UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

INDIANA MILLS & MANUFACTURING, INC., Plaintiff,	)	**REDACTED VERSION**
vs.	)	1:04-cv-1102-LJM-WTL
DOREL INDUSTRIES INC. and DOREL JUVENILE GROUP, INC., Defendants.	)	

ORDER ON DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

This cause is now before the Court on defendants', Dorel Industries, Inc. ("DII") and Dorel Juvenile Group, Inc. ("Dorel Juvenile") (defendants collectively, "Dorel"), Motion for Summary Judgment of Invalidity and Motion for Summary Judgment of Noninfringement, and DII's Motion for Summary Judgment challenging parent liability and induced infringement.[1] Plaintiff, Indiana Mills & Manufacturing, Inc. ("IMMI"), opposes each of the motions.

For the reasons discussed herein the Court **DENIES** DII's Motion for Summary Judgment, **GRANTS** Dorel's Motion for Summary Judgment of Noninfringement, and **DENIES** Dorel's Motion for Summary Judgment on Invalidity. The Court also **DENIES as MOOT** Dorel's Motion for Summary Judgment on IMMI's Claim of Willful Infringement, **DENIES as MOOT** IMMI's Motion for Reconsideration, and **DENIES as MOOT** Dorel's Motion for *In Camera* Review of Schiff Hardin Work Product to the extent such motion remains under advisement.

[1]Dorel Industries, Inc., alone filed this motion.

I. BACKGROUND[2]

A. THE PARTIES

IMMI is an Indiana corporation with its principal place of business in Westfield, Indiana. Compl. ¶ 2. IMMI owns the patent at issue in this case, U.S. Patent No. 4,660,889 (the "'889 patent").

DII is a Canadian corporation with its principal place of business in Montreal, Canada. Lisio Decl. ¶ 3. Although DII's divisions and subsidiaries employ approximately 5,000 employees worldwide, all of DII's employees reside in Canada. *Id.* ¶ 5. In Security and Exchange Commission ("SEC") filings DII refers to itself and its subsidiaries as "Dorel." Pl.'s DII Part. Mot. for Summ. J. Exh. 9, Dorel Indus. Inc. 2003 Annual Renewal Form ("Pl.'s DII Exh. 9").

DII does not pay the salaries of employees of its subsidiaries. Lisio Decl. ¶ 8. Nor does DII exercise any day-to-day control over the design, manufacturing or distribution practices of its subsidiaries located in the United States. *Id.* ¶ 5; Rana Decl. ¶ 7. However, DII press releases stress its overall commitment to cost reduction in its operations so that it can become "more efficient, rais[e] margins, cut[] operating expenses [and] lower[] purchasing costs . . . ." Pl.'s DII Exh. 1, DII Press Release, May 30, 2002. Likewise, in 2003 and 2004 DII made numerous public statements that emphasized its strategy or "strategic plan" to use Asian manufacturers or Asian supply sources, including Chinese companies. Pl.'s DII Exh. 8, DII Press Release, Mar. 4, 2003; Pl.'s DII Exh. 33,

[2]The facts set forth in this section are taken from briefs pertaining to all three motions now before the Court. The Court made every effort to ensure it was clear from which set of facts information was derived, however, rather than recite them as set forth in the briefs, the Court sets the facts forth in the most logical fashion for a person unfamiliar with the case.

DII Press Release, May 28, 2003; Pl.'s DII Exh. 3, E-Mail, From J. Segal, Subj.: Goodbaby, Jan. 9, 2004.

During the relevant time period and until the end of 2004, Pierre Dupuis ("Dupuis") was the Vice President and Chief Operating Officer of DII. Dupuis Dep. at 14. Jeff Segal ("Segal") was the Corporate Vice President of Sales and Marketing for DII. Mitchell Dep. at 65. Ed Wyse ("Wyse") was Executive Vice President of Procurement for DII during the relevant time period. Dupuis Dep. at 94-95. And, Camillo Lisio ("Lisio") was DII's Chief Operating Officer for the remaining relevant time period. Pl.'s DII Exh. 15, DII Press Release, Nov. 23, 2005.

Dorel Juvenile is a Massachusetts corporation with its principal place of business in Columbus, Indiana. Dorel Juvenile is a wholly owned subsidiary of Dorel U.S.A., Inc., a Delaware Corporation. Dorel U.S.A., Inc., is a wholly owned subsidiary of DII. In other words, Dorel Juvenile is a separate corporation with its own officers, board of directors, and stationery. Lisio Decl. ¶ 9. Dorel Juvenile trains its own employees, publishes its own sales and marketing literature, sets its own prices, issues its own warranties, has its own bank accounts, and sets its own operational policies. *Id.* ¶ 6. Day-to-day oversight of the inventory, accounting system, and public relations of Dorel Juvenile occur only at the subsidiary level. *Id.*

But, there is evidence that Segal of DII worked with all of DII's divisions to "encourage, and motivate . . . people" to "push[] the envelope of product development and marketing" and to act "as an animator, a guru of product development and marketing . . . ." Dupuis Dep. at 51-52. Moreover, in 2002, DII held a "Procurement Conference" where the theme was "Maximum Resistance to Price Increases" and where DII instructed its divisions to use "Group Purchasing" to resist price increases and to change suppliers if necessary. Pl.'s DII Exh. 34, E-Mail, From Ed Wyse, To

bcazenave@djgusa.com, Subj.: Action Plan 8th Procurement Conf. May 14th/15th, June 3, 2002, & Attachments. Further, Wyse tracked commodity pricing globally, and used the information to check on whether or not its subsidiaries, like Dorel Juvenile, would seek cost adjustments from their suppliers. Dupuis Dep. at 94-95; Pl.'s DII Exh. 31, E-Mail, From Jeff Hale, To Pierre Dupuis, Subj.: Goodbaby, Feb. 13, 2005. The evidence suggests also that DII's Edward J. Kelley ("Kelley") would act as a sales consultant for Dorel Juvenile, and was involved with "point of sale" issues. Bimschleger Dep. at 34-35. Similarly, DII negotiated with mass merchants such as Wal-Mart and Kmart on behalf of Dorel Juvenile. Pl.'s DII Exh. 20, E-Mail String, From Don March, To, *inter alia*, *Executive, Subj.: FW:Kmart, Feb. 1, 2002. In fact, in April 2004, DII's Cathy Carter ("Carter") stated that DII and Dorel Juvenile "need[ed] a PLAN fast!" to stay competitive with other car seat manufacturers at Kmart. Pl.'s DII Exh. 21, E-Mail, From Cathy Carter, To Bruce Cazenave, Subj.: Kmart, Apr. 29, 2004.

Furthermore, both Dupuis and Lisio had executive positions at both DII and Dorel Juvenile. Pl.'s DII Exh. 13, Dorel Juvenile Exec. Staff Org. Chart. In early 2002, Dupuis was "interim President" of Dorel Juvenile and it was during Dupuis' interim presidencey that Dorel Juvenile began development of the accused products. Pl.'s DII Exh. 3, DII Press Release, Feb. 26, 2002; Pl.'s DII Exh. 39, Adjustor Mtg., Mar. 13, 2002. Donald Mitchell ("Mitchell") was Executive Vice President, Sales and Marketing for Dorel Juvenile, and later Executive Vice President of Marketing and Design and Development Center for Dorel Juvenile. Mitchell Dep. at 14, 17. In September 2003, Dorel Juvenile implemented a design change in some of its car seats to utilize an up front center adjustor designed by Richard Glover ("Glover"), Vice President of Applied Technology, Dorel Juvenile, instead of using IMMI's A-Lok adjustor. Glover Dep. at 52. Dorel Juvenile

purchased the newly designed adjustor from Goodbaby Group ("Goodbaby"), apparently a Chinese manufacturer, for use in car seats manufactured by Dorel Juvenile. Cartwright Dep. at 41-42. Mitchell provided no information to Dupuis or Segal regarding the implementation of the Goodbaby adjustor to the United States consumer market. Mitchell Dep. at 66.

However, there is evidence that suggests that DII executives were involved in decisions to implement the new adjustor. For example, Dorel Juvenile sought approval from Dupuis before signing a supplier agreement with IMMI in 2002. Pl.'s DII Exh. 34, E-Mail, From Jeff Hale, To Pierre Dupuis, Subj.: Dorel/IMMI Supplier Agreement & Quotation, Jan. 31, 2002, & Attachments. Dupuis admitted that DII would have the power to control the suppliers used by Dorel Juvenile although he described what DII actually does as "nudging . . . suggesting, encouraging, [and] promoting . . . ." Dupuis Dep. at 65-66. In addition, Glover kept DII's Dupuis informed about the reasons why alternative adjustors would not work. Pl.'s DII Exh. 7, E-Mail, From Richard Glover, To, *inter alia*, Pierre Dupuis, Subj.: Adjuster [sic] Design, July 22, 2002. In fact, Dorel Juvenile kept DII abreast of its new adjustor design project at DII's request, and DII knew replacement of the IMMI adjustor with one from Goodbaby would be a large cost savings for Dorel Juvenile, if Dorel Juvenile could work around IMMI's patents. Pl.'s DII Exh. 35, E-Mail, From Jeff Hale, To Martin Schwartz, Subj.: FW: Project Updates, Nov. 8, 2002. Furthermore, DII's Wyse was "in constant communication with Jeff Cartwright re [sic] Global Dorel Action Plan on Buckles and Harnesses." Pl.'s DII Exh. 4, E-Mail String, From Ed Wyse, To Pierre Dupuis, Subj.: Harness Cost Breakdown, Sept. 2, 2003. *See also*, Pl.'s DII Exh. 5, E-Mail, From Jeff Hale, To Ed Wyse, Subj.: FW: Project Updates - Buckle/Harness Sys., Dec. 10, 2002, & Attachments; Glover Dep. 194-95 (discussing Wyse's role among DII divisions). DII's Vice President of International Operations, Hani Basile

("Basile"), worked with Goodbaby to resolve certain manufacturing issues with the new adjustor. Pl.'s DII Exh. 37, E-Mail, From Jeff Cartwright, To Bruce Cazenave, Subj.: RE: Another Front Adjuster [sic] Unqualified/Unapproved Change, Oct. 21, 2003.

B. THE '889 PATENT

Prior to the '889 patented invention, car seat manufacturers used a three-bar slide to adjust the harness; the ends were threaded through the slide to adjust the harness size. H. Wallen Decl. ¶ 4. James R. Anthony ("Anthony") and Allan R. Lortz ("Lortz"), the inventors named on the '889 patent, U.S. Patent No. 4,660,889, Apr. 28, 1987 ("'889 Patent"), recognized a need for a child restraint seat that had a quick and easy means for adjusting the harness web. Their efforts to solve this problem resulted in the '889 patented invention. Lortz Mar. 29, 2005, Dep. at 43 ("Lortz I Dep."); Anthony June 1, 2005, Dep. at 20 ("Anthony I Dep."); '889 Patent, col. 2, *ll.* 31-37.

The '889 patent claims, in relevant part:

> 8. A child restraining device for mounting in a vehicle, comprising:
>
> a child seat having a seat support upon which the child may sit and back support against which the child may rest against;
>
> a harness movably mounted to said child seat and including a front restraining portion positionable in front of the child with first lock means mounted on said front restraining portion, said harness including a belt affixed thereto being located beneath said seat support with said belt extending forwardly through said seat to and in front of said seat support;
>
> second lock means mounted to said seat in front of said seat support and engageable with said first lock means to removably secure said harness to said seat; and

a belt adjustor mounted to said seat in front of said seat support with said adjustor including adjusting means frictionally receiving said belt being operable to hold said belt once said belt is pulled manually through said adjustor to tighten said harness and also being operable to release said belt to loosen said harness upon manual operation of said adjustor.

* * *

11. A child restraining device for mounting in a vehicle comprising:

a seat having a seat support and a back support;

harness means positionable in front of a child sitting in said seat for holding said child securely in said seat;

first locking means attached to said harness means for removably securing said harness means to said said [sic] seat;

second locking means mounted to said seat for receiving and lockingly engaging said first locking means; and

a belt adjustor mounted to said seat for tensionably adjusting the proximity of said harness means relative to said child when said first and second locking means are engaged said belt adjustor including a manually operated cam member and bar designed to frictionally receive and hold stationary a portion of said harness means, said cam member being pivotably adjustable to bias said belt against said bar to release said harness means.

'889 Patent, col. 7, *ll.* 50-68 to col. 8, *ll.* 40-60.

The Court construed the disputed claim terms as follows:

"affixed" means	"secured"
"adjusting means" means	its functions are: 1) to frictionally receive the belt; 2) to hold the belt to tighten the harness; and 3) to release the belt to tighten it; its corresponding structures are: a cam member and bar, or a bottom wall, cam bar and bar, that are described in the '889 patent at col. 1, *ll.* 55-57, col. 1, *ll.* 63-68 to col. 2, *ll.* 1-8, and at col. 3, *ll.* 65-68 to col. 4, *ll.* 1-58, and Figures 3-5, or their equivalents
"cam member" means	"an eccentrically revolving part with a radial bearing surface;" and
"bar" means	a part that is longer than it is wide.

The '889 patent cites the following references as prior art: U.S. Patent No. 2,442,266, May 1948, to Davis, U.S. Patent No. 2,919,946, January 1960, to Miener, U.S. Patent No. 3,380,776, April 1968, to Dillender, U.S. Patent No. 3,678,542, June 1972, to Prete, Jr., U.S. Patent No. 3,887,966, June 1975, to Gley, U.S. Patent No. 4,118,833, October 1978, to Knox, and Federal Republic of Germany Patent No. 2059321, May 1971. '889 Patent, at 1.

One of the objects of the '889 patented invention is "to provide a child seat harness assembly having improved means for controlling the tensioning of the harness." *Id.* at col. 2, *ll.* 35-37. Lortz testified that the problem that he and Anthony were trying to solve, "a quick and easy means of

adjusting the web" of a child restraint, Lortz I, at 43, was known in the industry at the time of the invention. *Id.* at 45.

The commercial embodiment of the '889 patented invention are parts sold by IMMI under the trademark A-Lok.™ The A-Lok consists of an adjustor[3] strap connected to a T-bar, and an adjustor that receives the adjustor strap. H. Wallen Decl. ¶ 6. The A-Lok is reversibly connected to the harness through the T-bar for tightening and loosening the harness web. *Id.* The A-Lok is generically referred to by those in the car seat industry as a center front adjustor or "up-front" adjustor. Exh. Dorel Label. This commercial embodiment practices the invention in claims 8 and 11 of the '889 patent. Williamson 4th Decl. ¶ 9.

Jerry Bougher ("Bougher"), now a Dorel employee, testified that while he was employed by IMMI, Lortz gave a copy of U.S. Patent No. 3,782,550, to Yang ("Yang '550"), and a Pacific Scientific cam adjustor, which was the commercial embodiment of the Yang '550 patented invention, to Bougher, with instructions to design an adjustor that would meet the dynamic test requirements of the newly revised Federal Department of Transportation regulation FMVSS 213 ("FMVSS 213"),[4] but would avoid infringing the Yang '550 patent. Bougher Dep. at 7, 129-30. Bougher examined, measured and tested the prior art Yang '550 adjustor and copied aspects of that adjustor, such as the spring arrangement, into the A-Lok. *Id.* 130-34. Bougher testified that the '889

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[3]The Court notes that the parties, the experts and the patents at issue in this case sometimes use, alternatively, the spellings "adjuster" and "adjustor" to describe the relevant part. Because either is proper, the Court will endeavor to use only one spelling, the one used in the claims of the '889 patent (adjustor), for clarity.

[4]Glover declared that FMVSS213, which mandated more stringent dynamic crash test requirements for car seats, made car seat manufacturers look for new harness adjustor components to meet the new standard. Glover Decl. ¶ 5.

patented invention involved reverse engineering a known, patented, commercial product for adjusting automobile seat belts, scaling down its size, changing the internal configuration sufficiently to avoid Yang '550, and using it on a child's car seat. *Id.* 129-34. Bougher "authored" all of the early drawings of the adjustor of the '889 patent, and the corresponding design patent, U.S. Patent No. D296,678 ("'678 patent"). *Id.* at 135-37, 139-41. Bougher is a named inventor of the '678 patent, as well as six other IMMI patents. Bougher Dep. at 43-49.

IMMI employment records indicate that Bougher was hired by IMMI on November 12, 1984, a month before the first drawing of the A-Lok appeared in December 1984. Bougher Dep. at 12-13; Pl.'s Invalidity Opp'n Exh. 73, Jerry D. Bougher, Employment Record, Nov. 12, 1984; Pl.'s Invalidity Opp'n Exh. 74, IMMI Drawing No. 1243, A-LOK - LL ADJUSTER [sic] ASS'Y, Dec. 19, 1984. There is no dispute that Bougher created the December 19, 1984, drawing of the A-Lok. Bougher testified that he did not do any design work on the A-Lok during the first few weeks after he was hired by IMMI. Bougher Dep. at 16 & Errata Sheet. Rather, Bougher testified that his first responsibility with the A-Lok may have been as a manufacturing engineer rather than as a design engineer. *Id.* at 14. According to Bougher, manufacturing engineers at IMMI were "responsible for implementing existing designs or existing products into a manufacturing atmosphere, making sure that they are properly tooled, and making sure that the manufacturing criteria is established and is achievable. So it's more monitoring and managing the manufacturing end of it rather than the design." *Id.*

According to Anthony and Lortz, they recollect Bougher's position at the time of the '889 patented invention as a draftsman, and do not recall his involvement with the patented invention. Anthony I Dep. at 20, 29; Lortz I Dep. at 54.

Apparently, Bougher left IMMI in 1992 and attempted to return in 1998, but was hired elsewhere. Pl.'s Invalidity Opp'n Exh. 71, Letter, From Jerry D. Bougher, To Al Lortz, Aug. 24, 1998; Bougher Dep. at 9.

C. LEVEL OF ORDINARY SKILL IN THE ART

The '889 patent states that the disclosed "invention is in the field of adjustors for controlling tension in a belt or web mounted to a child restraint seat." '889 Patent, col. 1, *ll.* 6-8. During examination of the '889 patent, the examiner considered adjustors used to adjust belts and straps generally, including adjustors used to secure cargo and other objects, as relevant art. '889 File History, Paper Nos. 3-4. Therefore, the examiner considered the field of the invention to be adjustors for controlling the tension of a belt or web for any purpose, as well as child restraint systems for use in automobiles.

Dr. Guenther, Dorel's expert, opined that a person of ordinary skill in that field at the time of the invention is one who has several years of experience in design and/or selection of devices for adjusting or controlling tension on a belt or web. Guenther Decl. ¶ 5. Similarly, Dr. Williamson, IMMI's expert, opined that one of ordinary skill in the field at the time of the invention is one with "either a degree in an appropriate branch of engineering – for example, mechanical engineering or industrial engineering – and one or two years' industrial experience in the design of mechanisms; or would have a lesser qualification, such as a trade-school diploma, and three or four years' experience." Williamson 3d Decl. ¶ 4.

D. PRIOR ART

Dorel contends that the '889 patented invention is an obvious combination of two well-known devices: a children's car seat and a cam-actuated belt adjustor. With respect to the child seats, Dorel argues that the following car seat patents and cam-actuated belt adjustor patents, in combination, disclose or teach each of the limitations of claims 8 and 11 of the '889 patent: Australian Patent No. 503,602, to Heath ("Heath '602"), U.S. Patent No. 4,342,483, to Takada ("Takada '483"), Japanese Utility Model Patent Application No. 56-18760 ("Japanese '760"), U.S. Patent No. 2,998,626, to Prete, Jr. ("Prete '626"), U.S. Patent No. 3,867,876, to Elsner ("Elsner '876"), U.S. Patent No. 2,538,641, to Elsner ("Elsner '641"), German Patent No. 2,059,321 ("German '321"), U.S. Patent No. 3,872,550, to Yang ("Yang '550"), U.S. Patent No. 2,537,307, to Griswold ("Griswold '307"), U.S. Patent No. 3,177,545, to Svensson ("Svensson '545"), U.S. Patent No. 3,020,612, to Meeker ("Meeker '612"), and U.S. Patent No. 2,916,786, to Legat ("Legat '786"). The Court reviews each reference in turn, then reviews each of the prior art references cited by the examiner, but not by Dorel.

1. Heath '602 Patent

Heath '602 issued on September 28, 1978. Australian Patent No. 503,602, to R.B. Heath, Sept. 28, 1978, at 1 ("Heath '602 Patent"). Apparently, Britax Child Safety, Inc. ("Britax"), owns the Heath patent. Wallen Decl. ¶ 20.

The Heath '602 patent claims, in relevant part:

> 1. A seat strap arrangement which is suitable for use in conjunction with a single seat, comprising

a crotch strap arranged to lie symmetrically with respect to the central longitudinally extending vertical plane of the seat, means to secure the crotch strap to said seat, and one part of a three part buckle on the crotch strap,

a pair of buckle parts each with a strap guide aperture engageable with said one part of the buckle and arranged symmetrically with respect to said vertical plane,

a pair of sash strap portions extending downwardly and passing through respective said strap guide apertures and then outwardly away from said vertical plane to then form lap strap portions,

means joining said sash strap portions rearwardly of the seat,

means retaining said lap strap portions to the seat,

an adjustment strap secured to the sash strap portions rearwardly of the seat,

and releasable locking means carried by the seat co-operable with the adjustment strap so as to provide adjustment means for adjustment of the effective lengths of the sash and lap strap portions.

2. A seat strap arrangement according to claim 1 wherein said sash and lap strap portions are all portions of a single loop strap, said adjustment strap depending from said loop in said central vertical plane of the seat.

* * *

5. A combination seat and seat strap assembly, comprising a seat having a seat portion, a seat back portion and side wings, an upper area of the seat back portion containing a pair of upper apertures, a pair of side apertures through the seat near the junction of the side wings and the rear of the seat portion, and a front aperture through the front of the seat beneath the seat portion,

a seat strap arrangement according to Claim 2 having said crotch strap secured at its lower ends by its said securing means to said seat, the upper ends of said sash strap portions extending through respective said upper apertures from the front to the rear of the seat, the outer ends of said lap strap portions extending through said apertures also from the front to the rear of the seat and being continuous at the rear of the seat, means securing the upper end of said adjustment strap to the sash strap portions at the rear of the seat, said adjustment strap extending through said front aperture and terminating at its lower end in front of the seat.

6. A combination seat and seat strap assembly according to claim 5 wherein there are two said front apertures one above the other, and said releasable locking means comprises a plate having an aperture therein, said plate extending through the upper front aperture, said adjustment strap extending through the plate aperture rearwardly of said seat front portion, through said lower front aperture, and again through the plate aperture forwardly of said front portion.

Heath ‘602 Patent, claims 1, 2, 5, 6. The Heath ‘602 patent states:

> There is a well recognized need for a separate moulded [sic] single seat . . . to be used in the body of an automobile which will hold a child comfortably . . . .
>
> With the previous arrangements some difficulties are encountered. Owing to the difficulty in adjusting the effective lengths of each seat belt component separately, quite often adjustment is not made . . . . The main object of this invention is to provide a seat strap arrangement which can be quickly and easily adjusted by a single adjusting means, and which can be quickly and easily fitted, and which can be quickly and easily disengaged by a single release function, thereby encouraging use . . . .

Id. at p. 6-7.

Moreover, the Heath '602 patent describes the desirability of an adjustor for a child's car seat that allows the strap to be pulled through the adjustor such that "the strap can flow through its apertures thereby tightening both the sash and lap portions of the strap" but allows the adjustor to be released such that "the adjustment strap can flow in a rearward direction." *Id.* at 6. Furthermore, the Heath '602 patent repeats that its harness/adjustor assembly is desirable because "adjustment is quickly and easily effected, but that the locking means can be so arranged so as to provide a very firm grip on the adjustment strap." *Id.* at 8.

With respect to the "releasable locking means" specifically, the Heath '602 patent describes the following: "In a further aspect of the releasable locking means is spring biased so that pulling the adjustment strap to shorten the harness will automatically release the locking mechanism, but to lengthen the harness it is necessary to separately release the locking mechanism." *Id.* at p. 9.

Dorel contends that the Heath '602 reference teaches:

> a child safety seat 10 for mounting in a vehicle having a seat portion 11 and a back portion 12. [Heath '602 Patent, p. 2, *ll.* 106; p. 5, *ll.* 1-2; Fig. 1; claim 5.] The disclosed safety seat also has a movably mounted harness that includes a crotch strap 21, an adjustment strap 27, shoulder straps ("sash straps") 25, and lap straps 25. [*Id.*, p. 3, *ll.* 3-20; p. 5, *ll.* 10-21; Fig. 1.] The shoulder straps and lap straps are positioned in front of the child sitting in the seat and thus are part of the "front restraining

> portion" of the harness. [*Id.* Fig. 1.] Attached to that front restraining portion are two male buckle parts 39, as shown in Fig[ure]s 1-3, which comprise the "first lock means." [*Id.* p. 7, *ll.* 20-27; Figs. 1-3.] The adjustment strap is attached to the shoulder straps behind the seat, then it extends forwardly beneath the seat, through one of the apertures 15 in the seat, to and in front of the seat portion. [*Id.* p. 5, *ll.* 17-23; Figs. 1-3.] The male buckle parts 39 ("first lock means") engage a female buckle part 23 ("second lock means"), which is attached to the crotch strap. [*Id.* p. 5, *ll.* 10-16; p. 8, *ll.* 6-11; Fig. 2.] As shown in Fig[ure]s 2-3, the crotch strap, and therefore the female buckle part, is attached to the seat in front of the seat support. [*Id.* p. 5, *ll.* 10-16; Figs. 1-2.]
>
> 10. The Heath '602 patent also teaches mounting a belt adjustor [sic] to the seat in center front of the seat support. The patent reads: "a seat strap arrangement includes . . . an adjustment strap [27] secured to the sash strap portions [25] rearwardly of the seat, and releasable locking means carried by the seat co-operable with the adjustment strap so as to provide adjustment means for adjustment of the effective lengths of the sash and lap strap portions." [*Id.* p. 3, *ll.* 3-20; p. 3, *l.* 26 to p. 3a, *l.* 7; Figs. 1-3; claims 1-2, 5.] The releasable locking means, shown in Fig[ure] 3 as steel plate 28, is attached to the seat at the front apertures 15. [*Id.* p. 3a, *ll.* 2-7; p.5, *l.* 21 to p. 6, *l.* 11; Figs. 2-3; claim 6.]

Guenther Decl. ¶¶ 9-10.

IMMI argues that the Heath '602 reference teaches an adjustor that is based on intersecting plates with three principal parts: two plates and a spring. Williamson 3d Decl. ¶ 8; Heath '602 Patent, at ps. 6-7, Fig. 3. Moreover, IMMI avers that there is nothing in Heath '602 that invites replacement of its adjustor design with another one. Williamson 3d Decl. ¶ 9.

2. <u>Takada '483 Patent</u>

The Takada '483 patent issued on August 3, 1982, and is referenced by the '889 patent. *See* U.S. Patent No. 4,342,483, Aug. 3, 1982 ("Takada '483 Patent"); '889 Patent, col. 1, *ll.* 11-23 (describing the prior art "U.S. Pat. Nos. 4,025,111 and 4,342,483"). The reference cites the following problems with then-current technology:

> Because children vary considerably in size . . . the belts are usually adjustable. Many of the known belts systems are relatively complicated because of the number of belt sections involved and the adjustable features incorporated in them. They are also frequently cumbersome to put on the child.

U.S. Patent No. 4,342,483, at col. 1, *ll.* 22-28 ("Takada '483 Patent"). The Takada '483 patent claims, in relevant part:

> **1.** A child safety seat for vehicles having a seat bottom, a seat back, a pair of should restraint belts leading from laterally spaced-apart locations on the seat back above the locations of the shoulders of a seat occupant to a buckle tongue, and a buckle affixed to the front center portion of the seat bottom for receiving the tongue . . . .
>
> * * *
>
> **3.** A child safety seat according to claim **1** and further characterized in that the shoulder belts pass through slots in the back and include portions extending downwardly behind the seat back which are joined to a retractor belt, and further characterized in that there is an emergency locking retractor affixed under the seat bottom from which the retractor belt extends and by which the shoulder belts are yieldably held under tension.
>
> **4.** A child safety seat according to claim **3** and further characterized in that the retractor is of the type which normally allows the belt to be withdrawn freely against the rewinding force of a spring but which locks automatically in the event of acceleration of the seat occupant.

Id. col. 8, *l.* 32 to col. 9, *l.* 8.

With respect to adjustment of the restraining system, the Takada '483 patent teaches that:

> The length of belt that can be wound and unwound from the emergency locking retractor should be relatively short so that the child cannot remove the belt by loosening it and then climb out of the seat. Accordingly, for adjustment of the belt system to fit children of various size, say from age 7 months to 4 years, an adjustable detachable buckle is fitted on each should strap, preferably adjacent the retractor belt, so that each strap can be detached from the retractor belt and the effective length of each strap can be altered. This feature, in conjunction with multiple pairs of slots in the back, ensures proper fitting of the belt system to children of various sizes.

Id. col. 3, *ll.* 15-27. And, with respect to the emergency locking retractor, the Takada '483 patent describes:

> The restraint belt system of the child safety seat shown in FIGS. **1** to **3** includes an emergency locking retractor **70** which is housed in casing **72** and is fastened under the seat bottom **12** by a nut and bolt **74** (see FIG. **4**). The retractor is, preferably, of the type which locks in response to a predetermined acceleration of the retractor belt **76** that is wound onto it. The belt is continuously kept under tension by a winding spring but is otherwise free to be pulled from the retractor except when it locks. The retractor **70** can also be of the type which responds to an inertia sensitive device which detects a predetermined acceleration of the vehicle in any direction. Emergency locking retractors have the advantage of permitting the person who is restrained by the belt to move relatively freely except when the retractor is locked in an emergency.

Id. col. 4, *l.* to col. 5, *l.* 6.

The '889 patent cites the Takada patent as prior art. '889 Patent, col. 1, *ll.* 13-14.

3. Japanese '760 Patent

The Japanese '760 patent was published on February 19, 1981. JP App. Pub. No. S56-18760, Feb. 19, 1981 (the "Japanese '760 Patent"). It is a utility patent that describes its scope as follows:

> A child safety seat characterized in that it comprises a seat body that accommodates a child passenger, a thigh webbing, one end of which is affixed to said seat body, a pair of shoulder webbings that are affixed adjustably to the other end of said thigh webbing, a second webbing that is affixed to said seat body and to the other end of said webbing so that its length can be adjusted.

Japanese '760 Patent Translation, at D0159581. The patent sets forth the following purpose and solution to the problems of restraint-system adjustment:

> to provide a child safety seat wherein the length of the webbing can be adjusted easily and rapidly after the child passenger is seated and that will secure the webbing to the child passenger securely.
>
> The child safety seat according to the present invention has a construction wherein an energy-absorbing webbing is connected to the shoulder webbings and the

> energy-absorbing webbing is affixed to the seat body by means of a length adjustment fixture. This allows the length of the attached webbing to be changed rapidly.

Id. at D0159582.

The Japanese '760 patent claims a 3-, 4-, or 5-point harness system wherein the two shoulder straps converge in the back of the child seat into one strap that is

> looped around a U-shaped hook 44 that is affixed to the base plate 42, passes through an opening 48 formed in the front plate 46 (see Figure 3), and is led to the front of the seat body 10.
>
> * * *
>
> As shown in Figure 1 and Figure 3, a length adjustment plate 50 is attached to the front plate 46 as a length adjustment accessory. The length adjustment plate 50 is affixed to the front plate 46 with a suitable gap formed between it and the front plate 46. A pair of openings, 52 and 54 [sic] are formed with suitable spacing in the top and bottom thereof.
>
> Here, the distal end of the energy-absorbing webbing 40 that has been led through the opening 48 of the front plate 46 to the front of the seat body 10 is passed through opening 52 is folded over, is inserted into the opening 54, and is inserted into the space between the length adjustment plate 50 and the front plate 46. Thus, when tensile strength is applied from the pair of shoulder webbings 32 and 34 to the energy-absorbing webbing 40, [the energy-absorbing webbing 40] is held securely in the length adjustment plate 50 fully or partially by the force of friction of the portion [of the energy-absorbing webbing 40] folded through the openings 52 and 54 when a force that moves it towards the tip of the energy-absorbing webbing 40 (in the direction of arrow A) is applied.
>
> In addition, the fitted length for a child passenger can be freely adjusted by changing the depth to which the energy-absorbing webbing 40 is inserted into the openings 52 and 54 in the length adjustment plate 50.

Id. at D0159584-85 (additions and/or changes by translator).

4. Prete '626 Patent

The Prete '626 patent issued on September 5, 1961. U.S. Patent No. 2,998, 626, Sept. 5, 1961 ("Prete '626 Patent"). The Prete '626 patent "relates to a buckle for connection to one strap end and for releasable engagement with a second strap end, which buckle is particularly adapted for connecting the ends of cargo straps." *Id.* at col. 1, *ll.* 9-12. The reference specifically states that it is an improvement on "a buckle of the general type disclosed in the Elsner patent, No. 2,538,641."[5] *Id.* col. 1, *ll.* 13-14, 34-35.

The Prete '626 patent claims, in part:

> 2. A buckle for connection to one strap end and for releasable engagement with a second strap end, comprising: a pair of substantially parallel upright side plates having matched apertures therein including a non-circular aperture near the forward end of each plate; a first transverse member having its ends fixedly mounted in matched apertures near the rear end of each of said plates for interconnecting the two plates and for permanent connection to said second strap end with the second strap end looped upward and backward over the second member, said second member having its ends fixedly mounted in said non-circular apertures to resist rotation relative to the two plates, said second transverse member having a flat upper surface inclined towards the forward ends of the two plates; a third transverse member to extend under said second strap end and having its ends mounted in matched apertures in said plates, said last-mentioned aperture being forward of said non-circular apertures, the upper surface of said third member bing positioned above the lowermost surface of said second member to change the direction of the second strap end to substantially parallel with said flat surface; a gripping member secured by matched apertures in said two plates, said gripping member being rotatable to cooperate with said flat surface for gripping said second strap end, said gripping member having a serrated eccentric portion to engage the strap end and having a forwardly extending handle portion, said side plates extending above the range of effective gripping positions of said gripping member to serve as guard means to avoid accidental release rotation of the gripping member; and spring means rotatably biasing said gripping member towards said flat surface.

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[5]The Elsner patent identified by the Prete '626 patent is the same patent that the Court has designated "Elsner '641".

> 3. A buckle as set forth in claim 2 in which said second transverse member has flat shoulder surfaces abutting the inner surfaces of said two side plates, and in which said first and third transverse members are peened into engagement with the outer surfaces of the two sided plates to hold the side plates firmly against said flat shoulder surfaces for rigidity of the buckle construction.

Id. col. 4, *l.* 75 to col. 6, *l.* 15.

Moreover, the Prete '626 patent teaches that

> strap end **40** may be tightened by simply pulling on the free end of the strap and at the same time pulling on the portion of the strap that leads to the buckle. The eccentric gripping member **26** will yield to such pulling force on the strap by release rotation but will automatcially grip the strap when the free end of the strap is released.
>
> When the strap end **40** is engaged in the manner shown in FIG. 1, it is a simple matter to release the strap simply by exerting finger pressure on the release arm **30**.

Id. col. 3, *ll.* 64-74.

5. Elsner '641 Patent

The Elsner '641 patent issued on January 16, 1951. U.S. Patent No. 2,538,641, Jan. 16, 1951 ("Elsner '641 Patent"). Generally, the Elsner '641 patent is directed to a buckle for connecting cargo straps or bands, however, Elsner cites four relevant specific objectives:

> An object of the present invention is to provide a buckle whereby desired tautness of a strap can be attained, whereby said tautness will be retrained, and whereby quick release of said tautness is effected for quick separation of the buckle parts.
>
> Another object of the invention is to provide a buckle, as indicated, which embodies automatic strap gripping means effective to retain the strap under tension, whereby a simple pull on one end of the strap effects further tensioning thereof, and whereby quick release of the strap is effected and separation of the buckle parts made possible by a simple manual push on an element of the buckle.
>
> Another object of the invention is to provide, in a strap buckle, novel strap gripping means that is automatically effective for gripping a strap, automatically

releases upon a pull on a free end of said strap, and is adapted to be manually released by a simple push.

A further object of the invention is to provide a buckle, as above, in which the manually operable portion of the strap gripping means is protected against inadvertent operation.

Id. at col. 1, *ll.* 5-29.

The Elsner '641 patent claims, in part:

6. A strap buckle comprising a generally rectangular frame, a roller mounted transversely at an intermediate part of the frame for a loop formed by training the strap over the roller, a fixed pressure bar transverse of the frame, one run of the strap loop extending over the bar and the other under the bar, an eccentric wedge mounted above the bar for gripping said upper run of the strap between itself and the bar, a rock pivot for the eccentric wedge, the upper run of the strap including an unsupported portion extending between the roller and the wedge, and an extension on the wedge having impinging engagement with said unsupported portion of the upper run of the strap to hold the eccentric wedge in position to grip the strap against said bar, said extension being directed toward the roller and adapted to be manually depressed to rock the eccentric wedge in a strap-releasing direction.

* * *

8. In a strap buckle, a roller over which a strap having a free end is trained, automatic wedging means spaced from the roller for gripping said free strap end upon tension being applied to the strap to draw said free end in a direction toward the roller, said free end of the strap having an unsupported flexible portion extending between the roller and the wedging means having impinging engagement with the mentioned unsupported portion of the strap and held by the strap to releaseably hold the wedging means in strap-gripping position, said flexible portion of the strap yielding to manual depression of the extension and the wedging means moving to non-gripping position when the extension is depressed.

Id. col. 5, *ll.* 12-31; *id.* col. 6, *ll.* 10-26. With respect to the "gripping means" the Elsner '641 patent describes:

The gripping means **14** comprises a bracket which includes a plate or bar **23** arranged transversely across the frame side **18** and adjacent to the end **20** thereof, a pair of integral ears **24** of said plate **23** extending upwardly on either side of the frame, a transverse pin **25** extending between the ears above said plate, and a preferably

> knurled eccentric roller **26** mounted on said pin to rock therearound. [sic] The plate **23** is welded to the frame in space relation to roller **22** and the free end **13** of the strap extends from the strap loop **11** and over said plate. The eccentric roller **26** is designed to effectively grip the strap end **13** between itself and said plate **23**.

Id. col. 2, *ll.* 28-41.

6. Elsner '876 Patent

The Elsner '876 patent issued on January 13, 1959. U.S. Patent No. 2,867,876, Jan. 13, 1959 ("Elsner '876 Patent"). The Elsner '876 patent has three objects: (1) "to provide means increasing the strap-retention power of a buckle," *id.* col. 1, *ll.* 18-19; (2) "to provide improved means, as above indicated, that increases the strap-retention power by displacement or distortion of a strap that is releasably connected to the buckle," *id.* col. 1, *ll.* 20-23; and (3) "to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability." *Id.* col. 1, *ll.* 24-28.

Claim 1 of the Elsner '876 patent reads:

> 1. In a buckle for connecting the ends of a strap, a frame having sides between which said strap ends are disposed, a member spanning between the frame sides and to which one strap end is connected, a second and cylindrical member spanning between the frame sides adjacent the first member and over which the other strap end is trained in the form of a bight [sic] that terminates in a free end, said latter strap end being deformable, means to releasably clamp said free end to resist pull between the strap ends, and circumferentially arranged and tansversely spaced means embodied in said cylindrical member to deform transversely spaced and circumferential portions of the strap bight outwardly from the in-between portions engaged by the cylindrical member, said latter means comprising projections on the cylindrical surface of said cylindrical member, said projections outwardly deforming the strap bight trained thereover [sic] under the mentioned pull.

Id. col. 4, *ll.* 13-29.

The Elsner '876 patent specification describes the "means to releasably clamp said free end to resist pull between the strap ends" ("clamping means") as follows:

> The means **12** comprises the mentioned transverse plate **17** and a member **27** that is pivotally mounted on shaft **16** and is provided, at one end, with a roughened cam face **28** directed toward plate **17**, and curved lever **29** at the other end and terminating between means **9** and plate **17**.
>
> The strap **6** is adapted to be passed beneath plate **17**, be trained over means **9** from beneath, and pass between said plate **17** and the cam face **28** of member **27**. The bight [sic] thus formed terminates in the mentioned free end **11**. Tension on the strap **6** draws cam face **28** into gripping engagement with end **11** because the portion of said end engaged by lever **29**, seeking to straighten, engages said lever. The latter is, thereby, urged upwardly and causes a downward strap-gripping movement of cam face **28**.

Id. col. 2, *ll.* 20-35.

The remaining claims of the Elsner '876 patent are directed to improvements on aspects of the invention unrelated to the clamping means. *See id.* col. 2, *l.* 30 to col. 6, *l.* 2.

7. German '321 Patent[6]

The German '321 patent was before the examiner during prosecution of the '889 patent. '889 Patent, at 1. Dr. Guenther, Dorel's expert, describes the teachings of the German '321 patent as follows:

> German Patent No. 2,059,321 discloses strap adjustment structure falling within the Court's construction of the "adjusting means" of claim 8 and "belt adjustor" of claim 11. The structure disclosed in the German patent '321 includes a cam member 19 (or 19A) that is pivotally mounted on pin 16 (or 16A), which is attached to buckle side walls 11 (or 11A). The eccentric cam member has a radial bearing surface having serrations 20 (or 20A). The cam member is biased against a bar 18 (or 18A) having

[6]The Court notes that neither party provided an English language translation of the German '321 patent to the Court that would have allowed the Court to present the claims and teachings of the German '321 patent in objective terms.

> a flat surface of contact with the cam member that is longer than it is wide. It is clear from the figures that a belt 22 (or 22A) is frictionally received and held between the cam member and bar, but is then released by pivoting of the cam member. The German '321 patent also satisfies the main object of the Heath '602 patent, thus providing the motivation to combine the two.

Guenther Decl. ¶ 30 (citations to the German '321 patent omitted).

8. Yang '550 Patent

The Yang '550 patent was prior art considered by the examiner of the '889 patent. '889 Patent, at 1. The Yang '550 patent discloses a webbing or belt adjustor for securing objects or persons that

> utilizes a stationary spool and a wedge member, which is in spring biased contact with the stationary spool. The wedge member is operated by a release tab. The webbing material is in contact with a substantial portion of the surface of the spool and is fed between the spool and the wedge member, which locks the webbing material securely on the spool.

'550 Patent, Abstract. "The primary object of such mechanisms is to allow for the movement of the webbing material in one direction to tighten the belt while at the same time the bracket or buckle incorporates a mechanism which will prevent the reverse movement of the belt." *Id.* col. 1, *ll.* 12-16. "The release of the webbing to loosen the belt from around the object is accomplished in a single hand motion of pulling a tab attached to the wedge member." *Id.* col. 1, *ll.* 54-56.

The reference has a single claim that reads:

> 1. A safety belt webbing adjustor comprising:
>
> a frame member having two spaced, upwardly extending support flanges;
>
> a cylindrical spool rigidly mounted between said support flanges for guiding the movement of said webbing through said frame member, the cylindrical surface of said spool being grooved to better grip the webbing;

a wedge member having a generally teardrop shaped cross section pivotally mounted between said flanges adjacent said spool;

an elongated coil spring concealed within said wedge member connected between the wedge member and the frame member for biasing said wedge member in contact with said spool to restrain the movement of said webbing in one direction, in a manner such that an increasing load on the webbing increases the wedging action;

a holding bar extending between said flanges adjacent said spool and positioned to insure that the webbing is held in contact with approximately 270° of the surface of the spool as it passes from the holding bar to the wedge member; and

a release tab attached to said wedge member centrally with respect to said frame flanges to pivot said wedge member away from said spool to allow movement of said webbing in said one direction.

Id. col. 4, *ll.* 21-47.

9. Griswold '307 Patent

The Griswold '307 patent issued on January 9, 1951. '307 Patent, at 1. The invention is a clamping buckle "for safety belts such as are used in airplanes to retain passengers in position in their seats." *Id.* col. 1, *ll.* 2-4. The Griswold '307 patent describes the following objects: "to provide a buckle which will be convenient and safe in operation and which will automatically act to give a complete and secure grip on the belt in each fastening operation," *id.* col. 1, *ll.* 5-9, and to provide "a gripping member [that is] automatically latched in open position for insertion of the strap and subsequent release to gripping position on the strap . . . ." *Id.* col. 1, *ll.* 10-14.

The Griswold '307 patent claims, in relevant part:

3. A buckle for a belt or the like comprising a strap plate and a cooperating gripping member pivoted on an axis transverse to said plate and having a cam face eccentric to said axis and adapted to contact the surface of said belt, a spring tending to turn said member to closed position of said cam face, latching means between said plate and said member adapted to automatically engage and hold said member in

> open position against the action of said spring, and a transversely movable part resiliently held outward for engagement by the hand of the user and yieldingly moving inward to detach said latching means and release said gripping member for closing movement under the action of said spring.
>
> 4. A buckle for a belt or the like comprising a strap plate having intergral side flanges of generally triangular formation, a pin transversely spanning the space between said flanges adjacent the base of the triangles and consisting of a relatively small end seated in one side flange and an opposite larger flat-sided recess in the other flange, a gripping member journalled [sic] on said pin between said side flanges and having a toothed cam face eccentric to the axis of the pin and moving adjacent the surface of the plate to bind and hold a strap thereon adjacent said transverse pin, a strap slot in the plate adjacent the other end thereof, a handle on said gripping member moving between said flanges to carry its end toward said strap slot in clamping position of said member on said strap, a recess in one end of said gripping member surrounding said transverse pin adjacent said enlarged head, and a coiled spring in said recess around said pin and having one end connected to said head and the other end to said member to resiliently urge said member to bring the cam surface thereof in holding grip against the strap.

Id. col. 4, *l.* 41 to col. 5, *l.* 7.

The Griswold '307 patent teaches that "[w]ith the strap end in place between the eccentric clamp **13** and the plate **18**, the clamp is released for automatic pivoting to gripping position . . . ." *Id.* col. 2, *ll.* 6-9. "In operation the user opens for insertion or release of the strap by lifting pressure under the end of the clamp **11**, turning it upward to the position shown in Fig. 6." *Id.* col. 3, *ll.* 56-59.

10. Svensson '545 Patent

The Svensson '545 patent issued on April 13, 1965. '545 Patent, at 1. The patent has a single claim:

> A safety belt buckle comprising
>
> *(a)* a base to which one end of a belt is adapted to be secured,

(b) a flap mounted at one end on said base to pivot between an open and a closed position, respectively,

(c) a first spring uprging [sic] said flap to its closed position,

(d) a locking member mounted within said flap between said flap and said base for oscillation about the pivotal axis of said flap between a locking position and a released position, respectively,

(e) said member having a clamping portion thereof formed to clamp the other end of a belt against said base, when said member is in its locking position,

(f) a second spring urging said locking member towards its locking position independently of said first spring and of said flap but in the same direction as the first-named spring urges said flap, and

(g) a shoulder formed on said locking member and projecting through a slot in said flap to be engaged by said flap to pivot said locking member from its locking position to its released position, when said flap is moved from its closed to its open position,

(h) said slot extending about said pivotal axis a distance sufficient to disengage said shoulder upon movement of said locking member and said flap, under the action of said springs, to said locking position and to said closed position, respectively, whereby said flap must move independently of said locking member toward the open position of said flap before moving said locking member toward release position, and

(i) said locking member having an integral, tongue-like projection at the opposite side of said pivotal axis from said should and extending toward the free end of said flap, and operative to engage said other belt end to limit the pivotal movement of said locking member in the direction of its locking movement, when said belt is subjected to an extreme stress.

Id. col. 3, *l.* 27 to col. 4, *l.* 27.

The Svensson '545 patent teaches that

[t]he locking member is provided with a knurled or serrated portion **36** for clamping the other belt-part **38** against the base portion **10**, which may have for this purpose a backing section in the form of a protuberance **40**.

* * *

> It will be readily understood that the locking member **32** cannot (the shoulder **46** being disregarded) rotate counter-clockwise, as viewed in FIG. 1, in relation to the flap **24** further than to a position wherein the tongue **48** clamps the belt-part **38** against the lower portion **10**. This limitation of the freedom of movement has for its object to prevent failure of the locking member in cases of catastrophy [sic] and the like, when the safety belt is subjected to a very large, more or less momentary load. . . . [T]he tongue **48** limits . . . rotation so as to ensure that the knurled portion **36** would still be effective, at least partially, to maintain belt-part **38** locked.

Id. col. 2, *ll.* 7-11, *ll.* 50-65.

11. Meeker '612 Patent

The Meeker '612 patent issued on February 13, 1962. '612 Patent, at 1. The invention is "directed more particularly to buckles of the type designed for use in connection with safety belts such as are being used in motor vehicles, airplanes and the like." *Id.* col. 1, *ll.* 10-13. The Meeker '612 patented invention purports to solve the slipping problems of prior art safety belts by providing, in its simplest form, a "safety belt buckle which functions by friction to secure a free end of a safety belt with means for restraining or resisting the forward throw or movement of the free end of the belt webbing under inertia and thereby preventing the belt end from acting upon the release lever of the buckle to open the same or cause it to disengage from and release the secured belt end." *Id.* at col. 1, *ll.* 61-68. Moreover, the invention provides a restrainer guard element that lies under the releasing lever to prevent the free end of the engaged part of the safety belt from shifting the buckle release portion in an emergency situation. *See id.* col. 2, *ll.* 1-16.

The patent describes:

> a gripping jaw which is in the form of a substantially circular or cylindrical bar having formed longitudinally therethrough [sic] the eccentric passage **22** through which the pivot pin **20** passes. This pivot pin is of an overall diameter throughout the major portion of its length to fit snugly in the passage **22** but at one end it is provided

> with an encircling recess **23** in which is positioned a coil spring **24** which surrounds the shaft in the reduced area and has one end turned to extend transversely of the shaft into a suitable aperture **25** while the opposite end turns outwardly and is fixed in the gripping member or body **21** as indicated at **26**. The eccentric mounting of the body **21** provides a peripheral area which extends outwardly to form a camming or gripping surface **27** which is preferably serrated or toothed longitudinally of the body **21** as is clearly shone in FIGS. 2 and 3, and when the gripping body is turned in the buckle-closed position, this toothed surface is disposed in relatively close relation with the surface of the platform portion**19** to grip the free end of the strap or belt **18**" when the latter is extended longitudinally through the buckle between the gripping body and the supporting platform **19**.

Id. col. 3, *ll.* 22-44. And, the reference claims:

> A safety buckle comprising a body having a base and elongate spaced side flanges, means for attaching a belt to one end portion of the base, means rockably supported by and between the flanges adjacent to the other end of the body for gripping an end portion of a belt, an elongate lever tongue connect to said means for actuating the same to belt releasing position and extending toward said one end of the base when said means is in belt gripping position, a plate member disposed between said flanges between the lever tongue and the body base, and means supporting said plate in spaced relation to said body base comprising outwardly extending flat trunnion ears carried upon opposite sides of said plate adjacent to the end thereof nearest to said gripping means and slots in said flanges in which said trunnion ears are loosely mounted for limited turning movement, said loose mounting of the trunnion ears in the slots permitting limited swinging of the other end of the plate and preventing engagement of said plate with said lever tongue.

Id. col. 5, *l.* 12 to col. 6, *l.* 7.

12. Legat '786 Patent

The Legat '786 patent issued on December 15, 1959. '786 Patent, at 1. The Legat '786 patented invention is directed "to buckles for use on safety belts in automobiles and aircraft." *Id.* col. 1, *ll.* 11-13. It teaches:

> The buckle of such a belt should be constructed so that it can easily and readily be connected to the belt and released therefrom, and when in connected condition be

able to withstand very high pressure without danger of slipping on the belt or opening up.

It is the primary purpose of the instant invention to provide an improved safety belt buckle having a structure which is capable of satisfying the aforesaid requirements.

A further object of the invention is to provide a buckle of the indicated type which when connected on the belt will always be in a locked condition until positively unlocked and yet while in such locked condition shall permit the adjustment of the belt to be tightened.

Id. at col. 1, *ll.* 21-33.

The Legat '786 patent claims, in part:

1. A buckle comprising a body having a back plate provided with a transverse opening adjacent to one end thereof and forming on such back plate a transverse end bar to which one end of a belt is connected, side walls extending from said back plate and provided with aligned openings adjacent to the other end of said back plate, a pin extending through said openings, a locking member extending transversely between said side walls and having a longitudinally extending bore revolvably receiving said pin, said member having an offset locking portion coactable with a portion of said back plate located behind said pin to lock said buckle on a belt end inserted between said member and portion, and having an elongated recess extending longitudinally thereof and located on that side of said member which is substantially opposite to the offset locking portion thereof, said recess providing a pair of spaced shoulders extending lengthwise of said member and inwardly of said side thereof, a hand operable lever member disposed generally substantially tangentially to said side of said locking member with one end thereof overlying said recess, said lever end having inturned ears provided with aligned opening for revolvably receiving said pin and located on said pin between the ends of said locking member and said side walls, said lever end having a lug in the form of an integral extension located between said ears and bent inwardly at an angle to said lever so as to extend into said recess, said lug being permanently located in said recess between said shoulders and coacting with at least one os said shoulders when said lever is manually pivoted about said pin to cause said locking member to be rotated about said pin to cause said locking member to be rotated as a unit with said lever in the direction of pivotal movements of the latter, a spring seat provided in one end of said locking member, a spring mounted on said pin between said locking member and a lever ear having one end engaged with said spring seat, the other end of said spring extending outwardly in parallelism with said pin through an opening in the associated lever ear and through an opening in the associated side wall of the buckle and being fixed to said associated

side wall so that said locking member is normally biased into engagement with said belt end.

2. A buckle as defined in claim 1, in which said other end of the spring rests on said pin, and said lever ear opening forms part of the opening through which said pin extends, said opening having a cam shaped edge portion engaging said spring end when said offset locking portion is in said coactable relation with said back plate portion.

Id. col. 7, *l.* 35 to col. 8, *l.* 9.

13. Tanaka '111

U.S. Patent No. 4,025,111, to Tanaka ("Tanaka '111") was cited by the examiner as prior art. '889 Patent, at 1. Tanaka '111 is directed to a child safety harness with an improved abdominal pad and buckle securing means. U.S. Patent No. 4,025,111, May, 24, 1977, at Abstract ("Tanaka '111 Patent"). Among others, Tanaka '111 cites as its objects:

to provide a harness for a child safety seat including an abdominal pad which utilizes the minimum amount of webbing while yielding the maximum amount of adjustability[,] to provide a child safety seat which the user parent can easily and quickly seat the child therein but in an emergency can rapidly extract the child therefrom[,] . . . [and] to provide an improved adjustment means for determining the position of the abdominal pad of the child safety seat.

Id. col. 1, *ll.* 55-66.

The most relevant portions of the claims of Tanaka '111 read:

6. In a child safety seat including a seat frame for supporting a child, harness means for securing the child to the seat frame, the harness means including at least two harness webbing sections anchored to the seat and attached to an abdominal pad for restraining the upper torso of the child and restraining the pad and at least a third harness webbing section anchored to the seat at a first end and attached at a second end to the abdominal pad for restraining the lower part of the torso and restraining the abdominal pad, and adjustment means for adjusting the vertical position of the pad, the improvement comprising provision of:

said third harness webbing section having a fixed length, said adjustment means comprising positioning means associated with the pad for positioning the second end of the third harness webbing section for positioning the pad relative to the child.

7. In an adjustment means for determining the position of an abdominal pad of a child safety seat including at least one webbing segment attached at one end to the pad and anchored at another end to a remote location, the improvement comprising the provision of:

a bar and mounting means in the pad for mounting the bar at different vertically spaced locations in the pad, and

attaching means on said one end of the webbing segment for attaching one end of the webbing segment to the bar, whereby changing the vertical position of the bar in the pad alters the length of webbing protruding from the pad to position vertically the pad.

8. In a harness system for restraining a child occupant in a child safety seat including an abdominal pad and at least two sections of webbing extending generally upward from the pad to be anchored at a location remote from the pad to restrain the upper torso of the child and at least one section of webbing extending generally downward from the pad and anchored at a location remote from the pad for restraining the lower torso of the child, and adjustment means for adjusting the length of the webbing sections, the improvement comprising the provision of:

attaching means on the ends of the webbing sections at the pad an bar means attachable at different vertical locations within the pad and attached to said attaching means for adjustably vertically positioning the ends of the webbing sections within the pad to adjust the vertical position of the pad.

Id. col. 7, *l.* 46 to col. 8, *l.* 27. Similarly, Tanaka '111 teaches adjustment of an abdominal pad through an adjustment bar located behind the back of the child seat, which Tanaka '111 describes as "a remote location," and through an on-pad rib system. Tanaka '111 Patent, col. 2, *ll.* 6-23. With respect to the "adjustment means," Tanaka '111 discloses:

[T]he adjustment means for adjusting the vertical position of the pad comprises in the preferred embodiment a bar **51** and mounting means **52** for mounting the bar at different vertical spaced locations on the pad. The mounting means includes vertically spaced ribs means formed in the pad for receiving the bar **51** between

> adjacent ribs, and by determining the ribs which receive the bar, the vertical position of the pad is determined.

Id. col. 4, *l.* 64 to col. 5, *l.* 4. The patent also teaches that the shoulder portions of the harness system may be adjusted via a "hook plate or anchor plate." *Id.* col. 3, *l.* 67 to col. 4, *l.* 17. The length of harness webbing is adjusted through appropriate selection of a an opening that receives the hook. *Id.* col. 4, *ll.* 11-17. The "hook plate or anchor plate" appears to be in the back of the child safety seat. *Id.* Fig. 10.

14. <u>Dillender '776</u>

The patent examiner also cited U.S. Patent No. 3,380,776, to Dillender ("Dillender '776"). Dillender '776 discloses a child safety harness, which "has more particular reference to an adapter means by which the harness may be easily attached to conventional, already installed, automobile safety belts." U.S. Patent No. 3,380,776, Apr. 30, 1968, col. 1, *ll.* 10-13 ("Dillender '776 Patent"). The harness itself is a flexible one generally of the structure as that found in U.S. Patent No. 3,321,247 (the "'247 patent"). *Id.* col. 1, *ll.* 14-23. The improvement of Dillender '776 is "an adjustable adapter or locking means . . . for adjustably and detachably connecting some portion of the child's harness of [the '247 patent] to the conventional safety belt webbing ends." *Id.* at 26-29. All of the claims use the adapter means. *Id.* col. 4, *l.* 25 to col. 6, *l.* 5

Dillender '776 describes the adapter means in more detail:

> Referring to the adapter member **100**, the same includes a rigid frame structure **110** which includes a base **111** and upstanding side flanges **111a** and **112**. The base **111** has the opening **102**, above described, to which the strap **101** is connected.
>
> The adapter **100** includes a lock bar **113** which has an apertured end extension **114** pivoted to the flange **112** in a slot **115** on extension portions **116** which project

into the slot **115**. This slot **115** is located at an acute angle with respect to the plane of the base **111**, as shown in FIG. 6. This connection is sufficiently loose to permit the knurled lock bar **113** to be easily swung to opened position upon the base **111** for securement to the belt strap B and C.

The lock bar **113** is knurled in order that it may clamp the safety belt webbing against the bottom wall **111** of the frame **110**. The opening end of the bar **113** consists of a pair of polygonal cross sectional spaced extensions **120**, as shown in FIG. 5 and the innermost thereof is provided with a flexible plastic tube **121** slipped thereon. The wall **111**[a] of the frame structure **110** is provided with an obtuse angled slot **123** therein into which the opening end of the lock bar **113** may be extended into position the said lock bar in belt clamping position. It is shown in FIG. 5[a] that the slot **123** is narrow at its outer end and enlarged at its inner end. Since the claim tube **121** is preferably of flexible plastic and quite tough, it can be compressed as it slips through the narrow portion of the slot **123** and then will come to securely held position in the lower wider portion of the slot **123**, as shown in FIG. 5.

As shown in the drawings, the conventional safety belts B and C are preferably doubled upon themselves prior to securement of the adapters **100** thereto. The base **111** has a slot **150** therein through which the doubled belts B and C are slipped. With the lock bar **113** in opened position the looped portions of the belt webbing extended through the slots **150** is then extended around the bars **113** and the bars moved back into latched position. This securely holds the straps **101** against travel in either direction along the seat belt to which attached.

Id. col. 3, *ll.* 35-73.

15. <u>Gley '966</u>

The examiner also cited U.S. Patent No. 3,887,966, to Gley ("Gley '966"). In Gley '966, in a tension latch assembly, a handle is "pivotally supported adjacent to one end thereof on a mounting bracket for movement between an open position and a closed position [and] adjustably receives and frictionally retains in adjusted position the free end of a tie-down webbing extending from an anchor and over an article to be tied down . . . ." U.S. Patent No. 3,887,966, June 10, 1975, Abstract ("Gley '966 Patent"). As "the handle moves from its open position to its closed position"

tension on the web is increased. *Id.* The objects of the Gley '966 invention include providing a heavy-duty latch that is adapted to tension down webs, has a large grip range, is secure and is relatively easy to operate. *Id.* col. 1, *ll.* 58-68.

Claim 1 of Gley '966 reads:

> A latch and belt assembly for tensioning a flexible belt length along a line of action including in combination, a length of flexible belt having a free end, a mounting bracket having a base, a handle having a bottom and sides extending upwardly from said bottom, said bottom being formed with spaced openings providing a first bottom portion extending between said sides at a location adjacent to one end of said handles and a second bottom portion extending between said sides at a location intermediate the ends of said handle, and means mounting said handle sides on said bracket at a location above said base for pivotal movement around an axis from an open position in which said second bottom portion is above said axis to a closed position at which said second bottom portion is between said axis and said base, said belt length base, the closed position of said handle extending from said free end thereof into said latch past said first and second handle bottom portions on one side of said bottom and around said second bottom portion and between said first and second bottom portions and around said first portion and past said first and second portions on the other side of said bottom and again around said second bottom portion and past said first and second portions on said one side of said bottom and outwardly and away from said latch along a ling of action generally parallel to said base so that spaced portions of said belt adjacent to said free end are captured between said second bottom portion and the outwardly extending portion of said belt and between said first bottom portion and the outwardly extending portion of said belt.

Id. col. 4, *ll.* 10-41.

16. <u>Knox '833</u>

The patent examiner cited U.S. Patent No. 4,118,833, to Knox ("Knox '833"), which discloses a buckle assembly with a strap-tightening mechanism, that uses a pivotally-mounted handle that presses a belt against a main frame. U.S. Patent No. 4,118,833, Oct. 10, 1978, Abstract ("Knox '833 Patent"). Knox '833 claims:

> 1. In a buckle for tightening a strap having a generally U-shaped main frame member with a pair of opposing side walls joined together by a plurality of cross-bars forming a bottom, one of which is centrally located and another of which is at one end of said frame member, and a handle member pivotally supported between the sides of said frame member and having a pair of side arms joined together by an inner and outer cross-bar, one end of the strap being looped around the inner cross-bar of the handle with two legs of the loop being drawn under the centrally located cross bar of the frame member and out from the buckle, the other end of the strap being attached to the cross bar at said one end of said frame member, the improvement comprising:
>
> means for stopping the downward travel of said handle and latching said handle at a predetermined position spaced from the bottom of said frame member comprising a projection formed in one of the side walls of said frame member and extending inwardly therefrom, a projection on one of said handle side arms and a projection on the other of said frame member side walls whereby in the latched position the bottom edge of the other of said handle side arms abuts against said frame member side wall projection with the projection on the other side of said handle said arms abutting against the under side of the projection on the other of said frame member side walls,
>
> similar apertures formed in each of the side walls of the main frame member and the side arms of said handle member, said apertures being aligned with each other with the handle ins aid predetermined latched position, and
>
> security means for locking said handle in the latched position including a bar fitted through said apertures.

Id. col. 3, *l.* 10 to col. 4, *l.* 21.

17. <u>Prete '542</u>

United States Patent No. 3,678,542, to Prete, Jr. ("Prete '542"), was also cited by the '889 patent examiner. Prete '542 is directed to a cam buckle for fastening belts or straps used in cargo handling. U.S. Patent No. 3,678,542, July 25, 1972, Abstract ("Prete '542 Patent"). Prete '542 professes to contain the best combination of the following important features: low cost, light

weight, high strength, protection of cargo from damage by the buckle and adaptability to a large number of belt sizes. *Id.* col. 1, *ll.* 23-29. Prete '542 teaches a locking cam mechanism:

> 1. A buckle for removably holding a strap end including
> a channel member having
> a central portion extending along the length of said channel member and defining
>
> a pressure plate receiving means formed adjacent one end of said channel member,
>
> a pivot means mounted on said channel member in a fixed position relative to said pressure plate receiving means,
>
> a pivotable member mounted on said pivot means and including
>
> a cam face, in eccentric relationship to the axis of said pivotable member, at one end of said pivotable member and
>
> a lever means at the opposite end of said pivotable member, said pivotable member being freely rotatable about said pivot means, in a first said direction,
>
> a pressure plate loosely seated and freely floating upon said pressure plate receiving means including
>
> means on said pressure plate for removably seating and retaining said pressure plate on said pressure plate receiving means, and
>
> means for biasing said pivotable member about said pivot means in said first direction to force said cam face against said pressure plate, thereby holding said pressure plate in a seated position on said pressure plate receiving means and preventing further rotation of said pivotable member in said first direction.

Id. col. 5, *l.* 28 to col. 6, *l.* 1. Prete '542 teaches that the pressure plate "may be formed either as an integral part of the frame or as a separate member which is mounted thereon." *Id.* col. 2, *ll.* 1-2.

18. Miener '946

The patent examiner also cited U.S. Patent No. 2,919,946, to Miener ("Miener '946"). Miener '946 is directed to a trunk lid-holding device that is designed to hold onto the trunk lid of an automobile when it cannot be closed because of the items placed inside the trunk. U.S. Patent No. 2,919,946, Jan. 5, 1960, col. 1, *ll.* 15-20 ("Miener '946 Patent"). Miener '946 claims, in relevant part:

> 3. A trunk lid-holding device for an automobile having a trunk compartment and a lid for said compartment in which an underdeck panel is provided with spaced apertures, comprising a clamp adapted to be attached to an automobile bumper below the trunk compartment, a resilient strap of a resilient material extending between the lid and said clamp element, said strap being substantially of a Y-shaped construction having divergent strap arms at its upper end, means on each of said upper strap arms for engaging the spaced apertures of said lid deck panel to attach said strap to said lid, the clamp element including a socket portion through which the opposite lower end of said resilient member slidably extends, the lower end of said resilient strap beting adapted to be pulled through the socket portion to adjust for the lid height and to place the strap under tension, and means on said clamp element for securing the resilient strap in adjusted position in said socket portion, the resilient strap being free of attachment to the clamp element when secured in adjusted position by said clamp means.

Id. col. 4, *ll.* 46-66. The clamp means includes a latch arm "with an eccentric cam portion **26** that is adapted to extend into and out of socket portion **21** upon pivotal movement of arm **24**." *Id.* col. 2, *ll.* 56-61.

19. Davis '266

United States Patent No. 2,442,266, to Davis ("Davis '266"), was also cited by the '889 patent examiner. Davis '266 is directed to improvements to cargo tie-downs for aircraft. U.S. Patent No. 2,442,266, col. 1, *ll.* 1-7 ("Davis '266 Patent"). Davis '266 recites:

> Special objects of the present invention are to provide a tie-down unit which may be used more or less universally for securing cargo of various kinds under different varying conditions; which can be quickly applied and released, be easily adjusted and adapted to the load and to particular surrounding conditions, which will be entirely safe and secure, take up but small space, be light in weight, be readily adjustable for length and be easily adjustable at any time to take up any slack, such as might be occasioned by the settling of a load.

Id. col. 1, *ll.* 8-18. The disclosed buckle achieves some of these objects using a spring-loaded locking cam. *Id.* col. 1, *l.* 48 to col. 2, *l.* 10.

Davis '266 claims, in part:

> 1. A cargo tie-down, comprising an elongated flat plate having substantially parallel edge flanges providing a strap guiding channel there-between and having two parallel spaced slots extending across the same between said flanges near one end and a single slot extending across the same between the flanges near the opposite end, a strap clamping member supported between the edge flanges at an intermediate point in the length of the plate between the cross slots near the opposite ends of the same, and a strap of a width to enter and be guided between the edge flanges, said strap extending over the face of the plate between said edge flanges, through the inner of the two slots first mentioned to the opposite side of the plate, thence through the outer of the two slots to the first side of the plate beneath the portion of the strap at the side, thence to the back of the plate and over that portion fo the strap at the back of the plate and through the slot at the opposite end of the plate of the front side of the plate, and said strap then being doubled in return loop and the end portion of the same extending over the front side of the plate between the slotted portions and beneath and adjustably held by said clamping member.

Id. col. 4. *ll.* 6-32.

E. EVIDENCE RELATED TO SECONDARY CONSIDERATIONS OF NONOBVIOUSNESS

1. Commercial Success of the '889 Patented Invention

The car seat market essentially consists of convertible car seats and infant-only car seats. Convertible car seats, those seats that can face either frontward or backward and generally

accommodate newborns to four-year-olds, make up over two-thirds of the car seat market. Wallen Decl. ¶¶ 9-10. Infant-only car seats make up the other third of the car seat market. Of the infant-only seats that do not use a three-bar slide for adjustment, the A-Lok design is dominant. *Id.* ¶ 10. The United States convertible car seat market is made up almost exclusively of either manufacturers who purchase the A-Lok from IMMI or those manufacturers that practice their own design pursuant to a license from IMMI. *Id.* ¶ 10.

IMMI has sold [millions of] A-Lok harness systems over the years. *Id.* ¶ 12. Systems produced by [certain licensees] are not included in this number. *Id.* ¶ 14.

In Europe and Australia, the A-Lok design is the dominant adjustor system. *Id.* ¶ 15.

In terms of sales, in 2003 alone, [millions of] A-Loks were sold, resulting in [millions of dollars] in revenue. Pl.'s Invalidity Opp'n Exh. 19, IMMI Sales Summary, 2003-Feb. 4, 2005, at IMMI006843-51. In 2003, IMMI sold A-Loks to multiple manufactures including: [multiple manufacturers in North America and Europe.] *Id.* In 2003, IMMI sold 2 million A-Loks to Dorel alone. *Id.*

IMMI has granted [] licenses under the '889 patent. Wallen Decl. ¶ 17. [Information about the licensees redacted.] Each license is different from the others. *Id.* ¶ 18. *See also* Pl.'s Invalidity Opp'n Exhs. 23-27, Licenses.

IMMI knows of only one alternative use for the A-Lok, which accounts for less than 1% of A-Lok sales. *Id.* ¶ 13.

David Bimschleger, Dorel Juvenile's Executive Vice President, Sales ("Bimschleger"), testified that price, fashion, inserts and comfort are the most important sales drivers in the infant and child car seat market. Bimschleger Dep. at 13-14, 22-23, 54-55. Furthermore, Dorel sold a large

number of different children's car seat models that used an IMMI adjustor at a variety of different prices. Glover Decl. ¶ 11. The wholesale price of Dorel's line of car seats that utilized the IMMI adjustor varied from a low of $28.35 to a high of $123.13. *Id.*

2. '889 Patent Licenses

IMMI has entered into [] licenses under the '889 patent. Wallen Decl. ¶ 17. [Details about the licensees and the licenses redacted.]

3. Praise By Others

Dorel's Vice-President of Applied Technology, Glover, testified that in his opinion, the A-Lok was used industry-wide because "[i]t was a good product. It did what people expected it to do." Glover I Dep. at 113. Moreover, in a feature list on Dorel's web site in 2002, Dorel included the phrase: "Easy, reliable A-Lok™ harness adjustments." Pl.'s Invalidity Opp'n Exh. 52, http://www.djgusa.com/coscocat/carseats/480comuter.html, Oct. 28, 2002, at D5973. Apparently, Dorel's advertising highlighted the A-Lok because Dorel's consumer testing revealed that the up-front harness adjustor was perceived to be easier to use. Bimschleger Dep. at 84-85. Similarly, with regard to Dorel's use of the bullet point "Up-front harness adjustment" on a brochure, Bimschleger, Dorel Juvenile's Executive Vice President of Sales, testified that the statement related to "competitiveness and ease of use for the consumer." *Id.* at 89; Pl.'s Invalidity Opp'n Exh. 16, Dorel Car Seat Brochure. Mitchell also testified that Dorel highlighted the central front adjustor in promotional materials "because it's a feature - a convenience feature for the consumer." Mitchell Dep. at 32.

Other competitors acknowledged the advantages of an A-Lok system: (1) Maxi-Cosi notes that "[t]he one-pull harness is easy to use and adjusts quickly to suit big or small children, in bulky or thin clothing," Pl.'s Invalidity Opp'n Exh. 58, MAXI-COSI Advertisement, at IMMI 006486; (2) Britax notes that the "One-Pull Harness Strap Adjuster [sic] makes it easy for you to get a proper fit," and "One pull harness adjustment provides snug fit for wiggly toddlers." Pl.'s Invalidity Opp'n Exh. 59, Britax Catalog, at IMMI 006497 & 006420.

4. Failure of Others

Dr. Guenther testified that the spring of the Heath '602 reference might be susceptible to fatigue. Guenther Dep. at 42. He asserts that there is a motivation to combine the adjustor references with the Heath '602 patented invention because "the efficiency and the utility and life expectancy" issues with regard to the Heath '602 adjustor may suggest looking for a better adjustor. *Id.*

Dr. Williamson has pointed out the cumbersome design of the Cosco Safe & Easy seat. Williamson 3d Decl. ¶¶ 24-30.

5. Long-Felt Need

The Heath '602 patent states:

> There is a well recognized need for a separate moulded [sic] single seat . . . to be used in the body of an automobile which will hold a child comfortably . . . . With the previous arrangements some difficulties are encountered. Owing to the difficulty in adjusting the effective lengths of each seat belt component separately, quite often adjustment is not made . . . . The main object of this invention is to provide a seat arrangement which can be quickly and easily adjusted . . . .

Heath '602 Patent, at 2.

The Takada '483 patent states:

> Because children vary considerably in size . . . the belts are usually adjustable. Many of the known belt systems are relatively complicated because of the number of belt sections involved and the adjustable features incorporated in them. They are also frequently cumbersome to put on the child.

Takada '483 Patent, col. 1, *ll.* 22-28.

Anthony testified:

> A . . . There were car seats available. There was a lot of dissatisfaction with car seats and the ease of use, and the security with which they held a child.
>
> Q And what . . . was the dissatisfaction that you were aware of with respect to the then existing car seats?
>
> A Hard to use.
>
> Q Okay. In what respect?
>
> A Difficult to adjust, that's one.
>
> Q Okay, anything else?
>
> A Reaching way back now, but they could allow slack or looseness into a system.

Anthony I Dep. at 21.

Lortz testified that "one of the key problems was coming up with a quick and easy means of allowing a child restraint to have a quick and easy means of adjusting the web." Lortz I Dep. at 43. In addition, Lortz stated that "[a]djustment means was a known problem with child restraints." *Id.* at 45.

F. DOREL'S ALLEGEDLY INFRINGING PRODUCT

In 2002, Jeff Hale ("Hale"), Dorel Juvenile's Executive Vice-President of Operations, wrote in an e-mail to Dupuis at DII that "[IMMI's] A-lock [sic] is used industry wide, and they currently have a couple of patents on this that will last for a few more years." Pl's Invalidity Opp'n Exh. 29, E-mail, From: Jeff Hale, To: Pierre Dupuis, Subject: FW: Dorel/IMMI Supplier Agreement & Quotation, Jan. 31, 2002.

Glover at Dorel Juvenile acknowledged during his June 2005 deposition that use of the A-Lok is "industry-wide." Glover June 15, 2005, Dep. at 111 ("Glover I Dep."). Moreover, Glover testified that the A-Lok may have become "dominant" as early as 1990 or as late as 1992. *Id.* at 113. In fact, Dorel purchased the A-Lok from IMMI until Dorel decided to boost its profits by importing a lower cost alternative from China. Cartwright Mar. 4, 2005, Dep. at 35-36 ("Cartwright I Dep."); Pl.'s Invalidity Opp'n Exh. 40, E-mail, From: Richard Glover, To: Eddy Lutkemeier, RE: Questions concerning US boosters, Feb. 19, 2003 (discussing the Dorel-designed replacement of the IMMI adjustor and referencing "huge" savings). Glover was the person at Dorel responsible for the design of the allegedly infringing product. *Id.* at 30.

Apparently, Dorel developed the lower-cost alternative itself with the assistance of Catalyst, a design firm. *Id.* at 133; Pl.'s Invalidity Opp'n Exh. 37, E-mail Meeting Notice, Subject: Project Review with Catalyst, May 7, 2002 (referencing "A-Lock alternatives"); Pl.'s Invalidity Opp'n Exh. 39, E-mail, From: Andrew Mendenhall, To: Richard Glover, Subject: A-Lock Concepts, July 15, 2002, With Attachments; Pl.'s Invalidity Opp'n Exh. 38, A-Lock Design Alternatives. Glover gave Catalyst the following parameter for the design of the new adjustor: "simple and inexpensive, about

$1.50 and non-patent infringing."[7] Glover I Dep. at 133. Dorel sent at least one A-Lok to Catalyst for analysis. Baumgartner Dep. at 24. The original design sketches evidence that Dorel considered adjustors that were materially different from the IMMI A-Lok adjustor. Pl.'s Invalidity Opp'n Exh. 38, A-Lock Design Alternatives.

However, Dorel ended up focusing on two designs labeled 12b and 15b. Pl.'s Invalidity Opp'n Exh. 39, E-mail, From: Andrew Mendenhall, To: Richard Glover, Subject: A-Lock Concepts, July 15, 2002, With Attachments; Glover I Dep. at 160. The 12b design utilized a pinch bar system that incorporated a pre-loaded spring to guarantee the pinch. Pl.'s Invalidity Opp'n Exh. 39, E-mail, From: Andrew Mendenhall, To: Richard Glover, Subject: A-Lock Concepts, July 15, 2002, With Attachments. The 15b design utilized a rotating cam system that used a pinch cam and a release tab feature. *Id.* Glover testified that Dorel decided to focus on the two designs based on the ease of bringing them into development. Glover I Dep. at 160. Glover also testified: "The other ones that we ruled out we felt would be harder to develop, more expensive to develop, or longer to develop or some combination of all of those things. So we just - - we didn't elect to go with those." *Id.* Eventually, Dorel selected a single design to develop. *Id.*

As Dorel progressed through development of their own design in conjunction with Goodbaby, it referred to the IMMI A-Lok as a benchmark for such things as rivets, tooth profile, and pull strength. Glover I Dep. at 201-02; Glover June 16, 2005, Dep. at 227-31; 236-40; 269 ("Glover II Dep."); Pl.'s Invalidity Opp'n Exh. 44, E-mail String, Ending on Mon. Oct. 6, 2003, From Steve Oltman, To Greg Moser, Subject: Front Adjuster [sic] Update; Pl.'s Invalidity Opp'n Exh. 45, E-

[7]Glover declared that he sought and received an opinion of patent counsel prior to development of the new Dorel adjustor advising him on how to avoid infringement of the '889 patent. Glover Decl. ¶ 4.

mail String, Ending on Mon. Feb. 10, 2003, From Richard Glover, To Joe Baumgartner, Subject: Adjuster [sic] Details; Pl.'s Invalidity Opp'n Exh. 46, E-mail String, Ending on Thurs. Mar. 20, 2003, From Richard Glover, To Tony Song *et al.*, Subject: minutes of Front central adjuster [sic]; Pl.'s Invalidity Opp'n Exh. 47, E-mail String, Ending on Thurs. Mar. 20, 2003, From Steve Oltman, To Tony Song, Subject: frame sample (front adjuster [sic]); Pl.'s Invalidity Opp'n Exh. 48, E-mail, From Steve Saxton, To Bill Horton *et al.*, Subject: One inch front adjuster [sic] transition; Pl.'s Invalidity Opp'n Exh. 49, E-mail String, Ending on Sat. Apr. 19, 2003, From Richard Glover, To Al Fowler, Subject: front adjuster [sic] update. Apparently, when faced with a technical hurdle regarding performance of the new design, Glover testified that Dorel went through the following process:

> Q Okay. And did you have an approach that you wanted Joe Baumgartner to consider?
>
> A Through changing the tooth profiles to grow the tooth height on a tooth-by-tooth basis and to change the radius at the tip of the tooth.
>
> Q Did that idea work?
>
> A Partially. It was part - - I don't remember if it was the particular one, but we did - - because we did several that were similar and several with similar tip radii that we looked at.
>
> But is wasn't until we combined all of the things together, which was the tip radius, the height, the rivet hardness, and the chamfer on both sides of the rotating cam that we began to get acceptable performance numbers that repeated. I think I mentioned that before.
>
> Q You said in your note, "Is there a way to remanufacture the IMMI cam surface so it could be used as a test platform to test our thought."
>
> Do you see that?
>
> A Yes, I did.

Q Why did you want to do that?

A They had a system that worked well, and we wanted to be able to understand why what we had done did not work well and what they had done did and see if we could understand what the difference was. We didn't get that done.

Glover I Dep. at 201-02.

The Dorel adjustor, as depicted by Dorel Drawing Nos. EY 740 100, EY 740 002 B, EY 740 003, EY 740 004, and EY 740 001,[8] consists of a frame comprised of two parts that form a base-like section and two parts that form the sides that hold the "button" and "rivet" portions of the adjustor, and hold the two base-like portions in place. *See* Dorel Drawing No. EY 740 001. One of the base portions appears thin and is longer than the other one. *Id.* Sec. A-A. The longer base portion has a slight dip in the end that appears to be designed to receive the cam-like portion of the "button." *See id.*; Dorel Drawing No. EY 740 100. After the slight dip, the longer base portion ends in a small lip that protrudes in an opposite direction from the two sides. *See* Dorel Drawing No. EY 740 001, Sec. A-A. In other words, from the side view of the Dorel adjustor, with the longer base portion on the right as depicted in Dorel Drawing No. EY 740 001, SECTION A-A, the lip protrudes downwardly and the sides protrude upwardly on either side of the longer base portion. *Id.*

[8]The Court notes that both parties submitted drawings of the Dorel adjustor with their briefs on the non-infringement motion for summary judgment. *See* Dorel Mot. for Summ. J. App., Glover Decl., Exhs. 3 & 5 (Bates Nos. D0159499-503, D1625); IMMI Non-Infringement Exh. 2, Dorel Adjuster [sic] Drawings (Bates Nos. 1622-33). Because the parties submitted essentially the same drawings with different Bates numbers, the Court finds it easier to refer to the drawing numbers rather than the parties' exhibits to describe the allegedly infringing adjustor portion of the allegedly infringing products. With respect to the remainder of the allegedly infringing product, the Court finds IMMI's Non-Infringement Exhibit 51 more helpful than Dorel's corresponding Exhibit 4 to Glover's Declaration, therefore, the Court will refer to IMMI's exhibit in describing Dorel's allegedly infringing car seat.

The "button" portion of the Dorel adjustor has an eccentrically revolving portion with teeth on what the Court will call the lower part of the "gripping edge" that has the larger radius from the center of the hole for the rivet, and a handle on the other end. *See* Dorel Drawing No. EY 740 002-B. From the top view, the handle looks like a lever that is longer than it is thick. *See id.* According to the drawing, the gripping edge does not extend the entire width of the "button." *See id.* Rather, one end is left open to receive a spring. *See id.*; Dorel Drawing Nos. EY 470 003 & EY 740 100.

Assembled, the Dorel adjustor is comprised of the frame, the button, the rivet and a spring. *See* Dorel Drawing No. EY 740 100. The rivet fits through holes on the side portions of the frame and a small spring around one end, that fits into the non-gripping portion, or open end, of the "button"piece. *See id.*; Dorel Drawing Nos. EY 740 002 B & EY 740 003.

After the design was complete, Glover sought and received additional opinions of counsel that the new design did not infringe the '889 patent. Glover Decl. ¶ 4. However, despite incorporating their own design into a new adjustor system, Dorel still refers to their design as an "A-Lok." Glover I Dep. at 86. Glover testified that "[t]he team basically used A-Lok as a generic term of a front center adjuster [sic]." *Id.*

Dorel's allegedly infringing car seat incorporates Dorel's adjustor. For purposes of these motions, the Dorel car seat has a back, a seat portion, two arm portions, a front portion below the seat and a harness. Pl.'s Non-Infringement Exh. 51. The adjustor is located on the front portion of the product below the seat portion. *Id.* The allegedly infringing product has two shoulder harness that fit into a buckle that protrudes approximately half way between the front and the back of the seat portion, and approximately half way between the two sides of the seat portion. *Id.*

Other relevant facts shall be noted by the Court in the Discussion portion of this Order as necessary.

II. STANDARDS

A. SUMMARY JUDGMENT

Summary judgment is granted "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). *See also CAE Screenplates v. Heinrich Fiedler GMBH*, 224 F.3d 1308, 1316 (Fed. Cir. 2000). An issue is genuine only if the evidence is such that a reasonable jury could return a verdict for the opposing party. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A disputed fact is material only if it might affect the outcome of the suit in light of the substantive law. *See id.*

The moving party has the initial burden to show the absence of genuine issues of material fact. *See Wollin v. Gondert*, 192 F.3d 616, 620 (7th Cir. 1999); *Schroeder v. Barth*, 969 F.2d 421, 423 (7th Cir. 1992). This burden does not entail producing evidence to negate claims on which the opposing party has the burden of proof. *See Green v. Whiteco Indus., Inc.*, 17 F.3d 199, 201 & n.3 (7th Cir. 1994). The party opposing a summary judgment motion bears an affirmative burden of presenting evidence that a disputed issue of material fact exists. *See Wollin*, 192 F.3d at 621; *Gonzalez v. Ingersoll Milling Mach. Co.*, 133 F.3d 1025, 1031 (7th Cir. 1998); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87 (1986); *Scherer v. Rockwell Int'l Corp.*, 975 F.2d 356, 360 (7th Cir. 1992). Moreover, the opposing party must "go beyond the pleadings" and set forth specific facts to show that a genuine issue exists. *See Wollin*, 192 F.3d at 621; *Stop-N-Go*

of Madison, Inc. v. Uno-Ven Co., 184 F.3d 672, 677 (7th Cir. 1999); *Hong v. Children's Mem. Hosp.*, 993 F.2d 1257, 1261 (7th Cir. 1993), *cert. denied*, 511 U.S. 1005 (1994). This burden cannot be met with conclusory statements or speculation, *see Cliff v. Bd. of Sch. Comm'rs*, 42 F.3d 403, 408 (7th Cir. 1994) (citing *McDonnell v. Cournia*, 990 F.2d 963, 969 (7th Cir. 1993)); *accord Chapple v. Nat'l Starch & Chem. Co.*, 178 F.3d 501, 504 (7th Cir. 1999); *Weihaupt v. Am. Med. Ass'n*, 874 F.2d 419, 428 (7th Cir. 1989), but only with appropriate citations to relevant admissible evidence. *See* Local Rule 56.1; *Brasic v. Heinemann's Inc., Bakeries*, 121 F.3d 281, 286 (7th Cir. 1997); *Foreman v. Richmond Police Dept.*, 104 F.3d 950, 957 (7th Cir. 1997); *Waldridge v. Am. Hoechst Corp.*, 24 F.3d 918, 923-24 (7th Cir. 1994). Evidence sufficient to support every essential element of the claims on which the opposing party bears the burden of proof must be cited. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

In considering a summary judgment motion, a court must draw all reasonable inferences in the light most favorable to the opposing party. *See Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 988 (Fed. Cir. 1999); *Wollin*, 192 F.3d at 621; *Thomas & Betts Corp. v. Panduit Corp.*, 138 F.3d 277, 291 (7th Cir. 1998); *Spraying Sys. Co. v. Delavan, Inc.*, 975 F.2d 387, 392 (7th Cir. 1992). If a reasonable fact finder could find for the opposing party, then summary judgment is inappropriate. *Stop-N-Go*, 184 F.3d at 677; *Shields Enters., Inc. v. First Chi. Corp.*, 975 F.2d 1290, 1294 (7th Cir. 1992). When the standard embraced in Rule 56(c) is met, summary judgment is mandatory. *Celotex Corp.*, 477 U.S. at 322-23; *Thomas & Betts*, 138 F.3d at 291; *Shields Enters.*, 975 F.2d at 1294.

B. PATENT INFRINGEMENT

Reviewing whether a product infringes a patent is a two step process. *See CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1316 (Fed. Cir. 2000); *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1362 (Fed. Cir. 1999). First, a court must interpret the disputed claims, "from a study of all relevant patent documents," to determine their scope and meaning. *K-2 Corp.*, 191 F.3d 1356, 1362 (Fed. Cir. 1999). *See also Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 397 (Fed. Cir. 1994). Second, a court must determine if the accused device comes within the scope of the properly construed claims, either literally or by a substantial equivalent. *See K-2 Corp.*, 191 F.3d at 1362; *Dolly*, 16 F.3d at 397; *SmithKline Diagnostics v. Helena Labs. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988). In large part, the first phase of the infringement analysis, claim construction, occurred prior to the instant summary judgment motions. In those instances where it has not occurred, the Court will apply the principles set forth in the Federal Circuit's opinion in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), *en banc*. Thereafter, the Court must focus on whether Dorel's product come within the scope of the claims as they were either previously or currently construed by the Court.

To prove infringement of a patent, the plaintiff must show by a preponderance of the evidence that every limitation of the claim asserted to be infringed has been found in an accused device, either literally or by an equivalent. *See Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 796 (Fed. Cir. 1990); *Pennwalt v. Durand-Wayland, Inc.*, 833 F.2d 931, 935 (Fed. Cir. 1987), *cert. denied*, 485 U.S. 961 (1988) & 485 U.S. 1009 (1988). Although the requirements to show literal infringement of an ordinary term requires little explanation, literal infringement of a means-plus-function term requires a slightly different analysis. "Literal infringement of a means-plus-

function claim limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification." *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 (Fed. Cir. 2006) (citing *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1320 (Fed. Cir. 2003)). Once IMMI has identified the relevant structure in Dorel's product, IMMI "may prove it is equivalent to the disclosed structure by showing that the two perform the identical function in substantially the same way, with substantially the same result." *Id.* (citing *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1364 (Fed. Cir. 2000)).

Absent a finding of literal infringement, a court could find that an accused device infringes by applying the judicially-created equitable doctrine of equivalents. *See CAE Screenplates*, 224 F.3d at 1318; *Becton Dickinson*, 922 F.2d at 797; *ZMI Corp. v. Cardiac Resuscitator Corp.*, 844 F.2d 1576, 1581 (Fed. Cir. 1988); *Pennwalt*, 833 F.2d at 934. Under this doctrine, an accused device may still infringe a claim "if each and every limitation of the claim is . . . equivalently present." *CAE Screenplates*, 224 F.3d at 1318-19. "A claim limitation is 'equivalently present' in an accused device if there are only 'insubstantial differences' between the limitation and corresponding aspects of the device." *Id.* at 1319 (quoting *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1517-18 (Fed. Cir. 1995), *rev'd on other grounds*, 520 U.S. 14 (1997)). Generally, infringement by equivalents is an issue of fact. *See id.* But, a district court may grant partial or complete summary judgment where the evidence is such that no reasonable jury could determine two elements equivalent. *Id.*

C. INVALIDITY - OBVIOUSNESS

By statute, a patent is presumed to be valid. 35 U.S.C. § 282. The party challenging a patent's validity must prove invalidity by clear and convincing evidence. *See Apple Computer Inc. v. Articulate Sys., Inc.*, 234 F.3d 14, 26 (Fed. Cir. 2000); *Oney v. Ratliff*, 182 F.3d 893, 895 (Fed. Cir. 1999) (citing *Finnigan Corp. v. Int'l Trade Comm'n*, 180 F.3d 1354 (Fed. Cir. 1999)); *Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir. 1984). In the present procedural posture, "[s]ummary judgment is inappropriate if a trier of fact applying the clear and convincing standard could find for either party." *Oney*, 182 F.3d at 895.

Nonobviousness is related to the requirement that a patent be novel or new. If the invention is novel, then "further inquiry must be made into whether it is new enough" to be patented. I DONALD S. CHISUM, CHISUM ON PATENTS § 3.01 (Rel. No. 71, Sept. 1999) (hereinafter "CHISUM ON PATENTS"). "A claimed invention is unpatentable if the differences between it 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.'" *Robotic Vision Sys., Inc. v. View Engr'g*, 189 F.3d 1370, 1376 (Fed. Cir. 1999) (quoting 35 U.S.C. § 103(a)). *See also Graham v. John Deere Co.*, 383 U.S. 1, 13-14 (1966); *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 662 (Fed. Cir. 2000); *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999). Determination of whether or not an invention is obvious is a legal conclusion. *Ruiz*, 234 F.3d at 662; *WMS Gaming*, 184 F.3d at 1355. However, the underlying inquiries are factual. *Ruiz*, 234 F.3d at 662; *WMS Gaming*, 184 F.3d at 1355. The factual inquiries for obviousness are 1) the scope and content of the prior art, 2) the level of ordinary skill in the field of the invention, 3) the differences between the claimed invention and the prior art, and 4) any objective evidence of non-obviousness, such as long-felt need, commercial

success, the failure of others, or evidence of copying. *See Ruiz*, 234 F.3d at 662-63; *WMS Gaming*, 184 F.3d at 1355; *C.R. Bard*, 157 F.3d at 1351. As discussed above, the party asserting invalidity based on obviousness carries the burden of proof; however, that burden "is more easily carried when the references on which the assertion is based were not directly considered by the examiner during prosecution." *WMS Gaming*, 184 F.3d at 1355 (citing *Applied Mat'ls, Inc. v. Advanced Semiconductor Mat'ls Am., Inc.*, 98 F.3d 1563, 1569 (Fed. Cir. 1998) ("The presentation at trial of additional evidence that was not before the PTO does not change the presumption of validity or the standard of proof, although the burden may be more or less easily carried because of the additional evidence.")). *Accord Am. Hoist & Derrick*, 725 F.2d at 1360.

When a challenger asserts an obviousness defense or counterclaim based on two or more prior art references, there must be some suggestion or motivation to combine them. *WMS Gaming*, 184 F.3d at 1355. "The suggestion to combine may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved." *Id.*

III. DISCUSSION

A. PARENT LIABILITY

As stated earlier, DII has moved for summary judgment on whether or not it is liable at all to IMMI for infringement because it had no direct involvement with development of the allegedly infringing products, but is merely Dorel Juvenile's parent corporation. IMMI contends that there are issues of fact on the extent of DII's involvement in Dorel Juvenile such that summary judgment is

inappropriate. In part, IMMI alleges that certain documents evidence DII's intent to induce Dorel Juvenile to infringe.

As a preliminary matter, IMMI's latter argument, that DII induced Dorel Juvenile to infringe the '889 patent, is brought up for the first time in IMMI's response to the instant motion for summary judgment. Unlike the plaintiff in *Nilssen v. Motorola*, No. 96-C-5571, 2002 WL206007, at *14 (N.D. Ill. Feb. 8, 2002), which had specifically pled infringement broadly and had put defendant on notice of its induced infringement allegations a year prior to the summary judgment pending before the court, there is no evidence that IMMI has ever put either DII or Dorel Juvenile on notice that such allegations were part of this suit. IMMI points to its brief in opposition to DII's motion to dismiss for lack of personal jurisdiction as evidence that DII was put on notice of IMMI's induced infringement allegations. However, a review of that brief shows no support for such allegation, rather IMMI's brief focuses on evidence that some DII had direct involvement with certain sales and design aspects of Dorel Juvenile in the relevant period. *See* IMMI's Opp'n to Dorel Indus. Inc.'s Mot. to Dismiss, at 4-5 (Apr. 25, 2005). Therefore, IMMI's arguments regarding induced infringement are hereby **STRICKEN**.

With respect to DII's motion for summary judgment on its liability for infringement, the Court finds that summary judgment should be **DENIED**. IMMI claims that DII either "makes, uses or sells" products within the United States that infringe the '889 patent. There is no evidence that DII directly "makes, uses or sells" the allegedly infringing products in the United States, therefore, to hold DII liable for infringement IMMI must evidence that Dorel Juvenile is really a fictional corporate entity such that it "is so organized and controlled and its affairs conducted that it is a mere instrumentality or adjunct of [DII]." *Extra Energy Coal Co. v. Diamond Energy*, 467 N.E.2d 439,

441 (Ind. Ct. App. 1984) (citing *Burger Man, Inc. v. Jordan Paper Prods.*, 170 Ind. App. 295, 352 N.E.2d 821 (1976); *Feucht v. Real Silk Hosiery Mills, Inc.*, 105 Ind. App. 405, 12 N.E.2d 821 (1938)). The decision about whether or not the Court should disregard corporate identity or "pierce the corporate veil" is made by looking at the totality of the circumstances. *See Stacey-Rand, Inc. v. J.J. Holman, Inc.*, 527 N.E.2d 726, 728 (Ind. Ct. App. 1988) (stating that "[w]hile no one talismanic fact will justify with impunity piercing the corporate veil, a careful review of the entire relationship between various corporate entities, their directors and officers may reveal" the necessity "to disregard corporate identity . . . to protect innocent third parties from fraud or injustice").

Looking at the totality of the circumstances presented by IMMI, there is a question of fact on whether or not the relationship between DII and Dorel Juvenile is one in which the Court should ignore the corporate structure. Although DII has presented evidence that Dorel Juvenile acted autonomously, IMMI has evidenced that DII executives influence key aspects of Dorel Juvenile's business including supplier selection, product development and sales. For example, DII encourages its divisions to use group buying power to lower costs and directed Dorel Juvenile to become the lead division for purchasing car seat parts. Pl.'s DII Exh. 34, E-Mail, From Ed Wyse, To bcazenave@djgusa.com, Subj.: Action Plan 8th Procurement Conf. May 14th/15th, June 3, 2002, & Attachments. In addition, IMMI has evidenced that DII had final approval over Dorel Juvenile contracts, Pl.'s DII Exh. 34, E-Mail, From Jeff Hale, To Pierre Dupuis, Subj." Dorel/IMMI Supplier Agreement & Quotation, Jan. 31, 2002, & Attachments, and directed Dorel Juvenile's Glover to develop a new adjustor, following Dorel Juvenile's progress closely. Pl.'s DII Exh. 3, DII Press Release, Feb. 26, 2002; Pl.'s DII Exh. 39, Adjustor Mtg., Mar. 13, 2002; Pl.'s DII Exh. 35, E-Mail, From Jeff Hale, To Martin Schwartz, Subj.: FW: Project Updates, Nov. 8, 2002; Pl.'s DII Exh. 4,

E-Mail String, From Ed Wyse, To Pierre Dupuis, Subj.: Harness Cost Breakdown, Sept. 2, 2003; Pl.'s DII Exh. 5, E-Mail, From Jeff Hale, To Ed Wyse, Subj.: FW: Project Updates - Buckle/Harness Sys., Dec. 10, 2002, & Attachments; Glover Dep. at 194-95. Furthermore, there is evidence that DII directed sales efforts on behalf of Dorel Juvenile at Dorel Juvenile's major retailers, Wal-Mart and Kmart. Pl.'s DII Exh. 20, E-Mail String, From Don March, To, *inter alia*, *Executive, Subj.: FW:Kmart, Feb. 1, 2002; Pl.'s DII Exh. 21, E-Mail, From Cathy Carter, To Bruce Cazenave, Subj.: Kmart, Apr. 29, 2004. Drawing all inferences in the light most favorable to IMMI, it would be reasonable to conclude from the totality of the facts that DII controls significant aspects of Dorel Juvenile's business such that the corporate form is a sham. *Accord Hart, Schaffner & Marx v. Campbell*, 38 N.E.2d 895, 899 (Ind. Ct. App. 1942), *en banc* (finding a question of fact existed as to whether or not the corporate form should be ignored when an employee sent her work to the parent company for approval and several corporate executives worked for both entities). For this reason, the Court finds that DII's Motion for Summary Judgment should be **DENIED**.

B. NONINFRINGEMENT

1. Claim 8

IMMI contends that Dorel's accused products literally infringe Claim 8 because the "adjusting means" of the Dorel products performs the identical functions with an equivalent structure to the cam member and bar of the "adjusting means" of Claim 8. Moreover, IMMI argues that Dorel's accused products literally infringe the "second lock means" element. Dorel contends that its accused products do not infringe Claim 8 because they do not have an "adjusting means" and because they do not have a "second lock means" as those terms are used in the claim. More

specifically, with respect to the "adjusting means" Dorel argues that there is no genuine issue of material fact that the Dorel adjustor does not perform the three functions of the "adjusting means" in substantially the same way nor does its adjustor achieve substantially the same result. Dorel also contends that a scope of equivalents to the structure of the "adjusting means" of Claim 8 that would include Dorel's accused adjustor would also ensnare the prior art, which is improper pursuant to *Clearstream Wastewater, Inc. v. Hydro-Action, Inc.*, 206 F.3d 1440 (Fed. Cir. 2000). Furthermore, Dorel argues that IMMI's broad construction of the placement for the "second lock means" vitiates the claim element, and under a more narrow, proper construction, its allegedly infringing car seats do not have a "second lock means mounted in front of said seat support," as required by Claim 8.

The Court finds that there is no genuine issue of material fact that the Dorel allegedly infringing adjustor cannot be an equivalent structure of the "cam member and bar" of the "adjusting means" of Claim 8.[9] The Court addresses the scope of equivalent structures first, because within the context of a means-plus-function term, the scope of equivalents structures is an issue of claim construction. The Federal Circuit reiterated as much in *Intel Corp. v. U.S. International Trade Comm'n*, 946 F.2d 821 (Fed. Cir. 1991):

> [T]he word "equivalent" in § 112 should not be confused . . . with the "doctrine of equivalents." In applying the doctrine of equivalents, the fact finder must determine the range of equivalents to which the claimed invention is entitled, in light of the prosecution history, the pioneer-nonpioneer status of the invention, and the prior art. It must then be determined whether the entirety of the accused device . . . is so "substantially the same thing, used in substantially the same way, to achieve substantially the same result" as to fall within that range. In applying the "means plus function" [sic] paragraph of § 112, however, the sole question is whether the

[9]The Court notes that IMMI does not argue that the Dorel adjustor literally has a "cam member and bar," rather IMMI argues that it has an equivalent structure.

> single means in the accused device which performs the function stated in the claim is the same as or an equivalent of the corresponding structure described in the patentee's specification as performing that function.

Id. at 842 (quoting *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1575 (Fed. Cir. 1985)) (internal citations omitted). The *Intel* court went on to explain:

> It is not necessary to consider the prior art in applying section 112, paragraph 6. Even if the prior art discloses the same or an equivalent structure, the claim will not be limited in scope thereby. It is only necessary to determine what is an equivalent to the structure disclosed in the specification which is performing the function at issue.
>
> * * *
>
> Thus, under section 112, paragraph 6, the aids for determining a structural equivalent to the structure disclosed in the patent specification are the same as those used in interpreting any other type of claim language, namely, the specification, the prosecution history, other claims in the patent, and expert testimony.

Id. at 842-43 (citations omitted).

The *Clearstream* court holds no different. In fact, *Clearstream* teaches that a court should look to the written description and the prosecution history to determine whether a means-plus-function limitation in a combination claim should be construed to cover only new elements. *Clearstream*, 206 F.3d at 1445-46. And, similar to the *Intel* court, the *Clearstream* court finds the scope of equivalents of a means-plus-function term part of claim construction. *Id.* Furthermore, as both the *Intel* and *Clearstream* courts point out, in a combination patent, the elements of a patented invention may be old, but in combination be new. *Id.* at 842; *Clearstream*, 206 F.3d at 1445.

Applying these principles to the case at hand, the Court looks to the written description and other intrinsic evidence to conclude that the scope of equivalents for "cam member and bar" is very narrow. The Court has construed "adjusting means" to be a means-plus-function term that has the

following three functions: 1) to frictionally receive the belt; 2) to hold the belt to tighten the harness; and 3) to release the belt to tighten it. Its corresponding structures are: a cam member and bar, or a bottom wall, cam bar and bar, that are described in the '889 patent at column 1, lines 55-57, column 1, lines 63-68 to column 2, lines 1-8, and at column 3, lines 65-68 to column 4, lines 1-58, and Figures 3-5, or their equivalents. IMMI focuses its attack of Dorel's products on the "cam member and bar" structure. The bar of the "cam member and bar" structure is more specifically defined in the '889 patent as: "a bar . . . having a flat surface defining an area of contact . . . ." '889 Patent, col. 1, *ll.* 55-57. Where the cam member holds the belt "against the area of contact," to perform the holding function. The "bar" of the "cam bar and bar" structure is similarly described as a part with "a rectangular cross-section[]" with "side surfaces **59** of the bar [] perpendicularly arranged relative to the top and bottom surfaces **56** and **57**." *Id.* col. 4, *ll.* 12-13, 19-21. IMMI contends that because the curved portion of the bottom surface of the Dorel adjustor functions in the same way and achieves the same result as "a bar . . . having a flat surface defining an area of contact," there is at least a jury question on equivalency.

The Court disagrees that the equivalents of a "bar" can be read as broadly as IMMI asserts. The '889 patent specification carefully discusses the prior art, including the Yang '550 patent, which the '889 patent describes as " a prior web adjustor" that has "a pivotally mounted cam for releasably holding a belt." '889 Patent, col. 1, *ll.* 42-43. As previously discussed, the Yang '550 patent discloses a webbing or belt adjustor for securing objects or persons that

> utilizes a stationary spool and a wedge member, which is in a spring biased contact with the stationary spool. The wedge member is operated by a release tab. The webbing material is in contact with a substantial portion of the surface of the spool and is fed between the spool and the wedge member, which locks the webbing material securely on the spool.

'550 Patent, Abstract. The single claim of the Yang '550 patent similarly teaches a cylindrical surface against which the wedge member (a tear-dropped-shaped cam) restrains the movement of the webbing. *Id.* col. 4, *ll.* 21-47. The '889 patent purports to be an improvement over the prior art systems. Yet, if the Court were to construe the range of equivalents for the structure of the "bar" like IMMI urges, it would include the prior art structure specifically referenced in the '889 patent, because it too would have a surface defined as the area of contact against which a cam member holds the belt. In other words, such a reading would seem to obliterate the requirement that the "adjusting means" of the '889 patent have a "cam member and bar" structure. Therefore, the Court finds that a narrow construction of the structure for the "cam member and bar" is necessary and it must have a "flat surface defining an area of contact."

Under this construction, the Dorel adjustor clearly does not infringe Claim 8 because its adjusting means has a curved area of contact rather than a flat area of contact. For this reason, Dorel's motion for summary judgment of noninfringement of Claim 8 should be **GRANTED**.

2. Claim 11

The Court turns now to Claim 11. IMMI argues that Dorel's accused car seats have an adjustor with a "bar" because there is "a rectangle, longer than it is wide, within the base of the belt adjuster [sic], against which the harness is pressed by the cam." Williamson 2d Decl. ¶ 39. IMMI contends that the part is "longer than it is wide" because the curved surface is the relevant surface, not the entire bottom portion of the adjustor. *Id.* ¶¶ 15-17. In the alternative, IMMI contends that Dorel's adjustor infringes Claim 11 under the doctrine of equivalents because it meets the function-way-result test.

In contrast, Dorel argues that its accused products do not infringe Claim 11 because its adjustor does not have a flat surface defining an area of contact, nor does it have a part that is longer than it is wide. Moreover, Dorel contends that its adjustor does not infringe under the doctrine of equivalents because the scope of equivalents is limited by prior art. In other words, if the scope of equivalents for "bar" read on the Dorel adjustor, it reads on the prior art and would not be patentable. Dorel challenges IMMI to present a hypothetical claim that reads on its device. *See Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 684-85 (Fed. Cir.) (discussing the use of a hypothetical patent claim to simplify the analysis of whether or not prior art restricts the range of equivalents), *cert. denied*, 498 U.S. 992 (1990), *overruled on other grounds by Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83 (1993); *see also Streamfeeder, LLC v. Sure-Feed Sys., Inc.*, 175 F.3d 974, 981-82 (Fed. Cir. 1999) (discussing the "hypothetical claim methodology" as an aid in determining whether a particular claim may be infringed under the doctrine of equivalents).

The Court finds that Dorel's allegedly infringing products do not infringe Claim 11 either literally or under the doctrine of equivalents. First, Dorel's adjustor does not literally contain a "bar" as that term has been defined by the Court. The relevant claim element reads: "said belt adjustor including a manually operated cam member and bar designed to frictionally receive and hold stationary a portion of said harness means, said cam member being pivotably adjustable to bias said belt against said bar to release said harness means." '889 Patent, col. 8, *ll.* 55-60. The Court construed the term bar to mean: a part that is longer than it is wide. Dorel argues that its adjustor cannot literally infringe claim 11 because its adjustor has no part that has a "flat surface defining an

area of contact." However, that is not the definition of "bar" adopted by the Court.[10] The question is whether the Dorel adjustor has "a part that is longer than it is wide" and performs in the way required by claim 11.

Dorel also argues that the Court's claim construction rejected the argument that only part of the bottom wall of its adjustor could be a "bar" because the Court concluded that a "bar" was "a part . . . ." The portion of the Dorel adjustor that functions like the "bar" of claim 11 of the '889 patent is the curved area that is integral with the remainder of the adjustor bottom piece. *See* Dorel Drawing Nos. EY 740 100 & EY 740 001. IMMI contends that so long as a portion of the bottom wall functions like a "bar," or the portion that performs the function of a "bar," is longer than it is wide, the adjustor literally infringes.[11] IMMI argues that its tests show that the functional portion of Dorel's adjustor has the imprint of a part that is longer than it is wide. *See* Williamson 2d Decl. ¶¶ 15-17; Shehadeh Decl., Exh. A. But, this argument is really an argument that the Dorel adjustor bottom is equivalent to the "bar," of the '889 patented invention because it relies upon the function, way, result test rather than a specific identification of "a part that is longer than it is wide."

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[10]Dorel contends that this definition must be incorporated into the Court's construction for "bar" because the Court references such a structure within its discussion on the "adjusting means" limitation of claim 8. Cl. Constr. Order, at 14. Construction of a means-plus-function term necessarily relies upon the embodiments described in the specification. *See* 35 U.S.C. § 112, ¶ 6; *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998). But, as to the other claim terms, it is improper to import limitations from the specification into the claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323-24 (Fed. Cir. 2005) (discussing the proper use of the specification when interpreting claim language). The Court declines Dorel's suggestion to do so here.

[11]IMMI also argues that Glover's testimony that a raised portion of an adjustor bottom is likely to be construed as a bar, *see* Glover Dep. at 73-74, evidences that a portion of a bottom wall could be a "bar." The Court makes no judgment as to whether or not such a hypothetical adjustor would or would not have a "bar" as that term is used in Claim 11 of the '889 patents, it merely notes IMMI's argument.

Similarly, IMMI's argument that the Dorel adjustor's curved area on the bottom piece is longer than it is wide, therefore it acts like a bar, is still one that the Dorel adjustor has the equivalent of the "bar" of the '889 patented invention. IMMI has no evidence that really disputes that the Dorel adjustor's base is not longer than it is wide, therefore, the Court concludes that there is no material question of fact that the Dorel adjustor does not literally infringe Claim 11.

The Court also finds that Dorel's adjustor does not infringe Claim 11 under the doctrine of equivalents. Dorel argues that IMMI's range of equivalents would improperly ensnare prior art, and a proper range of equivalents would not read on Dorel's adjustor. In other words, Dorel contends that if the scope of equivalents for "bar" read on Dorel's adjustor, it reads on the prior art and would not be patentable. Dorel challenges IMMI to present a hypothetical claim that reads on its device, but not read on the prior art. IMMI largely ignores this argument, but instead points out that the Federal Circuit's suggestion to use a hypothetical claim analysis is not mandatory. IMMI Supp. Surreply, at 2-3 (citing *Streamfeeder*, 175 F.3d at 983; *Conroy v. Reebok Int'l, Ltd.*, 14 F.3d 1570, 1577 (Fed. Cir. 1994); *Int'l Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 772 (Fed. Cir. 1993)). It seems that the thrust of IMMI's counterargument is reliance on the fact that Claim 11 is a combination claim, and with such claims, combinations of old things will read on prior art but still be patentable. *See, e.g.*, *Clearstream*, 206 F.3d at 1445.

The Court finds that with IMMI's proffered evidence, there is at least a material question of fact on whether or not the Dorel accused adjustor functions in substantially the same way and achieves substantially the same result as that in the '889 patented invention described in Claim 11. IMMI presented evidence that the active surface of the Dorel adjustor is a bar-like portion that is longer than it is wide. Williamson 2d Decl. ¶ 17; Shehadeh Decl., Exh. A. In addition, IMMI

provides Dr. Williamson's testimony and demonstrative exhibits to show that the Dorel adjustor performs the functions of a "bar" in the same way and achieves the same results. Williamson 2d Decl. ¶¶ 18-19; IMMI Noninfringement Exhs. 8, Dorel Adjustor Animation, & 9, '889 Patent Adjustor Animation.

Having made this determination, the Court must now consider whether or not the proposed construction of Claim 11, or the "bar" limitation, under the doctrine of equivalents would invalidate the claim under 35 U.S.C. ¶¶ 102 or 103. *See Carman Indus., Inc. v. Wahl*, 724 F.2d 932, 942 (Fed. Cir. 1983) (discussing a proper doctrine of equivalents analysis). "Determining whether the scope of equivalents accorded to a particular claim would encompass the prior art is an issue of law . . . ." *Streamfeeder*, 175 F.3d at 981 (citing *Wilson*, 904 F.2d at 683-84). The reason behind this limitation on the doctrine of equivalents

> is that a patentee should not be able to obtain, under the doctrine of equivalents, coverage which he could not lawfully have obtained from the PTO by literal claims. The doctrine of equivalents exist to prevent a fraud on the patent, *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950), *not* to give a patentee something which he could not lawfully have obtained from the PTO had he tried. Thus, since prior art always limits what an inventor could have claimed, it limits the range of permissible equivalents of a claim.

Wilson, 904 F.2d at 684 (emphasis by *Wilson* court). The burden is on IMMI to prove that the range of equivalents it seeks would not ensnare the prior art. *See id.* at 685.

Although the Court agrees with IMMI that it is not mandatory for an infringement plaintiff to suggest a hypothetical claim in response to an alleged infringer's challenge to the scope of equivalents, it would have been helpful to have such a claim. Without such a proffer, the Court must assume that IMMI's range of equivalents for Claim 11 would include an adjustor where the cam

presses the belt against another part with a flat or curved surface.[12] Such an equivalent reads on the prior art. As already discussed within the context of Claim 8, the '889 patent specifically identifies that it is different from at least one prior art adjustor, Yang '550, where a portion of a spool, a curved part, functions in substantially the same way and achieves substantially the same result. '889 Patent, col. 1, *ll.* 40-44. Moreover, from the simplicity of the experiments run by IMMI's expert to show that the Dorel adjustor has the same "footprint" as a part longer than it is wide, it is clear from the drawing of the preferred embodiment in the Yang '550 patent that its cam would make a similar "footprint" against the curved surface of the spool. *See* Yang '550 Patent, at Fig. 2. Other prior art adjustors, including the one in the Griswold '307 patent, identify a seat belt adjustment mechanism that uses a cam member pressed against another surface to hold a belt, and would a have a similar "footprint." Griswold '307 Patent, col. 4, *l.* 41 to col. 5, *l.* 7 (Claims 3 & 4). Griswold is particularly interesting because it uses the bottom wall of the adjustor as the "bar" surface. *Id.* The prior art car seat disclosed in the Heath '602 patent contains the remaining elements of Claim 11, and to combine an adjustor used to retain passengers in seats, like Griswold '307, with the Heath '602 patent, would have been obvious to one of ordinary skill in the art at the time of the invention.

For these reasons, the Court finds that the Dorel accused products cannot infringe Claim 11 under the doctrine of equivalents, and Dorel's motion for summary judgment of noninfringement of Claim 11 either literally or under the doctrine of equivalents should be **GRANTED**.

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[12]The Court notes that the Federal Circuit has made clear that the analysis required to determine the limits imposed by prior art on a particular invention is not intended to be a full-blown patentability analysis of a hypothetical claim, but a method to ensure that a range of equivalents does not embrace inventions already disclosed by prior art. *Key Mfg. Group, Inc. v. Microdot, Inc.*, 925 F.2d 1444, 1449 (Fed. Cir. 1991).

Because the Court has found that there is no infringement, it **DENIES as MOOT** Dorel's Motion for Summary Judgment on IMMI's Claim of Willful Infringement. IMMI's Motion for Reconsideration of the Court's order regarding willful-infringement-related discovery is hereby **DENIED as MOOT**. All orders regarding willfulness-related discovery, including Dorel's Motion for *In Camera* Review of Schiff Hardin Work Product, and subsequent orders thereon are **DENIED as MOOT**, and any time lines therein are hereby **SUSPENDED** until further order of the Court.

C. INVALIDITY

Dorel has also moved for summary judgment on its invalidity counterclaims[13] arguing that the '889 patents Claims 8 and 11 are obvious combinations of prior art car seats and cam-actuated belt adjustors. IMMI asserts that there is, at a minimum, a material question of fact on the issue because the objective evidence of non-obviousness strongly supports validity, because Dorel's combinations of prior art are cumulative to what was before the examiner and because the prior art does not suggest or teach a motivation to combine the prior art.

The Court finds that, although it is a close case, under the construction given to the relevant terms by the Court in its prior claim construction order and herein, there is a material question of fact on whether or not Claims 8 and 11 of the '889 patent are valid. The Court starts with the first *Graham* factor, the level of ordinary skill in the art at the time of the invention, upon which there seems to be no dispute. Dorel's expert, Dr. Guenther, opined that one of the appropriate skill level

[13]There has been no indication in the briefs of whether or not Dorel would voluntarily drop its counterclaims of invalidity if the Court were to find no infringement. Therefore, the Court will proceed to address Dorel's motion on its counterclaims. *Accord Silicon Image, Inc. v. Genesis Microchip, Inc.*, 395 F.3d 1358, 1362 (Fed. Cir. 2005) (discussing jurisdiction when resolution of infringement claims had occurred but not the counterclaims).

was one who had several years of experience in design and/or selection of devices for adjusting or controlling tension on a belt or web. Guenther Decl. ¶ 5. IMMI's expert, Dr. Williamson, opined that one of the appropriate skill level was someone with "either a degree in an appropriate branch of engineering - - for example, mechanical engineering or industrial engineering - - and one or two years' industrial experience in the design of mechanisms; or would have lesser qualification, such as a trade-school diploma, and three or four years' experience." Williamson 3d Decl. ¶ 4. In other words, one who, with or without a degree, had some years of experience designing mechanisms.

The scope and content of the prior art is disputed in only one respect: whether or not certain references were before the examiner. Dorel argues that the examiner did not list any of the prior art car seats, namely Heath '602, Takada '483, and Japanese '760, in the prosecution history or the patent itself, nor did the examiner consider the bulk of the adjustors Dorel relies upon for its obviousness argument, namely Prete '626, Elsner '876, Elsner '641, Yang '550, Griswold '307, Svensson '545, and Meeker '612, therefore, the prior art is not cumulative. In contrast, IMMI contends that the examiner either had available to him or discovered three car seat references, and seven "cargo buckles," namely car seat patents Takada '483, U.S. Patent No. 4,025,111, to Tanaka ("Tanaka '111"), and U.S. Patent No. 3,380,776, to Dillender ("Dillender '776"), and "cargo buckle" patents Yang '550, U.S. Patent No. 3,887,966, to Gley ("Gley '966"), U.S. Patent No. 4,118,833, to Knox ("Knox '833"), U.S. Patent No. 3,678,542, to Prete ("Prete '542"), U.S. Patent No. 2,919,946, to Miener ("Miener '946"), U.S. Patent No. 2,442,266, to Davis ("Davis '266"), and German Patent No. 2,059,321 ("German '321"). IMMI contends that in the absence of evidence to show that Dorel's cited references are better than those provided to or found by the patent examiner,

Dorel cannot show that its prior art combinations are materially different than those considered by the examiner and rejected.

Despite the fact that the examiner failed to list them in the appropriate sections of the prosecution history, the Court presumes that the examiner considered Takada '483 and Yang '550 because those references were clearly cited in the specification. *Compare* '889 Patent, at 1, Refs. Cited (not including Takada '483 or Yang '550), *with id.* col. 1, *ll.* 13-14 (disclosing Tanaka '111 and Takada '483), *and with id.* col. 1, *ll.* 40-41 (disclosing Yang '550). *Accord Polaroid Corp. v. Eastman Kodak Co.*, 641 F. Supp. 828, 832-33 (D. Mass. 1986), *aff'd* 789 F.2d 1556 (1986); *Gould v. Gen'l Photonics Corp.*, 534 F. Supp. 399, 403 (N.D. Cal. 1982). Even presuming this, the Court has reviewed the remainder of the references cited by Dorel and those cited by the examiner and finds there is a question of fact on whether or not Dorel's cited references are better than those either considered by the examiner or cited by the examiner. The Court notes that, other than Takada '483 and Tanaka '111, the car seat configurations cited by Dorel appear much more similarly sophisticated to the '889 patented invention than those cited by the examiner. For example, the differences between the '889 patented invention described in Claims 8 and 11 and the car seat described in Heath '602 is the type of adjustor used to tighten the harness system. *Compare* '889 Patent, Claim 11 *with* Heath '602 Patent, Claim 5. However, the differences between the '889 patented invention and Gley '966 is not just the type of adjustor for the harness system, but the location of such adjustor and its purpose. *Compare* '889 Patent, Claim 11*with* Gley '966 Patent, col. 1, *ll.* 21-25 & col. 2, *ll.* 6-23. Likewise, the differences between the '889 patented invention and Dillender '776 are numerous. Dillinder '776 teaches a child harness that attaches directly to the seat

of a vehicle rather than a separate back and seat as taught by the '889 patented invention. This significant difference is evidenced by Claim 1 of Dillender '776:

> In a safety harness the combination of a vehicle having a frame structure and seat and a pair of relatively spaced conventional flexible safety belts secured to the car frame, buckle means for detachably connecting said belts together to hold an occupant in safety upon the seat, a body harness, and adapter means connected to the body harness for adjustable and releasable connection of the body harness to said safety belts in secured relation therewith when the safety belts are unbuckled.

Dillender '776 Patent, col. 4, *ll.* 25-33.

With respect to the adjustor systems cited by the examiner versus those cited by Dorel, at least some of those cited by Dorel are, at least in part, directed to holding something other than cargo whereas the references cited by the examiner, save Yang '550, are all directed to holding cargo. *See, e.g.*, Griswold '307 Patent, col. 1, *ll.* 1-4 (directed to safety belts in airplanes); Meeker '612 Patent, col. 1, *ll.* 9-13 (directed to safety belts for automobiles and airplanes); Svensson '545 Patent, col. 1, *ll.* 9-10 (directed to safety belt buckles); Legat '786 Patent, col. 1, *ll.* 11-13 (directed to safety belt buckles for automobiles and airplanes). Specifically, the ones cited by the examiner include Knox '833 which is directed to a cargo strap buckle and does not contain a locking cam. Knox '833 Patent, Abstract, Figs. 4-5. The remaining adjustor references are also directed to cargo carriers, although they contain a locking cam as part of the cargo-holding assembly. *See* Prete '542 Patent, Abstract, col. 1, *l.* 71, to col. 2, *l.* 26 (describing the advantages of the Prete '542 cam design over prior art); Miener '946 Patent, col. 1, *ll.* 15-20, col. 4, *l.* 70 to col. 5, *l.* 4 (describing the cam-like feature of the invention), Fig. 3; Davis '266 Patent, col. 1, *ll.* 7, col. 1, *l.* 48 to col. 2, *l.* 10, Figs. 2-5; German '321 Patent, Figs. 1-3. With respect to adjustors, it seems that the differences between the '889 patented invention and certain prior art cited by Dorel is much less than the differences between

the '889 patented invention and the prior art cited by the examiner. Nevertheless, IMMI is entitled to the inferences drawn in its favor at this stage of the litigation, and it has raised the question of whether or not the references cited by Dorel should carry more weight because the examiner did not consider them.

In addition to the material question of fact on the scope of the prior art, the Court finds that there is a material question of fact on the motivation to combine the resources to obtain the '889 patented invention as the Court has limited the scope of certain terms of Claims 8 and 11. The examiner considered both Takada '483 and Tanaka '111, which are directed to child restraint seats. Takada '483 teaches a child safety seat with manually adjusted straps that are attached to a retractor that "locks automatically in the event of acceleration of the seat occupant." Takada '483 Patent, col. 8, *l.* 32 to col. 9, *l.* 8. Ease of adjustment is one of the stated purposes of the Takada '483 patented invention. *Id.* col. 1, *ll.* 22-28. In addition, the configuration of the harness system with respect to the seat back and seat are similar to those of the '889 patent. However, with respect to the retractor, Takada '483 states: "Emergency locking retractors have the advantage of permitting the person who is restrained by the belt to move relatively freely except when the retractor is locked in an emergency." Takada '483 Patent, col. 5, *ll.* 3-6. This feature seems to teach away from the principle of the '889 patent, which concerns itself with continuous tension on the harness system for safety, unless the tension is purposefully released to loosen the harness. '889 Patent, col. 2, *ll.* 23-30; *id.* col. 2, *ll.* 35-37.

In Tanaka '111, the patent teaches adjustment of an abdominal pad through an adjustment bar and a harness strap adjustment mechanism located behind the back of the child seat, which Tanaka '111 describes as "a remote location." Tanaka '111 Patent, col. 2, *ll.* 6-23, col. 4, *l.* 64 to

col. 5, *l.* 12, col. 6, *l.* 66 to col. 8, *l.* 68 (claims further describing the adjustment means of the invention, see particularly Claims 7-11). This reference is concerned with the proper alignment of the abdominal pad and harness for the safety of the child occupant, however, the harness adjustor arrangement teaches away from the front of the seat placement of the '889 patent.

Heath '602, however, discloses a child seat design that uses a harness system that is adjusted via a single "adjustment means" to adjust the effect length of the sash and lap portions of the harness. Heath '602 Patent, Claim 1. Heath '602 specifically identifies as its main objective: "a seat strap arrangement which can be quickly and easily adjusted by a single adjusting means, and which can be quickly and easily fitted, and which can be quickly and easily disengaged by a single release function . . . ." *Id.* at 7. This objective is closely mirrored by the '889 patent: "it is an object of the present invention to provide a child seat harness assembly having improved means for controlling tensioning of the harness." '889 Patent, col. 1, *ll.* 35-37. The "means" referred to here is the "adjusting means" of Claim 8, and the "belt adjustor" of Claim 11.

In addition, Heath '602 discloses the following about its "releasable locking means" or "adjustment means:" "In a further aspect of the releasable locking means is spring biased so that pulling the adjustment strap to shorten the harness will automatically release the locking mechanism, but to lengthen the harness it is necessary to separately release the locking mechanism." Heath '602 Patent, at 9. The Heath '602 "adjustment means" has a more simple structure than that of the '889 patent and, according to IMMI, is based on intersecting plates with three principal parts: two plates and the spring. Williamson 3d Decl. ¶ 8; Heath '602 Patent, at 6-7, Fig. 3. This would seem to teach away from something more complicated like the '889 patent's "adjusting means" or "belt adjustor."

While this may be true, very similar structures to the '889 patent's "adjusting means" or the "belt adjustor" were in the prior art including, for example, that in Prete '626 or German '321. Prete '626 is directed to holding cargo, however, other prior art may have led one of ordinary skill in the art to cargo adjustment straps, just as the patent examiner searched such areas himself. For example, Yang '550, the adjustor patent for which there is evidence the inventors of the '889 patent had in their possession, is directed to both securing people and/or cargo. Yang '550 Patent, Abstract. Dr. Guenther testified that such a disclosure would encourage one of ordinary skill in the art at the time of the invention to look at mechanisms for securing both people and cargo to solve the problem identified in Heath '602 for quickly and easily adjusting the harness portion of a child restraint seat. Yang '550 itself discloses a cam operated adjustor as does Griswold '307, which is directed to "convenient and safe" buckles for automobile and airline seat restraints. Yang '550 Patent, col. 4, *ll.* 21-47 & col.4, *ll.* 21-47; Griswold '307 Patent, col. 1, *ll.* 5-9 & col. 4, *l.* 41 to col. 5, *l.* 7.

Moreover, evidence presented by Dorel that the industry standard for securing children in car seats had changed just prior to the discovery of the '889 patented invention supports an inference that those of ordinary skill in the art at the time would be searching for better ways to hold securely the harness system of a child restraint seat, while ensuring that it was still easy to make necessary adjustments.[14] Bougher Dep. at 7, 129-31; Glover Decl. ¶ 5. But, the safety standard did not mandate any particular way in which manufacturers had to meet the new performance requirements,

[14]IMMI suggests that the safety standard is irrelevant. The Court disagrees because, as discussed here, Dorel uses the standard and testimony of Glover about the relevance of the standard to show that those of ordinary skill in the art at the time were seeking alternative "adjusting means" to satisfy the standard. In this way, the standard is highly relevant to the issues at hand.

see Wallen Decl. ¶ 16, which may call into doubt how "obvious" making the combinations suggested by Dorel would have been to someone of ordinary skill in the art at the time.

Although there are questions of fact that remain on the obviousness issue, the Court must also address the secondary considerations of nonobviousness. IMMI asserts that the commercial success of its A-Lok adjustor, the subsequent licensing of the product, the long felt, but unmet need for the adjustor and failure of others rebuts Dorel's evidence of obviousness. The Court finds that IMMI's sales figures is the most compelling evidence of nonobviousness as it dominates the market for car seat adjustors. Wallen Decl. ¶¶ 12, 15; Pl.'s Invalidity Opp'n Exh. 19, IMMI Sales Summary, 2003-Feb. 4, 2005. The licenses are also relevant, however, it is less compelling evidence because the circumstances suggest that the licensees may have been threatened with litigation, which is a factor that could make the weight of the licenses less than other evidence. Wallen Decl. ¶¶ 17-18. Furthermore, except for the non-mandatory nature of the changed regulation, there is little evidence that there was a "long felt but unmet" need because there were prior art assemblies accomplishing the task. *See, e.g.*, Heath '602 Patent, Takada '483 Patent, Japanese '760 Patent. Similarly, there is little evidence that others tried to solve the problems associated with safe child restraint systems with easy-to-adjust harnesses but failed because there were several acceptable child restraint systems on the market prior development of the '889 patented invention. *See, e.g.*, Heath '602 Patent, Takada '483 Patent, Japanese '760 Patent. All in all, however, there are questions of fact on the weight to be given each of these factors in the analysis for obviousness, and whether or not, taken together, they would offset Dorel's evidence of obviousness.

In the final analysis, there are questions of fact on the scope and content of the prior art and the weight to be given each of Dorel's asserted references, and there are questions of fact about

whether or not one of ordinary skill in the art at the time of the invention would have been motivated to combine the most similar references to the patented invention, for example Heath '602 and Prete '626. Furthermore, there are questions of fact on the weight to be given the secondary considerations of nonobviousness. For these reasons, the Court is unable to conclude as a matter of law that Claims 8 and 11 of the '889 patent are invalid for obviousness and Dorel's Motion for Summary Judgment on Invalidity should be **DENIED**.

IV. CONCLUSION

For the reasons stated herein, the Court rules as follows:

1. Defendant, Dorel Industries, Inc., Motion for Summary Judgment is **DENIED**;

2. Defendants', Dorel Juvenile Group, Inc. and Dorel Industries, Inc., Motion for Summary Judgment of Noninfringement is **GRANTED**;

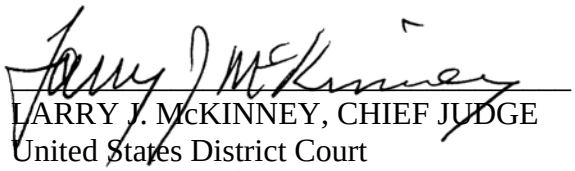
3. Defendants', Dorel Juvenile Group, Inc. and Dorel Industries, Inc., Motion for Summary Judgment of Invalidity is **DENIED**;

4. Defendants', Dorel Juvenile Group, Inc. and Dorel Industries, Inc., Motion for Summary Judgment on IMMI's Claim of Willful Infringement is **DENIED as MOOT**;

5. Plaintiff's, Indiana Mills & Manufacturing, Inc., Motion for Reconsideration is **DENIED as MOOT**;

6. Defendants', Dorel Juvenile Group, Inc. and Dorel Industries, Inc., Motion for *In Camera* Review of Schiff Hardin Work Product, which had been taken under advisement in part, is **DENIED as MOOT**.

IT IS SO ORDERED this 25th day of August, 2006.



LARRY J. McKINNEY, CHIEF JUDGE
United States District Court
Southern District of Indiana

Distributed electronically to:

Timothy Quinn Delaney
BRINKS HOFER GILSON & LIONE
tdelaney@usebrinks.com

Gregory Andrew Duff
ICE MILLER LLP
gregory.duff@icemiller.com

Sanders N. Hillis
BRINKS HOFER GILSON & LIONE
shillis@usebrinks.com

John F. Prescott Jr
ICE MILLER LLP
john.prescott@icemiller.com

A. James Richardson
BRINKS HOFER GILSON & LIONE
jrichardson@usebrinks.com

Lawrence A. Steward
BRINKS HOFER GILSON & LIONE
lsteward@usebrinks.com

Daymon L. Ruttenberg
BRINKS HOFER GILSON & LIONE
druttenberg@usebrinks.com

Michael A. Swift
ICE MILLER LLP
michael.swift@icemiller.com

Samuel Ellet Shehadeh
BRINKS HOFER GILSON & LIONE
ses@brinkshofer.com

Jay G. Taylor
ICE MILLER LLP
jay.taylor@icemiller.com