

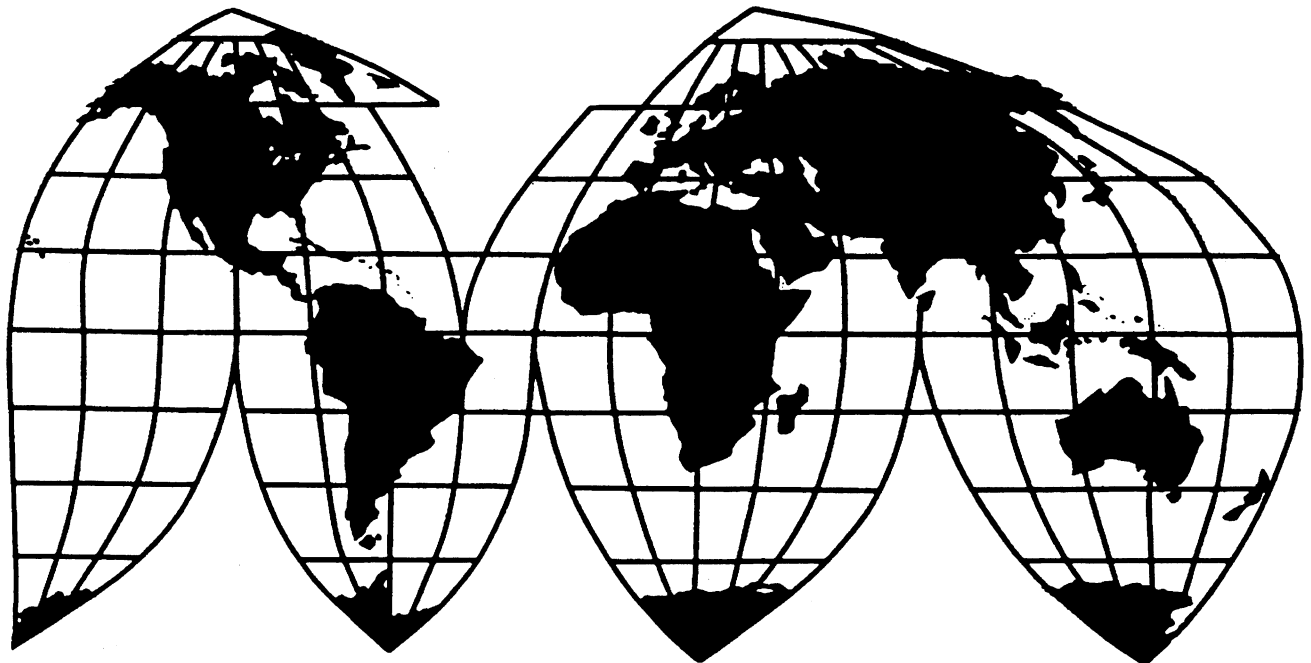
In the Matter of
**Certain Mechanical Lumbar Supports and
Products Containing Same**

Investigation No. 337-TA-415

Publication 3240

September 1999

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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In the Matter of

Certain Mechanical Lumbar Supports and Products Containing Same



Publication 3240

September 1999

CORRECTED VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC 20436**

99 AUG 17 P2:13

OFFICE OF THE SECRETARY
U.S. INTERNATIONAL TRADE COMMISSION

DOCKET

In the Matter of

**CERTAIN MECHANICAL LUMBAR
SUPPORTS AND PRODUCTS
CONTAINING SAME**

Inv. No. 337-TA-415

000022

**NOTICE OF COMMISSION DETERMINATION NOT TO REVIEW A FINAL
INITIAL DETERMINATION FINDING NO VIOLATION OF SECTION 337**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined not to review the final initial determination (ID) issued by the presiding administrative law judge (ALJ) on June 29, 1999, finding no violation of section 337 of the Tariff Act of 1930, 19 U.S.C. § 1337, in the above-captioned investigation. Accordingly, the Commission has terminated the investigation with a finding of no violation of section 337.

FOR FURTHER INFORMATION CONTACT: Jean Jackson, Esq., Office of the General Counsel, U.S. International Trade Commission, telephone 202-205-3104. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). Hearing-impaired persons are advised that information on the matter can be obtained by contacting the Commission's TDD terminal on 202-205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation of allegations of unfair acts in violation of section 337 in the importation and sale of certain mechanical lumbar supports on September 29, 1998. 63 Fed. Reg. 51949. The complaint alleged that five respondents had infringed two claims of U.S. Letters Patent 5,518,294 (the '294 patent) held by complainant McCord Winn Textron, Inc. (Textron) of Manchester, New Hampshire. The notice of investigation named the following respondents: Schukra Manufacturing Inc. and Schukra North America, Ltd., both of Canada, Schukra Berndorf GmbH of Austria, Schukra Automobil-Erstausstattungs GmbH, Germany, and Schukra U.S.A. of Plymouth, Michigan. On January 11, 1999, the Commission determined not to review an ID adding Advantage

Technologies, Inc. of Plymouth, Michigan as a respondent. An evidentiary hearing was held March 22-26, 1999.

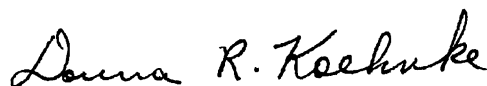
On June 29, 1999, the presiding ALJ issued her final ID, finding no violation of section 337, based on her finding that respondents were not infringing the asserted patent claims. On July 12, 1999, complainant petitioned for review of the claim construction and infringement issues. Also on that date, respondents filed a contingent petition for review of the issues of patent validity and unenforceability to be considered in the event that the Commission reviewed the claim construction and infringement issues. The Commission investigative attorney (IA) did not file a petition for review. On July 19, 1999, complainant, respondents, and the IA filed responses to the petitions for review.

Having reviewed the record in this investigation, including the parties' written submissions, the Commission determined not to review the ID or ALJ Order No. 41.

This action is taken under the authority of section 337 of the Tariff Act of 1930, 19 U.S.C. § 1337, and section 210.42 of the Commission's Rules of Practice and Procedure, 19 C.F.R. § 210.42.

Copies of the public version of the ID, and all other nonconfidential documents filed in connection with this investigation, are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street S.W., Washington, D.C. 20436, telephone 202-205-2000.

By order of the Commission.



Donna R. Koehnke
Secretary

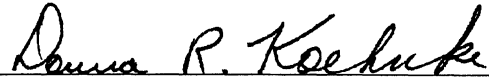
Issued: August 17, 1999

**CERTAIN MECHANICAL LUMBAR SUPPORTS
AND PRODUCTS CONTAINING SAME**

337-TA-415

PUBLIC CERTIFICATE OF SERVICE

I, Donna R. Koehnke, hereby certify that the attached (**CORRECTED VERSION**) **Notice Of Commission Determination Not To Review A Final Initial Determination Finding No Violation of Section 337** was served upon Ann M. Goalwin, Esq., Commission Investigative Attorney, and the following parties via first class mail and air mail where necessary on August 17, 1999.



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PUBLIC VERSION
UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of)
)

CERTAIN MECHANICAL)
LUMBAR SUPPORTS AND)
PRODUCTS CONTAINING SAME)
_____)

DOCKET

Investigation No. 337-TA-415

Initial Determination And Recommended Determination

Appearances

Robert C. Kahrl, Robert P. Ducatman, Sheryl H. Love, William H. Oldach III, Joseph D. Pollack, Thomas R. Goots and Michael W. Vary of Jones, Day, Reavis and Pogue, on behalf of Complainant, McCord Winn Textron, Inc.

Tom M. Schaumberg, Louis S. Mastriani, Michael L. Doane, Ramon R. Hoch of Adduci, Mastriani, and Schaumberg, L.L.P., on behalf of Respondents, Schukra of North America, Ltd.; Schukra Automobil-Erstaustattung GmbH; Schukra Berndorf GmbH; Schukra Manufacturing, Inc.; Schukra, U.S.A., Inc.; and Advantage Technologies, Inc.

Anne Goalwin, Jeffrey R. Whieldon, and Lynn I. Levine on behalf of the Office of Unfair Import Investigations, U.S. International Trade Commission

Debra Morriss, Presiding Administrative Law Judge:

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I. Procedural Background

McCord Winn Textron, Inc. ("Textron"), a Massachusetts Corporation, filed a complaint on August 19, 1998, amended on September 14, 1998, and supplemented on September 16, 1998, under 19 U.S.C. § 1337 ("Section 337") based on the alleged importation into the United States, the sale for importation, and the sale within the United States after importation of certain mechanical lumbar supports and products containing same by a number of proposed respondents. The Commission issued its Notice of Investigation on September 23, 1998, instituting this Section 337 investigation concerning Textron's allegations of infringement of Claims 15 and 16 of United States Patent 5,518, 294 ("the '294 Patent") owned by Textron, as well as Textron's claim of the requisite domestic industry. The Commission named Textron as the Complainant and Schukra Manufacturing, Inc. ("Schukra Manufacturing"), Schukra of North America, Ltd. ("Schukra N.A."), Schukra U.S.A., Inc. ("Schukra U.S.A."), Schukra Berndorf GmbH ("Schukra Berndorf") and Schukra Automobil-Erstausrüstungs GmbH ("Schukra Auto") as the Respondents. Subsequently, Textron on December 6, 1998, filed a motion to amend the Notice of Investigation to add Advantage Technologies, Inc. ("Advantage") as a Respondent. The motion was granted by an initial determination issued on December 16, 1998, which the Commission, on January 11, 1999, decided not to review. Textron requests relief in the form of a limited exclusion order, a reporting requirement and a cease and desist order.

By Order No. 3, issued October 13, 1998, a target date of September 29, 1999, for completion of the investigation was established. All parties made appearances at a Preliminary Conference on November 10, 1998, at which time a procedural schedule was set. By motion filed February 19, 1999, the Respondents moved for partial summary determination, which

motion was dismissed by Order No. 41 as untimely.

The hearing in this matter commenced on March 22, 1999 and concluded on March 26, 1999. All parties were represented at the hearing. Subsequent to the hearing, initial and reply briefs, proposed initial and reply Findings of Facts and Conclusions of Law, comments to the initial Findings and Conclusions, and statements regarding key factual issues were filed by the parties. These submissions have been fully considered in reaching this decision and any omission of a discussion of an issue raised by the parties or of a portion of the record does not indicate that it has not been considered. Rather, such issues and/or portions of the record were found to be irrelevant, immaterial and/or without merit. Additionally, any objections which may not have been ruled on to date and which may remain outstanding are hereby denied.

II. Claim Construction

The proper analysis of Textron's infringement charges involves a two-step process: first, construction of the claims asserted to determine their meaning and scope, and second, comparison of the properly construed claims to the accused products. See Tanabe Seiyaku Co. v. U.S. Int'l Trade Comm'n, 109 F.3d 726 (Fed. Cir.), cert. denied, 118 S.Ct. 624 (1997); Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). As to the first step, the meaning and scope of patent claims should be determined with reference to the claim language, the specification, and the prosecution history. Extrinsic evidence outside the record before the Patent and Trademark Office ("PTO"), such as expert testimony about how those skilled in the art would interpret certain language in the claim, may also be considered when appropriate as an inherent part of the process of claim construction and as an aid in arriving at the proper construction of the claim. Tanabe, 109 F.3d at 732; Markman,

52 F.3d at 979. Claim language should be construed according to its usual meaning to one of ordinary skill in the art where such construction is consistent with the specification. Multiform Dessicants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed. Cir. 1998). A patentee, however, acting as "his own lexicographer," may give terms an unusual meaning so long as the specification or prosecution history clearly conveys the atypical definition. Hoechst Celanese Corp. v. BP Chem. Ltd., 78 F.3d 1575, 1578 (Fed. Cir. 1996).

Claim 15 of the '294 Patent (subparts lettered below for ease of reference) teaches the following:

15. A back support for use within a seatback, comprising:
 - 15(a) a unitary flexible support member including a central body portion having a longitudinal axis and first and second longitudinal ends, and a plurality of support fingers extending outwardly from said central body portion in a direction generally perpendicular to said longitudinal axis of said central body portion;
 - 15(b) said support fingers each have a folded perimeter and a rounded end distal from said central body portion and project generally forward from a plane generally defined by said central body portion when said support member is in a relaxed position such that said rounded end on each said support finger is forward of said plane;
 - 15(c) said first longitudinal end having a clamping member adapted to be rotatably attached to a bar on a seatback wherein said back support is employed;
 - 15(d) said second longitudinal end having a holding member adapted to slidably and pivotally couple said second end to a second portion of the seatback; and
 - 15(e) wherein said central body portion said clamping member and said holding member are integrally formed from a single piece of material.

Claim 16 of the '294 Patent (subparts lettered below for ease of reference) teaches the following:

16. A back support for use within a seatback, comprising:
 - 16(a) a unitary flexible support member including a central body portion having a longitudinal axis and first and second longitudinal ends, and a plurality of support fingers extending outwardly from said central body portion in a direction generally perpendicular to said longitudinal axis of said central body portion;
 - 16(b) said first longitudinal end having a pair of clamping members projecting away from said central body portion and having opposite clamping surfaces such that said clamping members are adapted to rotatably engage a bar on the seatback wherein said back support is employed;
 - 16(c) said second longitudinal end having a holding member adapted to slidably and pivotally couple said second end to a second portion of the seatback;
 - 16(d) wherein said central body portion, said clamping member and said holding member are integrally formed from a single piece of material.

The two asserted claims have identical preambles, and they share some common claim language, which will be addressed together where appropriate. With respect to many of the claim terms, the parties offer little *evidence* as to their meaning, in tacit acknowledgment that such terms should be accorded their ordinary, plain meaning to a layperson. No party disputes that the identical preambles of Claims 15 and 16 call for a back support that includes, at least, the elements set forth in their respective claim limitations. See Genentech, Inc. v. Chiron Corp., 112 F.3d 495, 501 (Fed. Cir. 1997) ("Comprising is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim").

A. 15(a) and 16(a)

As to the identical claim limitations set forth in 15(a) and 16(a), the parties generally agree that the claim language is straightforward and can be accorded its plain meaning. They jointly clarify that the "*unitary* flexible support member" described therein refers not to construction from a single piece of material, but rather to components or otherwise separate parts that function together.

B. 15(b)

Subpart 15(b) of Claim 15 describes the characteristics and spatial configuration of the support fingers that, according to 15(a), extend outward from the central body portion. While the parties agree that most of the claim language requires no special interpretation, some contention surrounds the meaning and application of the "folded perimeter" of each of the support fingers, and the meaning of the statement that they "project generally forward." Textron contends that "... any perimeter that is bent, angled, curved or rolled back away from the forward projection of the fingers so as to avoid wear to the seat cushion" qualifies as a "folded perimeter" under 15(b). Complainant's Initial Brief at 13. Textron relies for support on a dictionary definition of "fold," on a reference by the '294 Patent examiner to the "folded perimeter" as "rolled edges," and on the purpose set forth in the patent specification for the "bent peripheral edges" - to enhance comfort and decrease wear on the seat cushion. See CX 1, Col. 3, lines 15-19. In response to testimony by the Respondents' expert, Dr. Eagle, that "fold" is a term of art referring to an operation performed only on metal, Textron insists that the "folded perimeter" limitation does not limit the device described in the '294 Patent to metal material to the exclusion of plastic. Textron highlights the statement in the '294 Patent specification that "...the back support could be made

of other materials, such as for example injection molded or thermoformed plastic." CX 1, Col. 6, lines 54-57. Also, Textron asserts that the '294 Patent is not a process patent, such that Claim 15 merely teaches the folded shape, not the method or manner of arriving at that shape. As to "perimeter," Textron argues that it necessarily refers to "more than just the 'tip' or 'end' of the finger." Textron Initial Brief at 13. Textron points to the distinction in the specification between a reference to "bent ends" and the reference to the folded perimeter as bent "peripheral edges" as an indication that the perimeter must include more than just the end. See CX 1, Col. 5, lines 44-46; Col. 3, lines 13-15.

The Respondents contend that "folded" means "bent," and stress their position that the "perimeter" need only include some of the perimeter of each support finger, but not necessarily include all of it. Citing Figures 2 and 3 of the '294 Patent and the testimony of Textron's expert, Mr. Smith, the Respondents assert that the bent peripheral edging disclosed in the '294 Patent does not extend completely around the perimeter, as inner "neck-like" portions are not bent. As to Textron's reliance on the distinction between "bent ends" and "peripheral edges," the Respondents note that the specification refers to "bent ends" only in connection with the non-preferred embodiment, while the discussion of the preferred embodiment makes no reference to them and does not distinguish between them and "peripheral edges." Similarly, in disputing Textron's assertion that "folded" can apply to plastic as well as metal, the Respondents contend that the specification passage cited by Textron for support pertains only to the non-preferred embodiment which allegedly is "unpatentable."

The Staff takes the position that "folded perimeter" means that "a substantial portion of the outside edge of two or more of the support fingers are bent in the opposite direction of the

forward projection of the fingers." Staff Initial Brief at 11-12. The Staff agrees with Textron that "folded" should not be construed as limited only to the operation performed on sheet metal, in light of the specification teaching as to the breadth of possible construction materials.

In the context of Claim 15, "folded" should be construed as "bent" or "rolled". Textron cites definitions of "fold" in The New Shorter Oxford English Dictionary, vol. 1 at 991 (1993), that include "[d]ouble or bend" and causing to "undergo bending or curvature", and I note that these common definitions are consistent with the patent examiner's paraphrase of this claim element as "rolled edges". See CX 2 at 98, 115. Accordingly, in keeping with this characterization in the prosecution history, this interpretation of "folded" is adopted. As to the parties' divergence regarding whether the "folded" claim language teaches a limitation of material type to sheet metal, I must conclude that the '294 Patent conveys no such limitation. Nothing in the plain language of Claim 15 directly communicates a requirement of material type. The expert testimony at the hearing differed regarding how one skilled in the art would interpret "folded" in this context, with the Respondents' expert indicating its applicability exclusively to sheet metal, and the Complainant's expert giving a conflicting, broader view that in the '294 Patent, the word connotes no particular type of construction material. Eagle, Tr. at 855; Smith, Tr. at 204. Most significantly, the patent itself dispels an interpretation of "folded" requiring the support fingers to be made of sheet metal by stating in the specification that a lumbar support embodying the patent could be made of "other materials, such as for example injection molded or thermoformed plastic." CX 1, Col. 6, lines 55-57. The Respondents attempt to overcome this disclosure because it refers to a non-preferred embodiment they claim is unpatentable, but this distinction fails to negate that the specification is part of the '294 Patent and serves as one of the

most important guides to construing the claim language. See Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 452 (Fed. Cir. 1985) ("The specification is, thus, the primary basis for construing the claims"). The specification thus makes clear that "folded" must be interpreted in accordance with its common definition, "bent" or "rolled" as the special meaning advocated by the Respondents would improperly create an inconsistency between Claim 15 and the patent specification. See CX 1, Col. 3, lines 14-16 ("The peripheral edges 82 of support fingers 80 are bent back slightly relative to the forward projection of the support fingers").¹

Additionally, it is my judgment that "perimeter", in the context of the '294 Patent, refers to most or all of the outer edge of the support fingers. While no party disputes that "perimeter" is defined as the outer edge, they disagree on *how much* of the outer edge must be folded, according to Claim 15. While the Respondents argue that neither Claim 15 nor the specification requires that the *whole* perimeter be folded, I also note that neither source states that only a portion or part of the perimeter is folded. Though the Respondents point out that the Complainant's expert conceded that one of the figures in the '294 Patent shows that the support fingers have relatively small areas of non-folded perimeter, where the fingers connect to the central body portion, Smith, Tr. at 1006-1007, I conclude that this minimal portion of non-folded perimeter exists only for the functionality of merging the support fingers into the central body portion, whose edges are not bent.

¹ Acceptance of the meaning advanced by Respondents in their Initial Brief would also be inconsistent with their equating of "round edges" with "folded perimeter" regarding an asserted derivation defense in their Pre-Hearing Brief. See Respondents' Prehearing-Brief at 79, (" 'teaching of rounding edges' communicated in the Miner letter teaches the folded or bent perimeter embodied by Claim 15 of the '294 Patent").

Turning to the "project generally forward" language, Textron emphasizes that the '294 Patent is silent as to the degree to which the fingers must angle forward, such that any angling forward "however slight" should satisfy this claim element. The Staff similarly contends that "project generally forward" "merely requires that the rounded distal end of two or more support fingers be forward of the plane generally defined by the central body portion in its relaxed position." Staff Initial Brief at 13, 28. The Staff relies on the plain language of the claim, and also points out that one of the inventors, Stephen Porter, testified that no particular angle was intended. See Porter, Tr. at 146. The Respondents argue that the fingers must project forward enough to bring about the desired result expressed in the specification description of the preferred embodiment, to "yield greater lateral support for a user and to enhance the comfort provided by the inventive back support." See CX 1, Col. 3, lines 11-14. They insist that minimal forward angling that provides no functional benefit falls outside the scope of this claim language. Citing Electro Medical Systems, S.A. v. Cooper Life Sciences, Inc., 34 F.3d 1048, 1054 (Fed. Cir. 1994) ("[p]articular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments"), Textron counters that the Respondents improperly seek to have limitations from the specification read into the more expansive claim.

I agree with Textron's and the Staff's assessments that the "project generally forward" element of Claim 15 refers to any angling forward of the support fingers. Where the claim itself teaches in plain language merely indicating a forward projection without any requirement as to the degree thereof, it would not be appropriate to add any other limitation, or to import any limitation from the specification. See Electro Medical, 34 F.3d at 1054. Furthermore, even the

limitation the Respondents seek to have read into the claim from the specification does not necessarily negate minimal angling, as the specification leaves the precise degree of angling necessary for the stated purpose ambiguous and open to question. In this regard, I note that the Respondents failed to cite to any expert testimony that minimal angling would *not* achieve the functional benefits of greater lateral support and enhanced comfort set forth in the specification.

C. 15(c) and 16(b)

Subparts 15(c) and 16(b) refer to a "clamping member" and "a pair of clamping members", respectively, that are adapted to rotatably attach to or rotatably engage a bar on the seatback. Textron asserts that the "clamping member" must merely attach the back support to the bar while allowing rotation at the first longitudinal end: "Thus, the 'clamping member' must join or connect the first longitudinal end to a bar on the seatback in a way that results in turning about an axis when the back support is engaged." Textron Initial Brief at 17. Textron notes that nothing in the patent precludes other types of movement in addition to rotation, such as sliding, at the first longitudinal end. According to Textron, the "clamping member" allows for a snap-on or snap fit to the bar on the seatback. Textron further argues that the prosecution history²

²The patent examiner rejected claims using the "clamping member" language other than those claims that ultimately issued as Claims 15 and 16 based on obviousness in light of two other patents. The patent examiner noted that a hinge disclosed in one of these other patents, U.S. Patent No. 3,762,769 ("Poschl '769 Patent") could qualify as a "clamping member" "absent any further structural description" of the "clamping member" in the claims. What became Claim 16 of the '294 Patent, which sets forth "clamping members", but also refers to "projecting away from said central body portion" and "opposing clamping surfaces", and Claim 15 of the '294 Patent, which sets forth a "clamping member" without referring to additional structural definition, were not rejected by the patent examiner. While Textron relies on Claim 16's "further structural definition" to argue that the hinge of the Poschl '769 Patent cannot qualify as the clamping member(s) taught by Claim 16 *and* Claim 15, Claim 15's lack of further structural

(continued...)

supports its construction of "clamping member." Textron stresses that "clamping member" does not suggest or require compressive force, arguing that the term "compressive force" is extrinsic to the claim, the specification and the prosecution history and noting as support the Respondents' position that the hinge on their "Model Q" device (RPX 3) constitutes a clamping member. According to Textron, which points to no supporting expert testimony, the hinge lacks the exertion of compressive force on the hinge pin.

The Respondents maintain that "[t]he ordinary meaning to one skilled in the mechanical arts of a 'clamping member' is a device which firmly grips or clasps another object by exertion of forces mutually upon opposite sides of an object." Respondents' Initial Brief at 12. They insist that compressive force is an element of clamping, but point out that in the context of the '294 Patent, the compression must still allow for the clamping member's rotation around the clamped object. The Respondents argue that a "rotatably attached" "clamping member" cannot just loosely confine the movement of the clamped object "without exerting firm gripping action on the object." Respondents' Initial Brief at 13-14. In addition, the Respondents point out that the "clamping member" cannot be identical to the "holding member" at the opposite end, since the claims at issue employ these different terms for their respective connections, and therefore the terms connote different types of connections. As to the "rotatably attached" limitation of the claims, the Respondents contend that it requires the rotation of the clamping member around the bar, as the fixed, non-moving axis of rotation. Textron disagrees that the bar must be the axis of

²(...continued)
definition belies Textron's argument. The Respondents and the Staff argue in response that for purposes of Claim 15, a hinge can be a "clamping member".

rotation, arguing that imposing such a requirement improperly reads a limitation into the claims. Again, the Respondents also make the argument that the use of "rotatably" as to the attachment at one end, as opposed to the use of "slidably and pivotally" as to the coupling at the other end, indicates a distinction between the nature of the attachments at each end.

According to the Staff, a "clamping member" refers to "... a member that is constructed in such a way that it can exert compressive force upon an object", but that the compressive force still allows for the rotation movement of the "clamping member". Staff Initial Brief at 14. The Staff asserts that its position is consistent with the prosecution history indicating the examiner's view that the "clamping member" set forth in Claim 15 could be satisfied by the hinge in the Poschl '769 Patent. However, as distinguished from the Respondents' view, the Staff indicates that the bar to which the "clamping member" is attached need not serve as the axis of rotation for the "clamping member". Furthermore, the Staff argues for a construction that does not require that the "clamping member" be "rotatably attached" at all times.

As to the "clamping members" of Claim 16, which offers additional description over that given in Claim 15, Textron notes that their "projecting away" means only that they "stand out" or "protrude" from the central body portion in any direction. The Staff seems to concur, maintaining that they must be "directed away from the central body portion at an unspecified angle". Staff Initial Brief at 21. The Respondents contend that this limitation implicitly requires that the central body portion be "physically spaced and separated from the pivot bar where the clamping members make rotatable attachment", such that the "clamping members jut out and extend in a longitudinal direction away from the central body to a displaced location where the clamped connection is made onto a bar." Respondents' Initial Brief at 25. The "opposite

clamping surfaces" set forth in Claim 16 do not, according to Textron, need to engage the bar at the same time. The Respondents, on the other hand, insist that the "opposite clamping surfaces" are implicit to any clamping member, and simultaneously grip a common bar from opposing sides. The Staff merely maintains that the opposite surfaces each have the capacity to exert compressive force on the bar, and notes that a snap-on attachment could fall within its construction.

The parties further disagree, with respect to the references to "a bar" in Claims 15 and 16, as to whether, as the Respondents contend, this necessarily means only one bar, or whether, as Textron and the Staff contend, this means one or more bars. The Respondents rely on the interplay between "rotatably attached" and "a bar" to argue that this refers to the use of "a single, fixed bar ... as the pivot for the clamping member." Respondents' Initial Brief at 15. Also, Textron, citing the statement in the specification that the bars in the preferred embodiment are "*preferably* horizontally disposed", maintains that these claims set forth no restriction on the configuration of the bar, such as whether it lies horizontally or vertically. As further support for this position, Textron notes that Claim 1 of the '294 Patent specifically teaches "horizontally disposed bars", such that this restriction should not be read into another claim that does not expressly include it.

As to the "clamping member" taught by Claim 15, I conclude that it refers to one or more devices exerting a pressure grip or compressive force as its or their means of attaching to the bar, in accordance with the plain meaning of "clamping". See Merriam Webster's Collegiate Dictionary, 10th ed. at 210 ("clamp [verb]: To fasten with or as with a clamp ..."; "clamp [noun]: 1 : a device designed to bind or constrict or to press two or more parts together so as to hold them

firmly; 2: any of various instruments or appliances having parts brought together for holding or compressing something"); Oxford English Dictionary, Shorter Version ("clamp [verb]: To make fast with a clamp or clamps"; "clamp [noun]: 1. a brace, clasp, or band, usually of rigid material, used for strengthening or fastening things together ... 2. a name of appliances with opposite parts which may be brought together, so as to seize, hold, compress or pinch anything"); Eagle Tr. at 865. Textron's argument against construing "clamping" to involve compressive force runs contrary to the plain meaning of the claim language. York Prods., Inc. v. Central Tractor Farm & Family Ctr., 99 F.3d 1568, 1572 (Fed. Cir. 1996) ("Without an express intent to impart a novel meaning to claim terms, an inventor's claim terms take on their ordinary meaning"). As to Textron's reference to the Respondents' allegedly inconsistent positions on a hinge as a "clamping member" and whether compressive force is exerted, I find no inconsistency between the Respondents' positions. While the patent examiner's statement that the "hinge" on the Poschl '769 Patent could qualify as a "clamping member" absent further structural description of that term indicates that that hinge exerts the requisite compressive force as the means of attachment to the bar, the "hinge" described and pictured in the Poschl '769 Patent may differ in its structure and installation from other hinges.

The "clamping member" of Claim 15 must be "adapted to be" "rotatably attached" to a bar on the seatback. The "adapted to be" language of the claim merely indicates that the claim is not limited to a particular structure, but rather to any structure appropriate for the specified use. See Rohm & Haas Co. v. Crystal Chem Co., 722 F.2d 1556 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) ("The use of functional language to claim an invention is specifically approved by statute, the patent office and the courts, particularly where, as here, it is obviously

impossible to enumerate all possible combinations of weeds, crops and application rates of propanil which will produce the recited useful selective post-emergence activity"). The Respondents argue that "adapted to be" teaches the possible addition of an adapter device to attach the "clamping member". This argument must be rejected as otherwise inconsistent with the plain language of the patent claim, as inconsistent with the conventional use of such "adapted" language, and as noted by the Staff, as inconsistent with the patentees' representations in the prosecution history that "[t]he clamping member is for rotatably attaching one end of the back support to a seatback." CX 2 at 90.

Both the Respondents' and Textron's experts testified that to one skilled in the art of mechanical engineering, "rotation" signifies turning about a fixed axis. See Eagle, Tr. at 868; Smith, Tr. at 347-48. Accordingly, if the "clamping member" is "rotatably attached" to "a bar", the ordinary meaning of this description indicates that the member must be joined or connected to the bar in such a way that facilitates rotational movement around the bar, while at the same time maintaining the compressive force inherent to the "clamping member". In this regard, I do not find persuasive the Staff's and Textron's argument that the rotation need not be around the bar, as the claim terms should not be read in isolation from one another. A plain reading of the entire phrase "rotatably attached to a bar" indicates that the axis for the rotatable attachment is the bar. In reaching this determination, I note the Staff argues that Claim 1, which teaches "a holding member pivotally and slidably attaching said second end to said second horizontally disposed bar such that said holding member pivots about and relative to said longitudinal axis of said second horizontally disposed bar", suggests "... that the inventors knew how to express the requirement that the axis of rotation be parallel to the bar to which the member is attached when

such a limitation was intended." Staff Initial Brief at 16. However, even the Staff acknowledges some difference between "pivotally" and "rotatably", and I note that the limitation cited by the Staff in Claim 1 is used in connection with a holding member that "pivots", and is not used in connection with "rotates" or "rotatably". Contrary to the Staff's argument that the omission in Claim 15 of the express identification of the bar as the axis of rotation precludes such a requirement, I conclude that the inclusion of such an identification would be superfluous and redundant, given the use of the language "rotatably attached to a bar" See Merriam Webster's Collegiate Dictionary 1018 (10th ed. 1997) ("rotate: to turn about an axis or a center: revolve ...").

With respect to the term "a bar" found in Claims 15 and 16, as set forth above in connection with "a clamping member", according to the conventions of patent drafting, the use of the article "a" connotes one or more bars where, as here, nothing else in the claims indicates that the term should be strictly limited to the singular. See Robert C. Faber, Landis on Mechanics of Patent Claim Drafting, 4th ed. (1998), § 20 at III-18; Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed. Cir. 1997), modified on other grounds, 131 F.3d 1009 (Fed. Cir. 1997). While the Respondents argue that in the context of these claims of the '294 Patent, "a bar" should be construed in the singular, their contention is unpersuasive, particularly in light of their failure to address or refute the generally accepted drafting convention or the arguments to that effect by the other parties. As to the configuration of the bar(s) taught by Claims 15 and 16, the claims fail to set forth any specifics in this regard, such that, as Textron contends and no other parties dispute, reading into the claims a limitation as to the horizontal placement of the bar(s) would not be proper.

Claim 16 distinguishes itself from Claim 15 by teaching a *pair* of "clamping members",

and the term "clamping members", standing alone, should be construed consistently with the use of the term in Claim 15. Claim 16 also sets forth that the "clamping members" must have "opposite clamping surfaces", which, according to their plain meaning are used to exert the requisite compressive force on the bar from opposing sides. For that reason, Textron's contention that the "opposite clamping surfaces" need not engage the bar simultaneously must be rejected for its failure to comport with the patently obvious function of the "clamping surfaces". Finally, Claim 16's additional description of the clamping members as "projecting away from said central body portion" refers to their jutting out from the central body portion. The Respondents' proposed construction must be rejected, as it involves limitations not found in the plain language of the claim, and the Respondents cite only the conclusory testimony of their expert Dr. Eagle that "projecting away" means jutting out in a longitudinal direction from the central body, Eagle, Tr. at 872, while failing to offer any compelling support in the form of expert testimony as to a special meaning in the art for the terms or of citations from the specification to support their proposed interpretation of "projecting away".

D. 15(d) and 16(c)

These identical subparts teach "a holding member adapted to slidably and pivotally couple" the second longitudinal end of the support member to a second portion of the seatback. Textron asserts that the "holding member" is "an attachment which maintains in the grasp 'a second portion of the seatback'", and argues that no distinction should be made between the terms "attached" and "couple[d]" as used in Claims 15 and 16, both requiring a physical connection. Textron Initial Brief at 22. The Staff concurs with this position, alleging support from the prosecution history and from Textron's expert. Both Textron and the Staff point out

that during the patent prosecution, the applicants, in submissions to the PTO, referred to both ends of the support, even the "couple[d]" end, as "attached" to the seatback. See CX 2 at 90. Textron suggests that "slidably" refers to allowing smooth movement along a surface, while "pivotally" has a meaning "similar" to "rotatably". However, Textron notes that the difference between the type of movement at the opposite longitudinal ends is:

. . . at some point the first longitudinal end must rotate about some (tangible or intangible) fixed axis. Although the claim does not require sliding or translating of the first longitudinal end, neither does it preclude some translation at this end, provided that, at some point, it stops and rotates. The second longitudinal end, on the other hand, must slide (or translate) and pivot (or rotate). This end, however, need not stop translating as it pivots or rotates.

Textron Initial Brief at 24-25. Textron further contends that the reference to the "second portion of the seatback" necessarily means only that the first and second ends not be attached to the same place on the seatback, but does not preclude the "clamping member" and "holding member" from attaching to the same bar, so long as they attach at different places on the bar.

The Respondents define the "holding member" as a "restraining means", and suggest a broader interpretation of it than of "clamping member". They argue that the use of "adapted" in these claims allows for the ". . . possibility of using accessories to suit the feature being 'adapted' to a particular purpose." Respondents' Initial Brief at 16. As to the meaning of "slidably", the Respondents seem to concur with Textron's definition, and as to "pivotally", they argue it means "turning on or as if on a pivot". While the Respondents note that "couple" means "to join together", they assert that it does not necessarily involve outright physical interconnection. As support, the Respondents cite their expert's testimony that one skilled in the art of mechanical engineering understands that parts can be "coupled" by magnetic, electrostatic or gravitational

means" without any physical interlock. Contrary to Textron's position, the Respondents claim that the "second portion of the seatback" must be construed to refer to a different component than the "bar" set forth in the claims. They argue that if the patentees intended to equate the "second portion" with the "bar", the patentees would have explicitly referenced it, in light of the identifiable antecedent already in each claim. The Respondents also point out that the specification does not indicate that the "second portion" could involve the "bar".

I conclude that the "holding member" at the second longitudinal end refers to a device that supports and restrains the second longitudinal end in a position on the seatback. The ordinary meaning of the adjective "holding" is broader than that of the adjective "clamping", and therefore the two distinct terms cannot be interpreted synonymously in the context of these claims. "Slidably and pivotally couple" indicates that the holding member must join or attach the second longitudinal end to the second portion of the seatback in a way that facilitates the second end's both moving smoothly along the surface and turning on or as if on a pivot ("pivot: a shaft or pin on which something turns" Merriam Webster's Collegiate Dictionary 887 (10th ed. 1997)). No expert testified that these terms hold special meaning in the art, and they are therefore accorded their plain meaning. I note that "couple", consistent with its ordinary definition, should be construed synonymously with "attach" in the context of these claims. The Respondents' argument to the contrary is belied by the prosecution history's statements by the applicants, where the terms are used interchangeably. CX-2 at 90. The "second portion of the seatback" refers to a part of the seatback *other than* the bar(s) referenced in 15(c) and 16(b). The reference to a "*second portion*" indicates an antecedent reference to a first portion of the seatback, and clearly "a bar on a seatback" serves as that antecedent reference. The use of "second" suggests a

different portion than the first, negating the argument that the "second portion" of the seatback could be another location on the first portion, the bar. Therefore, the "holding member" should be adapted to attach the "second longitudinal end" to a part of the seatback other than the "bar" to which the "clamping member[s]" are adapted to attach.

E. 15(e) and 16(d)

These identical subparts of Claim 15 and Claim 16 teach that the central body portion, clamping member and holding member "are integrally formed from a single piece of material". While both Textron and the Respondents assert that this "straightforward" claim language should be accorded its "ordinary and literal meaning", they disagree as to what that meaning is. Textron insists that the claim language does not preclude the attachment or affixation of additional material to the integral formation of the central body portion, clamping member and holding member. The Respondents argue that if any one of the central body portion, clamping member or holding member is a composite construction, then ". . . that occurrence effectively renders the overall construction a composite." Respondents' Initial Brief at 19. While the Respondents rely on their expert's testimony and on the patent specifications's emphasis on the advantage of a single-piece support over multi-piece supports, Textron relies on its expert's testimony and on the examiner's reference in the prosecution history to the single-piece construction as an unpatentable distinction and "a matter of design choice". The Staff takes the position that these claim limitations should not preclude the attachment of other features to the support member ". . . as this would contradict the proper meaning of the word 'comprising' in the preamble to the claim[s]." Staff Initial Brief at 20.

I conclude that the limitation that the central body portion, clamping member and holding member be "integrally formed from a single piece of material" should be construed according to

its plain meaning, that the components specified must be fashioned from one piece of material, as opposed to being constructed of multiple parts or from multiple materials. In essence, all the parties agree on this as the correct construction, as they all acknowledge that the central body portion, clamping member or holding member cannot consist of more than one piece or be formed from more than one piece of material. However, their rather fact-specific, infringement-driven disagreement stems from whether an additional component, formed from a separate piece of material, added onto the central body portion, clamping member or holding member would be deemed *part of* the central body portion, clamping member or holding member to which it was added, or whether the additional component would, instead, be deemed separate therefrom. If it were an integral part of either the central body portion, clamping member or holding member, the Respondents insist that such an arrangement falls outside the scope of Claims 15 and 16. The other parties focus on the claim preambles' use of "comprising" as an indication that *additional* features which are not inconsistent with the claim limitations may be added while still remaining within the scope of the claim. I agree with the contentions of the parties, and note that their positions do not conflict. Rather, the real conflict arises out of a factual disagreement over whether a particular feature on the Respondents' accused products should be considered a separate, independent feature from the central body portions, or whether it should be considered a constituent of the central body portion. Such a factual disagreement is properly resolved in the infringement section, *infra*, with consideration of the particular component involved.

III. Infringement

The asserted claims, as properly construed, must be compared to the accused products to determine whether the patent claims are infringed. Tanabe, 109 F.3d at 732; Markman, 52 F.3d at

979. The burden rests on the patent owner to establish infringement by a preponderance of the evidence. SmithKline Diagnostics Inc. v. Helena Lab. Corp., 859 F.2d 878, 889 (Fed. Cir. 1988). The patent owner must show that for each claim asserted, the accused products satisfy every claim limitation, either literally or under the doctrine of equivalents. Id. For the reasons that follow, I conclude that the accused devices do not infringe Claim 15 or Claim 16 of the '294 Patent. The Respondents' accused products in this investigation include both plastic basket lumbar support products ("Accused Plastic Products"), and metal basket lumbar support products ("Accused Metal Products"). While the parties agree that these products are similar, some differences do exist, such that the Accused Plastic Products and the Accused Metal Products are separately addressed below.

A. Accused Plastic Baskets

The Accused Plastic Products are exemplified by CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19, which include both complete and incomplete assemblies.

1. 15(a) and 16(a)

Textron and the Staff allege that the Accused Plastic Products meet all elements of the claim limitations set forth in 15(a) and 16(a), and the Respondents also concede this point. I agree that the Accused Plastic Products have a unitary flexible support member including a central body portion that has a first longitudinal end and a second longitudinal end. The central body portion has numerous support fingers extending outwardly therefrom in perpendicular direction to the longitudinal axis of the central body portion.

2. 15(b)

Textron and the Staff take the position that the limitation of 15(b) reads on the Accused

Plastic Products. The Respondents disagree, arguing that the fingers on the Accused Plastic Products lack the "folded perimeter" and do not "project generally forward", as set forth in 15(b). As to the "folded perimeter", the Respondents contend that the injection-molded plastic fingers have a rounded, but not "folded" edge. The Respondents further maintain that the rigid plastic used to make its Accused Plastic Products cannot be "folded" or bent in the manner contemplated by the '294 Patent. Textron's expert, however, testified that the Accused Plastic Products' fingers are "radiused", and "... that's certainly how you would do this folded edge, if you were going to manufacture it out of injection molded plastic." Smith, Tr. at 222. Alternatively, Textron argues that even if the Accused Plastic Devices are deemed not to have fingers with a "folded perimeter", their "radiused" fingers constitute equivalents that perform the same function in substantially the same way to achieve substantially the same result. The Staff agrees with Textron's position. The Respondents deny that Textron showed any evidence of equivalency.

As to "project generally forward", the Respondents insist that because their expert testified that their products are designed and intended for manufacture with flat fingers, co-planar to the central body portion, this claim element should not be deemed met by the Accused Plastic Products, as the projection measured on its devices is "inadvertent and non-designed". The Respondents point to design drawings and their expert's testimony in support of this position. See RX 127C; Eagle, Tr. at 880-81. In addition, the Respondents urge an interpretation and application of this claim term requiring "angling of the fingers that is conspicuous to the casual observer of the device", and they maintain that the angling measured on their device would not meet this standard. Respondents' Initial Brief at 32. Textron and the Staff criticize the Respondents' reliance on designs and drawings, rather than on the accused devices themselves, which the Respondents' expert even admitted did not have flat fingers, co-planar with the central

body portion. See Eagle Tr. at 934-35. Textron cites Hilton Davis, 62 F.3d at 1523, for the proposition that infringement is not negated by its accidental or unintended nature. The Staff concurs that the Accused Plastic Products, with the exception of those represented by CPX 19, satisfy this claim limitation.

I conclude that each of the fingers of the Accused Plastic Products displays a "folded perimeter" within the meaning of Claim 15. While the perimeters of the fingers do not show a sharp crease, the support fingers, in addition to having rounded ends, are longitudinally rounded or curved in such a way that the outer edges are properly characterized as rolled or "folded". Accordingly, the Accused Plastic Devices satisfy this claim element.

I also find that, apart from those products represented by CPX 19, the support fingers of the Accused Plastic Products "... project generally forward from a plane generally defined by said central body portion ..." as taught by Claim 15. In this regard, I note that designs and drawings of the accused products are not the appropriate points of comparison, and, furthermore, the exhibit cited by the Respondents, RX 127C, was offered and admitted for the limited purpose of showing what Dr. Eagle relied on in forming his opinions. See Tr. at 863. Additionally, the Respondents do not really dispute that the products' fingers project forward to some degree, and because I found in the claim construction section, *supra*, that any forward projection falls within the scope of the claim, the Accused Plastic Products other than CPX 19 satisfy this claim element.

3. 15(c) and 16(b)

Both the Staff and Textron contend that the Accused Plastic Products include the limitations of 15(c) and 16(b), but the Respondents maintain that they fail to satisfy several of the limitations found in these claim subparts. As to 15(c), the Respondents argue that the Accused

Plastic Products lack the "clamping member", fail to satisfy the "rotatably attached" element, and lack "a bar" as required by the claim. As to 16(b), they assert that the Accused Plastic Products lack the "pair of clamping members", fail to satisfy the "rotatably attached" element, and lack "a bar" as required by the claim.

The Respondents note that the Accused Plastic Products make identical connections at both longitudinal ends by inserting two vertical guide wires into "clips" or "collars" that are "... integrally molded into the plastic on the backside of the central body." Respondents' Initial Brief at 32; see also Eagle, Tr. at 885; Daniels, Tr. at 125. They assert that these cannot constitute "clamping members" because no clamping is made on the guide wires, as the clips or collars do not squeeze or exert compressive force thereon. In fact, the Respondents argue that the wire retentions created by the clips or collars often tend to be loose. They note that Textron's internal analysis of the Respondents' devices referred to their "clip on" structure, different from the "snap on" terminology Textron used for its own devices. See RX 110C. Textron highlights the Respondents' Engineering Manager, Mr. Dosen's statement that their Accused Plastic Products can be installed by "snap[ping]" it in the frame as consistent with the characterization in the patent specification of the preferred embodiment's clamping member "snap[ping] on" the bar. Textron also points to testimony by its expert that the Accused Plastic Products use two "clamping members". The Respondents sharply criticize Textron's excerpt and characterization of Mr. Dosen's testimony about "snapping", noting that he was testifying about "snapping" the guide wires into a seat frame, rather than about "snapping" the basket onto the guide wires. The Staff relies on Textron's expert's testimony regarding the existence of "clamping members" on the Accused Plastic Products for its position that this claim element is satisfied. See Smith, Tr. at 226-27, 374.

As to "rotatably attached", the Respondents explain that in order for the Accused Plastic Products to properly function, both ends must slidably move toward each other, precluding finding "rotatabl[e] attach[ment]" at either end. See Dosen, Tr. at 580. They note that neither end has a fixed and tangible axis of rotation, such that the Accused Plastic Products do not have an end which is "rotatably attached" to a bar. According to the Respondents, Textron offers confused and conflicting theories as to the "rotatabl[e] attach[ment]" on the Accused Plastic Products, wavering between asserting that one end is "firmly clamped" to the bar, and asserting that the clamped end can slide until it hits the kinks in the guide wires, at which time it begins to rotate about a fixed axis. See Smith, Tr. at 224; cf Kahrl, Tr. at 68. The Respondents maintain that the evidence at the hearing failed to support either theory, but instead showed that both ends of the Accused Plastic Products are attached slidably and pivotally. Dr. Eagle testified that neither end of the Accused Plastic Products is "rotatably attached". Eagle, Tr. at 887-89. Textron claims that its expert measured and testified to angular rotation in the Accused Plastic Products, and insists that the movement at this end of the devices differs from that at the opposite end because of the kinks or "retention bends" in the guide wires at this end. In support, Textron cites testimony from Barry Jones, Dragan Dosen, and from Alan Prettyman that once reached during actuation of the device, the retention bends serve to restrict the movement at that end of the lumbar support. See Jones, Tr. 551; Dosen, Tr. at 311; Prettyman, Tr. at 241, 256-57. Textron denies having advanced conflicting theories, noting that both Mr. Smith and Mr. Kahrl maintained that the rotation in the actuating Accused Plastic Devices begins only upon hitting the retention bend in the guide wires. The Staff supports Textron's position, noting that it did not find Dr. Eagle's testimony on this issue convincing, as the Staff believes he failed to fully address or consider certain aspects of the issue, and "... never stated that the clamping member

cannot be rotatably connected to the bar on a seatback when the clamping member is prevented from translating and held fixed against the retention bend." Staff Initial Brief at 31.

As to "a bar", Textron asserts that the guide wires on the Accused Plastic Products constitute "a bar". The Respondents disagree, noting the mounting at the top and the bottom on *two* vertical guide wires, and pointing out that if only one side of an Accused Plastic Product were mounted on a single vertical guide wire, the product could not function. The Respondents also emphasize the inconsistency of Textron's argument about the vertical guide wires with the patent teaching of "a bar" as a rotational axis in this context. Textron replies that the Accused Plastic Products have only a *single* guide wire, formed in a U-shape, rather than two separate guide wires, as alleged by the Respondents. The Staff offers no specific arguments addressing this issue.

Applying the proper construction of these claim subparts as set forth, *supra*, in the claim construction section, the Accused Plastic Products do not meet all the limitations set forth in 15(c) and 16(b). Although the Accused Plastic Products have a first longitudinal end that attaches to two guide wire bars, one on each side, the Accused Plastic Products do not meet the "clamping member[s]" or "rotatably attached"/"rotatably engaged" limitations of Claims 15 and 16. The means of attachment at each end of the Accused Plastic Products consists of two L-shaped, notched openings in the plastic, one on each side of each longitudinal end, into which two guide wires that eventually join at the bottom, one wire running along each side, fit. The openings are notched in such a way that the guide wires "pop" or "snap" from a larger part of the opening at the open end of the L-shape, through a smaller part of the opening at the corner of the L-shape, into a round, larger part at the closed end of the L-shape. Where the guide wire rests, in the round part of the opening at the closed end of the L-shape, it does not fit snugly, and allows

for some movement within the opening as well as for sliding up and down the guide wire. The smaller part of the opening at the corner of the L-shape is small enough to prevent the guide wire from re-entering that part of the opening without some outside force being used to "pop" or "snap" it back out, and so prevents the guide wire from slipping out of the opening. Accordingly, as is apparent from visual inspection of the devices, once the guide wire is in place in the round, larger part of the opening at the closed end of the L-shape, no compressive force is being exerted on it to hold it in place. This lack of compressive force compels the conclusion that the notched openings do not qualify as "clamping members" within the meaning of Claims 15 and 16. Certainly, these structures do not have the "opposite clamping surfaces" taught by Claim 16. To find that a structure such as these meets the "clamping member" claim elements would run counter to its plain meaning, and therefore would violate the important principle that claims must give fair public notice. See In re Morris, 127 F.3d 1048, 1054 (Fed. Cir. 1977) (citing Warren-Jenkinson, 117 S.Ct. at 1051).

As to rotatable attachment to or engagement of the bar, while I find that the guide wires qualify as "bars" based on the proper claim construction set forth, *supra*, I conclude that the notched openings on the Accused Plastic Products fail to create a rotatable engagement of or attachment of the central body portion to the guide wires, as required by the claims. I noted in the claim construction section, *supra*, that the "clamping member" must be joined or connected to the bar in such a way that facilitates rotational movement around the bar, while at the same time maintaining the compressive force inherent to the "clamping member". When activated, the Accused Plastic Baskets' central body portion is bowed, and curves at each longitudinal end, and Textron and the Staff contend that this curving motion at the first longitudinal end shows that the end is "rotatably attached" to the "bar". However, the Accused Plastic Baskets attach to two

vertical guide wires that eventually join at the bottom, with the left side of both the first and second longitudinal ends attaching, at two separate places, to one vertical guide wire, and the right side of both the first and second longitudinal ends attaching, at two separate places, to the second vertical guide wire. Thus, even if the curving of each longitudinal end could properly be characterized as rotational, certainly no rotation could be deemed to occur around either one of the vertical guide wire "bars" that run perpendicular to the direction of the alleged rotational movement. While Textron and the Staff frame their arguments on these claim elements more convincingly by discussing each claim element separately and distinctly, proper consideration of the entire phrases "clamping member adapted to be rotatably attached to a bar" and "said clamping members are adapted to rotatably engage a bar" indicates that the attachment to the bar or bars must facilitate rotational movement around the same. Because a visual inspection of the Accused Plastic Products clearly demonstrates that this does not occur, the Accused Plastic Products do not satisfy these claim elements.

4. 15(d) and 16(c)

Textron relies on its expert's and the Respondents' expert's testimony to establish that these claim limitations are met by the Accused Plastic Products, and the Respondents explicitly concede that their products meet these claim limitations, except that they note that *both* ends meet these claim limitations and *both* attach to the "second portion of the seatback" (in the Respondents' view, a portion other than the "bar" to which the first longitudinal end attaches). See Respondents' Initial Brief at 36. The Staff also concurs that the Accused Plastic Products satisfy 15(d) and 16(c). Notably, however, the parties maintain their divergence on the proper interpretation of some claim terms, particularly "second portion of the seatback".

Based on the proper construction of these claim terms, I conclude that the Accused

Plastic Products fail to meet that part of these claim subparts requiring attachment of the second end of the central body portion to "a second portion of the seatback". As set forth above, both longitudinal ends of the Accused Plastic Products are attached to the same two vertical guide wires or "bars". Because Claims 15 and 16 call for the second longitudinal end of the device to couple with a portion of the seatback *other than* the "bar" to which the first longitudinal end attaches, the Accused Plastic Products do not satisfy this limitation. The remaining elements taught by these claim subparts can be found in the Accused Plastic Products, as agreed by all the parties, and as is apparent from a visual inspection.

5. 15(e) and 16(d)

According to both Textron and the Staff, the limitations set forth in 15(e) and 16(d) read on the Accused Plastic Products. Textron contends that a mere visual inspection shows that the central body portion as well as the clamping and holding members in the Accused Plastic Products are formed from a single piece of material, though Textron also points to its expert's testimony confirming this point. The Respondents insist that the Accused Plastic Products, excepting the prototype represented by RPX 13, are constructed with a composite of different materials, as "... the central body portion must have a pair of spring steel strips structurally incorporated within a plastic basket subassembly to enable the device to perform properly." Respondents' Initial Brief at 36. They support this point by citing to the significant expenditure of labor and funds involved in installing the steel strips as an indication that the strips are "... hardly an artifice introduced to skirt around a patent claim" Respondents' Initial Brief at 37. The Respondents also state that because testing by Dupont of Canada and Schukra itself demonstrated that the steel strips are essential to the operation of the Accused Plastic Products in an automotive environment, the products for infringement purposes, should not be considered

without the strips. Respondents' Reply Brief at 15.

Textron counters that the addition of the steel strips cannot avoid infringement, as a matter of both fact and law. Textron cites authority from the Federal Circuit for the proposition that the mere addition of elements cannot negate infringement, and then cites testimony from Respondents' witnesses that Textron asserts admits that lumbar supports with strips riveted on constitute "one-piece" or "single-piece" baskets. See Richter, Tr. at 419; Cosentino, Tr. at 477. Textron states that the "add-on" nature of the strips is confirmed by the Respondents' production in this investigation of some plastic products without the steel strips. See CPX 5; CPX 14. Textron further argues the irrelevance of the General Motors standards, as they are outside the scope of the '294 Patent. On this point, the Staff notes that the Respondents failed to show that the Accused Plastic Products could not function under *any* circumstances of use without the steel strips, and the Staff further notes that neither Claim 15 nor Claim 16 explicitly teaches a back support for *automotive* use, negating the Respondents' reliance on automotive standards as the touchstone for the necessity and integral nature of the steel strips. The Staff supports finding that the Accused Plastic Products meet this claim limitation, maintaining that the use of "comprising" in the claims' preambles makes the addition of the steel strips still consistent with finding the central body portion, along with the clamping members and holding members, constructed from a single piece of material. The Respondents reply that because the steel strips are an integral part of the central body portion, the central body portion must be deemed formed from a composite of different materials.

As set forth above, the Accused Plastic Products lack the "clamping member[s]" taught by Claims 15 and 16, thereby precluding their satisfaction of these claim subparts that teach that the clamping member, holding member and central body portion "... are integrally formed from a

single piece of material". However, in the Accused Plastic Products, visual inspection of the Accused Plastic Products confirms that the holding members found at both longitudinal ends and the central body portion are all integrally formed from a single piece of plastic material. While the Respondents maintain that the two steel strips running the length of the central body portion are an integral part of it, such that the central body portion is formed of a composite of materials, I disagree. Although the steel strips are attached to the central body portion, they appear to be an additional feature rather than part of the central body portion. I agree with Textron and the Staff that the Respondents' reliance on the General Motors performance standards is not persuasive, not only because the standards themselves are not included or referenced in the patent, but also because the asserted claims do not even indicate that the claimed "back support" is for automotive use, as opposed to any other type of use. Furthermore, the Respondents failed to offer evidence that, absent the steel strips, the Accused Plastic Products could not be used as back supports in *any* circumstance or environment. At least one plastic back support produced by the Respondents and offered into evidence does not include the steel strips, underscoring their status as an added feature. Also, as advocated by the Staff, patent drafting principles suggest that the use of "comprising" in these claim preambles allows within the scope of Claims 15 and 16 for the addition of features not set forth, so long as they are not inconsistent with the claim limitations. Sec A. B. Dick Burroughs Corp., 713 F.2d 700, 703 (Fed. Cir. 1983) ("It is fundamental that one cannot avoid infringement merely by adding elements if each element recited in the claims is found in the accused device"). I conclude that the steel strips on the Accused Plastic Products constitutes such an added feature.

B. Accused Metal Baskets

The Accused Metal Products are exemplified by CPX 3C, CPX 4C, CPX 13C, CPX 15C

and CPX 16C, and are formed of stamped metal. Textron contends that they infringe Claim 16 of the '294 Patent³, while the Staff and the Respondents argue non-infringement. The Respondents maintain that the Accused Metal Products do not include several of the elements set forth in Claim 16, including the "pair of clamping members ... adapted to rotatably engage a bar ..." and the requirement of "integral[] form[ation] from a single piece of material." As to the remaining elements taught by Claim 16, the parties agree that the Accused Metal Products meet these limitations.

1. 16(b)

The structures in the Accused Metal Products that attach the central body portion to the guide wires differ from those found in the Accused Plastic Products. The Staff accurately describes these structures as horseshoe-shaped cutouts or openings in the metal, enclosing C-shaped rigid plastic "anti-friction" sleeves into which the guide wires are inserted. Although Textron contends that the metal openings serve as a "pair of clamping members", the Staff correctly points out, and a visual inspection of the devices confirms, that the metal cutouts or openings alone, without the plastic "anti-friction" sleeves inserted therein, could not hold the guide wires in place. See also Richter, Tr. at 403-04; Prettyman, Tr. at 262; Dosen Tr. at 292, 317, 610. While the plastic "anti-friction" sleeves hold the guide wire somewhat more snugly than the structures in the Accused Plastic Products, the retention of the guide wires in the Accused Metal Products still allows for some minimal lateral movement within the sleeve and allows the device to slide freely up and down on the guide wires. The Respondents contend that the design and cut of the plastic "anti-friction" sleeves causes them to put pressure on the edges

³Textron does not allege that the Accused Metal Products infringe Claim 15 of the '294 Patent.

of the horseshoe-shaped metal opening, in order to keep the sleeves in place, rather than to put pressure on the guide wires inserted in the sleeves. See Cosentino, Tr. at 502-03.

The Respondents argue that no "clamping members" exist on the Accused Metal Products, particularly in light of Claim 16's requirements of "opposite clamping surfaces" and "projecting away", as, according to the Respondents, "... neither the plastic sleeves nor the slot or eyelet opening per se firmly grip a seatback bar from 'opposite sides'" and "... the plastic sleeves and slots ... are defined within the bulk metal ... and they themselves do not literally stick out or otherwise protrude from the central body." Respondents' Initial Brief at 49-50. The Respondents also maintain that even if the plastic "anti-friction" sleeves were considered "clamping members", they do not "rotatably engage a bar on the seatback". The Respondents point out that although both ends of the Accused Metal Products slide along vertical guide wires and, when the metal products are activated, change orientation, the orientational changes do not occur about a fixed center, and certainly do not constitute rotation around a bar. Both the Respondents, Textron and the Staff seem to acknowledge that the guide wires configuration on the Accused Metal Devices is the same as that on the Accused Plastic Devices, such that their arguments regarding the latter also apply to the former.

Textron, by contrast, insists that the metal cutouts or openings constitute "clamping members" that "clamp[] around a plastic antifriction sleeve", and Textron argues for reliance on the testimony of Mr. Smith regarding the "clamping members" allegedly on the Accused *Plastic* Products as equally applicable to the Accused Metal Products "... but for Schukra's placing a plastic antifriction sleeve around the wire". Textron Initial Brief at 57. Textron also relies on the testimony of Mr. Prettyman that "once the wire is in place, it will not remove itself" and that it is "a press fit and it's restrained within the nylon." Prettyman, Tr. at 246-47. As for the "rotatably

engage" limitation, Textron cites testimony by Mr. Prettyman that when the central body portion in one of the Accused Metal Products is actuated, and once the lower end of the basket hits the retention bends in the guide wires, it "tilts around an axis" and that he guessed the center of "rotation" is at the anti-friction sleeve as an indication that the alleged "clamping members" "rotatably engage a bar on the seatback". Prettyman, Tr. at 243-45.

Based on the proper construction of subpart 16(b), I conclude that the Accused Metal Products lack "clamping members [with "opposite clamping surfaces"] projecting away" from the central body portion, and I further find no rotatable engagement of a bar on the seatback. Contrary to Textron's position, the metal cutouts cannot be deemed "clamping members" or even "holding members", for that matter, because, as credible testimony at the hearing confirmed, the cutouts by themselves cannot possibly function to hold the guide wires. The plastic "anti-friction" sleeves operate to hold the guide wires in place, but Textron fails to point to any evidence or indication that either the plastic "anti-friction" sleeves or the metal horseshoe-shaped cutouts exert compressive force as their means of attachment, as is implicit in 16(b). In fact, the evidence of record and a visual inspection of the Accused Metal Products indicate a lack of such compressive force in connection with the attachment. See Cosentino, Tr. at 502-03; CPX 15C. Furthermore, no *rotatable* attachment to the guide wire "bars" is made, as even the movement alleged by Textron or the Staff to be rotatable involves the curving of the support around an intangible axis running in a direction perpendicular to the vertical guide wires. In this regard, Textron's reliance on Mr. Prettyman's testimony is misplaced, as he certainly did not indicate that the rotational movement was around "a bar", but only that the intangible axis running in a direction perpendicular to the vertical guide wires would probably run through the center of the two plastic grommets at the longitudinal end. In fact, however, no guide wire or bar actually

runs horizontally between them at the longitudinal end.

2. 16(c)

The Respondents concede that the Accused Metal Products have two sets of "holding members" that "slidably and pivotally couple" *both* longitudinal ends to different spots on the vertical guide wire bars. Accordingly, the Respondents admit that under its proposed claim construction, the Accused Metal Products meet the elements taught in 16(c). While I agree that the Accused Metal Devices have "holding members" in the form of the plastic "anti-friction" sleeves, and that they couple the central body portion to the guide wires in a way that allows slidable and pivotal movement, I must conclude that under the proper claim construction, the Accused Metal Devices fail to satisfy the limitation that the "holding member[s]" attach the second longitudinal end to "*a second portion of the seatback*". Because I conclude that both the first longitudinal end and the second longitudinal end of the Accused Metal Devices attach to the same two vertical guide wire "bar[s]", those same "bar[s]", as indicated in connection with the Accused Plastic Devices, cannot also serve as the "second portion of the seatback".

3. 16(d)

Both the Respondents and the Staff take the position that the Accused Metal Products cannot be deemed to satisfy the limitation found in 16(d) that the central body portion, clamping member and holding member be "integrally formed from a sin[g]le piece of material", on the grounds that the plastic "anti-friction" sleeves attaching the support to the guide wires are formed from a different material than the metal central body portion. Textron argues that a visual inspection of the devices indicates otherwise, based on its view that the metal horseshoe-shaped openings constitute the "clamping members" and the "holding member" formed from the same piece of material as the central body portion, while the plastic "anti-friction sleeves" merely

constitute a permissible added feature. In support, Textron cites references to the Accused Metal Products as "one piece" or "single piece" by the Respondents in testimony and their internal documents. Alternatively, Textron, relying on alleged admissions by the Respondents' witnesses, argues that the addition of the plastic "anti-friction sleeves" "... was known to be interchangeable with an all-plastic basket", so as to constitute infringement of this element by equivalence. Textron Initial Brief at 65.

As set forth above, the Accused Metal Products lack "clamping members", and so therefore cannot meet the limitation of 16(d). Even assuming, *arguendo*, that "clamping members" as well as "holding member[s]", could be found on the Accused Metal Products, the relevant structures could only be the plastic "anti-friction" sleeves, rather than the metal horseshoe-shaped openings, which alone cannot hold an attachment with the guide wires. Accordingly, these features and the central body portion would not be "integrally formed from a sin[g]le piece of material", as the would-be "clamping members" and the "holding members" are formed from plastic, while the central body portion is formed of metal. I do not find Textron's reliance on colloquial references in the Respondents' internal marketing documents and witness testimony to the Accused Metal Products as "one piece" or "single piece" baskets persuasive, as this intra-company terminology was neither created nor used with consideration of the limitation set forth in the '294 Patent. Although Textron attempts to use this in support of an argument that the "anti-friction" sleeves are an "add-on" feature like the steel strips, it is plain that were this position adopted, and the Accused Metal Products were considered without the sleeves, they could not be deemed to have *either* "clamping members" *or* "holding members", and the devices could not function to attach to the guide wires. Finally, Textron also contends that the reference in the '294 Patent specification to the use of a polyurethane sleeve militates against

distinguishing the Accused Metal Devices on that basis. However, Textron's reliance on this reference is misplaced, as an examination of the specification reveals that the sleeve contemplated therein differs markedly from that found on the Accused Metal Products. In the specification, the sleeve contemplated would slip around the *bar* to facilitate smooth movement by the separate clamping members. The sleeves on the Accused Metal Products are themselves the members that attach to the guide wire "bars", such that that part of the specification is inapposite. Thus, in the Accused Metal Products, the difference between the material used for the "anti-friction" sleeves and the material used for the central body portion precludes satisfaction of 16(d).

I must also reject Textron's argument for infringement by equivalency. The testimony of Respondents' witnesses cited by Textron as its evidence of the "interchangeability" of an all-plastic device, and a device constructed of metal and plastic, with the plastic in the form of "anti-friction" sleeves does not actually support such a finding. The Respondents note that the applicants' statements to the PTO during prosecution of the '294 Patent reflect addition of the "integrally formed from a single piece of material" limitation to overcome composite back support prior art. See CX 2 at 90 ("Further, the fact that the Applicants' claimed invention is made from a single piece of material greatly enhances the provision of an apex that effectively shifts in response to an applied load. None of the art of record teaches or suggest [sic] such a back support"). This further weighs against the equivalency argument made by Textron.

IV. Invalidity

The Respondents raise numerous challenges to the validity of the '294 Patent. By statute, each claim of an issued patent receives a presumption of validity, and a challenger must prove invalidity of a patent claim by clear and convincing evidence. See 35 U.S.C. § 282; Fromson v.

Advance Offset Plate, Inc., 755 F.2d 1549, 1555 (Fed. Cir. 1985). As a threshold matter in connection with invalidity considerations, the parties have stipulated that the invention or priority date of the invention taught by the '294 Patent is May 23, 1994, the filing date of the application that matured into the '294 Patent. See JX 1 at ¶ 2.

A. Anticipation – Claims 15 and 16

1. "Model Q"

The Respondents contend that Claims 15 and 16 of the '294 Patent should be invalidated under 35 U.S.C. § 102(b) as anticipated by Respondent, Schukra Manufacturing's, and Centro Manufacturing, Inc.'s sale to the public before May 23, 1993 of the "Model Q" metal back support, exemplified by RPX 3 and RPX 4. According to 35 U.S.C. § 102(b):

A person shall be entitled to a patent unless

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

The Respondents argue that the "Model Q" embodies all the elements and limitations of Claim 15, and that therefore, the invention taught by Claim 15 of the '294 Patent, in the form of the "Model Q", was "on sale in this country, more than one year prior" to the '294 Patent's priority date. See Kegel Co. v. AMF Bowling, Inc., 127 F.3d 1420, 1429 (Fed. Cir. 1997) (holding that "[a]nticipation ... requires the presence in a single prior art disclosure of each and every element of a claimed invention"); Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc., 976 F.2d 1559, 1565 (Fed. Cir. 1992) (noting that anticipation through sale requires that the claimed invention be "... embodied in a single prior art activity"). As set forth below, the Respondents fail, on several grounds, to meet their burden of proving anticipation by the "Model

Q".

The Respondents maintain that "different versions" of the "Model Q" were publicly sold to numerous U.S. customers before the critical date, with the various versions having some structural differences depending on customer preference. The Respondents rely primarily on the "version" designated RPX 4 in support of their argument for anticipation of Claims 15 and 16. RPX 4 lacks the roller wheels, hinge pin and hinge plate found on RPX 3. Textron and the Staff counter that no clear and convincing evidence shows sales of such a "version" as RPX 4 before the critical date, while the evidence instead indicates that the "Model Q" was on sale in the form exemplified by RPX 3, with wheels at one longitudinal end and a hinge at the opposite longitudinal end. Textron cites five separate limitations it asserts cannot be found in the "Model Q", specifically:

- (1) support fingers that project forward from a plane defined by the central body portion;
- (2) support fingers having a folded perimeter;
- (3) a clamping member/pair of claiming members having opposite clamping surfaces, adapted to be rotatably attached to a bar on a seatback;
- (4) a holding member adapted to slidably and pivotally couple the second end of the back support to a second portion of the seatback; and
- (5) a central body portion, clamping member and holding member integrally formed from a single piece of material.

Textron Initial Brief at 71. The Staff, while not addressing each of these limitations, concurs with Textron's assessment that the "Model Q" fails to embody Claims 15 or Claim 16 of the '294 Patent.

As an initial matter, I conclude that the Respondents have not met their burden of showing the "Model Q" version allegedly exemplified by RPX 4 was on sale before the critical date. As set forth in greater detail below, Mr. Cosentino's testimony on this issue was inconsistent, and I deem it unreliable. I also find unreliable the proffered "corroborating

evidence", RX 35C, for the reasons expressed below.

a. 15(b)

The Respondents maintain that the support fingers in the "Model Q" underwent "a folding action done on the sheet metal to bend the edges backward", and reiterate their claim construction argument that a bend on some of the perimeter should be sufficient to meet the claim limitation that "said support fingers each have a folded perimeter". As set forth in the claim construction section, *supra*, however, most or all of the outer edge of the support fingers must be bent or rolled to satisfy this element. On the "Model Q", only the tip or very end of the support fingers are bent, certainly not a substantial portion of the fingers' perimeter. Accordingly, the Respondents cannot meet their burden of showing that this claim limitation reads on the "Model Q".

As to the support fingers "project[ing] generally forward", the Respondents rely on RPX 4 and on the testimony of Mr. Cosentino and Dr. Eagle in support of their proposition that the "Model Q" satisfies this limitation. Textron responds that RPX 4 shows an uneven few fingers projecting forward, but not others, and questions whether any version of the "Model Q" with fingers projecting forward was truly sold before the critical date. Textron cites as support Mr. Cosentino's admission that the [

] as well as his admission that he had no drawings or other records indicating a "Model Q" version with the fingers bent forward. See Cosentino, Tr. at 464, 494. In light of what Textron deems unacceptable uncorroborated oral testimony by an interested party as the basis for the Respondents' assertions as to this claim element, Textron insists, that the Respondents fail to meet their burden of proof by clear and convincing evidence. The Staff agrees that Mr. Cosentino's testimony regarding sales of the various configurations of

the "Model Q" remains uncorroborated.

I conclude that the Respondents have not met their burden of proof that the "Model Q" on sale prior to the critical date exhibited support fingers that project generally forward. On one of the two "Model Q"-related exemplars offered into evidence, the RPX 3 complete model shows a few of the support fingers haphazardly bent forward in a way suggesting that, as Mr. Cosentino conceded was possible, someone had "played" with the exemplar so as to bend some, but not all of the support fingers. On the other exemplar, RPX 4, a "Model Q" basket lacking the hinge plate, hinge pin, wheels and actuator, the support fingers lie flat, co-planar with the central body portion. The Respondents failed to come forward with other exemplars of the "Model Q" showing forward-projecting fingers. Thus, the physical specimens do not provide clear and convincing evidence that the "Model Q" support fingers project forward. Similarly, Mr. Cosentino's testimony cannot serve as the basis for such a finding, because, as an interested party, his testimony must be corroborated, and the Respondents failed to provide the requisite corroboration. See Finnigan Corp. v. Int'l Trade Comm'n, Docket No. 98-1411 (Fed. Cir. 1999) (noting that uncorroborated witness testimony alone cannot rise to the level of clear and convincing proof of invalidity under any subsection of § 102); Thomson, S.A. v. Quixote Corp., 166 F.3d 1172, 1176 (Fed. Cir. 1999) (corroboration required "... when the testifying inventor is asserting a claim of derivation or priority of his or her invention and is a named party, an employee of or assignor to a named party, or otherwise is in a position where he or she stands to directly and substantially gain by his or her invention being found to have priority over the patent claims at issue"); Woodland Trust v. Flowertree Nursery, Inc., 148 F.3d 1368 (Fed. Cir. 1998) (concluding that uncorroborated testimony regarding prior knowledge and use under § 102(a) could not serve as clear and convincing evidence of anticipation).

b. 15(c) and 16(b)

The Respondents argue that the "Model Q" meets the claim elements set forth in 15(c) and 16(b), first asserting that the RPX 4 "version" shows "semi-cylindrical formed ends" that serve as the "clamping members". On RPX 3, these semi-cylindrical formations attach to a hinge pin, and a hinge plate also attaches to the hinge pin, so as to allow the hinge plate to ultimately attach to the seatback. See Cosentino, Tr. at 464. Both Textron and the Staff, as noted above, dispute the Respondents' claim that the RPX 4 "version" was sold before the critical date, and insist that the only evidence of sales suggests that the "Model Q" was sold with wheels and a hinge plate. I previously found that the sole evidence of sales of the "Model Q" in a "version" such as RPX 4 was the insufficient, uncorroborated oral testimony of Mr. Cosentino, such that the Respondents' reliance on this "version" is misplaced. While the Respondents produced invoices, RX 35C, which they claim corroborated sales of the "Model Q" without the "mounting accessories", Textron persuasively argues that the invoices do not explicitly reflect that, stating only "no extra parts required", and further notes that the invoices show the same sales price as that for the full model exemplified by RPX 3. Textron points out the unlikelihood that customers would pay the same price for a stamped metal basket as for that basket with wheels and a hinge. The Staff also points out that during his direct examination, Mr. Cosentino explained the "no extra parts required" statement on the invoices as indicating sales without only the hinge bracket, that on cross examination, he could not point to anything in RX 35C indicating a sale without the roller wheels, and that only on redirect did he interpret "no extra parts required" as referring to a sale without not only the hinge bracket, but also without the wheels. Ultimately, his testimony regarding other "versions" of the "Model Q" cannot be relied on.

The Respondents' argument in favor of finding "clamping members" on the "Model Q"

depends on the '294 Patent examiner's statement that the Poschl '769 Patent shows "clamping members" that rotatably attach. However, based on the minimal description and the figures in the Poschl '769 Patent, the design and operation of that hinge is not identical to and does not readily resemble that of the hinge on RPX 3. The Poschl '769 "hinge" has no visible or described hinge plate that bolts or is welded onto the seatback, as does the "Model Q". As to Dr. Eagle's assertion that the "Model Q" hinge qualifies as a "clamping member" because of the exertion of compressive force, I note that he testified with reference to RPX 4, rather than RPX 3. In that regard, he testified that the semi-cylindrical metal structures could attach directly to the bar and exert compressive force thereon. With RPX 3, the version offered for sale, however, the first longitudinal end attaches to the seatback by the hinge plate, and the semi-cylindrical structures wrap around the hinge pin, rather than a bar on the seatback. The structure on RPX 3 would not involve compressive force on the "bar", as required to meet the asserted claims. Therefore, for the foregoing reasons, the Respondents fail to meet their burden of proof by clear and convincing evidence as to these claim elements.

c. 15(d) and 16(c)

The Respondents contend that the "Model Q" embodies the teachings of these claim subparts, requiring a "holding member adapted to slidably and pivotally couple". Textron and the Staff dispute this contention, arguing that the second longitudinal end of the "Model Q" has wheels that ride along the surface of a plate on the seatback, and do not "hold" the longitudinal end in place. See Cosentino, Tr. at 483-84, 487. Thus, Textron and the Staff insist that the wheels cannot constitute a "holding member" and that even if they could, the wheels do not "couple" the end to the seatback. The Respondents again attempt to rely on RPX 4, asserting that the "semi-cylindrical feature" formed at both ends serves as the "holding member", and reiterate

their argument that "couple" should not require direct attachment.

As indicated previously, the Respondents cannot rely on RPX 4 for their anticipation arguments on the "Model Q". Furthermore, their proposed construction of "couple" was rejected, *supra*, in favor of a construction requiring attachment. Considering, then, the wheels found at the second longitudinal end of "Model Q", that merely roll along the seatback without actually attaching to it, I must conclude that the "Model Q" fails to meet the "holding member" and "couple" elements of 15(d) and 16(c).

d. 15(e) and 16(d)

Pointing to the RPX 4 "version" of the "Model Q", the Respondents rely on their expert's testimony to show that the central body portion, holding member and clamping member are "integrally formed from a single piece of material" as required by these claims. However, because clear and convincing evidence does not show a pre-critical date offer for sale of the "Model Q" without its hinge plate and pin and without its wheels at the opposite end, the Respondents' position must be rejected. A visual inspection of the "Model Q" shows a construction from multiple pieces of material, and Textron supports such a finding by citing the testimony of Mr. Cosentino that RPX 3 consists of two stamped plates, two screws, a shaft, two wheels and two disks as well as a cable assembly, knob and actuator. See Cosentino, Tr. at 484. Plainly, the "Model Q" fails to embody the teaching set forth in 15(e) and 16(d).

2. "Flexi-Cable" or "Increased Profitability" Publications

The Respondents assert the invalidity, under § 102(a) or § 102(b) of Claim 16 in view of the "Flexi-Cable" publication, RX 31, or the "Increased Profitability" publication, RX 30. The text of § 102(b) is set forth above, and § 102(a) provides:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent ...

35 U.S.C. § 102(a).

Both the asserted publications relate to the "Model Q" device already deemed not to anticipate Claim 16 of the '294 Patent. The Respondents rely on the testimony of Mr. Cosentino to support distribution of the brochures to the public "beginning in 1992 and 1993". See Cosentino, Tr. at 460-62.⁴ As to these publications describing the invention of the '294 Patent, the Respondents merely note that the brochures "teach the same disclosures about the 'Model Q' device that was sold and publicly used by Respondents." Respondents' Initial Brief at 63. As set forth in the previous section, however, the Respondents fail to show that the "Model Q" embodies Claim 16 of the '294 Patent. Accordingly, even assuming, *arguendo*, the public distribution of the brochures prior to the critical date, and that the publications' disclosures were co-extensive with the public sale or use of the "Model Q" device itself, no anticipation can be found for the same reasons that the public sale or use of the device itself failed to anticipate Claim 16.

B. Obviousness

Section 103 sets forth the requirement that the subject matter of a patent be non-obvious.

The patent should not be obtained if:

...the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

⁴ I note that this testimony cited by the Respondents fails to explicitly set forth the timing and public distribution of these brochures.

35 U.S.C. § 103(a) (1998).

However, the presumption of validity attaching to an issued patent includes a presumption that the patented invention was non-obvious. Kahn v. Gen. Motors Corp., 135 F.3d 1472, 1480 (Fed. Cir. 1998). An obviousness determination involves an analysis of the prior art from the perspective of one of ordinary skill in that art at the time of the patent in question, including consideration of whether there existed an explicit or implicit suggestion to combine particular pieces or features of the prior art. Graham v. John Deere Co., 383 U.S. 1, 17 (1966); Env. Instruments, Inc. v. Sutron Corp., 877 F.2d 1561, 1568 (Fed. Cir.), cert. denied, 119 S.Ct. 56 (1998). The obviousness challenger must show some teaching or suggestion in the prior art to make any combination or substitution of features on which the challenger relies. Fromson v. Anitec Printing Plates, Inc., 132 F.3d 1437, 1447 (Fed. Cir. 1998), cert. denied, 119 S. Ct. 56 (1998). To make the determination regarding such a teaching or suggestion, the following factors may be considered for a motivation to combine or substitute: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. In re Rouffet, 149 F.3d 1350, 1355-56 (Fed. Cir. 1998).

The Respondents assert that Claims 15 and 16 of the '294 Patent were obvious based on Schukra North America's SNA 7 (RPX 5) or SNA 18 (RPX 6) in view of U.S. Patent 4,316,631 ("Lenz '631 Patent") (CX 8), or U.S. Patent 5,397,164 ("Schuster '164 Patent") (RX 25). According to the Respondents, SNA 7 and SNA 18 are lumbar support products sold more than one year prior to the '294 Patent invention date. See Dosen, Tr. at 572-74; RX 37C. The Respondents argue that SNA 7 and SNA 18 resemble the Accused Metal Products, except that SNA 7 and SNA 18 are not "integrally formed from a single piece of material". The Respondents therefore maintain that if the Accused Metal Products are deemed to satisfy Claim

15 and/or Claim 16, then SNA 7 and SNA 18 should be deemed to satisfy all limitations save the "single piece of material" limitation. Next, the Respondents argue that both the Lenz '631 Patent and the Schuster '164 Patent teach, by the time of the '294 Patent, single-piece construction of unitary flexible support members, so as to render obvious the modification of SNA 7 or SNA 18 with the single-piece construction.

Textron objects to the Respondents' failure to offer any testimony regarding what these patents would teach one of ordinary skill in the art, as well as the failure to offer any expert testimony about SNA 7, SNA 18, or either of the patents. Also, Textron cites the lack of evidence even as to the appropriate level of skill of one ordinarily skilled in the art. Textron argues that the absence of such testimony renders the record devoid of *any* proof of the proper standard, of how the combination of features would be made, or of the suggestion to combine, and therefore precludes the Respondents from satisfying their burden of proof.

The Staff contends that the Respondents do not show obviousness by the requisite burden of proof. First, the Staff and Textron note that SNA 7 and SNA 18 both are covered by U.S. Patent No. 5,050,930 ("Schuster '930 Patent) (RX 19), also issued to Schuster, and that the '294 Patent examiner had both the Schuster '930 Patent and the Lenz '631 Patent before him during the prosecution of the '294 Patent. CX 3 at 192-93 (record of parent application of '294 Patent); Manbeck Tr. at 802 (testifying that an examiner reviewing a continuation-in-part application, such as the application that matured into the '294 Patent, is instructed to examine art cited in connection with the parent application); see also American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1359 (Fed. Cir.), cert. denied, 469 U.S. 821 (1984) (noting legal presumption that patent examiners have done their jobs properly). Thus, according to the Staff and Textron, the examiner must have reviewed the Lenz '631 Patent in connection with the

Schuster '930 Patent without concluding that they rendered the invention of the '294 Patent obvious. The Staff and Textron then argue that this should preclude an obviousness conclusion based on the combination of either SNA 7 or SNA 18 and the Lenz '631 Patent.

The Respondents counter this assertion by arguing that SNA 7 and SNA 18 have support fingers projecting forward, a feature they claim is not taught by the Schuster '930 Patent, such that no automatic conclusions about the examiner's view of the devices can be drawn based on the examiner's review of the Schuster '930 Patent. Turning to the Schuster '164 Patent, the Staff asserts that the Respondents failed to offer any credible evidence of the teachings of the Schuster '164 Patent or any motivation or suggestion to one of skill in the art to make the combination proposed by the Respondents.

The Respondents object to Textron's and the Staff's criticism of the lack of expert testimony on this issue, noting first that Textron asserted in connection with infringement that no expert testimony was needed, and second arguing that where the subject matter of patents or prior art is sufficiently understandable, no expert testimony thereon need be offered for an obviousness finding. The Respondents insist that because SNA 7 and SNA 18 are in the record along with the patents in question, this suffices to provide all the evidence necessary for an obviousness determination.

Analysis of an obviousness claim involves "... a difficult process of turning back the clock to a time when the invention was made and asking what one of ordinary skill in the art might have thought." Litton Systems, Inc. v. Honeywell, Inc., 87 F.3d 1559, 1566-67 (Fed. Cir. 1996), vacated and remanded, 520 U.S. 111 (1997) (for reconsideration based on Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17 (1997)), opinion on obviousness reinstated on remand, 140 F.3d 1449 (Fed. Cir. 1998). Accordingly, to make the obviousness

determination in this investigation, as a threshold matter, it is appropriate to make a factual finding regarding the level of ordinary skill in the art. See Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565 (Fed. Cir. 1986), cert. denied, 479 U.S. 1034 (1987) ("The primary value in the requirement that level of skill be found lies in its tendency to focus the mind of the decision-maker away from what would presently be obvious to that decision-maker and toward what would, when the invention was made, have been obvious, as the statute requires, 'to one of ordinary skill in the art'"). No party except the Staff offers any proposal as to the appropriate skill level for the mythical person of ordinary skill in the art at the time of the '294 Patent⁵, and the Staff submits that the mythical person would either have a bachelor's degree in mechanical engineering, or an associate's degree in engineering and practical experience in seat design. Staff Initial Brief at 44 n.31. In their reply briefs, neither Textron nor the Respondents dispute the Staff's assertion. Accordingly, I agree that one of ordinary skill in the art at the time of the '294 Patent would have had the qualifications and/or experience set forth above.

With consideration to the level of ordinary skill, I note that the Respondents fail to point to any testimony interpreting the prior art they propose. As to identification of the suggestion or motivation to combine the pieces of prior art, the Respondents contend they can be found in the patents, and quote the allegedly relevant passages from both the Lenz '631 Patent ("The bow need not be composite because materials having adequate flexibility for this purpose are available") and the Schuster '164 Patent ("...for instance [the general pressure element] can be made of one or several bulging plates of any pressure resistant but flexible material...").

⁵The Respondents point out, and indicate their agreement with, an interrogatory response by Textron setting forth its view of the level of ordinary skill in the mechanical lumbar seat support art, and I note that Textron's proposal therein is broader, but not inconsistent with the Staff's. See RX 117C

However, these passages, which the Respondents argue indicate the general knowledge of single-piece construction, fail, on their face, to *suggest* a modification of SNA 7 or SNA 18, and offer no apparent *motivation* to make the modification. Obviousness cannot be established merely by selecting and combining features from various prior art unless there exists some teaching or suggestion to support the combination. In re Denis Rouffet et al., 149 F.3d 1350, 1358 (Fed. Cir. 1998); Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH, 139 F.3d 877, 882 (Fed. Cir. 1998). Although the suggestion or motivation can arguably be implicit to one of skill in the art, there is no testimony cited here to that effect. Accordingly, I must conclude that the Respondents fail to meet their burden of clear and convincing proof of the obviousness of Claims 15 or 16 in light of the asserted prior art combination. Given this finding, I need not reach the parties' contentions regarding "secondary considerations" or whether objective indicia of the non-obviousness of the '294 Patent invention exist.

C. Inventorship

Section 102(f) provides that "[a] person shall be entitled to a patent unless – (f) he did not himself invent the subject matter sought to be patented" 35 U.S.C. § 102(f). Under § 102(f), patentees must correctly name the inventor(s) as "a condition of patentability". Pannu v. Iolab Corp., 155 F.3d 1344, 149-50 (Fed. Cir. 1998). Section 116 sets forth the parameters of joint inventorship and joint application for a patent, including, in pertinent part:

When an invention is made by two or more persons jointly, they shall apply for patent jointly Inventors may apply for a patent jointly even though (1) they did not physically work together or at the same time, (2) each did not make the same type or amount of contribution, or (3) each did not make a contribution to the subject matter of every claim of the patent.

35 U.S.C. § 116. The Pannu court further stated that

All that is required of a joint inventor is that he or she (1) contribute in some significant manner to the conception or reduction to practice of the invention, (2) make a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and (3) do more than merely explain to the real inventors well-known concepts and/or the current state of the art.

Pannu, 155 F.3d at 1351.

Although § 116 and § 256 make provisions for the correction through the PTO of inadvertent mistakes in the naming of inventors in patent applications, all parties concede that the Commission lacks authority to make such a correction, such that if an incorrect statement of inventorship is found, the Commission cannot grant relief based on the patent unless the PTO or a court makes the necessary correction. Certain Eprom, Eeprom, Flash Memory and Flash Microcontroller Devices and Products Containing Same, Inv. No. 337-TA-395, Comm'n Op. at 9-10 (October 13, 1998).

The Respondents contend that the '294 Patent contains a fatally incorrect statement of inventorship, by virtue of the omission of Russell McDonald, "as well as other third parties", as named co-inventors. As background, the Respondents set forth that the application from which the '294 Patent, Serial No. 08/247,829 ("829 Application") issued was a continuation-in-part from an earlier application, Serial No. 08/042,926 ("926 Application") on which Mr. McDonald was a named co-inventor. [

]

The Respondents next claim other individuals should also have been named as co-inventors on the '294 Patent, relying on testimony by Michael Miner that the "project generally forward" limitation of Claim 15 came at the suggestion of unnamed third party engineers. [

] Citing the prosecution history of the '294 Patent, the Respondents argue that the '294 Patent examiner viewed the "project generally forward" limitation as the point of novelty. See CX 2 at 81 (subject matter of application claim 18 deemed allowable as of first office action). Textron objects to this portion of the Respondents' inventorship defense as improper, pointing out that because of their failure to properly and timely disclose the defense, the Respondents are prohibited under Order No. 55, from raising a derivation defense based on

the Miner letter, RX 61C.

Based on the foregoing, the Respondents assert that additional co-inventors of the '294 Patent invention were not joined. As a result, the Respondents insist that no relief should be granted based on the '294 Patent.

Textron denies the Respondents' inventorship contentions, stressing that no clear and convincing evidence supports a conclusion that additional co-inventors were omitted from the '294 Patent's statement of inventors. Starting from the premise that [

] See Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456, 1461 (Fed. Cir. 1998).

[

] Next, Textron points to a statement by the Ethicon court as requiring the Respondents to establish that Mr. McDonald jointly invented *Claims 15 and 16*, which the Respondents do not even contend. See id. at 1460 ("the critical question for joint conception is who conceived, as that term is used in the patent

law, the subject matter of the claims at issue"). In response to this point, the Respondents cite no contrary case authority, but argue that the statutory language refers to errors in "an issued patent" rather than in individual asserted claims. The Staff, in its reply brief, states that:

Complainant has misread certain aspects of [Ethicon]. Contrary to Complainant's assertions in its posthearing brief, the court in Ethicon did *not* require a correspondence between the claims for which inventorship was challenged and the claims asserted to be infringed. Rather, in Ethicon, misjoinder of inventors was found for claims 33 and 47 of the '773 patent at issue while claims 34 and 50 were alleged to be infringed. See Ethicon, 135 F.3d at 1459.

Staff Reply Brief at 4 n.1.

[

] Citing the prosecution history for the '926

Application, Textron points out that certain claims were rejected in part because of U.S. Patent No. 5,217,278 ("Harrison '278 Patent"), which discloses use of a single cable to adjust the back support. See RX 24. A contribution merely of "provid[ing] the inventor with well-known principles or explain[ing] the state of the art without ever having 'a firm and definite idea' of the claimed combination as a whole does not qualify as a joint inventor." Ethicon, 135 F.3d at 1460 (quoting Hess v. Advanced Cardiovascular Sys., 106 F.3d 976, 981 (Fed. Cir.), cert. denied, 117 S.Ct. 2469 (1997)).

[

[

] As to the other third

party alleged co-inventors, the Staff asserts that they "... did not conceive 'of a definite and permanent idea of [the] complete and operative invention [of claim 15], as it is hereafter to be applied in practice' and therefore should not have been joined as inventor(s) of the '294 patent." (quoting Hybritech, Inc. v. Monoclonal Antibodies, Inc. 802 F.2d 1367, 1376 (Fed. Cir. 1986), cert denied, 480 U.S. 947 (1987)).

With regard to the alleged § 116 violation for failure to name Mr. McDonald, I conclude that the Respondents fail to meet their burden of proving such a violation. In Ethicon v. U.S. Surgical Corp., 135 F.3d 1456, 1461 (Fed. Cir. 1998)⁶, the court held that a party alleging co-inventorship must prove the co-inventor's "contribution to the conception of the invention by clear and convincing evidence." Conception occurs when the inventor forms in his or her mind "... a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice." Id. at 1460 (citations omitted). Yet each co-inventor need not make an equal contribution, but each must "... perform part of the task which produces the invention." Id. To determine whether an alleged co-inventor made a contribution to the conception of the subject matter of a claim, I must determine what the alleged contribution was and then whether that

⁶I note here my agreement with the Staff's statements set forth above in regard to Ethicon's implicit teaching concerning the lack of any requirement of correspondence between asserted claims and claims to which an omitted co-inventor contributed. Accordingly, Textron's argument on these grounds is rejected.

contribution appears in the claimed invention. Id. [

] Given this

testimony, the Respondents cannot meet their burden of proof.

As to the Miner letter and testimony, I must first reject Textron's reliance on Order No. 55, as that order pertained to the derivation defense only. Nonetheless, I find that Mr. Miner's testimony and letter do not establish improper inventorship by clear and convincing evidence.

[

] Accordingly, the Respondents' inventorship defense is rejected.

D. Enablement

The Respondents next argue that Claims 15 and 16 of the '294 Patent should be invalidated based on failure to satisfy the enablement requirement set forth in § 112, that:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person

skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same ...

35 U.S.C. § 112. Specifically, the Respondents contend that the specification of the '294 Patent fails to give enabling information or guidance on "how the preferred back support design shown in Fig. 2 might be deployed in seatback bar environments other than those involving horizontal bars". Respondents' Initial Brief at 83. Also, the Respondents, relying on their expert's testimony, claim that if the "material" referenced in Claims 15 and 16 is interpreted, as it has been, to include the possibility of using plastic rather than just metal, then the specification does not enable one skilled in the art to make, without undue experimentation, the preferred embodiment out of injection-molded plastic. See Eagle, Tr. at 901-04.

As to the Respondents' second ground, concerning the plastic material, Textron objects to its being raised based on the Respondents' failure to include this ground in their pre-hearing brief or in discovery responses. I agree that the Respondents' failure to raise this alleged deficiency in their discussion in their pre-hearing brief of the enablement defense, at pages 80-83, constitutes a waiver of this ground pursuant to Ground Rule 7 ("The pre-hearing brief shall set forth with particularity a party's contentions, including citations to legal authorities in support thereof, on each of the listed issues in the [Joint Narrative Statement of Issues]. Any contentions not set forth in detail as required herein shall be deemed abandoned or withdrawn, except for contentions of which a party is not aware and could not be aware in the exercise of reasonable diligence at the time of filing the pre-hearing brief").

Turning to the issue of non-horizontal bars, Textron contends that no enablement deficiency exists in the '294 Patent as to the invention of asserted Claims 15 and 16. Textron asserts that mounting back supports on vertical bars was well known and understood in the prior

art, and that the Respondents lack any support in the record for their contention that undue experimentation would be required to utilize non-horizontal guide wires in connection with the '294 Patent. The Staff concurs with Textron that the Respondents fail to meet their burden of proof by clear and convincing evidence that one skilled in the art would face enablement problems in this regard, pointing out that no evidence was offered as to the length of time one skilled in the art would have to spend to practice the claimed invention.

While the Respondents reply that they need not offer such evidence because "the '294 patent provides not one scintilla of guidance on how one of ordinary skill might pursue" practicing the claimed invention, this argument indicates an attempt to improperly shift the burden of proving enablement to Textron. In raising enablement problems as an invalidity defense, the burden of proof by clear and convincing evidence rests on the Respondents, and the '294 Patent is entitled to a presumption of validity. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 941 (Fed. Cir. 1990), cert denied, 498 U.S. 920 (1990). Accordingly, the Respondents' enablement defense is rejected.

V. Unenforceability

The Respondents assert the unenforceability of the '294 Patent stemming from inequitable conduct by the applicants during prosecution of the patent, specifically by their allegedly intentionally withholding material prior art from the PTO. A patent may be rendered unenforceable if obtained through inequitable conduct during the patent application phase, as patent applicants and their representatives have a duty of candor, good faith and honesty in their patent prosecution. See Critikon v. Becton Dickinson Vascular Access, Inc., 120 F.3d 1253, 1256 (Fed. Cir.), cert. denied, 118 S.Ct. 1510 (1998); Molins PLC v. Textron, Inc., 48 F.3d 1172, 1178 (Fed. Cir. 1995). To prove inequitable conduct, the patent challenger must prove by clear

and convincing evidence that material information was withheld or misrepresented with an intent to deceive or mislead the patent examiner. Kingsdown Med. Consultants, Ltd. v. Hollister, Inc., 863 F.2d 867, 872 (Fed. Cir.), cert. denied, 490 U.S. 1067 (1989). The regulation at 37 C.F.R. § 1.56(b) establishes the PTO's framework to evaluate materiality as follows:

[I]nformation is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office,
 - or
 - (ii) Asserting an argument of patentability.

The Federal Circuit has described material information as that as to which a substantial likelihood exists that a reasonable patent examiner would consider the information important in determining whether to allow issuance of the patent. Halliburton Co. v. Schlumberger Tech. Corp., 925 F.2d 1435, 1439 (Fed. Cir. 1991).

The Respondents' inequitable conduct allegations arise out of the '294 Patent applicants' non-disclosure of the "Flexi-Cable" publication previously addressed, *supra*, in the section on anticipation. [

] See Paragon Podiatry Lab., Inc. v. KLM Labs., Inc. 984 F.2d 1182, 1193 (Fed. Cir. 1993) ("The concealment of sales information can be particularly

egregious because, unlike the applicant's failure to disclose, for example, a material patent reference, the examiner has no way of securing the information on his own"). As to its materiality, the Respondents rely on their anticipation arguments concerning the "Flexi-Cable" publication and on their allegation that the publication served as the "starting point" for the '294 Patent invention to argue that the '294 Patent examiner certainly would have deemed the reference important in determining whether to allow the patent. Textron denies this factual assertion. The Respondents also cite testimony by David Gaskey, one of the prosecuting attorneys for the '294 Patent, that had the applicants provided him with the publication, he would have disclosed it to the PTO. Gaskey, Tr. at 769-71.

As to intent, the Respondents attempt to discredit Mr. Porter's professed reason for not disclosing the "Flexi-Cable" publication, that it did not show a one-piece lumbar support like that of the '294 Patent invention, by arguing both that the "Flexi-Cable" publication states that it shows a "one piece construction" and that the applicants' failure to share the publication with their attorney suggests bad faith. Accordingly, the Respondents insist that intent to deceive should be inferred from the deliberate concealment of the "Flexi-Cable" publication as well as the alleged lack of credibility of the applicants.

Textron denies any inequitable conduct in connection with the '294 Patent. [

] Second, Textron argues that the "Flexi-Cable" publication, showing a multi-piece support, was cumulative of and less material than other prior art before the PTO, such as the Harrison '278 Patent, the Lenz '631

Patent, and U.S. Patent 5,197,780 ("Coughlin '780 Patent"). See Halliburton 925 F.2d at 1440. ("[A] patentee has no obligation to disclose an otherwise material reference if the reference is cumulative or less material than those already before the examiner"). [

]

The Staff contends that no finding of inequitable conduct should be made in light of the Respondents' failure to prove the materiality and non-cumulative status of the "Flexi-Cable" publication. The Staff notes that Mr. Gaskey could not opine on whether he deemed the reference material or non-cumulative, and that the only evidence supporting materiality is testimony by the Respondents' expert, which was contradicted by other witnesses. The Respondents reply that Textron cites to no testimony that the "Flexi-Cable" publication *was* cumulative of other prior art before the examiner.

The Respondents, who bear the burden on this defense, fail to establish the materiality and non-cumulative nature of the "Flexi-Cable" publication. As set forth, *supra*, in the anticipation section, the "Model Q" pictured and described in the "Flexi-Cable" publication not only did not anticipate Claims 15 or 16 of the '294 Patent, but differs in numerous significant ways from the teachings of the '294 Patent. Accordingly, as the Respondents maintain that the publication shows the features of the "Model Q", the publication necessarily also differs significantly from the teachings of the '294 Patent. The '294 Patent examiner considered and relied on other relevant prior art, including, but not limited to the Poschl '769 Patent, U.S. Patent 4,153,293 ("Sheldon '293 Patent"), the Lenz '631 Patent, U.S. Patent 4,601,514 ("Meiller '514

Patent"), the Graves '271 Patent, the Coughlin '780 Patent and the Harrison '278 Patent. I find that the Respondents have not established that the "Flexi-Cable" publication is more material than such prior art, nor have they established that the "Flexi-Cable" publication is not cumulative of such prior art. Accordingly, I further find no basis to conclude that a reasonable examiner would have considered the "Flexi-Cable" publication important in determining whether to issue the '294 Patent. I further find that even assuming, *arguendo*, the materiality of this prior art, the evidence does not support finding an intent to deceive on the part of the applicants. [

] Accordingly, the applicants' non-disclosure to the PTO of this brochure does not rise to the level of inequitable conduct. For the foregoing reasons, then, the Respondents' inequitable conduct defense is rejected.

VI. Jurisdiction

A. Importation

Section 337 requires an "importation" or a "sale for importation" as a condition of the Commission's exercise of jurisdiction over any accused goods. Enercon GmbH v. Int'l Trade Comm'n, 151 F.3d 1376 (Fed. Cir. 1998), cert. denied, U.S. Docket No. 98-1316. Textron contends that the evidence shows that each of the named Respondents imports into the United States, sells for importation into the United States, or sells within the United States after importation the accused products. The Respondents deny this contention as to Schukra USA, Schukra Berndorf, Schukra Auto, and Advantage, but explicitly admit the requisite conduct by Schukra N.A. and Schukra Manufacturing. The Staff takes the position that Textron makes the

necessary importation or sale after importation showing as to Schukra N.A., Schukra Manufacturing and Advantage, but fails in this regard as to Schukra USA, Schukra Berndorf or Schukra Auto.

As to those Respondents whose conduct relating to this issue remains in dispute, Textron offers "exemplary" evidence of their involvement in the importation or sale after importation, and concludes with an argument that the "interrelationship and common control of the Respondents" renders them all "responsible" for the importation or sale for or after importation of the accused products. With regard to Advantage, the only Respondent as to which the Staff and the Respondents disagree on this issue, the Staff maintains that the evidence reflects that Advantage purchases accused products, then sells them in the United States as part of a lumbar assembly. See CX 240C at 22-25, 29, 44-46.

Based on the Respondents' stipulation and ample evidence in the record, I conclude that the importation requirement is satisfied for Schukra N.A. and Schukra Manufacturing. Turning to Advantage, I note that Peter Hoehne, designated by Advantage to provide testimony on its behalf, acknowledged that Advantage imports the accused plastic lumbar support baskets, assembles them, and then provides them to its "customers". Hoehne, CX 240C at 4, 22-29. Also, in the Respondents' Reply Brief, they argue the absence of evidence of importation, or sale for or after, only as to Schukra U.S.A., Schukra Berndorf and Schukra Auto, apparently tacitly conceding that such evidence exists as to Advantage. Respondents' Reply Brief at 38. I find that the evidence of record indicates Advantage's importation and/or sale after importation of accused devices, so as to satisfy this Section 337 requirement. However, as to Schukra U.S.A., Schukra Berndorf and Schukra Auto the evidence of record does not support finding importation or sale for or after importation of accused devices. For Schukra U.S.A., Textron cites to *no* evidence

whatsoever of the requisite conduct, and acknowledges that the company is "not presently active". Textron Initial Brief at 118-19 n.28. Similarly, as to Schukra Auto, Textron offers *no* evidentiary support from which to find the requisite conduct. I therefore find that Textron does not meet its burden on this issue. For Schukra Berndorf, Textron relies on a passage from the testimony of Mr. Richter. See, Richter, CX 226C at 120. The testimony cited gives no clear indication of or support for Schukra Berndorf's satisfaction of the requirement, and other testimony by Mr. Richter, CX 226C at 93 and 117-120, casts doubt that Schukra Berndorf has been involved in the necessary conduct. While Textron attempts to overcome its evidentiary deficiencies concerning these three Respondents by arguing that they are interrelated and commonly controlled, rendering all the Respondents "responsible" for the importation and sales for and after, Textron cannot rely on this theory, for which it cites no authority in support, to avoid the statutory jurisdictional requirement as to these Respondents. Accordingly, the argument is rejected.

B. Domestic Industry

As a prerequisite to reliance on Section 337(a)(1)(B), Textron must establish that "...an industry in the United States, relating to the articles protected by the patent ... concerned, exists or is in the process of being established." 19 U.S.C. § 1337(a)(3). Typically, the domestic industry requirement of Section 337 is interpreted as consisting of two prongs: economic and technical. E.g., Certain Variable Speed Wind Turbines and Components Thereof, Inv. No. 337-TA-376, Comm'n Opinion at 14-17 (1996). The economic prong concerns the investment in a domestic industry, while the technical prong involves whether the claimed investment pertains to material protected by the patent. The domestic industry for articles protected by the '294 Patent must involve: (1) significant investment in plant and equipment; (2) significant employment of

labor or capital; or (3) substantial investment in its exploitation, including engineering, research and development, or licensing. 19 U.S.C. § 1337(a)(3). Proof of meeting any one of these three criteria satisfies a complainant's burden of proof on the domestic industry requirement. Certain Concealed Cabinet Hinges and Mounting Plates, Inv. No. 337-TA-289, Comm'n Opinion at 19-20, 22 (1990). As set forth below, Textron meets its burden of establishing the requisite domestic industry for products practicing Claims 15 and 16 of the '294 Patent.

1. Technical Prong

Textron relies on the physical exemplars of its proffered domestic industry products, CPX 1 and CPX 2, along with the testimony of its expert, Mr. Smith, Smith, Tr. at 212-16, to establish that these products practice Claims 15 and 16 of the '294 Patent. The Staff maintains that the technical prong is satisfied, at least through the practice by CPX 2 of Claim 15 of the '294 Patent. The Staff notes that Mr. Smith's testimony to that effect was unchallenged by the Respondents' expert, Dr. Eagle. Neither in the Respondents' Initial Brief, nor in the Respondents' Reply Brief do they dispute or offer any argument against Textron's satisfaction of the technical prong of the domestic industry requirement.

I conclude that Textron's proffered domestic industry product, as represented by CPX 2, satisfies the technical prong of the domestic industry requirement. A visual inspection of the product confirms that it embodies all the limitations set forth in Claims 15 and 16 of the '294 Patent. The expert testimony of Mr. Smith supports this finding, and no party challenges Textron's fulfillment of the technical prong.

2. Economic Prong

The parties stipulate to Textron's satisfaction of the economic prong of the domestic industry requirement.

Conclusion

Accordingly, for the foregoing reasons, I determine that the importation and sale of the accused products does not violate Section 337 by reason of infringement of Claims 15 or 16 of the '294 Patent. Textron established the requisite domestic industry, but failed to prove infringement of either of the asserted claims. The Respondents did not prove the invalidity of the asserted claims or the unenforceability of the '294 Patent.

Recommended Determination

Pursuant to Commission Rule 210.42(a), 19 C.F.R. § 210.42(a), this recommended determination contains findings of fact and recommendations concerning the appropriate remedy and bond amount for consideration in the event that the Commission finds a violation of 19 U.S.C. § 1337 ("Section 337") in this investigation. As set forth in more detail below, should the Commission conclude that a violation of Section 337 did occur, it is my recommendation that an appropriate remedy under such circumstances would consist solely of a limited exclusion order directed to Respondents' mechanical lumbar supports that infringe Claim 15 or Claim 16 of the '294 Patent. It is my further recommendation, as set forth below in more detail, that, in the event of the Commission finding a violation, the appropriate bond amount would be 17% of the [] approximate value of each allegedly infringing imported product.

VII. Remedy

Textron requests as remedies the imposition of a limited exclusion order, a cease and desist order and a reporting requirement. According to Textron, the limited exclusion order should cover all of the Respondents' accused and infringing plastic and metal basket lumbar supports and all products such as automobile seats, but excepting automobiles themselves, that include the supports. Textron contends that no harm to the public interest would result from such

a limited exclusion order, noting that it and other lumbar support suppliers can meet any demand needs arising out of an order rendering the Respondents' products unavailable. In support of a cease and desist order, which Textron acknowledges is only deemed appropriate if there exists commercially significant inventories of the infringing products in the U.S., Textron merely asserts, without pointing to *any* evidence, that given Advantage's importation and resale of infringing products, it must "of necessity maintain some normal level of inventory". Textron Initial Brief at 128-29. As to the proposed reporting requirement, Textron suggests only that it should be imposed to address its "concerns" about infringing importation because "a great number of infringing lumbar supports may enter the United States in foreign-made automobiles". Textron Initial Brief at 128.

The Respondents oppose the proposition that any exclusion order or cease and desist order reach products other than those found to infringe one of the asserted claims of the '294 Patent, or be imposed on any of the Respondents for which Textron fails to demonstrate the requisite importation-related activity. The Respondents cite Certain Erasable Programmable Read-Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories (EPROMs), Inv. No. 337-TA-276, USITC Pub. 2196 (1989), aff'd, Hyundai Elec. Indus. Co. v. U.S. Int'l Trade Comm'n, 899 F.2d 1204 (Fed. Cir. 1990) in support of its contention that downstream products should not be included in any order so as to avoid disruption of legitimate trade. The multi-factor framework for analysis of the propriety of including downstream products under the coverage of a limited exclusion order is set forth in EPROMs as follows:

the value of the infringing articles compared to the value of the downstream products in which they are incorporated;

the identity of the manufacturer of the downstream products (*i.e.*, are the downstream products manufactured by the party found to have committed the unfair act, or by third parties);

the incremental value to complainant of the exclusion of downstream products;

the incremental detriment to respondents of such exclusion;

the burdens imposed on third parties resulting from exclusion of downstream products;

the availability of alternative downstream products which do not contain the infringing articles;

the likelihood that imported downstream products actually contain the infringing articles and are thereby subject to exclusion;

the opportunity for evasion of an exclusion order which does not include downstream products; and

the enforceability of an order by Customs.

Hyundai, 899 F.2d at 1209 (citing EPROMs). Textron fails to address *any* of the EPROMs factors other than the availability of alternatives to the infringing products.

The Staff takes the position that a limited exclusion order covering the Respondents'⁷ infringing baskets and assemblies for those baskets alone would be the appropriate remedy under the circumstances. As to a cease and desist order, the Staff asserts a lack of evidence to indicate that any of the Respondents maintains the requisite commercially significant level of inventory.

Based on the submissions of the parties and the evidence of record, I recommend issuance of a limited exclusion order that covers only the infringing products of those Respondents deemed in violation of Section 337, and does not extend to third party downstream products. In seeking a broader order to encompass downstream products, Textron, in its post-

⁷The Staff does not specify *which* Respondents it contends should be subject to the order.

hearing briefs and proposed findings, omits any showing on most of the EPROMs factors, despite the Respondents having cited the EPROMs analytical framework. Textron therefore fails to establish that these factors weigh in favor of an order that applies to downstream products in this investigation. Accordingly, in light of Textron's omissions, I must recommend against broadening any exclusion order to cover downstream products.

Similarly, I do not recommend issuance of a cease and desist order in light of Textron's deficient offer of the requisite evidence. While Textron acknowledges the requirement of finding a commercially significant level of allegedly infringing inventory in the U.S., Textron puts forth *no* evidence regarding the existing level of such inventory, and instead merely makes an argument based on supposition. See EPROMs; In re Certain Crystalline Cefadroxil Monohydrate, 15 USPQ2d 1263, 1278 (Int'l Trade Comm'n 1990). Without the evidence necessary to make the underlying threshold factual finding, I cannot recommend a cease and desist order.

Turning, finally, to the special reporting requirement proposed by Textron, I also decline to recommend its imposition. Again, Textron points to no evidentiary support for its contentions that its situation with regard to the Respondents presents unusual concerns. Rather, Textron makes only a conclusory assertion as to the necessity of a reporting requirement. I find no compelling justification to recommend implementation of such a reporting requirement under these circumstances.

VIII. Bonding

Finally, as to the appropriate amount for a bond to be set according to Section 337(j)(3) at an amount "... sufficient to protect the complainant from any injury" associated with the continued importation of any offending products during the Presidential review period, Textron

requests a bond in the amount of 100% of the price of any infringing products. In support thereof, Textron claims that sales of any infringing products hurt its ability to compete and to charge a price reflecting the full value of its patented products. The Respondents counter that the amount of any bond should be minimal. They note that given its purpose, a bond should constitute only the amount by which the price of the allegedly infringing products undercuts the sales price for the patented products. In this case, according to the Respondents, the accused products do not sell at prices below those of Textron's product. Furthermore, the Respondents contend that the respective products cannot be compared as interchangeable, as they are sold "according to precise specifications, after qualification, on a long-term contract basis". Respondents' Initial Brief at 108. The Staff suggests that 17% of the estimated [] value of each allegedly infringing imported product constitutes an appropriate bond amount to protect Textron from injury. According to the Staff, [

]

Of the parties, only the Staff points to evidence and offers argument properly relating the amount of the bond to the actual value necessary to protect Textron from the injury suffered as a result of permitting the continued importation of products deemed to infringe the '294 Patent. No party proposes a bond related to a reasonable royalty rate for the '294 Patent, but the Staff seemingly focuses on the injury that may result from price undercutting. Textron's arguments as to the severe and irreparable nature of the likely injury lack strong evidentiary support, and its request for a 100% bond is without *any* evidentiary support. Accordingly, I recommend setting

the bond in the amount suggested by the Staff, 17% of a []entered value for each accused product. See SX 12C; Richter, Tr. at 405, 431.

FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATIONS
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Findings of Fact

I. Background

4. All findings of fact set forth in the Initial Determination are incorporated herein by reference.
5. McCord Winn Textron, Inc. ("Textron") is a business entity incorporated in Massachusetts with its principal headquarters at 645 Harvey Road, Manchester, New Hampshire. JX 1, ¶ 3.
6. Textron is the owner, by assignment, of United States patent number 5,518,294 ("the '294 Patent"). JX 1, ¶ 4, CX 4.
7. Respondent Schukra of North America, Ltd. ("Schukra N.A.") is a corporation under the laws of Ontario, Canada with its principal place of business at 1361 Ouellette Ave., Windsor, Ontario. JX 1, ¶ 5.
8. Respondent Schukra Manufacturing, Inc. ("Schukra Manufacturing") is a corporation under the laws of Ontario, Canada with its principal place of business at 310 Carlingview Drive, Etobicoke, Ontario. JX 1, ¶ 6.
9. Respondent Schukra U.S.A., Inc. ("Schukra U.S.A.") is a Michigan corporation with a principal place of business at 801 West Big Beaver, Suite 500, Troy, Michigan. JX 1, ¶ 7.
10. Respondent Advantage Technologies, Inc. ("Advantage") is a Michigan corporation with a principal place of business at 14731 Helm Court, Plymouth, Michigan. JX 1, ¶ 8.
11. Respondent Schukra Automobil-Erstausrüstung GmbH ("Schukra Auto") is a

- limited liability company registered in Nürnberg, Germany with a principal place of business at D-90411 Nürnberg, Gebertsrasse 5, Germany. JX 1, ¶ 9.
12. Respondent Schukra Berndorf GmbH ("Schukra Berndorf") is a limited liability company registered in Berndorf, Austria with its principal place of business at Leobersdorfer Strasse 26, A-2560 Berndorf, Austria. JX 1, ¶ 10.
 13. Textron filed a complaint against the Respondents on August 19, 1998, amended it on September 14, 1998, and supplemented it on September 16, 1998.

Complaint.
 14. The Commission issued its Notice of Investigation on September 23, 1998, instituting this Section 337 investigation concerning Textron's allegations of infringement of Claims 15 and 16 of the '294 Patent, as well as Textron's claim of the requisite domestic industry. Notice of Investigation.
 15. Textron is the owner by assignment of the '294 Patent, entitled Variable Apex Back Support that issued on May 21, 1996 based on continuation-in-part application number 08/247,829. JX 1, ¶4; CX 4; CX 1; CX 2.
 16. The '294 Patent has 20 claims, including independent Claims 15 and 16 that are at issue in this investigation. CX 1; SX 11.
 17. Complainant alleges that the devices identified as plastic-type baskets: 707 (CPX 5, 8, 9, 18); 711; 3402 (CPX 10); 4501 (CPX 7); 6401; 6402 (CPX 11, 14); 6403; 7601 (CPX 6, 17), the Opel model (CPX 12) and the Recara sports seat (CPX 19), as well as the lumbar assemblies of which they are a part, infringe Claims 15 and 16 of the '294 Patent. SX 11 at 3; CX 106C.
 18. Complainant alleges that the devices designated CPX 3C, CPX 4C, CPX 13C,

CPX 15C and CPX 16C and the lumbar assemblies of which they are a part infringe Claim 16 of the '294 Patent. SX 11 at 4.

II. Claim Construction

19. Claim 15 of the '294 Patent is an independent claim and provides as follows:

A back support for use within a seatback, comprising:

a unitary flexible support member including a central body portion having a longitudinal axis and first and second longitudinal ends, and a plurality of support fingers extending outwardly from said central body portion in a direction generally perpendicular to said longitudinal axis of said central body portion;

said support fingers each have a folded perimeter and a rounded end distal from said central body portion and project generally forward from a plane generally defined by said central body portion when said support member is in a relaxed position such that said rounded end on each said support finger is forward of said plane;

said first longitudinal end having a clamping member adapted to be rotatably attached to a bar on a seatback wherein said back support is employed;

said second longitudinal end having a holding member adapted to slidably and pivotally couple said second end to a second portion of the seatback; and

wherein said central body portion said clamping member and said holding member are integrally formed from a single piece of material.

CX 1, Col. 12.

20. Claim 16 of the '294 Patent is an independent claim and provides as follows:

A back support for use within a seatback, comprising:

a unitary flexible support member including a central body portion having a longitudinal axis and first and second longitudinal ends, and a plurality of support fingers extending outwardly from said central body portion in a direction generally perpendicular to said longitudinal axis of said central body portion;

said first longitudinal end having a pair of clamping members projecting away from said certain body portion and having opposite clamping surfaces such that

said clamping members are adapted to rotatably engage a bar on the seatback wherein said back support is employed;

said second longitudinal end having a holding member adapted to slidably and pivotally couple said second end to a second portion of the seatback;

wherein said central body portion, said clamping member and said holding member are integrally formed from a single piece of material.

CX 1, Col. 12.

21. The identical preambles in Claim 15 and Claim 16 contain terms with an ordinary, plain meaning rather than terms of special significance in the art. See CX 1, Col. 12, lines 21 and 44.
22. In the prosecution history of the '294 Patent, in an office action dated April 13, 1995, the examiner, with regard to application claims 3 and 17, referred to the "folded perimeter" of the support fingers as "rolled edges", noting that this "... is considered a matter of design choice and obvious mechanical expediency, and is not considered a patentable distinction." CX 2 at 98; see also CX 2 at 115.
23. The specification of the '294 Patent states as follows:

The peripheral edges 82 of support fingers 80 are bent back slightly relative to the forward projection of the support fingers 80. The bent peripheral edges also enhance the comfort provided by the back support member and further reduce the amount of wear on a seat cushion that might otherwise be caused by the movement or adjustment of the back support 62 within the seatback.

CX 1, Col. 3, lines 13-19.
24. The specification of the '294 Patent states as follows: "It should be understood that the back support could be made of other materials, such as for example injection molded or thermoformed plastic." CX 1, Col. 6, lines 55-57.
25. The specification of the '294 Patent states as follows: "Horizontal support strips

16 preferably include bent ends 23 that protect a seatback padding from damage."

CX 1, Col. 5, lines 44-46.

26. The specification of the '294 Patent states as follows: "The peripheral edges 82 of support fingers 80 are bent back slightly relative to the forward projection of the support fingers 80." CX 1, Col. 3, lines 13-15.
27. The New Shorter Oxford English Dictionary, vol. 1 at 991 (1993) includes the following definitions of "fold": "[d]ouble or bend"; causing to "undergo bending or curvature".
28. Mr. Fred P. Smith, Textron's expert, qualified as an expert in the field of mechanical engineering. Tr. at 200.
29. Mr. Smith testified as follows:

Q Do you see the language in the claim, Mr. Smith, relating to "support fingers each having a folded perimeter" in 15(b) of the chart?

A Yes.

Q What is meant by "folded" in the patent and according to the file history?

A Again, that's kind of discussed in column 3, starting with line 13, it says "the peripheral edges of the support fingers 80 are bent back slightly relative to the forward projection of the support fingers 80. The bent peripheral edges also enhance the comfort provided by the back support member and further reduce the amount of wear on the seat cushion that might otherwise be caused by the movement or adjustment of the back support 62 within the seat back."

So what they were trying to do is take the periphery of the finger and take that away from this part that was out in the middle, so that it wouldn't chafe on the seat back.

Q Does figure 2 have any bearing on the term "folded," the meaning of the term?

A Well, you can look in figure 2, and you can see this second line around here that shows how that periphery

is bent back away from the main portion of the finger here.

Q Is a specific mechanical operation necessary in order to achieve this folded state? In other words, is it necessary to bend a metal finger to get to a folded state?

A No. And in fact, the patent specification actually talks about -- column 6, it talks about other materials -- let's see, we're at line 54. "It should be understood that the back support could be made of other materials such as, for example, injection molded or thermal formed plastic."

If you're going to make this out of a thermal -- or injection molded plastic, for instance, you certainly wouldn't bend that back because that wouldn't make any sense to do it that way. But you would actually put that same feature in the mold so that it would accomplish the same purpose. And that could be done by, for instance, radiusing the edge or tilting the edges back in the mold so that it's actually molded that way.

Q How do you take the term "folded" in connection with the word "perimeter" as it's used in the patent claims?

A I kind of discussed that before. The perimeter, I mean, if this is a finger, it is, the outside edge would be the whole perimeter of that finger.

Smith, Tr. at 203-05.

30. Dr. Paul J. Eagle, the Respondents' expert, qualified as an expert in the field of mechanical design and manufacturing as it relates to automotive components and subassemblies. Tr. at 848-50.

31. Dr. Eagle testified as follows:

Q And then subparagraph (b) of the claim 15 goes on to say "said support fingers each have a folded perimeter." Could you give us your understanding of the element "folded perimeter"?

A "Folded" is a term of art used in sheet metal [sic] folding. It implies an action has been performed on some sheet of material, just like you would fold a piece of paper, it's bent to create a fold line or an edge. It's an action that is performed on something. Now, a folded perimeter, from what I have seen in the patent, suggests that some portion of the perimeter or outside edge of these

fingers that are the long protuberances coming off of the lumbar support have an edge that has been folded or bent away.

Q And with regard to folding, can you tell from looking at figure 2 of the patent whether the fingers are folded or intended to be folded?

A My interpretation of this drawing is that there are -- there has been a folding action done to a sheet of material on some portion of the perimeter of the fingerlike elements.

Q And what about for the -- strike that. What do you understand figure 2 to be, by the way?

A I believe that figure 2 is an illustration of the device that is described in the specification, and I understand it to be very much like the Textron or Ligon lumbar support.

Q And have you heard that referred to by Mr. Smith and Textron as a preferred embodiment?

A Yes, I have.

Q And what about the device that's in figure 6 of the patent?

A My understanding is that this is the nonpreferred embodiment of the patent and was the original development that was in the first patent application and was the result of development done by Ligon Brothers.

Q And can you tell by looking at figure 6 whether the -- let's call it the fingers there are folded?

A Yes. There's a fold done on those fingers.

Q And when you were describing folding to us before, you mentioned that you had made some reference, I believe, to two folding operations. I'd like you to look at Exhibit RX 127-C, and unfortunately, there's not serial pages on these, but there's a page, the sixth page from the end, which is an excerpt from the -- from chapter 22 of the text. Do you see what I'm talking about, sir?

A I do.

Q And what is this document?

A This is a page that has been photocopied out of one of the most widely used textbooks in undergraduate engineering education for manufacturing processes.

Q And if you could just read to us what that textbook is and the addition from which this excerpt was taken?

A This is from Mikell Groover's book, "The

Fundamentals of Automotive Manufacturing" published by Prentice-Hall in 1996.

Q And did you consider this document in reaching an understanding of the term "folding"?

A Well, I was familiar with the term "folding" prior to viewing this document. As I mentioned, it's a term of art in sheet metal forming, but I -- this certainly describes the type of action or type of process that folding of sheet metal represents.

Q At the top of the page, it says -- it's 512 in chapter 22, slash, sheet metal working, so is it correct that this discussion relates to folding operations on metal?

A That's correct. This page, these illustrations and the discussion contained in these paragraphs are part of a chapter in this text that explains the basic operations in sheet metal working.

Q And do these -- would these operations apply to, for instance, plastic?

A Well, one would not normally use these terms or do these operations on plastic parts. Now, there's various types of plastic. Injection molding parts would not tend to be folded, because they would be cast or, you know, liquid would be injected into a die and solidify under certain shapes, so you wouldn't tend to do a subsequent operation where you would fold something. Sheet metal is a solid piece of material, and then you do operations to it, actions are performed on it to fold it to the shapes that you see here.

Q For instance, looking at an example, RPX 7, which is a Schukra device, what type of plastic is used in this particular product?

A That is a glass-filled nylon.

Q And do you know how that basket is made generally?

A Yes. There's a cavity, an empty space within a mold, and liquid plastic, which is this glass-filled nylon material, is injected into it at a high temperature, and it cools and solidifies and is left in that shape. The die will then open up. There's actually a complicated sequence of the die opening to prevent the part from being damaged and thin injector pins will force the finished part out of the die.

Q And would folding operations for sheet metal be used -- or could they be used, in your opinion, on that type of material?

A That isn't something that a person, you know, skilled in the art would say. We wouldn't fold a plastic injection molded part. It would be very irregular to say something like that.

Eagle, Tr. at 855-59.

32. Mr. Smith testified as follows:

Q. In talking about this peripheral edge issue, Mr. Smith, you said that the entire - - the whole periphery of the finger has to be bent. Can you look at figure 2 and tell me whether you see, for instance, 80, which is a finger - - on the right side, can you tell me whether the entire periphery of element 80, which is the finger, is bent?

A. In my estimation, that would - - I would consider that the periphery of the finger being bent, yes.

* * *

Q. If you could just elaborate.

A. Obviously, there's a small portion where this hooks onto the central body portion, which isn't bent, but the entire rest of the periphery of the finger is bent.

Smith, Tr. at 1006-1007.

33. Stephen Porter, James T. Ligon, Sr. and Andrew Patrias are the named inventors on the '294 Patent. See CX 1.

34. Mr. Porter testified as follows:

Q What were you trying to accomplish with the angling of the fingers?

A To more closely match the contour of the occupant's back.

Q Is there any particular angle that you had in mind for projecting the fingers forward?

A Not a particular angle. We were just trying to bend them forward slightly.

Porter, Tr. at 146.

35. The specification of the '294 Patent provides that "[t]he angle of support fingers 80 is provided to yield greater lateral support for a user and to enhance the

comfort provided by the inventive back support." CX 1, Col. 3, lines 11-14.

36. The '294 Patent examiner rejected claims using the "clamping member" language other than those claims that ultimately issued as Claims 15 and 16 based on obviousness in light of two other patents. See CX 2 at 99, 112-14. The patent examiner noted that a hinge disclosed in one of these other patents, U.S. Patent No. 3,762,769 ("Poschl '769 Patent") could qualify as a "clamping member" "absent any further structural description" of the "clamping member" in the claims. CX 2 at 99, 112-14.

37. Merriam Webster's Collegiate Dictionary 210 (10th ed. 1997) includes the following definitions: "clamp [verb]: To fasten with or as with a clamp ..."; "clamp [noun]: 1 : a device designed to bind or constrict or to press two or more parts together so as to hold them firmly; 2: any of various instruments or appliances having parts brought together for holding or compressing something".

38. The Oxford English Dictionary, Shorter Version at 319 includes the following definitions "clamp [verb]: To make fast with a clamp or clamps"; "clamp [noun]: 1. a brace, clasp, or band, usually of rigid material, used for strengthening or fastening things together ... 2. a name of appliances with opposite parts which may be brought together, so as to seize, hold, compress or pinch anything".

39. Dr. Eagle testified as follows:

A A clamping member is something that provides a compressive force on to something. A clamp is -- offers restraint with a compressive force. Now, it's important to note that in the context of this patent, that clamping member provides a compressive force to something, but not so much that it cannot rotate because later we'll see that this clamping member must be able to rotate on a bar.

Q When you were explaining compressive force, you were using your hands. Is this a unilateral force, or -- unidirectional or is it more directional?

A The clamping member would be applying a force from two sides. A single force can't be compressive. You have to have a pair of forces to have compression. Tension is when the forces act in directions opposite each other, and compression would be when the forces act toward each other.

Eagle Tr. at 865.

40. During the '294 Patent prosecution, the applicants stated to the PTO that "The clamping member is for rotatably attaching one end of the back support to a seatback." CX 2 at 90.

41. Dr. Eagle testified as follows:

Q And you referred to the word "rotation." Can you give us your understanding of the claim element rotatably attached?

A Rotatably attached suggests that the -- something can change its orientation or rotate or turn about a fixed and tangible axis. The reason that we know this is we talk about rotatably attached to a bar, and the center line of that bar then becomes a tangible axis of rotation.

Q Is that axis fixed?

A Well, from reading the patent and looking at these claims and looking at the illustrations, that axis would be fixed on a bar that does not move, and then the clamping member would change its orientation only with one type of motion turning about that bar that stays in a fixed location. I just want to add, I also believe that that is the case because the patentees were very careful to distinguish another type of turning motion later on, which is pivoting, which I presume I will discuss in a moment here.

Eagle, Tr. at 865-66.

42. Dr. Eagle testified as follows:

Q Let me ask you this: Before when you were talking about rotatably attached you said that was going to affect

your discussion on pivot, pivotally?

A The patentees are careful to distinguish these two terms. They say "rotatably" in one case and they have "pivotally" in another case and they don't use the same word in each case, which kind of confirms in my mind, especially when you look at the illustrations, that they're talking about the motion of an instant center. They chose the word "pivotally" to distinguish it from "rotatably" where "rotatably" means we're talking about changing orientation about a fixed tangible axis; whereas "pivotally" is referring to changing orientation about an instant center that is changing all the time as that end moves.

Eagle, Tr. at 868-69.

43. Mr. Smith testified as follows:

Q You testified before, in response to Mr. Vary's questions, that in discussing the differences in the ends of the preferred embodiment in the '294 patent, that one end clamps and rotates in a fixed position. Isn't it correct that "fixed" means that it cannot move?

A It means that at some point, it does not move, that's correct.

Q At some point, you're talking about translationally or rotationally?

A I was talking about translationally.

Q So it's your testimony that when you use the word "fixed," there is some movement that has to be part of the component of that word, in that state. In other words, when something is fixed, you're saying that the state of being fixed connotes that there has to be some translational movement in it; is that correct?

A No.

Q Then explain what you mean by "fixed" in your answer to Mr. Vary's question before.

A What I was saying is that at some point, that end is held in translation about some axis.

Q And when it's held in translation about some axis, it means it's also rotating; correct?

A The two are not mutual, but it does rotate, yes.

Q And in this particular context, it is rotating; correct?

A That's correct.

Smith, Tr. at 347-48.

44. Merriam Webster's Collegiate Dictionary 1018 (10th ed. 1997) includes the following definition of "rotate": "to turn about an axis or a center: revolve".
45. In submissions to the PTO during the prosecution of the '294 Patent, the applicants used the terms "couple" and "attach" interchangeably. CX 2 at 90.
46. Merriam Webster's Collegiate Dictionary 887 (10th ed. 1997) includes the following definition of "pivot": "a shaft or pin on which something turns".

III. Infringement

47. The Accused Plastic Products are exemplified by CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19, which include both complete and incomplete assemblies.
48. The Accused Plastic Products have all the features described in 15(a) and 16(a). See CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19.
49. Mr. Smith testified as follows:

Q All right, Mr. Smith, let's talk about whether or not the Schukra exhibit responds to the language of claim 15, sir.

A As we look at this, this certainly is also a unitary, flexible support member. I'll show the flexible. It includes a central body portion, it has a longitudinal axis, first and second longitudinal ends. It has a plurality of support fingers extending outwardly from the central body portion. They're perpendicular to the longitudinal axis of the central body portion. So this responds directly to 15(a).

The support fingers each have a folded perimeter and a rounded end distal from central body portion and project generally forward from the plane generally defined by said central body portion. Let me pick that -- take that

just with the folded perimeter first. There's two parts of how you would do a folded perimeter, at least how Schukra has done the folded perimeter. First of all, the end is radiused, so that it gets the sharp edge away from this central part, as I talked about earlier in the specification.

The second thing that has been done on these fingers is the whole finger, if you can see that, is radius, so that that in addition gets that edge away from that central portion of the finger. And that's certainly how you would do this folded edge, if you were going to manufacture it out of injection molded plastic.

Rounded distal end, rounded end distal from said central body portion. Certainly have that. And project generally forward from a plane generally defined by said central body portion. Probably the easiest way to do this again is with the straightedge. You can see that those ends are above that plane.

Smith, Tr. at 221-23.

50. Dr. Eagle testified as follows:

THE WITNESS: Okay. "Coplanar" means that all of the elements lie in the same plane. I have to point out that this has been distorted the guide wires so this does not appear to be in the same plane, but when the part is designed -- when the part was designed and manufactured, when it comes out of the mold, these are coplanar. They are not on a curved kind of semicylindrical shape that they're shown here. This is due to the fact that it's mounted and recycled several times, of course. Well, my opinion is that these do not project generally forward.

First of all, we know project generally forward suggests that -- these fingers would be angled away from the plane defined by the central body such that they would perform some sort of useful purpose. Looking at this on edge, there's no angle that would cause these to have a person even notice that they have -- that they are not coplanar.

Secondly, I've reviewed the drawings that were used in the design of this component, and it's important to note that on this plane, on this surface it's marked with what's called a datum symbol and the datum is a plane that the designer has in mind when other components are going to

be referenced and indicated. So the designer called this a flat surface.

Q May I interrupt you. When you say flat, are you using that interchangeably with the term "coplanar"?

A Yes. There is a minor distinction there, but yes, the designer intended that these all -- all these elements lie in the same plane.

Q You looked at a design drawing of that particular feature?

A Yes, I have.

Q And looking at Exhibit 127-C, can you find the drawing, the materials that you reviewed in order to form your opinion?

A Figure 5, which is very near the back of this stack of pages, is perhaps -- it is the fifth -- fourth -- fifth page from the back is one view which has been extracted from that drawing.

MR. MASTRIANI: And may I approach the witness, your Honor?

JUDGE MORRISS: Yes.

BY MR. MASTRIANI:

Q I'm going to hand you what I'm representing is a blow-up of that figure 5 and if you could just point out for us your testimony with regard to the datum symbol.

A In mechanical design, a datum symbol is something that refers to a plane that is used for reference of dimensions and tolerances. The designer visualizes a flat coplanar surface as a datum, and this particular drawing shows the C datum surface, this thing that looks like a flag on the left side of the drawing is a datum surface, and this, what we see here, is the fingers when viewed on end. The way to visualize that would be to take this SNA Physical Exhibit 8 and turn it upside down and look at it in the direction of the longitudinal axis, and we see the fingers as viewed on edge. So the designer has created this view and labeled it as datum, indicating that it is a flat surface.

Eagle, Tr. at 879-81.

51. RX 127C was admitted for the limited purpose of providing a reference of the material relied on by Dr. Eagle in forming his expert opinion. See Tr. at 863.

52. Dr. Eagle testified as follows:

Q Let's take one that you did use, Plaintiff's Physical Exhibit 7, okay? I'm sorry, Respondent's Physical Exhibit 7.

Now, Professor Eagle, if I put this device flat on the table and the fingers were forward at the plane at the central body portion, the central body portion wouldn't touch the table, would it?

A I would agree with that.

Q Now, when I put this down on the table, will this central body portion touch the table?

A Well, why don't we try it.

Q Okay, why don't we try it. Now, you can see --
MR. MASTRIANI: Excuse me, objection. Let's put it on a table so it's on an even surface.

MR. KAHRL: Sure.

BY MR. KAHRL:

Q Now, you would agree with me, Professor Eagle, that when I push down on the center portion of this device, it bends the fingers backwards, doesn't it?

A It deflects under load, I would agree with that.

Q And you would agree with me if you looked across the table at a plane, you would see the central portion raised up off of the table so it doesn't actually touch the table, wouldn't you?

A It's resting on a couple of fingers and the central body portion's off the table, yes.

Eagle, Tr. at 934-35.

53. The perimeters of the support fingers of the Accused Plastic Products are folded, and, except for CPX 19, their support fingers project forward from the central body portion. CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19.

54. Dr. Eagle testified as follows:

Now, as we talk about a clamping member, we have to impart a compressive force onto something. Now, there is no compressive force that is being imparted onto this wire by these collar arrangements at either end. There's several

reasons that we know that. First, by looking at this object on end, we can see daylight coming through. We can see light from the light fixtures on the ceiling coming through around the wires, suggesting that there is clearance, and when there is clearance, there isn't that compressive force being imparted. And then also the designer's intent was to provide clearance, and for good reason. This has to be able to be free to slide on these wires. And I've reviewed the engineering drawings that were used to produce this plastic basket, and it clearly indicates that there's clearance between the guide wires that the unit slides and pivots on, and the collar that is molded into the plastic.

Q Let me ask you this: You referred to a drawing that showed you that. Is that in the materials that you relied on in Exhibit RX 127-C?

A There is a series of three views that were extracted from that drawing. As a matter of fact, it's the same drawing that we were talking about earlier.

Q Where is that, sir?

A That would be the last page of this package of drawings, pictures which is labeled figure 14.

Q And before you continue, I'm going to give you a blow-up of that figure 14 for ease of reference for the Court.

A Here's three different views which are three of the -- when I say three different views, they're looking at those collars or clips in different cases on end. So I'm going to hold up the other exhibit and show what you were looking at. So when we look at the collar clip on end, we see it shown in these views, and there's different arrangements for those collars and clips, depending on where they're at.

But the important point is that in each case, we see the guide wire is identified, and there's a diameter given for it, and then we also see the size of the collar is also indicated with these dimensions, and in each case, the guide wire is smaller than the open area of the collar. So there's nothing compressing or squeezing the guide wire or clamping it as is required in 15 -- in point 15(c).

Q So you don't find the clamping member in RPX 7; is that correct?

A That's correct.

Eagle, Tr. at 885-87.

55. Mr. George F. Daniels is the President of McCord Winn Textron. Tr. at 80.

56. Mr. Daniels testified as follows:

Q I would like to draw your attention, please, to Respondent's Exhibit 110, RX 110. Do you understand what this document intends to convey?

A It appears to be a comparison of two products.

Q And it appears to be a comparison between MWT, which we could agree is McCord Winn Textron?

A Yes, sir.

Q And Schukra; is that correct?

A That's correct.

Q And you see, the third item talks about installation ease, do you see that?

A Yes, sir.

Q Do you see the notes at the bottom, talking about installation?

A Yes, sir.

Q On the left, it talks about MWT, and it says "snap-in support, no tools required." Is that correct?

A That's correct.

Q To the right, in comparing Schukra, it says "clip-in supports to frame, tools required." Is that correct?

A That's correct.

Daniels, Tr. at 125.

57. RX 110C reflects Textron's internal analysis of the Accused Plastic Products, and refers to them "clip[ping]-in" to place. RX 110C.

58. Mr. Smith testified as follows:

A Again, claim 16 is the same as 15, so what I did before applies equally to that. I might also show to the court, if you can hold it, because I can't actually hold it at the same time, that even off of here, that the bottom rotating, go ahead and actuate it, and the top slides and pivots. In fact, I can even turn it upside down, and it will even do the same thing.

The reason I took it off is to show you the clamping members, and that's the pair of clamping members, this being one clamping member, that being another clamping

member. As you snap this bottom on, it requires this snapping motion that clamps that onto the wire. Again, each of these clamping members project away from this central body portion. They have opposite clamping surfaces. In fact, that's the reason it snaps onto the bar as it goes through these -- it snaps on because it goes through these opposite clamping surfaces.

"Such that the clamping members are adapted to rotatably engage bar." We went through that. These, when they actuate, can still rotate on that bar. And then at 16(c) and 16(d) are the same as in 15. So it's my testimony that SNA Physical Exhibit 8, or Exhibit CPX 7 responds in each and every way to each element of claim 16 of the patent.

Smith, Tr. at 226-27.

59. Mr. Smith testified as follows:

Q Have you had an opportunity, Mr. Smith, to review SNA 9, which is the same as Richter Exhibit 29?

A I have.

Q And have you compared this SNA 9 to SNA 8, which you've previously testified about today?

A I have.

Q Do your opinions of infringement change with respect to SNA 9 versus SNA 8, which you testified --

A Absolutely not.

Smith, Tr. at 374.

60. Mr. Dragen Dosen is the engineering manger and senior project manager for Schukra N.A., and he supervises the prototype department. Tr. at 289.

61. Mr. Dosen testified as follows:

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Dosen, Tr. at 579-80

62. Mr. Smith testified as follows:

THE WITNESS: Okay. I think we've decided 15(a) and (b) -- or the Schukra device responds to 15(a) and 15(b) of the claim. 15(c) says the first longitudinal end having a clamping member. Again, this end is firmly clamped onto the bar, it's not going anywhere. And it's adapted to be rotatably attached to a bar on the seat back.

As I operate this, you will see that that end simply rotates.

BY MR. VARY:

Q Can you use your digital level on that as well?

A Yes, actually, I can. So we start out at 21.7 degrees, and as we actuate the lumbar support, it goes down to about 4 degrees.

Smith, Tr. at 224-25.

63. Dr. Eagle testified as follows:

Q Continuing on with subparagraph (c), do you find any rotatable attachment of the first longitudinal end to a bar on a seat back?

A I don't find a rotatable attachment, and it's important to go back to that discussion which I had about the difference between a rotatable attachment and slidably and pivotally coupled. A rotatable attachment, as I mentioned earlier, is something that is changing its orientation about a fixed and tangible axis.

Now, there is no fixed and tangible axis of rotation for either end of this exhibit. We see these collars or clips going over guide wires at both ends. It is free to slide on these guide wires at both ends and has to do that, as a matter of fact, because in this type of arrangement with a collar on a wire, the cable force or actual issuing force, in order to get this thing to buckle, would be very high if it wasn't able to slide. And since it's able to slide at both of these ends, we don't see that rotatable attachment that is described in the claim 15(c).

Q Just looking at Exhibit RPX 7, you've been referring to it as collars, are they differentiated, depending on which end you're looking at?

A Well, there are collars on both ends.

Q Yeah, but are they different from each other in their geometry or their shape?

A Well, there are some -- there are some different clearances on the different ends, but their function is the same. There is a -- they retain the wire, and there is a clearance all around them so that they are not being compressed by the -- the wire's not being compressed by the collar.

Q So for subparagraph (c), it's your testimony there is no clamping member and no rotatable attachment in RPX 7?

A That is correct.

Q Will you please move on to subparagraph (d) and tell us whether you find the elements of that subparagraph in RPX 7.

A Well, this requires that the second longitudinal end has a holding member, something that performs some restraint that is adapted to slidably and pivotally couple. And I do find that in this device we see sliding and pivoting; as this device is actuated, it translates as well as rotates at both ends. So I do find it. As a matter of

fact, I find it on both longitudinal ends, I don't just find it at one end, it is at both ends.

Q Do you find either end of that unit as a basis for the pivoting of the basket?

A Well, when the ends are squeezed together, they have to change orientation. So they're pivoting, but they're also sliding. It's a motion about an instant center that is changing its location all the time.

Q When you say that the ends are squeezing together, do you mean that they're moving towards each other in order to achieve the bend?

A In order for this lumbar support to perform its function, the ends are squeezed together, and it buckles in this controlled fashion, creating this apex that customizes the seat back shape.

Eagle, Tr. at 887-89.

64. Mr. Barry Jones is the President of Schukra N.A. Tr. at 533

65. Mr. Jones testified as follows:

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Jones, Tr. at 550-51.

66. Mr. Dosen testified as follows:

Q Now, with respect to the Schukra North America products, the plastic and the metal products, the two-way manual and two-way electric lumbar supports of Schukra North America, isn't it fair to say that all of those products

have guide wires that are vertical and have a kink at the bottom, a retention method?

A I believe they're all on guide wires, and I believe that they all have a bend in the guide wire to restrain or restrict the movement of the bottom of the basket to a certain location.

Dosen, Tr. at 311-12.

67. Mr. Alan Prettyman is the product development engineer for Schukra N.A., and he had engineering responsibility for the design of CPX 15C. Tr. at 235-36.
68. Mr. Prettyman testified as follows:

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Prettyman, Tr. at 241.

69. Mr. Prettyman testified as follows:

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Prettyman, 256-57.

70. The means of attachment at each of the two longitudinal ends of the Accused Plastic Products consists of two L-shaped notched openings in the plastic, one on each side of each end. See CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19.
71. The openings are notched in such a way that the guide wires "pop" or "snap" from a larger part of the opening at the open end of the L-shape, through a smaller part of the opening at the corner of the L-shape, into a round, larger part at the closed end of the L-shape. See CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19.
72. Where the guide wire rests, in the round part of the opening at the closed end of the L-shape, it does not fit snugly, and allows for some movement within the

opening as well as for sliding up and down the guide wire. The smaller part of the opening at the corner of the L-shape is small enough to prevent the guide wire from re-entering that part of the opening without some outside force being used to "pop" or "snap" it back out, and so prevents the guide wire from slipping out of the opening. Accordingly, as is apparent from visual inspection of the devices, once the guide wire is in place in the round, larger part of the opening at the closed end of the L-shape, no compressive force is being exerted on it to hold it in place. See e.g. CPX 7.

73. The first longitudinal end of the Accused Plastic Devices is not rotatably attached to the guide wires. See e.g. CPX 7.
74. In the Accused Plastic Products, both longitudinal ends attach to the same two vertical guide wires. See e.g. CPX 7.
75. Some Accused Plastic Products were produced without steel strips. See CPX 5; CPX 14.
76. Spring steel strips are attached to the central body portion of some of the Accused Plastic Products. See e.g. CPX 7.
77. The Accused Metal Products are exemplified by CPX 3C, CPX 4C, CPX 13C, CPX 15C and CPX 16C, and are formed of stamped metal. See CPX 3C, CPX 4C, CPX 13C, CPX 15C and CPX 16C.
78. The structures on the Accused Metal Products that attach the central body portion to the guide wires differ from those found on the Accused Plastic Products. See CPX 3C, CPX 4C, CPX 13C, CPX 15C and CPX 16C.
79. The structures on the Accused Metal Products that attach the central body portion

to the guide wires are horseshoe-shaped cutouts in the metal enclosing a C-shaped rigid plastic grommet into which the guide wires are inserted. See e.g. CPX 15C.

80. The horseshoe-shaped cutouts in the metal could not, without the plastic grommets inserted therein, hold the guide wires in place. See e.g. CPX 15C; see also Richter, Tr. at 403-04; Prettyman, Tr. at 262; Dosen Tr. at 292, 317, 610.

81. Mr. Karl Richter is the chief executive officer of Schukra N.A. Tr. at 379-80.

82. Mr. Richter testified as follows:

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Richter, Tr. at 403-04.

83. Mr. Prettyman testified as follows:

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Prettyman, Tr. at 261-62.

84. Mr. Dosen testified as follows:

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Dosen, Tr. at 292.

85. Mr. Dosen testified as follows:

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Dosen, Tr. at 317.

86. Mr. Cesare Cosentino is employed by Schukra Mfg. Tr. at 440.

87. Mr. Cosentino testified as follows:

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Cosentino, Tr. at 502-04.

88. The plastic grommets and horseshoe-shaped metal cutouts on the Accused Metal Products do not exert compressive force on the guide wires. See e.g. CPX 15C; Cosentino, Tr. at 502-03.
89. In the Accused Metal Products, the means for attaching each of the longitudinal ends to the guide wires are identical in structure. See CPX 5, CPX 6, CPX 7, CPX 8, CPX 9, CPX 10, CPX 11, CPX 12, CPX 17, CPX 18, and CPX 19.
90. In the Accused Metal Products, the means for attaching each of the longitudinal ends to the guide wires, and the central body portion, respectively, are formed from different materials. See e.g. CPX 15C.
91. The plastic grommets or "anti-friction" sleeves on the Accused Metal Products do not embody the features or characteristics of, and are implemented differently than, the polyurethane sleeves described in the '525 Patent specification. See e.g. CPX 15C; CX 1, Col. 3, lines 52-54.
92. In statements to the PTO during prosecution of the '294 Patent, the applicants asserted, "[f]urther, the fact that the Applicants' claimed invention is made from a single piece of material greatly enhances the provision of an apex that effectively shifts in response to an applied load. None of the art of record teaches or suggest [sic] such a back support". CX 2 at 90.

IV. Invalidity

93. The invention date of the '294 Patent is May 23, 1994. JX 1 at ¶ 2.
94. The "Model Q" is a metal back support sold by Respondent Schukra Manufacturing and by Centro Manufacturing, Inc. See RPX 3, RPX 4; RX 35 C; Cosentino, Tr. at 462-63.

95. The "Model Q" product was placed on sale in the U.S. before May 23, 1993.
Cosentino, Tr. at 462-63; RX 35C
96. No clear and convincing evidence was offered of the "Model Q" product in the form of RPX 4 being on sale prior to May 23, 1993. Cosentino, Tr. at 462-63, 493-94.
97. Mr. Cosentino testified as follows:

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Cosentino, Tr. at 464-65.

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98. Mr. Cosentino testified as follows:

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Cosentino, Tr. at 493-94.

99. RX 35C is a collection of invoices and purchase orders relating to the "Model Q".
See RX 35C.
100. None of the invoices or purchase orders for the "Model Q" specify that no hinge plate or wheels were attached, and none indicate separate charges or payments for hinge plates or wheels. See RX 35C.
101. One invoice reflects a separate charge for "plastic knobs" other than the charge for the "Model Q" products. CX 35C at 28.
102. The invoice dated 12/27/91 shown in CX 35C at 26 reflects a description and single charge of \$10 as the unit price for "Schukra Frame Model 'Q' w/Flexi Cable (No Extra Parts Required)". RX 35C at 26.
103. Invoices stating "no extra parts required" reflect sales prices identical to or greater than those clearly indicating sale of a complete assembly of the "Model Q". RX 35C at 26, 9.
104. Mr. Cosentino testified as follows:

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Cosentino, Tr. at 495-98.

105. Mr. Cosentino's testimony indicates that the notations and statements shown on the RX 35C invoices were not made consistently, as the practice varied from customer to customer. Cosentino, Tr. at 495-98.
106. The invoices and purchase orders at RX 35C do not provide a reliable source of corroboration as to the "Model Q" being sold in different structural "versions". See RX 35C; Cosentino, Tr. at 495-98.
107. The structure and operation of the "hinge" shown and described in the Poschl '769 Patent is not identical to the hinge on the "Model Q". See CX 6; RPX 3.
108. Mr. Cosentino testified as follows:

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Cosentino, Tr. at 487.

109. The wheels on the "Model Q" do not hold the second longitudinal end of the

"Model Q" on the seatback. See Cosentino, Tr. at 487; RPX 3.

110. The wheels on the "Model Q" do not attach the second longitudinal end of the

"Model Q" to the seatback. See Cosentino, Tr. at 487; RPX 3.

111. Mr. Cosentino testified as follows:

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Cosentino, Tr. at 483-84.

112. The central body portion, means for attaching the first longitudinal end to the seatback, and wheels at the second longitudinal end of the "Model Q" consist of multiple pieces formed from multiple types of materials. See RPX 3.

113. RX 30 and RX 31 describe and show the "Model Q". See RX 30, RX 31; RPX 3.

114. The testimony of Mr. Cosentino cited by the Respondents as supporting a finding that RX 30 and RX 31 were distributed to the public "beginning in 1992 and

1993" fails to support such a finding. See Cosentino, Tr. at 460-62.

115. Mr. Dosen testified as follows:

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Dosen, Tr. at 572-75.

116. RPX 5 is an exemplar of Schukra North America's SNA 7 lumbar support. See RPX 5; Dosen, Tr. at 572-74.
117. RPX 6 is an exemplar of Schukra North America's SNA 18 lumbar support. See RPX 6; Dosen, Tr. at 572-74.

118. The Schuster '930 Patent and the Lenz '631 Patent were before the examiner for the '926 Application. See CX 3 at 192-93; see also RX 19.
119. The '926 Application was the parent application of the '294 Patent. See CX 2.
120. Mr. Harry Manbeck, Jr., Respondents' expert, qualified as an expert on PTO procedures. Tr. at 789.
121. Mr. Manbeck testified as follows:

Q Was any prior art submitted with the CIP application, Exhibit CX 2?

A There was no prior art submitted by the applicants at the time the application was filed.

Q Was the prior art that was submitted about the parent application deemed to have accompanied the CIP application?

A The examiner is instructed to go back and look at the art in the parent application, so that if the examiner did his job, he went back and looked at that art.

Q And when you say that the examiner is instructed, how is he or she instructed?

A In the manual, in the manual of Patent Office -- manual of patent examining procedure, which is issued by the Patent Office for the instruction of its employees, particularly the examiners. It's also used as a guide by attorneys in their practice before the office.

Q And looking at Exhibit CX 2, the CIP application, can you determine whether the patent examiner on this application went back to the parent application to examine the prior art that was submitted therewith?

A I cannot say that he didn't, but there is no evidence in the file that he did. He should have indicated he went back and looked at that art in the search notes box on page 158, and there's no such notation in there. But, you know, I can't say that he didn't.

Q But the manual of patent examiner procedure requires that that normally be done?

A Well, that's the way I read it, that he is supposed to put it in there.

Manbeck, Tr. at 802-03.

122. A person of ordinary skill in the art at the time of the '294 Patent had either a bachelor's degree in mechanical engineering, or an associate's degree in engineering and practical experience in seat design. See Staff Initial Brief at 44 n.31; see also RX 117C.

123. Neither the Lenz '631 Patent nor the Schuster '164 Patent, on their faces, offer a motivation or suggestion to modify or combine with SNA 7 or SNA 18. See CX 8; RX 25.

124. Russell McDonald was a named co-inventor along with James Ligon, Sr., on the '926 Application, the parent application of the '294 Patent. See CX 3.

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130. Claim 11 of the '294 Patent teaches:

The seat of claim 1, wherein said subtending means comprises a flexible cable attached to said support member proximate said support member second longitudinal end, and a means for shortening an effective length of said cable disposed adjacent said seat; whereby shortening said effective length of said cable longitudinally subtends said support member by drawing said support member second longitudinal end toward said support member first longitudinal end.

CX 1, Col. 12, lines 1-8.

131. Claim 12 of the '294 Patent teaches:

The seat of claim 11, wherein said shortening means comprises a spool and a means for rotating said spool, said cable being wrappingly received around a portion of said spool to thereby shorten said effective length of said cable.

CX 1, Col. 12, lines 9-12.

132. Claim 15 of the '926 Application read as follows:

The back support of claim 10 wherein said subtending means comprises a lightweight resilient cable and means for adjusting the effective length of the cable.

CX 3 at 181.

133. Claim 17 of the '926 Application read as follows:

The back support of claim 15 wherein said adjusting means comprises a spool for windingly receiving said cable and a manually adjusted means for turning said spool.

CX 3 at 181.

134. [

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135. [.

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136. The Respondents failed to raise or address in their pre-hearing brief an enablement defense based on construction of the '294 Patent invention from plastic. See Respondents' Pre-Hearing Brief at 80-83 (concerning enablement defense, and omitting any discussion of this ground).

V. Unenforceability

137. [

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138. [

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139. Mr. Porter testified as follows:

Q Can you tell us what this is?

A This is another piece of sales literature.

Q Does it show another Schukra lumbar support?

A Yes, it does.

Q Did you see this brochure during the time that you were working on the lumbar support picture of your patent?

A Yes.

Q How did you see it?

A My father-in-law faxed me this from a trade show he was attending.

Q Did you find anything in this brochure that was pertinent to what you were doing in your design?

A Not really, no.

Q What were the differences that led you to that conclusion?

A Well, I saw quite a few, once I studied it. You know, in our lumbar support, we were trying to develop a one-piece lumbar support that was easily installed in the seat. When I examined this, I saw a multipiece lumbar support that was bolted into the seat. It was not coupled at the top like our lumbar support was, but it actually had a couple of rollers that rode up and down on a plate that had to be welded into the seat back.

Porter, Tr. at 151-52.

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141. Mr. Gaskey, a patent attorney, worked on prosecuting the '294 Patent. Gaskey, Tr. at 759.

142. [

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143. The "Flexi-Cable" publication pictures and describes the "Model Q". See RX

32C; RX 151C.

144. The '294 Patent examiner considered and relied on other relevant prior art during the prosecution, including, but not limited to the Poschl '769 Patent, U.S. Patent 4,153,293 ("Sheldon '293 Patent"), the Lenz '631 Patent, U.S. Patent 4,601,514 ("Meiller '514 Patent"), the Graves '271 Patent, U.S. Patent 5,197,780 ("Coughlin '780 Patent") and the Harrison '278 Patent. CX 2 at 83.
145. The "Flexi-Cable" publication is not more material than the prior art before the '294 Patent examiner. See RX 32C; RX 151C; see also e.g. CX 6, CX 7, CX 8, CX 9, CX 10, CX 11, CX 12.

VI. Jurisdiction

146. Schukra N.A. and Schukra Manufacturing import, sell for importation and/or sell within the United States after importation, the accused products. Respondent's Prehearing Brief at 91, n.12; CX-207C; CX-211C.
147. Peter Hoehne, testifying on behalf of Advantage, testified that Advantage imports and sells the accused products in the United States after importation. CX 240C at 4, 22-29.
148. Advantage imports and sells the accused products in the United States after importation. CX 240C at 4, 22-29.
149. Textron points to no testimony or evidence that establishes that Schukra U.S.A., Schukra Berndorf, or Schukra Auto import, sell for importation and/or sell within the United States after importation, the accused products. See Textron Initial Brief, Textron Reply Brief.
150. CPX 1 and CPX 2 are the physical exemplars of Textron's proffered domestic

industry product. See CPX 1, CPX 2; Smith, Tr. at 212-16.

151. Mr. Smith testified as follows:

Q Could you take, now, one of the Textron demonstrative exhibits, Mr. Smith, and demonstrate how the Textron device responds to the language of claim 15, if in fact it does?

A Obviously, this one, since it's a single piece one, has to be unitary because it's only one piece. It's a flexible support member. As you can see, when it's operated, it flexes. And then of course it has a longitudinal axis. The first and second longitudinal ends, first longitudinal end, second longitudinal end.

It has a plurality of support fingers that extend outwardly from the central body portion. And they're generally perpendicular to the longitudinal axis. So it addresses 15(a).

15(b), the support fingers each have a folded perimeter, as you can see here, this is bent back or folded back, and that's that folded perimeter that's being talked about. A rounded end distal from the central body portion. And they project generally forward from a plane generally defined by the said central body portion. This is what I was talking about earlier. If you take and put this across the plane of the central body portion, you can see that the fingers project forward of that plane.

When it's in a relaxed position, rounded and on each set of support fingers forward of said plane, the way I just showed you.

Q Mr. Smith, let me stop you there for a second. Have you in fact taken a picture of what you just demonstrated to the court?

A I did. That was in my, I think it was Exhibit 3 of my report.

Q Just for the court's reference, I think it's Exhibit 2 is the Textron device, and it's figure 2 of Exhibit 2 to Mr. Smith's redacted report.

MS. GOALWIN: Excuse me, your Honor, could Mr. Smith identify the exhibit by physical exhibit number that he's been referring to?

THE WITNESS: Sure. This is CPX 2.

Let's see. We're up to 15(c). "Said first longitudinal end having a clamping member, adapted to rotatably attach to a bar on the seat back." It's certainly

clamped onto that bar. And this is a digital level that will allow us to see what the amount of angular rotation this bottom end goes through is.

BY MR. VARY:

Q Have you attached that digital level to the first longitudinal end of the Textron support?

A Correct, this is the first longitudinal end. You can see this reading, 14.4 degrees, and as we rotate this, not only can you see it rotating, but also the numbers are changing, so that we get all the way up to, oh, probably 38, 39 degrees or more.

Q So does the Textron device respond to that language of the claim with respect to the first longitudinal end and the clamping member being rotatably attached to a bar on a seat back?

A It does. Then in 15(d), the said second longitudinal end having a holding member adapted to slidably and pivotally couple said second end to a second portion of the seat back. That's 15(d). This is the first section, this is the second portion. This end is held onto the bar, can't come off, and let's look at slidably first. I don't know how to do this.

If I take and put a line across here, and actually this, it's pretty easy to see that it slides. And then again doing the same thing with the level, you can see that it starts off right around 5.3 degrees, and as you begin to actuate it, it goes up to a little over 20 degrees. So that end is obviously pivoting. And so the Textron device would certainly respond to 15(d).

Then 15(e) talks about the central body portion, the clamping member, and the holding member being integrally formed out of a single piece of material, which this certainly is.

Q Mr. Smith, have you supplied the court with photographs of your measuring the rotation and pivoting of the two ends of the Textron lumbar support?

A I did. I believe that's also in Exhibit 2 of my report.

Q For reference to the court, it's figures 3 through 6 of Exhibit 2 to Mr. Smith's direct and rebuttal report.

All right, Mr. Smith, could you please now take claim 16 and apply the language of the claim, if you would, to the Textron device?

A 16(a), we just went through because it's the same at 15(a). 16(b), first longitudinal end having a pair of

clamping members, you can see this is your pair of clamping members. This being one and that being the other one.

Projecting away from the central body portion, this being the central body portion, and they project away from it. "Having opposite clamping surfaces." Probably the easiest thing to do is to look how this is put on the wire. There's a clamping surface that's holding down like this and the one is the -- in the middle is a clamping surface holding up like this. So those are the two opposed clamping surfaces.

"Such that clamping members are adapted to rotatably on the bar." We did that already.

16(c), second longitudinal end having a holding member adapted to slidably and pivotally couple, that's the same as it was in 15. So it responds to that also. 16(d) is also the same language as in claim 15, central body portion, clamping member and holding member integrally formed from a single piece of material.

So this device responds to each and every portion of both claim 15 and 16.

Smith, Tr. at 212-16.

152. CPX 1 and CPX 2 embody all the features and limitations set forth in Claim 15 of the '294 Patent. See CPX 1, CPX 2; Smith, Tr. at 212-15.
153. CPX 1 and CPX 2 embody all the features and limitations set forth in Claim 16 of the '294 Patent. See CPX 1, CPX 2; Smith, Tr. at 215-16.
154. The parties stipulate to Textron's satisfaction of the economic prong of the domestic industry requirement. JX 1.
155. Mr. Daniels testified as follows:

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156. [

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VII. Remedy

157. Textron points to no evidence of record that any of the Respondents maintain commercially significant levels of allegedly infringing inventory in the U.S., and Textron offers no evidence to contradict the Respondents' contentions to the contrary. See Textron Initial Brief; Textron Reply Brief; see also SX 3C at 8, SX 4C at 11, SX 5C at 11, SX 6C at 11, SX 7C at 11 and SX 8C at 11.

VIII. Bonding

158. Mr. Daniels testified as follows:

[

]

159. Textron offers no specific factual denial of the Staff's assertion that [

] see also Textron Reply Brief, Textron's

Statement Regarding Proposed Findings of Fact and Conclusions of Law.

160. Mr. Richter testified as follows:

[

]

Richter, Tr. at 404-06.

161. Mr. Richter testified as follows:

[

]

Richter, Tr. at 430-31.

162. [] represents the approximate sales price of the accused products. See SX 12C;

Richter, Tr. at 405, 431.

Conclusions of Law

1. All conclusions of law set forth in the opinion are incorporated herein by reference.
2. The Complainant has proven the importation requirement of Section 337 as to Schukra N.A., Schukra Manufacturing and Advantage.
3. The Complainant has failed to prove the importation requirement of Section 337 as to Schukra U.S.A., Schukra Berndorf and Schukra Auto.
4. The Complainant has demonstrated satisfaction of the domestic industry requirement of

Section 337.

5. The Respondents have failed to prove that Claim 15 or Claim 16 of the '294 Patent is invalid.
6. The Respondents have failed to prove that the '294 Patent is unenforceable.
7. The evidence of record does not demonstrate that the Accused Plastic Products infringe Claim 15 or Claim 16 of the '294 Patent.
8. The evidence of record does not demonstrate that the Accused Metal Products infringe Claim 15 or Claim 16 of the '294 Patent.
9. There is no violation of Section 337 with respect to the Accused Plastic Products or the Accused Metal Products and Claims 15 or 16 of the '294 Patent.

Remedy And Bonding Recommendations

1. Issuance of a limited exclusion order that covers only the infringing products of those Respondents deemed in violation of Section 337.
2. A bond of 17% of the estimated [] value for each accused product.

INITIAL AND RECOMMENDED DETERMINATIONS AND ORDER

Based on the foregoing opinion, findings of facts, conclusions of law, and the record as a whole, and having considered all pleadings and arguments as well as proposed findings of fact and conclusions of law, it is my Initial Determination ("ID") that no violation of Section 337 exists in the importation into the United States, sale for importation, or sale within the United States of certain Mechanical Lumbar Supports and products containing same. It is also my Recommended Determination ("RD") that a limited exclusion order covering only the products of those Respondents deemed in violation of Section 337 issue and that a bond of 17% of the [] value for each accused product be set.

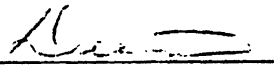
I hereby certify to the Commission this ID and RD together with the record of the hearing in this investigation consisting of the following:

1. The transcript of the pre-hearing conference held on November 10, 1998, and the transcript of the hearing held from March 22, 1999 to March 26, 1999,
2. The exhibits accepted into evidence in this investigation as listed in the attached exhibit lists, and
3. All orders entered in this investigation as well as all pleadings, briefs and other documents and things filed with the Secretary.

In accordance with 19 C.F.R. § 210.39(c), all confidential material under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this ID and RD upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order (Order No. 1) issued in this investigation, and the Commission investigative attorney. To expedite service of the public version, counsel are hereby ordered to serve on my office no later than July 12, 1999, a copy of this ID and RD with those sections considered by the party to be confidential bracketed in red.

Pursuant to 19 C.F.R. § 210.42(h), the ID shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the ID or certain issues herein.


Debra Morriss
Administrative Law Judge

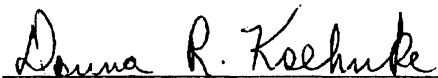
Issued: June 29, 1999

**CERTAIN MECHANICAL LUMBAR
SUPPORTS AND PRODUCTS
CONTAINING SAME**

337-TA-415

CERTIFICATE OF SERVICE

I, Donna R. Koehnke, hereby certify that the attached INITIAL DETERMINATION AND RECOMMENDED DETERMINATION was served upon Anne M. Goalwin, Esq., Commission Investigative Attorney, and the following parties via first class mail and air mail where necessary on July 19, 1999.



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**CERTAIN MECHANICAL LUMBAR
SUPPORTS AND PRODUCTS
CONTAINING SAME**

337-TA-415

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