at all times,” even

when clearing an obstacle (Fact 17). Thus, the prior art gives good reason for one of ordinary skill in the art to modify Degonda with Booth.

Even if Degonda were equally effective as Booth in terms of maintaining all the ground contacting wheels on the ground, that fact would not have discouraged one of ordinary skill in the art from arriving at Appellant's claimed subject matter. In that case, the prior art would have suggested that Booth's configuration and Degonda's configuration provide comparable results. While Degonda's wheelchair would have been a perfectly usable product, a person having ordinary skill in the art would not have been dissuaded in any way from making the proposed modification because these configurations would have been interchangeable. Thus Appellant's claimed subject matter would have been *prima facie* obvious.

Moreover, the collective teachings of the prior art give additional reasons for combining the references in order to arrive at Appellant's claimed subject matter. Specifically, a person having ordinary skill in the art would have been led to modify Booth's wheelchair in view of Degonda's teachings (namely the provision of springs, a forwardly extended frame member 16, and an additional rear castor wheel), as we discussed above. These additional reasons do not depend on the advantage of all ground-contacting wheels remaining on the ground at all times. Thus, Appellant's argument does not compel a conclusion of nonobviousness.

"When the PTO shows *prima facie* obviousness, the burden then shifts to [Appellant] to rebut." *In re Mayne*, 104 F.3d at 1342.

Appellant argues that the "declarations of Mr. Goertzen and Dr. Swanger each discuss the *Graham* factors and conclude that, if there is any motivation to combine the references, it would not result in a combination

that included each of the elements of claim 1” (App. Br. 9; Facts 25-39). Specifically, Appellant contends that “Mr. Goertzen and Dr. Swanger declared that the prior art would have led them down the path to modifications *different* from that proposed by the Final Rejection” (App. Br. 9).

While we have considered the relied upon portions of the Declarations of Mr. Goertzen and Dr. Swanger, they are not powerful or probative evidence of nonobviousness as Appellant might think. Specifically, we do not find the relied upon testimonies particularly helpful because they fail to address key parts of the prior art disclosures, fail to take into account the teachings of the prior art as a whole, and fail to consider common sense or knowledge of one of ordinary skill.

When addressing the prior art, declarants simply make conclusory statements while attacking the references individually without considering the prior art teachings as a whole. Mr. Goertzen, in particular, states:

[T]he chair [resulting from the combination of references] could not include separate leading pivot arms extending forwardly of the base frame pivotally mounted to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors, because the Degonda and Booth patents both do not disclose separate leading pivot arms extending forwardly of the base frame pivotally attached to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors. [Fact 28.]

While the statement regarding Degonda and Booth (“Degonda and Booth patents both do not disclose separate leading pivot arms extending forwardly of the base frame pivotally attached to opposite sides of the base frame for independently supporting respective mid-drive wheels and front castors”) is literally or technically true, Mr. Goertzen does not discuss in any meaningful

way, what the *combined* teachings would have suggested to one of ordinary skill in the art. In essence, Mr. Goertzen says that neither reference alone meets claim 1, but that is not the end of an obviousness inquiry. Here, Degonda teaches the forwardly extended leading pivot arm with spring suspension and the alternative use of more than one front wheel while Booth teaches the use of independent suspensions on either side of plate 1 (*i.e.*, the base frame). Again, we conclude that the collective teachings of the prior art would have given good reason for a person having ordinary skill in the art to arrive at the here claimed subject matter. *In re Keller*, 642 F.2d at 426 (“[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references.”).

In the case of Dr. Swanger, he testifies that Degonda’s “triangular arrangement of wheels is like a three-legged stool; all three wheels of a triangular arrangement will be in simultaneous contact with the ground” and that, therefore, “there is not motivation for combining the independent suspension of Booth with Degonda . . .” (Facts 36 and 39). But this testimony ignores the prior art teachings that Booth and Degonda are interchangeable, thus rendering Appellant’s claimed subject matter *prima facie* obvious. Nor does it address the full range of possibilities suggested by the prior art (*e.g.*, modifying Booth’s wheelchair in view of the teachings of Degonda to arrive at Appellant’s claimed subject matter).

Appellant asserts that “[b]ecause Degonda discloses that springs are optional and Booth discloses that springs are a disadvantage and omits their use in all disclosed embodiments, Booth fairly suggests omission or removal of the spring 72 from the structure of Degonda . . .” (App. Br. 16; Facts 28, 37, and 38). We disagree. The alleged “disadvantage” centers on Booth’s

disclosure, which states: “The spring mounting of the front castor gives the vehicle some obstacle-mounting ability, but this ends when the resilience in the spring is taken up” (Booth col. 1, ll. 31-33; Fact 19). But this disclosure refers to a prior art system that “has four wheels, mounted at the four corners of a square, and [in which] the normal direction of travel of the vehicle lies along a diagonal of that square,” not Booth’s bogie system (Fact 19). Also, the “spring mounting of front castors” as described in Booth’s discussion of previous prior art has not been shown to be the same as Degonda’s spring 72, which acts between the first and second chassis portions 61 and 62. Even assuming that they were the same, Booth’s disclosure hardly constitutes the type of disclosure that would have led a person of ordinary skill in the art to a different path, *i.e.*, dispense with springs altogether. Indeed, a person having ordinary skill in the art would have expected that a spring would provide the disclosed *advantage* of better obstacle-mounting ability up to the point that the resilience of the spring is taken up. Also, even if Booth’s disclosure is considered as teaching a disadvantage, “case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide the motivation for the current invention.” *In re Fulton*, 391 F.3d at 1200.

Regarding the spring, Dr. Swanger testified that “[t]here is no spring used with a bogie system” (Fact 37). But Dr. Swanger did not explain why that is necessarily the case for all wheelchair chassis configurations. In fact, Dr. Swanger’s testimony on this point appears to be directly refuted by Degonda’s disclosure.

Appellant also relies on commercial success and copying as secondary considerations of nonobviousness (App. Br. 27-33). In support, Appellant

relies on the Sullivan Affidavit (Tab 4) as well as the Declarations of Bertrand, Lipka, and Swanger (Tabs 5-8) (Facts 40-63).

A party asserting commercial success must establish a nexus between the commercial success and the claimed invention. *In re Huang*, 100 F.3d at 139. Recently, our reviewing court explained that the commercial success must be attributed to the material difference between the claimed invention and the closest prior art. *Asyst*, slip op. 10.

Applying these principles, we find that the proffered evidence of commercial success is insufficient to outweigh the strong evidence of obviousness. Specifically, Appellant did not meet its burden of demonstrating that the material differences between the claimed invention and the closest prior art (Degonda's Figure 12) resulted in commercial success.

When discussing the increased market shares, Mr. Sullivan did not discuss the particulars of Invacare's commercial wheelchair prior to introduction of the commercial product (Fact 50). Nor did Mr. Sullivan state that Pride's commercial product was comparable to that of Degonda's Figure 12 or Booth's Figures. Additionally, it is not clear to us whether the increased sales resulted from factors such as newly instituted insurance reimbursements, a new sales distribution, or even improved skills of sales personnel.

Moreover, the scope of the "[o]bjective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support." *In re Tiffin*, 448 F.2d at 792; *In re Grasselli*, 713 F.2d at 743. The objective evidence is not commensurate in scope (coextensive) with the claimed subject matter if the claims are broader in scope than the

scope of the objective evidence, *e.g.*, if the product included elements or features not recited in the claims which may be responsible for the commercial success or praise. *See Joy Technologies*, 751 F. Supp. at 229-30.

Here, Mr. Sullivan did not discuss the specifics of the successful commercial products, such as the technical features that may affect sales (Facts 50 and 59). As far as we know, it may very well be technical features unrelated to any of the claimed elements (*e.g.*, the power system, control system, rehabilitation system, or seating comfort) that gave rise to increased sales. Furthermore, Mr. Sullivan specifically attributed the increased sales to certain characteristics, which are not even recited in appealed claim 1 (Facts 42 and 43). These facts indicate that the claims are not commensurate in scope with the evidence in support of nonobviousness. For example, the commercial success may have resulted from features such as the comfort of the seats, sophisticated control and/or power system, the stability, and/or the degree of reliability of maintaining the wheels on the ground at all times. But the claim is broadly recited to read on any seat, any control or power system, any degree of stability, and any degree of reliability in terms of maintaining all wheels on the ground – all without any limitation. Indeed, claim 1 does not even require the wheelchair to be a powered wheelchair. Because the Declarations of Bertrand, Lipka, and Swanger do not remedy the deficiencies of Mr. Sullivan’s testimony, it is not reasonably possible to assess whether the material differences between claimed invention and the closest prior art (Degonda’s Figure 12 or Booth’s Figures) resulted in commercial success. In other words, Appellant failed to establish a nexus. *In re Huang*, 100 F.3d at 139.

As to evidence of copying, Appellant relies on Swanger Declaration II (including Exhibit 1 attached thereto) (Fact 60).<sup>3</sup> We are not persuaded by the relied upon evidence. According to Dr. Swanger, Exhibit 1 includes photos of Pride Mobility Jazzy 600 wheelchair, a competitive product, which allegedly includes every element of appealed claim 1 (Facts 61 and 62). In the fourth photo on the second page of Exhibit 1, Appellant has labeled what it believes are the leading pivot arm and pivot axis. But to us, it is incorrect to say that the upper right portion of the labeled leading pivot arm above the pivot axis is part of the leading pivot arm. Additionally, the fifth photo on the third page shows that the mid-drive wheel is not “mounted for rotation on each of said pivot arms [as labeled in the fourth photo],” as required by appealed claim 1. Since the mid-drive wheel is mounted on the pivot arm in the claimed invention, it has to pivot with the pivot arm. The mid-drive wheel of Pride Mobility Jazzy 600 does not appear to do this.

Moreover, Appellant failed to show that the copying did not result from lack of concern for patent property or Patentee’s ability to enforce the ‘343 Patent (*i.e.*, the invention being in the public domain). Additionally, Appellant did not demonstrate that the single product represented by Pride Mobility Jazzy 600 reasonably supports the broad scope of appealed claim 1. *In re Tiffin*, 448 F.2d at 792; *In re Grasselli*, 713 F.2d at 743

Even assuming that Appellant’s evidence of commercial success and copying were properly established, it does not compel a conclusion of obviousness in this case. Here, the applied prior art references establish a strong *prima facie* case of obviousness, and we do not think that the

---

<sup>3</sup> We append to our Decision a color reproduction of Exhibit 1, which Appellant’s counsel provided at oral argument (Fact 63).

evidence of nonobviousness is of such weight as to overcome it. *Asyst*, slip op. 10 (“[E]vidence of secondary considerations does not always overcome a strong prima facie showing of obviousness.”); *accord Pfizer*, 480 F.3d at 1372.

### CONCLUSION

On this record, we determine that Appellants have failed to demonstrate any error in the Examiner’s determination that a person a having ordinary skill in the art would have found it prima facie obvious to provide Degonda’s wheelchair as shown in Figure 12 with dual pivot arms, each arm being provided with a front castor wheel and spring suspension system and that the relied upon rebuttal evidence is insufficient to outweigh the evidence in support of obviousness.

### DECISION

The Examiner’s decision to reject appealed claims 1, 2, 4-6, and 8 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

### AFFIRMED

ack

cc:

CALFEE HALTER & GRISWOLD, LLP  
800 SUPERIOR AVENUE

Appeal 2008-4324  
Reexamination Control 90/007,491 (U.S. Patent 6,196,343 B1)

SUITE 1400  
CLEVELAND OH 44114

THIRD PARTY REQUESTOR:  
TED C. GILLESPIE  
MACMILLAN SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA, 4<sup>TH</sup> FLOOR  
720 WATER STREET  
TOLEDO, OH 43604-1619

APPENDIX

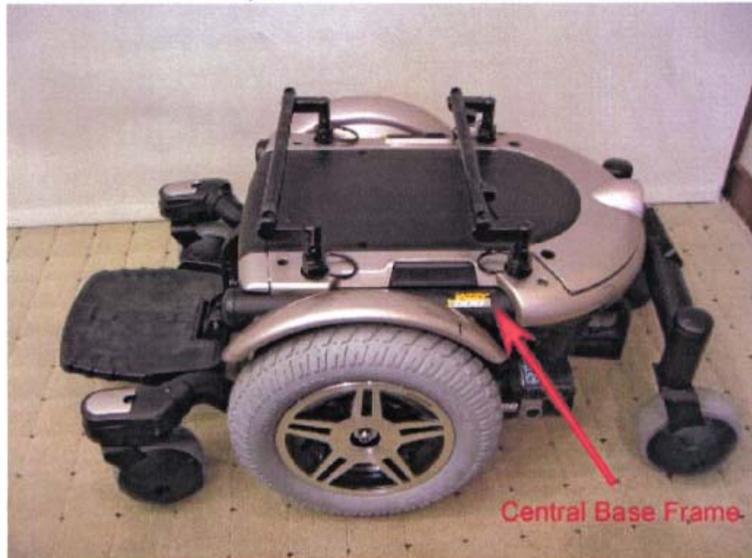
Exhibit 1. Pride Jazzy 600 has all elements of '343 Claim 1:

1. A Mid-wheel drive wheelchair



comprising:

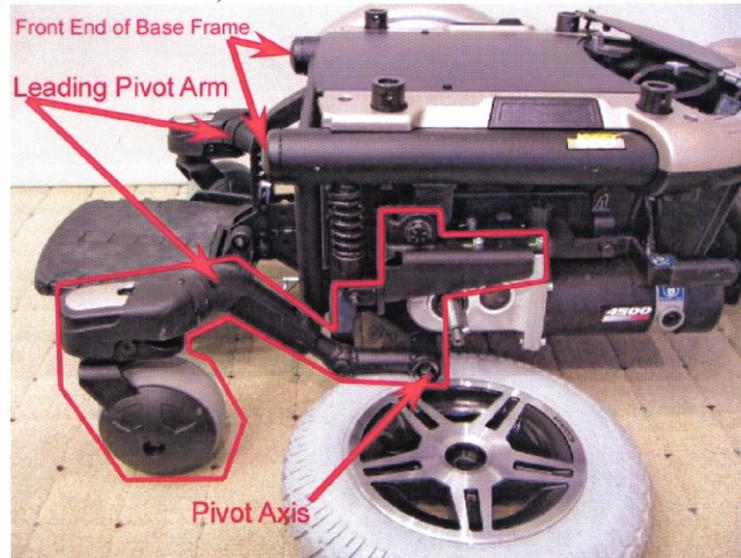
a central base frame,



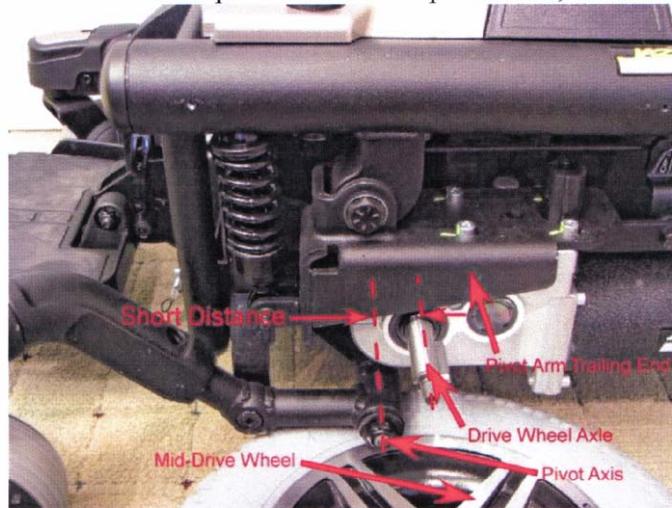
a seat or chair frame attachable to said base frame,



a pair of leading pivot arms pivotally supported on opposite sides of said base frame for independent pivotal movement relative to the base frame about a common transverse pivot axis, each said pivot arm extending forwardly of the front end of the base frame,



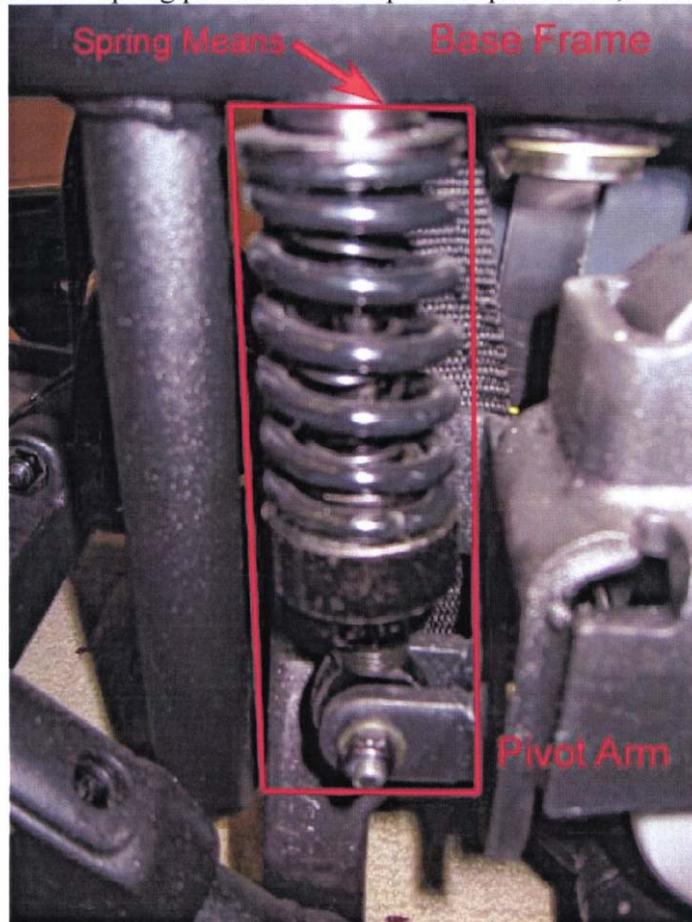
a mid-drive wheel mounted for rotation on each of said pivot arms adjacent its trailing end, with the axle of each drive wheel being located a short distance rearwardly of the common transverse pivot axis of said pivot arms,



a pair of ground engaging front castor wheels respectively mounted at the leading ends of said pivot arms,



spring means respectively acting between each said pivot arm and an adjacent side portion of the base frame, said spring means, in use, being arranged to resist pivotal movement of its associated said pivot arm and to allow the base frame to tilt under spring pressure with respect the pivot arms, and



a pair of transversely spaced apart ground engaging rear castor wheels movably supported with respect to said base frame.

