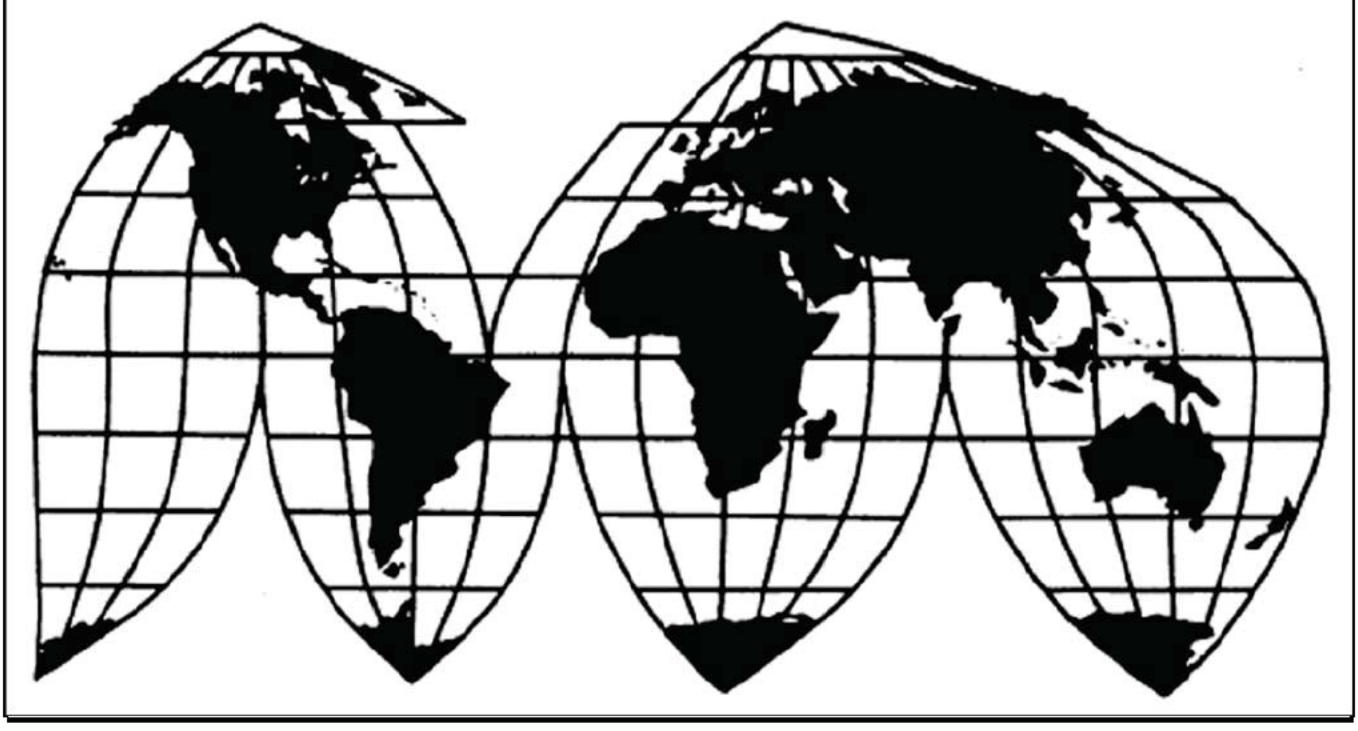
In the Matter of

Certain Adjustable Keyboard Support Systems and Components Thereof

Investigation No. 337-TA-670

Publication 4285 **November 2011**

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of **CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF**	**Investigation No. 337-TA-670**

NOTICE OF COMMISSION DETERMINATION OF NO VIOLATION OF SECTION 337; TERMINATION OF THE INVESTIGATION

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined that there is no violation of 19 U.S.C. § 1337 by respondents in the above-referenced investigation. The investigation is terminated.

FOR FURTHER INFORMATION CONTACT: Jia Chen, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 708-4737. Copies of non-confidential 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. General information concerning the Commission may also be obtained by accessing its Internet server at *http://www.usitc.gov*. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov*. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on March 13, 2009 based on a complaint filed by Humanscale Corporation ("Humanscale") of New York, New York. 74 *Fed. Reg.* 10963 (Mar. 13, 2009). The complaint, as amended, named CompX International, Inc., of Dallas, Texas and Waterloo Furniture Components Limited, of Ontario, Canada (collectively, "CompX") as respondents. The complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain adjustable keyboard support systems and components thereof that infringe certain claims of U.S. Patent No. 5,292,097 ("the '097 patent").

On February 23, 2010, the ALJ issued a final ID, including his recommended determination on remedy and bonding. In his ID, the ALJ found that CompX's "Wedge-Brake" products do not infringe either claims 7 or 34. The ALJ found that CompX's "Brake-Shoe" products, on the other hand, do infringe claims 7 and 34, but that respondents established that claim 7 is invalid because it is obvious under 35 U.S.C. § 103. The ALJ further found that respondents have not established the defense of intervening rights. Finally, the ALJ found that complainant proved the existence of a domestic industry in the United States. Accordingly, the ALJ recommended that the Commission issue a limited exclusion order barring entry into the United States of infringing adjustable keyboard support systems and components thereof. The ALJ further recommended the issuance of a cease and desist order against respondent Waterloo Furniture Components Ltd.

On March 9, 2010, Humanscale, CompX, and the Commission investigative attorney ("IA") each filed a petition for review of the ALJ's final ID. On April 26, 2010, the Commission determined to review a portion of the ALJ's ID and requested briefing from the parties on the issues under review and on remedy, the public interest, and bonding. On May 17, 2010, Humanscale, CompX, and the IA each filed responses to the Commission's request for written submissions. On May 27, 2010, Humanscale, CompX and the IA filed reply submissions. On June 14, 2010, CompX filed a surreply to Humanscale's reply submission.

Having examined the record of this investigation, including the ALJ's ID and the submissions of the parties, the Commission has determined to reverse the ALJ's determination that the respondents violated section 337. The Commission finds the asserted claims are not infringed and are invalid.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in section 210.45 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.45).

By order of the Commission.

Marilyn R. Abbott
Secretary to the Commission

Issued: July 9, 2010

CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF **337-TA-670**

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **NOTICE OF COMMISSION DETERMINATION OF NO VIOLATION OF SECTION 337; TERMINATION OF THE INVESTIGATION** has been served by hand upon the Commission Investigative Attorney, Heidi E. Strain, Esq., and the following parties as indicated, on July 9. 2010.

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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of **CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF**	**Investigation No. 337-TA-670**

COMMISSION OPINION

On February 23, 2010, the presiding administrative law judge ("ALJ") issued a final initial determination ("ID") that respondents violated section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337). The ALJ found that respondents' "Brake-Shoe" products infringe asserted independent claim 7 and dependent claim 34 of United States Patent No. 5,292,097 ("the '097 patent"), but that claim 7 is invalid for obviousness under 35 U.S.C. § 103. He also found that respondents' "Wedge-Brake" products do not infringe claims 7 and 34. On April 26, 2010, the Commission determined to review a portion of the ID relating to the "Brake-Shoe" products. On June 23, 2010, the Commission issued notice of its decision to reverse the ALJ's determination and to terminate the investigation with a finding of no violation due to noninfringement and invalidity of the asserted claims. The following opinion sets forth the reasons for the Commission's determination. The Commission adopts the ALJ's ID to the extent it is not inconsistent with this opinion.

I. BACKGROUND

A. Procedural History

The Commission instituted this investigation on March 13, 2009 based on a complaint filed by Humanscale Corporation ("Humanscale") of New York, New York. The complaint, as amended, named CompX International, Inc. of Dallas, Texas, and Waterloo Furniture Components Ltd. of Ontario, Canada (collectively, "CompX") as respondents. The complaint alleged violations of section 337 in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain adjustable keyboard support systems and components thereof that infringe claims 7, 10, 26, 27, 34, 37, 38, and 44 of the '097 patent. During the investigation, the Commission allowed the complainant to terminate the investigation with regard to claims 10, 26, 27, 37, 38, and 44. As a result, only independent claim 7 and dependent claim 34 remain in this investigation.

On November 4, 2009, the ALJ issued an initial determination (Order No. 27) granting Humanscale's motion for summary determination that it has satisfied the economic prong of the domestic industry requirement under 19 U.S.C. § 1337(a)(2). On November 16, 2009, respondents filed a petition for review of the ID. On November 23, 2009, Humanscale and the Commission investigative attorney ("IA") filed oppositions to the petition for review, arguing, *inter alia*, that CompX's petition for review was untimely and CompX did not request leave to file its petition out of time. After examining the record in this investigation, the Commission agreed that the petition was untimely, but determined to review the ID on its own motion pursuant to Commission Rule 210.44. On review, the Commission requested the parties to brief their respective positions on the issues under review with reference to the applicable law and the evidentiary record. The parties submitted briefs in response on January 15, 2010 and reply briefs

on January 22, 2010.

Meanwhile, the ALJ held an evidentiary hearing on December 1-4, 2010, and thereafter received post-hearing briefs from the parties. On February 23, 2010, the ALJ issued the subject ID, including his recommended determination on remedy and bonding. In the final ID, the ALJ found that respondents did not establish by clear and convincing evidence that asserted independent claim 7 is invalid under 35 U.S.C. § 102, but that they did establish that claim 7 is invalid for obviousness under 35 U.S.C. § 103. The ALJ also found that respondents did not establish that asserted dependent claim 34 is invalid under either 35 U.S.C. §§ 102 or 103. He found that, if independent claim 7 is not invalid, one of the three categories of CompX's accused products, *i.e.*, the "Brake-Shoe" products, infringes independent claim 7. He also found that this same category of CompX's accused products infringes dependent claim 34. He found, however, that the remaining categories of CompX's accused products, *i.e.*, the "Front Wedge-Brake" and the "Rear Wedge-Brake" products, do not infringe claims 7 or 34.

The ALJ further found that respondents did not establish any intervening rights under 35 U.S.C. § 252, which would be a defense to infringement. Finally, the ALJ found that complainant proved the existence of a domestic industry in the United States with respect to the '097 patent. Accordingly, the ALJ recommended that the Commission issue a limited exclusion order barring entry into the United States of infringing adjustable keyboard support systems and components thereof. The ALJ further recommended the issuance of a cease and desist order against respondent Waterloo Furniture Components Ltd. Finally, he recommended that the Commission set the bond during the Presidential review period at 100 percent of the entered value of the infringing products.

On March 9, 2010, complainant filed a petition for review of the final ID, challenging the

ALJ's determination with respect to claim construction, non-infringement of asserted claims 7 and 34 by respondents' "Front Wedge-Brake" and the "Rear Wedge-Brake" products, the priority date of claim 34, and invalidity of claim 7 for obviousness under 35 U.S.C. § 103. On the same day, respondents filed a petition for review, challenging the ALJ's determination with respect to claim construction, infringement of claims 7 and 34 by the Brake-Shoe products, validity of claims 7 and 34 under 35 U.S.C. § 112, paragraph 2, validity of claim 34 under 35 U.S.C. §§ 102 and 103, the defense of intervening rights, and the economic prong of the domestic industry requirement.[1] Also on the same day, the IA filed a petition for review, challenging the ALJ's determination only with respect to validity of claim 34 under 35 U.S.C. § 103. On March 17, 2010, complainant, respondents, and the IA filed reply submissions.

On April 26, 2010, the Commission determined to review a portion of the ALJ's final ID. Specifically, the Commission determined to review: (1) the claim construction of the term "frictionally interengagable" recited in claim 34, (2) infringement of claim 34 by respondents' "Brake-Shoe" products, (3) the priority date of claim 34, (4) invalidity for anticipation and obviousness of claims 7 and 34, and (5) the defense of intervening rights. The Commission determined not to review the remaining issues. The issue of the economic prong of the domestic industry requirement was already on review. The Commission requested briefing on the issues on review, remedy, the public interest, and bonding and asked that the parties respond to several questions relating to the issues on review. On May 17, 2010, complainant Humanscale, respondents CompX, and the IA each filed responses to the Commission's request for written submissions. On May 27, 2010, complainant, respondents, and the IA filed reply submissions.

On May 24, 2010, respondents filed a motion to strike section VI of complainant's reply

[1] None of the parties challenged the ALJ's determination with respect to the technical prong of the domestic industry requirement.

submission. In the motion, respondents point out that complainant failed to follow the Commission's instructions regarding briefing the issues of remedy, the public interest and bonding that were included in the Commission's notice of review, and that instead of briefing these issues in its main submission, complainant addressed them in Section IV of its reply submission. Respondents requested that the Commission strike the remedy, public interest, and bonding section of complainant's reply brief, or alternatively, allow respondents to submit a response to this section of complainant's reply brief. On June 4, 2010, the Commission granted respondents' request to file a surreply. Respondents filed the surreply on June 14, 2010.

B. Patent at Issue

The '097 patent, entitled "Work Surface Support," issued on March 09, 1993 to Edwin R. Russell. The '097 patent is a continuation-in-part of United States Patent Application No. 07/607,448 ("the '448 parent application"), filed on October 31, 1990. The '448 parent application was also subject to a provisional Australian patent application, PJ 7133, filed on October 31, 1989 and published on May 9, 1991 ("the AU '578 application"). The '097 patent was subject to a reexamination request by complainant Humanscale on October 13, 2004. The *ex parte* reexamination certificate number US 5,292,097C1 issued on August 26, 2008 and states that claims 1, 2, 5, 16, 18, 30-33, 39 and 46 were cancelled, claims 3, 5, 6, 7, 10, 11, 14, 17, 18, 20, 21, 26, 34, 40-42 and 47 were determined to be patentable as amended, and claims 8, 9, 12, 13, 15, 22-25, 27-29, 35-38, 43-45, and 48-52, dependent on the amended claims, were determined to be patentable. The claims are generally directed to an adjustable work surface support mechanism having a pair of swing-link suspension arms for adjusting a support platform, such as a computer keyboard, in a range of desired positions.

C. Products at Issue

Complainant has accused three different categories of keyboard support mechanisms manufactured, imported, and sold by respondents of infringement: (1) "Rear Wedge-Brake" products, in which a pair of wedge locks is attached to the linkage arms at the fixed base side of the assembly (2) "Front Wedge-Brake" products, in which a pair of wedge locks is attached to the linkage arms at the support platform side of the assembly, and (3) "Brake-Shoe" products, in which the locking members are engaged and disengaged with brake shoes. Only the "Brake-Shoe" products were found by the ALJ to infringe the asserted claims and are at issue on review.

II. ANALYSIS

A. Claim Construction of "Frictionally Interengagable"

The term "frictionally interengagable" is recited in asserted claim 34 of the '097 patent, which depends from asserted claim 7. Claims 7 and 34 state:

> 7. A support means [as claimed at claim 1] *for supporting a support platform from a fixed base whereby the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base, said support means comprising a first element adapted to be mounted to the support platform, a second element adapted to be affixed to said fixed base, a pair of linkage elements each pivotally fixed at one end to said first element at spaced intervals on said first element and each pivotally mounted at the other end to said second element at spaced locations spaced on said second element for movement of the support platform between the first and second positions and throughout such movement the attitude of said support platform remains substantially constant, said support means further comprising a locking means for locking said support platform in a range of positions including said second position, said locking means comprising a first locking member supported on one of said elements and having a first engagement face engagable with a second engagement face provided on a second locking member provided on another of said elements, said locking members being movable relative to each other upon the exertion of a force to one of these two elements for moving said locking members to a released position at which the engagable faces are disengaged for subsequent movement of said support platform relative to said base to any of a plurality of desired positions, release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element in the desired positions* wherein the pivotal

> connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements, said first locking member being provided on said one link element and said second locking member being provided on the other of said elements, such longitudinal displacement being effective to move said locking members between their released and locked positions.

'097 patent, col. 1, l. 35–col. 2, l. 4.

> 34. A support means as claimed at claim [5] 7 *wherein* [the first] *locking* [member is provided on one link element and the second locking member is provided on one of the first or second elements, the pivotal connection of one link element to the one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said first and second elements] *members are adapted to be* ***frictionally interengagable*** *when engaged with each other.*

'097 patent, col. 3, ll. 8–15.[2] The bold term is the only claim limitation at issue on review.

In his final ID, the ALJ construed "frictionally interengagable" to mean "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use," which the ALJ emphasized to be distinct from "a serration arrangement." ID at 43. According to the ALJ, it is undisputed that all of the locking mechanisms of the devices in the '097 patent and the related prior art have friction acting on them in some form or another, if for no other reason than because some friction is always present between parts of a machine that engage each other. *Id.* at 41. The ALJ pointed out, however, that pursuant to the doctrine of claim differentiation, a specific limitation in a dependent claim raises a presumption that the limitation is not present in the independent claim, especially when the only difference between the independent and dependent claims is the limitation in dispute. *Id.* Moreover, the ALJ found that unasserted dependent claim 4, which also depends from asserted independent claim 7, discloses only the limitation that "one of locking members is serrated." *Id.* at 42. Thus, the ALJ found that dependent claim 4 and asserted dependent claim

[2] The bracketed text shows portions that were removed during the reexamination process, and the italicized text shows portions that were added during the reexamination process.

34 each disclose different types of locking members and that the scope of asserted independent claim 7 includes some locking members that are not serrated. *Id.* Furthermore, the ALJ found that the '097 patent does not mention friction in its description of any of the embodiments other than the ninth embodiment, which describes that locking with frictionally interengagable locking members "is effected" through friction. *Id.* Thus, the ALJ concluded that to qualify as "frictionally interrengable" locking members, locking members must involve friction as the principle on which they rely and not merely as an incidentally present force. *Id.* at 42-43.

First, we agree with the ALJ that claim 34 cannot cover locking mechanisms that have only incidental friction. Otherwise, the limitation of claim 34 that "locking members are adapted to be frictionally interengagable when engaged with each other" would be superfluous and claim 34 would cover all locking mechanisms under claim 7. *See Phillips v. Awh Corp. Inc.*, 415 F.3d 1393, 1315 (Fed. Cir. 2005); *see also SunRace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003). Because claim 34 is presumed to differ in scope from claim 7, it does not cover all locking means with interengagable locking members as recited in claim 7.

The specification of the '097 patent describes in further detail the types of locking means that are excluded from the term "frictionally interengagable." In its description of the ninth embodiment, the specification emphasizes the distinction between locking surfaces that are "frictionally inter-engaged" and locking surfaces where "locking inter-engagement is effected through complementary serrated formations":

> The ninth embodiment shown at FIGS. 20, 21 and 22 is of very similar form to the eighth embodiment of FIGS. 19, 20 and 21. **The exception provided by the ninth embodiment however relates to the nature of the locking inter-engagement between the locking surfaces. In previous embodiments the locking inter-engagement is effected through complementary serrated formation provided on the opposed locking surfaces. In the case of the ninth embodiment the locking surfaces are <u>frictionally inter-engaged</u>.**

'097 patent, col. 6, ll. 37-65 (emphasis added). Thus, we also agree with the ALJ that "frictionally interengagable" locking members are distinct from locking members having "a serration arrangement" found in several embodiments of the '097 patent other than the ninth embodiment. ID at 43. As explained by respondents' expert, the written description of the ninth embodiment conveys to a person of ordinary skill in the art that "the inventor had within his possession that solely friction could be used or that friction is sufficient to provide locking and that . . . you can now have an infinite number of positions as opposed to the discrete positions . . . conveyed by the first seven embodiments." Tr. at 1374, ll.11-19.

The parties dispute, however, whether the ALJ limited claim 34 to V-shaped locking members. The specification describes at least one way of implementing "frictionally interengagable" locking surfaces:

> As shown at FIG. 22 the arcuate locking surface 35 has a convex V-shaped profile while the adjacent end 36 of the one link member is formed with a V-shaped groove which is receivable over the arcuate locking surface. In addition the degree of divergence of the convex surface of the arcuate locking surface 35 is greater than that of the groove on the one link element 15.

'097 patent, col. 6, ll. 37-54. According to Figure 22, locking surface 35 has a convex V-shaped profile and the locking surface 36 has a V-shaped groove:

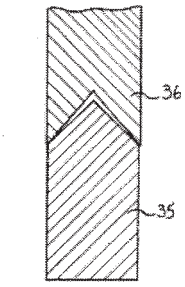


Fig 22

'097 patent, Fig. 22. Complainant argues that the ALJ's construction of "frictionally interengagable" essentially limits claim 34 to the V-shaped frictional locking members disclosed in the specification's ninth embodiment, and as a result, impermissibly requires all locking to

take place at the first and second locking members of claim 7. Respondents argue that the ALJ's construction does not limit claim 34 to the V-shaped frictional locking members of the ninth embodiment, but that the ALJ incorrectly applied his construction in his obviousness analysis. We find that, contrary to the assertions of both complainant and respondents, the ALJ simply did not address whether "frictionally interengagable" locking members should be limited to these locking members having V-shaped profiles and grooves. The ALJ does, however, seem to inconsistently apply his claim construction in his subsequent infringement analysis with respect to the Brake-Shoe products and his obviousness and priority date analyses for claim 34. To arrive at his conclusion that the Brake-Shoe products meet the "frictionally interengagable" limitation, the ALJ assumed that his construction of the limitation is not necessarily limited to the V-shaped profiles and grooves of the ninth embodiment. *See* ID at 66-67. By contrast, in his priority date and obviousness analyses of claim 34, the ALJ assumed that his construction of the limitation "frictionally interengagable" is limited to the V-shaped profiles and grooves of the ninth embodiment. *Compare id.* at 92 and 138.

Because the claims of a patent measure the invention at issue, the claims must be interpreted and given the same meaning for purposes of both our validity and infringement analyses. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001). Turning to the language of claim 34 itself, we find that claim 34 makes no reference to V-shaped profiles and grooves, as contrasted with the language of unasserted claim 26, which also depends from claim 7. Specifically, claim 26 recites the limitation "wherein the one engagement face has V-shaped profile and the other engagement face has a concave V-shaped profile." '097 patent, col. 3, ll. 4–6. The clear reference to the V-shaped profile in claim 26 and the lack of such reference in claim 34 suggests that claim 34 is not limited in that way. In addition, while the

specification describes the V-shaped profile and grooves in the context of the ninth embodiment, there is no indication that this is the only way to implement frictionally interengagable locking surfaces. Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language. *Home Diagnostics Inc. v. Lifescan Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004). Thus, "frictionally interengagable" locking means of claim 34 are not limited to the V-shaped profiles and grooves of the ninth embodiment.

With respect to claim 34's reference to "locking members," complainant argues that the frictionally interengagable locking members of claim 34 need not be the first and second locking members of claim 7 and relies on this claim construction argument in its infringement analysis. Complainant argues that because claim 7's locking means "comprises" a first locking member and a second locking member and because the locking members of claim 34 have no antecedent restrictions, claim 34 is met if any set of locking members of the locking means of claim 7 is frictionally interengagable. The ALJ did not address this specific issue in his claim construction of the term "frictionally interengagable."

Comparing the language of independent claim 7 to that of dependent claim 34, we note that the "locking members" of claim 34 do not specifically refer to the "first" and "second locking members" of claim 7. Claim 7's locking means "comprise" a first locking member and a second locking member, and therefore may include additional locking members. *See e.g.*, *Georgia-Pacific Corp. v. U.S. Gypsum, Co.,* 195 F.3d 1322, 1327-28 (Fed. Cir. 1999) ("The transitional term 'comprising' . . . is inclusive or open ended and does not exclude additional, unrecited elements or method steps."). However, we do not agree with complainant that just because the locking members of claim 34 have no antecedent restrictions, claim 34 is met if any set of locking members of the locking means of claim 7 is frictionally interengagable. In our

view, because claim 34 recites "*wherein locking members* are adapted to be frictionally interengagable when engaged with each other," a plain reading of the claim indicates that all locking members must be frictionally interengagable to meet the limitation. Despite the number of locking members the locking means of claim 7 potentially "comprises," claim 34 does not recite that *any* or *at least one* set of locking members must be adapted to be frictionally interengagable when engaged with each other, as complainant's argument assumes. Thus, we find that the frictionally interengagable locking members of claim 34 must include at least the first and second locking members of claim 7.

For the foregoing reasons, we agree with the ALJ that the proper construction of the term "frictionally interengagable" of claim 34 of the '097 patent is "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use." Under this construction, "frictionally interengagable" locking members are distinct from locking members having a serration arrangement but are not necessarily limited to the V-shaped profile and groove structures described in the ninth embodiment. In addition, under this construction, the frictionally interengagable locking members of claim 34 must include at least the first and second locking members of claim 7.

B. Infringement

1. Infringement of Claim 34 by the Brake-Shoe Products

In his infringement analysis of claim 34, the ALJ determined that the Brake-Shoe products practice the "frictionally interengagable" limitation of claim 34 because "respondents' expert has stated that the locking of the Brake-Shoe products use 'frictional engagement for sufficient force to lock the mechanism' and that an actuating force on one link arm causes a Brake-Shoe to brake against another link arm." ID at 66. Specifically, the ALJ relied on the

following testimony:

> Q. Where is the braking force on this Brake-Shoe product?
>
> A. It is between – in this picture [RDX-1A.50] there's a dark region that looks like a three-quarter moon that has a bolt through it, a pivot point through it. You can see the hexagonal bolt pin that goes through it. That brake force occurs between that element – that element, that rake shoe, and the upper link arm, which we can see – the best way to describe the upper link arm in this photo for the record would be it's actually inside. Or if we look at a – if you look at an axis that goes into the picture, it's inside and partially being covered up by that three-quarter moon. That's the upper link arm that interacts with the surface of the Brake-Shoe as it rotates to cause frictional engagement for sufficient force to lock the mechanism . . . .

Id. at 65 (quoting Tr. at 1257:19-1248:13). Because infringement of claim 34 by the Brake-Shoe products is affected by the proper construction of the term "frictionally interengagable," the Commission determined to review this issue.

The distinguishing characteristic of the Brake-Shoe products is the three-quarter moon-shaped brake-shoe. In addition, the Brake-Shoe products include two link arms: an upper arm and a lower arm. The parties do not dispute that the three-quarter moon-shaped brake shoe serves as the "second locking member" recited in claim 7 as well as one of the "locking members" of claim 34. The parties disagree, however, over which link arm of the accused device the brake shoe, *i.e.*, the "second locking member," frictionally engages with.

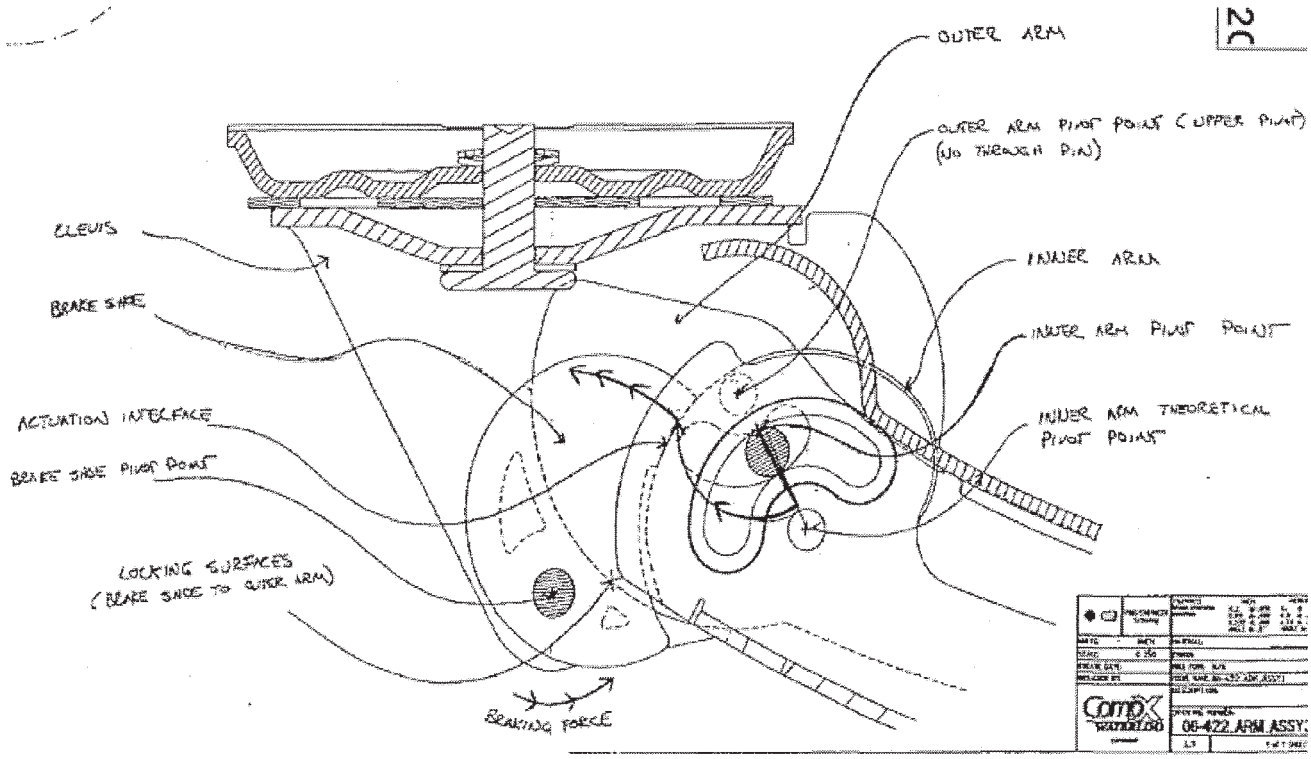
According to independent claim 7, one of the link arms, or "link element," must have "pivotal connections" that are "displaceable longitudinally" from each other. '097 patent, col. 1, l. 63–col. 2, l. 4. Claim 7 also requires that "the first locking member" be provided on the one link element with the longitudinally displaceable pivotal connections. *Id.* Because the upper link arm of the Brake-Shoe device does not have longitudinally displaceable pivotal connections under the ALJ's construction of the limitation, the only possible location for the "first locking member" is on the lower link arm of the accused device.

Complainant's expert testified that friction exists at the "actuation interface" between the three-quarter moon-shaped brake shoe and the lower link arm:

> Q. Is it still your opinion, Dr. Pratt, that at the engagement faces, which I believe that you testified were at the actuation interface, they are adapted to be frictionally interengagable?
>
> A. Yes. One of the engagement faces, which happens to be at the interface annotated as the actuation interface does have friction and resistance to relative motion along that interface is resisted by friction, not blocking.

Tr. 1603:16-1604:19. Complainant's expert, however, did not testify that the friction existing at this "actuation interface" between the lower link arm and the brake shoe is sufficient to lock the entire device. Rather, complainant's expert admitted that much of locking of the device "may occur between the brake shoe and another interface." Tr. at 1604:7-19.

Respondents' expert testified that any friction that can possibly occur between the lower link arm and the brake shoe will not be sufficient to maintain a locked position during normal use. The testimony is more clearly illustrated by the following drawing of the Brake-Shoe product:



Specifically, respondents' expert testified:

> The way that [the Brake-Shoe device] work is . . . when we release the support platform with the first element on it . . . [t]here's a force created between the brake shoe . . . .
>
> . . .
>
> There's a force that's created which is an actuating force which is part of the concept of a brake shoe, which is shown here with a – with counter-clockwise arrows with three arrowheads on it on the top portion of the brake shoe. That force is created between the insert and the brake shoe. That would be the – that would be the point that Dr. Pratt talked about as where you get frictional interengagement.
>
> That actually is just an actuating force. What that causes is the brake shoe to rotate counter-clockwise and then engage not the lower link element but the upper link element frictionally. That's the force that would be sufficient to hold this brake element. It can't be the actuating force because that part of the brake shoe actually slides on the lower link element.

Tr. at 1254:20-1256:2 (emphasis added). Respondents' expert further testified that frictional engagement sufficient to lock the Brake-Shoe device occurs between the upper link arm and the brake shoe:

> Q. Where is the braking force on this brake shoe product?
>
> A. It is between -- in this picture there's a dark region that looks like a three-quarter moon that has a bolt through it, a pivot point through it. You can see the hexagonal bolt pin that goes through it. That brake force occurs between that element –that element, that brake shoe, and the upper link arm, which we can see -- the best way to describe the upper link arm in this photo for the record would be it's actually inside. Or if we look at a -- if you look at an axis that goes into the picture, it's inside and partially being covered up by that three-quarter moon. That's the upper link arm that interacts with the surface of the brake shoe as it rotates to cause frictional engagement for sufficient force to lock the mechanism.

Tr. at 1257:19-1258:13 (emphasis added). In other words, respondents' expert testified that the brake shoe does not actually stop relative to the lower link arm but rather slides against the lower link arm. The device is designed so that this sliding motion against the lower link arm causes the brake shoe to rotate and interact with a surface of the upper link arm to lock the device.

Thus, we find that expert testimony from both parties shows that any frictional force between the brake shoe and the lower link arm is insufficient to maintain the Brake-Shoe device in a locked position during normal use. Under our construction, the term "frictionally interengagable" means "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use" and that such frictional force must include at least the "first" and "second locking members" of claim 7. Thus, frictional interengement under claim 34 needs to occur at least between the brake shoe and the lower link arm of the accused device. Because expert testimony provided by both parties demonstrates the contrary, the Commission finds that the Brake-Shoe products do not meet the "frictionally interengagable" limitation of claim 34 and therefore do not infringe the claim.

2. The Defense of Intervening Rights

The ALJ determined that respondents have not established that they are entitled to the defense of intervening rights with respect to infringement of claim 34. The ALJ began his

analysis by noting that because the doctrine of intervening rights is an affirmative defense of infringement, it must be proven by clear and convincing evidence. ID at 141 (citing *Checkpoint Svs., Inc. v. U.S. Int'l Trade Comm'n*, 54 F.3d 756, 761 (Fed. Cir. 1995); *Kaufman*, 807 F.2d at 978). The ALJ then observed that under 35 U.S.C. § 252, respondents must show that the products at issue in the investigation are substantively identical to the products they made, sold, offered for sale or imported prior to the issuance of the reexamination certificate. *Id.* at 141. The ALJ proceeded to find that respondents did not clearly and convincingly make such a showing. *Id.* at 142-144.

We determine to vacate the ALJ's determination with respect to the defense of intervening rights because respondents have raised significant issues regarding the applicable legal and evidentiary standard.[3] We further determine not to reach the issues relating to this defense as we dispose of this investigation on other grounds. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421 (Fed. Cir. 1984) (holding that the Commission is at liberty to reach a no violation determination on a single dispositive issue).

C. Invalidity

1. Effective filing dates of claim 34

Before the ALJ, the parties argued over the effective filing dates of independent claim 7 and dependent claim 34 of the '097 patent. The continuation-in-part application that led to the '097 patent was filed on July 1, 1992, but the '448 parent application, to which the '097 patent claims priority, was filed on October 31, 1990. In addition, the '448 parent application was also subject to a provisional Australian patent application, the AU '578 application, filed on October

[3] We note, however, that complainant, respondents, and the IA agree on review that the appropriate evidentiary standard for the affirmative defense of intervening rights is preponderance of the evidence.

31, 1989 and published on May 9, 1991.

In his final ID, the ALJ found that independent claim 7 of the '097 patent is entitled to the benefit of the earlier October 31, 1990 priority date of the '448 parent application, whereas dependent claim 34 is not entitled to the benefit of this earlier date and has an effective filing date of July 1, 1992. ID at 87 and 93. With respect to whether claim 34 is supported by the '448 parent application under 35 U.S.C. §§ 120 and 112, the ALJ observed: "it is . . . undisputed that the locking shown in the ninth embodiment of the '097 patent is completely different from that shown in the first eight embodiments and that the V-shaped groove of the ninth embodiment would not have been obvious in the late 1980s." ID at 92. Thus, the ALJ's analysis of the effective filing date of claim 34 assumed that the construction of "frictionally interengagable" is limited to the V-shaped groove of the ninth embodiment, contrary to how the term is used in the context of the ALJ's infringement analysis of claim 34. Based on these priority date determinations, the ALJ found that the AU '578 application, to which the '448 parent application claims priority, is not prior art with respect to claim 7 of the '097 patent but is prior art with respect to claim 34. *Id.* at 26, n. 22. The ALJ, however, did not rely on the AU '578 application for his anticipation and obviousness determinations.

We find that the ALJ improperly applied the claim construction of "frictionally interengagable" by assuming that the term is limited to V-shaped locking members. Accordingly, we vacate his determination regarding the effective filing date of claim 34 as well his determination that the AU '578 application is prior art to clam 34. The Commission, however, takes no position on the effective filing date of claim 34 and whether the AU '578 application is prior to the claim because neither the Commission nor the ALJ relied on the AU '578 application in analyzing anticipation and obviousness of claim 34.

2. Anticipation and Obviousness

A patent may be found invalid as anticipated under 35 U.S.C. § 102(a) if "the invention was known or used by others in this country, or patented or described in a printed publication in a foreign country, before the invention thereof by the applicant for patent." 35 U.S.C. § 102(a). A patent also may be found invalid as anticipated under 35 U.S.C. § 102(b) if "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."

A claim is anticipated and therefore invalid when "the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation." *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). To be considered anticipatory, the prior art reference must describe the applicant's "claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *Helijix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

If the invention is not disclosed or described as set forth in 35 U.S.C. § 102, a patent may nevertheless be found invalid under 35 U.S.C. § 103(a) 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." 35 U.S.C. § 103(a). Once claims have been properly construed, "[t]he second step in an obviousness inquiry is to determine whether the claimed invention would have been obvious as a legal matter, based on underlying factual inquiries including: (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3)

the differences between the claimed invention and the prior art; and (4) secondary considerations of non-obviousness." *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1354 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)).

Secondary considerations such as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstance surrounding the origin of the subject matter sought to be patented and may have relevancy as indicia of obviousness or nonobviousness. *Graham*, 383 U.S. at 17-18. To accord substantial weight to secondary considerations, its proponent must establish a nexus between the evidence and the merits of the claimed invention. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995).

ii. Anticipation and Obviousness of Claim 7

The references used in the ALJ's obviousness determination of claim 7 are German Patent DE 3323780 ("Kompauer"), Australian Publication AU-A-75700/87 ("Adam"), U.S. Patent No. 790,207 to Holtz ("Holtz"), and U.S. Patent No. 420,069 to Hood ("Hood"). *See* JX-63, JX-69, JX-67, and RX-103. The ALJ found that although claim 7 is not anticipated by Kompauer, it is rendered obvious by Kompauer in view of either Adam, Holtz, or Hood. ID at 127-134.

a. The Kompauer Reference

It is undisputed that the art relevant to the '097 patent is "support platforms."[4] Thus, the ALJ found that Kompauer is relevant prior art to the '097 patent because it involves support platforms. ID at 127. As observed by the ALJ, the invention in Kompauer relates specifically to "a height adjustable table or the like with a foot frame" that "exhibits at least one stably

[4] The ALJ found that a person of ordinary skill in support platforms in 1989 would have a Bachelor of Science degree in mechanical engineering or an equivalent foreign degree and have at least about three years of experience in the design of support platforms. ID at 126.

constructed foot," on top of which is mounted a table top that is "lockable selectively at its respectively set height level." *Id.* at 98. According to Kompauer:

> [T]he object of the invention is to provide a height adjustable table, which exhibits a sturdy foot frame, which allows the height of the table top to be adjusted quickly and reliably and in an uncomplicated way over a large adjustment range without requiring separate operating elements or locking devices that have to be released and tightened again by hand.

JX-63, at CompX002666.

Figure 1 is a perspective view of the height adjustable table according to the invention of Kompauer:

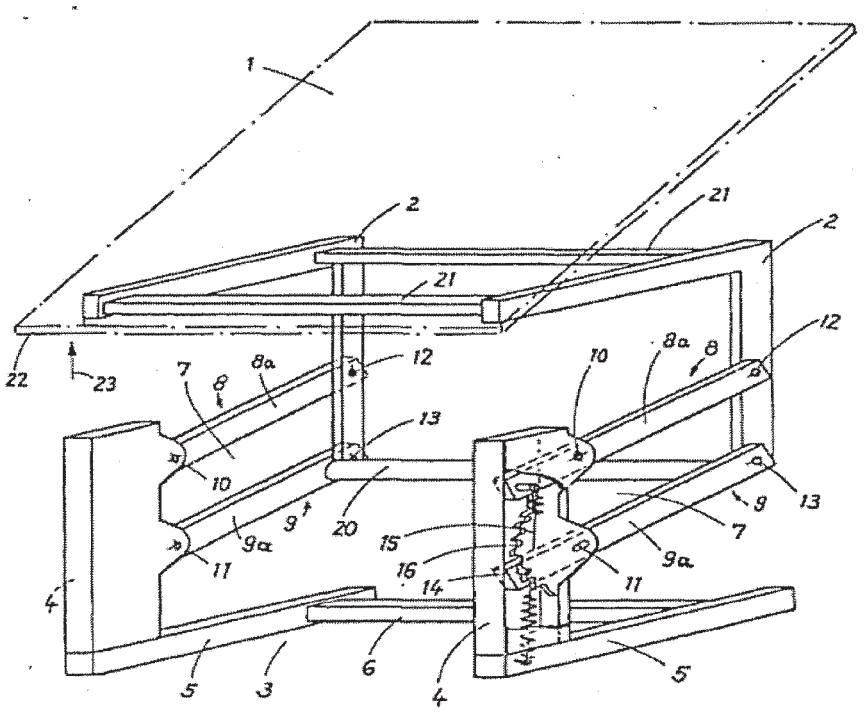


Fig. 1

JX-63 at CompX002677. Kompauer describes the structures of Figure 1 as follows:

> Each of the essentially L-shaped carriers 2 is mounted on the related foot 4 by means of a parallelogram lever mechanism, which exhibits two parallel articulated levers 8, 9, which are spaced apart one on top of the other and which are linked at one end at 10, 11 to the foot 4 and at the other end at 12, 13 to the

vertical leg of the carrier 2, so as to be swivellabe about the parallel articulated axes.

JX-63 at CompX002672.

As observed by the ALJ, the parties do not dispute that the Kompauer reference discloses the following underlined limitations recited in claim 7:

> 7. A support means for supporting a support platform from a fixed base whereby the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base, said support means comprising
>
> a first element adapted to be mounted to the support platform,
>
> a second element adapted to be affixed to said fixed base,
>
> a pair of linkage elements each pivotally fixed at one end to said first element at spaced intervals on said first element and each pivotally mounted at the other end to said second element at spaced locations spaced on said second element for movement of the support platform between the first and second positions and throughout such movement the attitude of said support platform remains substantially constant,
>
> said support means further comprising a locking means for locking said support platform in a range of positions including said second position,
>
> said locking means comprising a first locking member supported on one of said elements and having a first engagement face engagable with a second engagement face provided on a second locking member provided on another of said elements,
>
> said locking members being movable relative to each other upon the exertion of a force to one of these two elements for moving said locking members to a released position at which the engagable faces are disengaged for subsequent movement of said support platform relative to said base to any of a plurality of desired positions,
>
> release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element in the desired positions wherein the pivotal connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one

> link element with the other of said elements, said first locking member being provided on said one link element and said second locking member being provided on the other of said elements, such longitudinal displacement being effective to move said locking members between their released and locked positions.

ID at 95-96. According to the ALJ, the dispute between the parties regarding the remaining limitations of claim 7 centers on which structures disclosed by Kompauer correspond to the "fixed base" and which structures correspond to the "second element adapted to be affixed to said fixed base." *Id.* at 96. Before the ALJ, respondents argued that engagement disk 15 of Kompauer corresponds to the recited "second element" of claim 7 and foot 4 of Kompauer corresponds to the recited "fixed base." Complainant argued before the ALJ that the "second element" is missing from Kompauer. According to complainant, if foot 4 is considered the "second element," that would force longitudinal foot component 5 of Kompauer to be the "fixed base," but Kompauer does not disclose a support means that can be moved below this "fixed base" as required by claim 7. Complainant also argued that engagement disk 15 of Kompauer cannot possibly be the "second element" as contended by respondents because the parallel articulated levers 8 and 9 of Kompauer are not connected to the engagement disk 15 as required by claim 7.

After examining relevant expert testimony from both parties as well as the Kompauer reference itself, the ALJ found that the longitudinal foot component 5 of Kompauer corresponds to the "fixed base" recited in claim 7, and that foot 4 of Kompauer corresponds to the "second element adapted to be affixed to said fixed base." ID at 101; *see also* JX-63. With respect to foot 4 of Kompauer, the ALJ quoted the following testimony from complainant's expert:

> Q. Dr. Pratt, in what respect did you disagree with Dr. Wood's analysis of the asserted claims in view of the Kompauer reference?
>
> A. I disagree with Dr. Wood's characterization of what the fixed base was. For

> example, Dr. Wood, if we refer to, in the Kompauer reference, if we were to refer to figure 1, Dr. Wood testified that the two link members 8 and 9, were mounted to both a first element, which in the Kompauer reference is identified by number 2, and also to item 4.
>
> Well, I do agree with Dr. Wood and the Kompauer translation clearly states that the two linkage elements are pivotally connected to both items 2 and items 4. I don't think there is any dispute in that regard.
>
> However, that would make item 4 the second element in terms of the '097 patent. Not the fixed base. So the fixed base would have to be something that item 4 connects to. And the only thing that comes close is item 5 in this figure.

Id. (quoting Tr. at 1471-1472). Relying on the underlined portions of this testimony, the ALJ concluded that foot 4 of Kompauer discloses the "second element" of claim 7. *Id.*

According to the ALJ, engagement disk 15 of Kompauer cannot correspond to the "second element" as contended by respondents because he found no disclosure in Kompauer that the articulated lever 9 is "pivotally mounted" to engagement disk 15. ID at 102. The ALJ found, rather, that in Kompauer, the articulated lever bears an engagement element which may engage with recesses in the engagement disk. *Id.*

The ALJ then found that longitudinal foot components 5 of Kompauer correspond to the "fixed base" of claim 7. ID at 100-101. Specifically, the ALJ relied on the following testimony from complainant's expert:

> A. ... [T]hat would make item 4 the second element in terms of the '097 patent. Not the fixed base. So the fixed base would have to be something that item 4 connects to. And the only thing that comes close is item 5 in this figure.
>
> Q. So Dr. Pratt, just so the record is clear, what is missing under Dr. Wood's analysis?
>
> A. Under Dr. Wood's analysis, the second element is missing.
>
> Q. And is that the same result under your claim construction?
>
> A. No, under my analysis, the second element is item number 4, and so the fixed base is either item 5 or it is something else. It is probably not even item 5 because

the Kompauer patent makes clear that item 5 is a component of item 4.

Id. at 101 (quoting Tr. at 1547-1548). Relying on the above underlined testimony, the ALJ concluded that foot 4 of Kompauer is adapted to be affixed to longitudinal foot component 5 of Kompauer and that this longitudinal foot component 5 corresponds to the "fixed base" of claim 7. *Id.*

Using these correspondences, the ALJ observed that in Kompauer, "table top 1" which corresponds to the "support platform" of claim 7 never moves below the longitudinal "foot component 5." ID at 103. The ALJ further observed that it is not clear whether "table top 1" can move in front of "foot component 5." *Id.* at 127. Thus, the ALJ determined that Kompauer does not disclose the limitation "the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base" recited in claim 7. *Id.* at 103.

We agree with the ALJ that engagement disk 15 of Kompauer cannot correspond to the "second element" of claim 7 because testimony from complainant's expert and the disclosure of Kompauer both show that the linkage elements of Kompauer are connected to foot 4 rather than to the engagement disk 15. *See* Tr. at 1471-1472; JX-63 at CompX002672 and claim 1. In particular, claim 1 of Kompauer reads as follows:

> A height adjustable table . . . which exhibits . . . a parallelogram lever mechanism (7), which has <u>two parallel articulated levers</u> (8, 9), which are spaced apart one above the other and which are <u>linked at one end to the foot</u> (3) and at the other end to the carrier (2), forming a coupling rod, so as to be <u>swivellable about parallel articulated axes</u>."

JX-63 at claim 1 (emphasis added). As shown in Figure 1 of Kompauer, the parallel articulated levers 8 and 9, which correspond to the "pair of linkage elements" recited in claim 7, are connected at one end to the foot 4, which correspond to the "second element," and at the other

end to the carrier 2, which correspond to the "first element."

Claim 1 of Kompauer further states that the parallel articulated levers 8 and 9 are "swivellable about parallel articulated axes," meaning that the levers 8 and 9 (*i.e.*, the "pair of linkage element") can rotate about the axes where they connect to foot 4 (*i.e.*, the "second element"). In addition, with respect to Figure 1, the specification of Kompauer describes that the connection between the lower lever 9 and the foot 4 can be longitudinally displaced and thus capable of linear movement:

> [T]he lower articulated lever 9 is mounted at the articulated point 11 by means of an oblong hole 120 on a journal 13, which is arranged on the foot 4, so as to be swivellable and longitudinally displaceable to a limited extent in the longitudinal direction of the lever.

JX-63 at CompX002672. In other words, the connection between the lower link member 9 and foot 4 is capable of both rotational and linear movement. Thus, Kompauer discloses that link member 9 is "pivotally mounted" to foot 4, as required by claim 7. Accordingly, we find that foot 4 of Kompauer corresponds to the "second element" of claim 7 and foot component 5 corresponds to the "fixed base" of claim 7.

We also agree with the ALJ that if foot 4 of Kompauer corresponds to the "second element," then Kompauer does not disclose the limitation "the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base." According to relevant testimony by complainant's expert, in Kompauer, tabletop 1 (which corresponds to the "support platform" of claim 7) cannot be lowered below the bottom of foot 4 or the bottom of longitudinal foot component 5. *See* Tr. at 1630:12-24. Moreover, as observed by the ALJ, no portion of the specification of Kompauer discloses that the table top may be adjusted to be partially below the longitudinal foot components. ID at 103. Thus, the ALJ correctly found that respondents have not established, by clear and convincing

evidence, that Kompauer anticipates asserted independent claim 7 of the '097 patent. *Id.* at 103-104.

b. The Combination of Kompauer with Adam, Holtz or Hood

The ALJ considered each of Adam, Holtz, and Hood to be relevant prior art to the '097 patent because respondents' expert testimony shows that they are all in the technical field of "support platforms" and that they solve similar problems of adjusting a support platform to place it at various levels. ID at 127, 130, and 131. With respect to Adam, the ALJ observed that the invention relates to a "height adjustment means for a work surface," such as the separate work surface of a desk that provides support for a computer keyboard, and "in particular to a height adjustment means for a work surface that quickly and easily adjusts the height of the surface," including a "locking means" for holding the work surface at different heights. *Id.* at 127 (citing JX-69, at HMN00180325-326).

The ALJ found that Adam discloses a work surface that "can be releasably held in a plurality of positions." ID at 128 (citing JX-69 at HMN00180327-HMN00180331). According to the ALJ, Adam discloses that the work surface height can be "adjusted to allow the operator [of the computer] to find the most comfortable position for the keyboard in relation to their physical requirements" by a variety of means, and that once the work surface reaches a desired height, it is held by a clamping means that may be engaged via notches. *Id.* (citing JX-69 at HMN00180325). The ALJ found that in a preferred embodiment of Adam, "[t]he support arms 22 are arranged such that they form a parallelogram-type arm and allow for movement of the work surface 11 in relation to the desk 10 while being moved up and down." *Id.* (citing JX-69 at HMN00180329). In addition, the ALJ observed that it is undisputed that the support platform 11 of Adam is attached to a bracket that is in turn pivotally connected by linkage elements 22 to

another bracket that is attached to the fixed base 10. *Id.* at 129. It is also undisputed that the support platform of Adam can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base. *Id.* Based on the disclosures of Kompauer and Adam, the ALJ found that a person of ordinary skill in the art would have known that a support platform can be moved to these various positions, as claimed in the '097 patent. *Id.* Accordingly, the ALJ concluded that the combination of Kompauer and Adam renders claim 7 obvious. *Id.*

The ALJ then considered the combination of Kompauer and Holtz. The invention of Holtz relates to an improvement in the adjusting mechanism for dental tool trays. It is undisputed that dental tool trays are "support platforms" and therefore relevant prior art to the '097 patent. The ALJ found that one object of the invention of Holtz was to "provide a simple, inexpensive, and efficient [dental bracket] of great strength and durability capable of ready adjustment to swing it vertically and horizontally and to vary its length for arranging the table at the proper elevation and in the proper position." *Id.* (citing JX-67 at CompX044454). As observed by the ALJ, Holtz discloses that "[t]he dental bracket will permit the table to be rotated, to be swung horizontally, and to be raised and lowered, and said table is firmly supported at the proper elevation by the locking mechanism, which is readily operable to change the position of the table." ID at 130 (citing JX-67 at CompX044455). The ALJ further observed that the support platform of Holtz can be moved to various positions, including (1) partially below the fixed base and (2) partially in front of the fixed base. *Id.* Based on these findings, the ALJ determined that a person of ordinary skill in the art would have known that a support platform can be moved to these various positions. *Id.* at 130-131. Accordingly, the ALJ concluded that the combination of Kompauer and Holtz renders claim 7 obvious. *Id.* at 131.

With respect to Hood, which also relates to an improvement in the adjustment mechanism for dental tool trays, the ALJ observed that the invention "may be turned to the right or left and adjusted vertically to any desired altitude." ID at 131 (citing RX-103 at HMN00183008). The ALJ observed that in one embodiment of Hood, a shelf retained in position by a pivot "may be turned into any desired position, and raised or lowered to suit the wants of the operator." *Id.* Thus, the ALJ found that the support platform of Hood can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base. *Id.* Based on these findings, the ALJ determined that a person of ordinary skill in the art would have known that a support platform can be moved to these various positions. *Id.* Accordingly, the ALJ concluded that the combination of Kompauer and Hood renders claim 7 of the '097 patent obvious. *Id.*

Complainant asserts that it was clearly erroneous for the ALJ to combine the invention of Kompauer with the teaching of Adam, Holtz, or Hood that a support platform can be moved to a position partially below the fixed base. Complainant argued that, if element 5 of Kompauer is a foot component that rests on the floor, one of ordinary skill in the art would not combine the teaching of Adam, Holtz, or Hood (that a support platform can be moved below the fixed base) with Kompauer because this would require the support platform to move below the plane of the floor where it rests. According to complainant, the ALJ provided no explicit reasoning or evidence why a person of skill in the art would be prompted to modify Kompauer according to Adam, Holtz, or Hood to permit its support platform to travel below the foot, and that the ALJ made this improper combination based on impermissible hindsight.

The Commission disagrees with complainant's argument that the ALJ impermissibly used hindsight to combine the references to allow the support platform of Kompauer to travel below the foot. We believe that complainant's argument would be contrary to the obviousness

standard articulated by the Supreme Court in *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). While the *KSR* decision cautioned against reliance upon *ex post* reasoning, the decision also stated that "[r]igid preventative rules that deny factfinders recourse to common sense . . . are neither necessary under our case law nor consistent with it." *KSR*, 550 U.S. at 421. According to the Supreme Court, "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *Id.* at 417.

As discussed above, the ALJ relied on relevant expert testimony and the disclosures of each reference at issue to find that these references are all in the same technical field of support platforms and solve similar problems of adjusting a support platform to place it at a particular height or level. Analyzing the disclosures of Adam, Holtz, and Hood in detail, the ALJ found that each of these references discloses adjusting the support platform to positions including (1) partially below the fixed base and (2) in front of the fixed base. Thus, the ability to adjust support platforms to various heights or levels relative to a fixed base is well known in the prior art. We agree with the ALJ that a person of ordinary skill in the art would recognize this well-known feature in prior art adjustable support platforms to improve the support platform disclosed in Kompauer. In our view, the application of this simple technique would not be beyond his or her skill.

Furthermore, we agree with the ALJ that secondary considerations do not support the patentability of independent claim 7. The ALJ found that there was no evidence that indicated any nexus between (1) any sales, awards, or any alleged long felt need and (2) the alleged patentable features of the invention as claimed in claim 7. ID at 132. The ALJ observed, in

addition, that complainant admitted that it did not put forth any evidence of copying of the invention of claim 7. *Id.* The ALJ further observed that with respect to others accepting licenses under the '097 patent, it is undisputed that complainant paid only $100,000 for the '097 patent and the '097 patent is not subject to any license at this time. *Id.* As recognized by the Federal Circuit, a weak showing of secondary considerations of nonobviousness does not overcome a strong prima facie showing that the claims are obvious. *See e.g., Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007); *see also Agrizap, Inc. v. Woodstrearp. Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008).

For the foregoing reasons, the Commission affirms the ALJ's finding that claim 7 of the '097 patent is rendered obvious by Kompauer, in view of Adam, Holtz or Hood.

ii. Obviousness of Claim 34

Although the ALJ found claim 7 to be obvious, the ALJ found that claim 34 is not obvious because there is no evidence that clearly and convincingly proves that one of ordinary skill in the art would be motivated to use frictionally interengagable locking members. ID at 139. According to the ALJ, complainant's expert testified that he was not certain whether the V-shaped frictional engagement mechanism would be obvious. ID at 138 (citing Tr. at 939-944). Relevant portions of this particular testimony relied on by the ALJ reads:

> With regard to the V, I understand that to be new matter that was introduced in about 1992. I'm not sure that, in my opinion, I don't, I just don't – I'm not sure myself whether a ***V-shaped groove*** would have been obvious to one skilled in the art at the time the application was made for the patent.

Tr. at 941:9-16 (emphasis added).

However, as discussed *supra*, under the proper construction of the limitation, "frictionally interengagable" locking members are distinct from locking members having a serration arrangement but are not necessarily limited to the V-shaped profile and groove structures

described in the ninth embodiment. Rather, "frictionally interengagable" simply means "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use." With regard to whether such frictionally interengagable locking means were known to a person of ordinary skill at the time application for the '097 patent, the Commission finds that the following statements are not disputed by the parties:

> Kompauer references disclose engageable locking members that have serrations and pawls.
>
> In 1989, a person having ordinary skill in the art would know that some pawls engage by frictional engagement with a surface.
>
> In 1989, a person having ordinary skill in the art would know that both non-blocking frictional pawls/toothless ratchets and blocking pawls were available.
>
> In 1989, a person having ordinary skill in the art would know that there different species of locking mechanisms, such as pawls and ratchets, complementary serrated engagement faces, and frictional engagement faces, could be used to position a support platform.
>
> In 1989, a person having ordinary skill in the art would know that non-blocking toothless ratchets and frictional engagement surfaces could have been used in place of mechanical blocking surfaces, such as serrations and pawls.
>
> Frictional pawls and toothless ratchets rely on friction, rather than mechanical blocking, to restrict movement between the locking surfaces.

Complainant's Proposed Finding of Fact 7.29-7.32, 7.99; Respondents' Proposed Finding of Fact 243, 245; IA's Proposed Finding of Fact III.57.

In sum, it is undisputed that Kompauer discloses serrated locking members and that a person of ordinary skill in the art, at the time of the invention of the '097 patent, would know that frictional engagement surfaces such as non-serrated frictional pawls and toothless ratchets could have been used. Thus, at the time of the '097 patent, frictional locking members are a well known element that can be substituted for serrated locking members, and that it would have been obvious to a person of ordinary skill in the art to apply such knowledge to the combination of

Kompauer and Adam, Holtz, or Hood, to arrive at the claimed invention of dependent claim 34. Again, secondary considerations do not overcome this showing of obviousness. Accordingly, the Commission finds that claim 34 is obvious over the prior art.

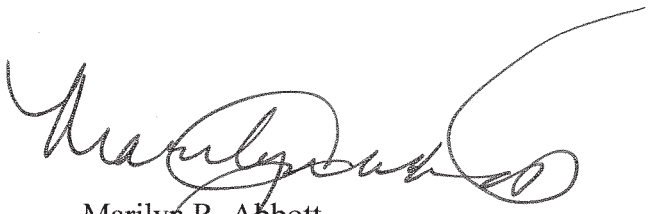
D. Domestic Industry

Because the Commission finds that the asserted claims of the '097 patent are invalid and not infringed, the Commission does not reach the issue of whether the economic prong of the domestic industry requirement is met. Accordingly, the Commission vacates the ALJ's initial determination granting complainant's motion for summary determination that it has satisfied the economic prong of the domestic industry requirement with respect to the '097 patent.

III. CONCLUSION

Because the Commission finds that claims 7 and 34 of the '097 patent are invalid for obviousness and because the Commission also finds that the claims are not infringed by the Brake-Shoe products, we reverse the ALJ's determination that section 337 has been violated.

By order of the Commission.



Marilyn R. Abbott
Secretary to the Commission

Issued: August 13, 2010

CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF **337-TA-670**

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Heidi E. Strain, Esq., and the following parties as indicated, on August 13, 2010.

Marilyn R. Abbott, Secretary
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of **CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF**	**Investigation No. 337-TA-670**

NOTICE OF COMMISSION DETERMINATION TO REVIEW-IN-PART A FINAL DETERMINATION ON VIOLATION OF SECTION 337; SCHEDULE FOR FILING WRITTEN SUBMISSIONS ON THE ISSUES UNDER REVIEW AND ON REMEDY, THE PUBLIC INTEREST, AND BONDING

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review a portion of the final initial determination ("ID") issued by the presiding administrative law judge ("ALJ") on February 23, 2010, regarding whether there is a violation of section 337 in the above-captioned investigation.

FOR FURTHER INFORMATION CONTACT: Jia Chen, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 708-4737. Copies of non-confidential 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. General information concerning the Commission may also be obtained by accessing its Internet server at *http://www.usitc.gov*. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov*. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on March 13, 2009 based on a complaint filed by Humanscale Corporation ("Humanscale") of New York, New York. 74 *Fed. Reg.* 10963 (Mar. 13, 2009). The complaint, as amended, named the following two companies as respondents: CompX International, Inc., of Dallas, Texas and Waterloo Furniture Components Limited, of Ontario, Canada (collectively, "CompX"). The complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain adjustable keyboard support systems and components thereof that infringe certain claims of U.S. Patent No. 5,292,097 ("the '097 patent").

On February 23, 2010, the ALJ issued a final ID, including his recommended determination on remedy and bonding. In his final ID, the ALJ found that respondents did not violate section 337 with respect to their "Wedge-Brake" products because they did not infringe asserted independent claim 7 or asserted dependent claim 34. The ALJ found, however, that respondents did violate section 337 with respect to their "Brake-Shoe" products because they infringed dependent claim 34. The ALJ also found that there was no violation with respect to independent claim 7 because respondents established by clear and convincing evidence that claim 7 is invalid for obviousness under 35 U.S.C. § 103. The ALJ further found that respondents have not established any intervening rights. Finally, the ALJ found that complainant proved the existence of a domestic industry in the United States with respect to the '097 patent. Accordingly, the ALJ recommended that the Commission issue a limited exclusion order barring entry into the United States of infringing adjustable keyboard support systems and components thereof. The ALJ further recommended the issuance of a cease and desist order against respondent Waterloo Furniture Components Ltd. Finally, he recommended that the Commission set the bond during the Presidential review period at 100 percent of the entered value of the infringing products.

On March 9, 2010, Humanscale, CompX, and the Commission investigative attorney ("IA") each filed a petition for review of the ALJ's final ID. On March 17, 2010, CompX filed a reply to Humanscale's petition for review. On the same day, Humanscale filed its consolidated reply to CompX's and the IA's petitions for review. Also on the same day, the IA filed a consolidated reply to Humanscale's and CompX's petitions for review.

Having examined the record of this investigation, including the ALJ's final ID and the submissions of the parties, the Commission has determined to review (1) the claim construction of the term "frictionally interengagable" recited in dependent claim 34, (2) infringement of claim 34 by the Brake-Shoe products, (2) the priority date of claim 34, (3) invalidity for anticipation and obviousness of claims 7 and 34, and (4) the defense of intervening rights. The economic prong of the domestic industry requirement is already under review. No other issues are being reviewed. This constitutes a final determination that the Wedge-Brake products do not infringe claims 7 and 34 and therefore there is no violation with respect to these products.

The parties should brief their positions on the issues on review with reference to the applicable law and the evidentiary record. In connection with its review, the Commission is particularly interested in responses to the following questions:

1. Assuming that the locking means of claim 34 is not limited to the first and second locking members of claim 7, and assuming that "frictionally interengagable" locking means do not include serrated locking structures that operate through blocking, what is the proper construction of the term "frictionally interengagable"? Should the Commission limit the construction of "frictionally interengagable" to the V-shaped structures described in the ninth embodiment of the '097 patent? Please cite to evidence from the record as support.

2. Applying the construction of "frictionally interengagable" provided in response to Question 1, do the Brake-Shoe products meet this limitation? Please cite to evidence from the record as support.
3. What, if any, assembly of the keyboard support system does Humanscale perform in the United States? Are keyboard support systems shipped to customers by Humanscale in an assembled, partially assembled, or disassembled state?
4. If the "articles protected by the patent" under 19 U.S.C. § 1337(a)(2) are the entire keyboard support systems, what portion of Humanscale's (a) investment in plant and equipment and (b) employment of labor and capital in the United States can be attributed to the manufacture and processing of these articles? Out of this portion, what part is attributed to the process of assembling the keyboard support system as opposed to manufacturing the keyboard and mouse support platforms?
5. According to respondents, since 2003, Humanscale has sold a certain number of units of "its allegedly patented mechanisms either as a separate article of commerce or as a component of bundled keyboard support systems." *See* Reply of Respondents CompX in Response to the Commission's Notice to Review an Initial Determination of the Economic Prong of the Domestic Industry Requirement, at 6; *see also* RX-005C. Is respondents' statement of the figure accurate based on the record?
6. Of the total number of units of the patented mechanisms sold by Humanscale, how many units were sold individually and how many units were sold as components of a bundled keyboard support system?
7. Sales of the patented mechanism by itself constitute what percent of Humanscale's total revenue, and sales of the patented mechanism as components of a bundled keyboard support system constitute what percentage of the total revenue?
8. Does section 337(a)(3)(c) allow the Commission to consider investments in research and development or engineering related to technology not covered by the '097 patent when addressing the domestic industry requirement? Are Humanscale's investments in research and development or engineering related to the keyboard and mouse support platforms investments in the exploitation of the '097 patent? Are Humanscale's investments in research and development or engineering related to assembling the keyboard and mouse support platforms with the patented support means investments in the exploitation of the '097 patent? What are Humanscale's investments for each?
9. Under section 337(a)(3)(C), can Humanscale's activities relating to its domestically manufactured keyboard and mouse platforms be considered "investment" in the "exploitation" of the '097 patent that is not "engineering, research and development, or licensing"?"

10. If foot 4 of Kompauer corresponds to the "second element" of claim 7, does Kompauer disclose the limitation "pivotally mounted" under the ALJ's construction? Also, does Kompauer disclose each and every limitation of claim 7 under the ALJ's construction of the disputed claim terms? Please cite to evidence from the record as support.
11. If one or more limitations is not disclosed by Kompauer under the ALJ's constructions, does Adam, Holtz, or Hood make up for this deficiency under the ALJ's construction? Please cite to evidence from the record as support.
12. If the answer is yes to Question 11, does the record explain why a person of ordinary skill in the relevant field would have had a reason to combine the elements in the way claim 7 does?
13. What evidentiary standard should the Commission apply to the affirmative defense of intervening rights, clear and convincing evidence or a preponderance of the evidence?
14. Does the evidence of record show that the scope of reexamined claim 34 has substantively changed from the original claims of the '097 patent? Please provide any relevant claim constructions for the original claim terms of the '097 patent as well as any relevant discussions during the reexamination proceeding regarding amendments to these claims.
15. Does the evidence of record show that the "specific thing," *i.e.*, the specific accused products, were "made, purchased, offered [for sale], or used within the United States, or imported into the United States" prior to the grant of the reexamination certificate to the '097 patent? 35 U.S.C. § 252.
16. Does the evidence of record show that respondents made "substantial preparation[s]" before the grant of the reexamination certificate to "manufacture, use, offer for sale, or [sell] in the United States" the accused products in their current form? 35 U.S.C. § 252. In addition, does the evidence of record show that respondents made investments or commenced business related to the accused products prior to the grant of the reexamination certificate? *Id.*
17. If the answer to Question 15 or 16 is yes, does the evidence of record show that the accused products did not infringe or would not have infringed any of the original claims of the '097 patent?

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue one or more cease and desist orders that could result in a respondent being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, *see In the Matter of Certain*

Devices for Connecting Computers via Telephone Lines, Inv. No. 337-TA-360, USITC Pub. No. 2843 (December 1994) (Commission Opinion).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

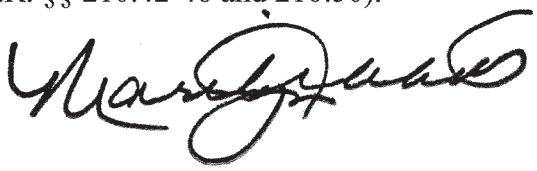
If the Commission orders some form of remedy, the United States Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005, 70 *Fed. Reg.* 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

WRITTEN SUBMISSIONS: The parties to the investigation are requested to file written submissions on the issues identified in this notice. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding. Complainant and the Commission investigative attorney are also requested to submit proposed remedial orders for the Commission's consideration. Complainant is also requested to state the date that the patent expires and the HTSUS numbers under which the accused products are imported. The written submissions and proposed remedial orders must be filed no later than close of business on May 10, 2010. Reply submissions must be filed no later than the close of business on May 17, 2010. The written submissions must be no longer than 60 pages and the reply submissions must be no longer than 30 pages. No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document and 12 true copies thereof on or before the deadlines stated above with the Office of the Secretary. Any person desiring to submit a document to the Commission in confidence must request confidential treatment unless the information has already been granted such treatment during the proceedings. All such requests should be directed to the Secretary of the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 C.F.R. § 210.6. Documents for which confidential treatment by the Commission is sought will be treated accordingly. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in sections 210.42-46 and 210.50 of the Commission's Rules of Practice and Procedure (19 C.F.R. §§ 210.42-46 and 210.50).

By order of the Commission.



Marilyn R. Abbott
Secretary to the Commission

Issued: April 26, 2010

CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF **337-TA-670**

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **NOTICE OF COMMISSION DETERMINATION TO REVIEW-IN-PART A FINAL DETERMINATION ON VIOLATION OF SECTION 337; SCHEDULE FOR FILING WRITTEN SUBMISSIONS ON THE ISSUES UNDER REVIEW AND ON REMEDY, THE PUBLIC INTEREST, AND BONDING** has been served by hand upon the Commission Investigative Attorney, Heidi E. Strain, Esq., and the following parties as indicated, on April 27, 2010.

Marilyn R. Abbott, Secretary
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

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On Behalf of Respondents CompX International, Inc. and Waterloo Furniture Components, Ltd.:

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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF	)	Investigation No. 337-TA-670

Final Initial and Recommended Determinations

This is the administrative law judge's Final Initial Determination under Commission rule 210.42. The administrative law judge, after a review of the record developed, finds inter alia that there is jurisdiction and that there is a violation of section 337 of the Tariff Act of 1930, as amended.

This is also the administrative law judge's Recommended Determination on remedy and bonding, pursuant to Commission rules 210.36(a) and 210.42(a)(1)(ii). Should the Commission find a violation, the administrative law judge recommends the issuance of a limited exclusion order barring entry into the United States of infringing adjustable keyboard support systems and components thereof with certification provision and the issuance of a cease and desist order against respondent Waterloo Furniture Components Ltd. He further recommends that any bond be set at 100 percent of the entered value of the infringing products imported, during the Presidential period, should a violation be found.

OPINION

I. Procedural History

By notice, dated March 9, 2009, the Commission ordered that an investigation be instituted pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, to determine (a) whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain adjustable keyboard support systems or components thereof that infringe one or more of claims 7, 10, 26, 27, 34, 37, 38, and 44 of U.S. Patent No. 5,292,097, (the '097 patent), and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

The complaint was filed with the Commission on February 10, 2009, under section 337 of the Tariff Act of 1930, as amended, on behalf of Humanscale Corporation of New York, New York (Humanscale). The complainant requested that the Commission institute an investigation and, after the investigation, issue an exclusion order and a cease and desist order.

The following were named in the notice of investigation as respondents and were served with the complaint: COMPX International, Inc., 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240 and COMPX Waterloo, 501 Manitou Drive, Kitchener, Ontario Canada N2C 1L2.

Order No. 3, which issued on April 6, 2009, set a target date of June 14, 2010 which meant that any final initial determination should be filed no later than February 16, 2010. Order No. 32 which issued on February 16, 2010 extended the target date to June 23, 2010 which meant that said initial determination should be filed by February 23, 2010. The administrative law judge was unable to complete said initial determination by February 16 (Monday February 15 being a Federal holiday) because of inclement weather that forced the closure of the Federal

government on February 8, 9, 10 and 11, 2010 and because the administrative law judge was out of town on February 12, 2010 due to a long-standing commitment approved by the Chairman.

Order No. 4, which issued on April 20, 2009, corrected the name of respondent COMPX Waterloo, as identified in the notice dated March 9, 2009 to respondent "Waterloo Furniture Components Ltd."

Order No. 10, which issued on August 25, 2009, put into effect a stipulation involving imports. Order No. 17, which issued on September 24, 2009 put into effect a stipulation regarding access and participation of certain corporate representatives and a stipulation of undisputed material facts.

Order No. 19, which issued on October 5, 2009, granted respondents' Motion Nos. 670-13 and 670-14 to withdraw certain affirmative defenses.

Order No. 20, which issued on October 19, 2009, found that complainant had satisfied the importation requirement. The Commission determined not to review Order No. 20 on November 19, 2009.

Order No. 26, which issued on November 4, 2009, rejected complainant's assertion that respondents should not be permitted "at this late stage of the investigation" to pursue the affirmative defense of intervening rights.

Order No. 27, which issued on November 4, 2009, granted complainant's Motion No. 670-18 for summary determination regarding the economic prong of the domestic industry requirement. Respondents petitioned to the Commission for review of Order No. 27, and said petition is currently before the Commission.

Order No. 28, which issued on November 17, 2009, terminated the investigation as to

claims 10 and 44 of the '097 patent. The Commission determined not to review Order No. 28 on December 14, 2009.

Order No. 29 which issued on November 17, 2009, required certain submissions from each of complainant, respondents and the staff.

Order No. 31, which issued on December 1, 2009, terminated the investigation as to claims 26, 27, 37 and 38 of the '097 patent. The Commission determined not to review Order No. 31, on December 22, 2009.

Pursuant to Order No. 7, which issued on April 20, 2009, a prehearing conference was conducted on December 1, 2009. At the prehearing conference, the administrative law judge reserved a ruling on complainant's Motion In Limine No. 670-32 pending the live examination of certain witnesses. (Tr. at 25.) Referring to complainant's Motion In Limine Nos. 670-33, 670-34, and 670-35, those motions were granted to the extent that respondents' expert was precluded from testifying beyond the scope of his expert reports although said rulings did not preclude evidence regarding respondents' defenses that relate to asserted claims. (Tr. at 28-29.) Complainant's Motion In Limine 670-36 was granted to the extent that respondents' expert was precluded from testifying regarding any on sale bar defense. (Tr. at 29-30.) In addition respondents withdrew their inequitable conduct defense. (Tr. at 68.)

Pursuant to Order No. 7, an evidentiary hearing was conducted on December 1, 2, 3, and 4, 2009. Only claims 7 and 34 of the '097 patent are now in issue.

By letter dated December 7, 2009 the staff notified the administrative law judge as follows:

> In accordance with Order No. 29, the Commission Investigative

> Staff ("Staff") hereby submits this letter to notify Your Honor and the private parties of changes in the Staff's position on the merits based on the record established at the hearing in this investigation on December 1-4, 2009. In its pre-hearing statement and answers to the Order No. 29 educational questions, the Staff originally indicated that it expected the evidence at the hearing to establish that the brake-shoe products infringe asserted claims 7 and 34, but that claim 7 is invalid for obviousness, and therefore that a violation of Section 337 would be established with regard to claim 34 only.
>
> However, based on testimony at the hearing from both parties' experts with regard to the knowledge of a person of skill in the art at the time of the invention regarding frictional locking, the Staff now takes the position that both claims 7 and 34 are rendered invalid for obviousness, and thus, that there has been no violation of Section 337. Moreover, specifically with regard to the obviousness issue, the Staff now submits, based on testimony from Respondents' expert regarding the Kompauer reference, that that reference, when combined with the knowledge of a person of skill in the art at the time of the invention, renders both claims 7 and 34 obvious. Similarly, the Staff now submits that the obviousness combinations identified by the Staff in its pre-hearing brief as rendering claim 7 obvious, when combined with the knowledge of a person of ordinary skill in the art at the time of the invention regarding frictional locking, render claim 34 obvious as well.

Post hearing submissions have been filed. The matter is now ready for a final decision.

The Final Initial and Recommended Determinations are based on the record compiled at the hearing and the exhibits admitted into evidence. The administrative law judge has also taken into account his observation of the witnesses who appeared before him during the hearing. Proposed findings of fact submitted by the parties not herein adopted, in the form submitted or in substance, are rejected as either not supported by the evidence or as involving immaterial matters and/or as irrelevant. Certain findings of fact included herein have references to supporting evidence in the record. Such references are intended to serve as guides to the testimony and

exhibits supporting the finding of fact. They do not necessarily represent complete summaries of the evidence supporting said findings.

II. Jurisdiction

The administrative law judge finds that the complaint properly states a cause of action under Section 337 of the Tariff Act of 1930. Thus, he finds that the Commission has jurisdiction over the subject matter of this investigation. See Amgen, Inc. v. United States International Trade Commission, 902 F.2d 1532, 1536 (Fed. Cir. 1990). The Commission has in rem jurisdiction over the products at issue by virtue of Order No. 10 regarding the parties' stipulation on importation. Respondents also have responded to the complaint and participated in the investigation, thereby submitting to the personal jurisdiction of the Commission.

III. Parties

See FF 1-12.

IV. Importation

In effect is said stipulation that the accused articles have been imported into the United States. See Order No. 10 supra. Accordingly, this element of Section 337 has been established.

V. General Overview Of Technology In Issue

The private parties have stipulated to the following general overview of the technology of the patents-in-issue to which the staff has no objection:

> United States Patent No. 5,292,097 (the '097 Patent) is directed to work surface support mechanisms that are adapted to be affixed to a fixed base. One application of the work surface support mechanisms disclosed by the '097 patent is supporting keyboards. The '097 Patent discloses a support mechanism with a locking mechanism that disengages by applying a force to a link element, moving the locking members out of contact and allowing the user

> to then adjust that platform up or down. Once the platform is in the desired position, the user releases the force, which allows the locking members to reengage.

(Joint Stipulation Concerning the Technology Involved at 1 (November 24, 2009).)

VI. Experts

Complainant's expert John D. Pratt was qualified as "an expert in the area of mechanical devices, including mechanical devices having linkage structures, latches, and blocking mechanisms." (Tr. at 358.)

Respondents' expert Kristin Wood was qualified as "an expert within the field of the mechanical arts and to provide testimony as to what one of ordinary skill in the art would understand in the field of art of the '097 patent, including mechanical devices." (Tr. at 1123.)[1]

VII. The Asserted Patent

The '097 patent in issue is entitled "Work Surface Support." Edwin R. Russell is the named inventor of said patent. The application that became the '097 patent was filed on July 1, 1992. This application was a continuation in part of serial number 07/607,448 (the '448 patent application), dated October 31, 1990 (RX-102). The '097 patent was also subject to a provisional Australian patent application, PJ 7143, filed on October 31, 1989 and published on May 9, 1991 (the AU '578 application) (JX-61). (See RFF 72 (undisputed).)

The '097 patent had one reexamination request entered by Humanscale with the U.S. Patent and Trademark Office (USPTO) on October 13, 2004. (JX-3; JX-4C at 5.) The ex parte reexamination certificate number US 5,292,097C1 which issued on August 26, 2008 states that claims 1, 2, 5, 16, 19, 30-33, 39 and 46 were cancelled, claims 3, 4, 6, 7, 10, 11, 14, 17, 18, 20,

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[1] See FF 13-17 for additional live witnesses at the evidentiary hearing.

21, 26, 34, 40-42 and 47 were determined to be patentable as amended, and claims 8, 9, 12, 13, 15, 22-25, 27-29, 35-38, 43-45, and 48-52, dependent on an amended claims, were determined to be patentable. (JX-2, JX-4C at 5.) The following is the Examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in the reexamination proceeding:

> The prior art of record does not disclose, fairly suggest or make obvious the combination that is claimed in each of claims 7, 11 and 47, and in the claims ultimately dependent therefrom. More specifically, the prior art fails to disclose or suggest providing
>
> > a pivotal connection on one link/linkage element, which connects it to one of the first and second elements and which is longitudinally displaceable from another pivotal connection of the linkage element with the other of said first and second elements, wherein the displacement of the displaceable connection is effective to move the locking members between their released and locked positions,
>
> in a support means claimed which includes
>
> - first and second elements,
> - a pair of linkage elements pivotally fixed (or mounted) to the first and second elements,
> - a first locking member provided on the one linkage element, and a second locking member provided on one of the other elements,
> - whereby force exerted to one of the elements will cause engagement faces of the locking members to disengage and a release of said force will cause the engagement faces to reengage.
>
> The closest art to these claims is considered to be Bultman (US 1,172,272) since the linkage element 35-37 of Bultman is adjustable in length (see page 2, lines 16-23) and is provided in a bracket which also includes locking members. An adjustment of

> the length of the linkage element of Bultman will cause one pivotal connection (with the second element/inner member 11) to be longitudinally displaced from the other pivotal connection (with first element/outer member 7). However, this longitudinal displacement of the one connection of the linkage element with respect to the other connection of the linkage element will not function to move the locking member/pawl 29 with respect to the locking member/ratchet 28.
> None of the other references discussed in this Reexamination proceeding, including the Hetal (German No. 2524019 A), Hood et a1 (US 420,069), and Holtz (US 790207), or any of the other prior art references that have been made of record, suggests the subject matter.

(JX-3 at HMN00181822-23.)

VIII. Ownership Of The Asserted Patent

Complainant Humanscale, when it was Softview Computer Products Corp, became the owner of the '097 patent by assignment from{

} Complainant changed its name from Softview Computer Products Corp. to Humanscale Corporation on August 25, 2000. It subsequently filed a Certificate of Amendment of the Certificate of Incorporation to reflect its name change with the New York Department of State on January 3, 2001. (JX-4A.)

IX. Claims In Issue

The claims in issue are claims 7 and 34 of the reexamination certificate. Said claim 7 reads:

> A support means for supporting a support platform from a fixed base whereby the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base, said support means comprising a first element adapted to be mounted to the support platform, a second element adapted to be affixed to said fixed base, a pair of linkage elements

each pivotally fixed at one end to said first element at spaced intervals on said first element and each pivotally mounted at the other end to said second element at spaced locations spaced on said second element for movement of the support platform between the first and second positions and throughout such movement the attitude of said support platform remains substantially constant, said support means further comprising a locking means for locking said support platform in a range of positions including said second position, said locking means comprising a first locking member supported on one of said elements and having a first engagement face engagable with a second engagement face provided on a second locking member provided on another of said elements, said locking members being movable relative to each other upon the exertion of a force to one of these two elements for moving said locking members to a released position at which the engagable faces are disengaged for subsequent movement of said support platform relative to said base to any of a plurality of desired positions, release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element in the desired positions wherein the pivotal connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements, said first locking member being provided on said one link element and said second locking member being provided on the other of said elements, such longitudinal displacement being effective to move said locking members between their released and locked positions.

(JX-2.)

Said claim 34 reads:

> A support means as claimed at claim 7 wherein locking members are adapted to be frictionally interengagable when engaged with each other.

(JX-2.)

X. Level Of Ordinary Skill In The Art

Complainant's expert Pratt testified that a person of ordinary skill in the art[2] would be someone with a Bachelor of Science degree in mechanical engineering and approximately three years of experience in the design of mechanisms such as keyboard support systems or similar mechanisms having similar kinematics and having articulating links. (Tr. at 366-370.)

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[2] The art of the '097 patent is "support platforms." (RFF 15 (undisputed).)

Respondents' expert Wood testified that a person of ordinary skill in the art would have a Bachelor of Science degree in mechanical engineering, an equivalent foreign degree, or equivalent expertise or experience in the art. (Tr. at 1122.)

The administrative law judge, based on the testimony at the hearing, finds that a person of ordinary skill in the art of "support platforms" in 1989, when the provisional Australian patent application was filed, would have a Bachelor of Science degree in mechanical engineering or equivalent foreign degree and have at least about three years of experience in the design of support platforms.

XI. Claim Construction

Claim construction is a question of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996) (Markman); see Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1455 (Fed. Cir. 1998). In construing claims, a court should look to intrinsic evidence consisting of the language of the claims, the specification and the prosecution history as it "is the most significant source of the legally operative meaning of disputed claim language." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) (Vitronics); see Bell Atl. Network Servs., Inc. v. Covad Commc'n. Group, Inc., 262 F.3d 1258, 1267 (Fed. Cir. 2001). Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and, when necessary, to explain what the patentee covered by the claims." See U.S. Surgical Corp. v. Ethicon, Inc., 103 F.3d 1554, 1568 (Fed. Cir. 1997).

The claims themselves "provide substantial guidance as to the meaning of particular claim terms." Phillips v. AWH Corp., 415 F.3d 1303, 1314 (Fed. Cir. 2005) (Phillips), citing Vitronics, 90 F.3d at 1582. It is essential to consider a claim as a whole when construing each

term, because the context in which a term is used in a claim "can be highly instructive." Id. In construing claims, the administrative law judge should first look "to the words of the claims themselves . . . to define the scope of the patented invention." Vitronics., 90 F.3d at 1582; see, generally, Phillips, 415 F.3d at 1312-13. Claim terms "are generally given their ordinary and accustomed meaning." Vitronics, 90 F.3d at 1582. Moreover, each term of a claim should be given its own meaning. See Merck & Co. v. Teva Pharm., USA, Inc., 395 F.3d 1364, 1372 (Fed. Cir. 2005), cert. denied 546 U.S. 972 (2005). (Merck & Co.) ("A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.").

In Pause Technology, Inc. v. T.V., Inc., 419 F.3d 1326 (Fed. Cir. 2005) the Court stated:

> . . . in clarifying the meaning of claim terms, courts are free to use words that do not appear in the claim so long as "the resulting claim interpretation . . . accord[s] with the words chosen by the patentee to stake out the boundary of the claimed property." Cf. Renishaw PLC v. Marposs Societá per Azioni, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (noting that "[w]ithout any claim term susceptible to clarification . . . there is no legitimate way to narrow the property right").

Id. at 1333. Also, claim terms are presumed to be used consistently throughout the patent, such that the usage of the term in one claim can often illuminate the meaning of the same term in other claims. Research Plastics, Inc. v. Federal Packaging Corp., 421 F.3d 1290, 1295 (Fed. Cir. 2005) (Research Plastics).

The ordinary meaning of a claim term may be determined by reviewing a variety of sources, which may include the claims themselves, dictionaries and treatises, the written description, the drawings, and the prosecution history. Ferguson Beauregard/Logic Controls v. Mega Sys., LLC, 350 F.3d 1327, 1338 (Fed. Cir. 2003). "Dictionaries ... are often useful to assist

in understanding the commonly understood meaning of words and have been used both by our court and the Supreme Court in claim interpretation." Phillips, 415 F.3d at 1322. The use of a dictionary, however, may extend patent protection beyond what should properly be afforded by a patent. Also, there is no guarantee that a term is used in the same way in a treatise as it would be by a patentee. Id. Moreover, the presumption of ordinary meaning will be "rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope." ACTV, Inc. v. Walt Disney Co., 346 F.3d 1082, 1091 (Fed. Cir. 2003).

The presence of a specific limitation in a dependent claim raises a presumption that the limitation is not present in the independent claim. Phillips, 415 F.3d at 1315. This presumption is especially strong when the only difference between the independent and dependent claims is the limitation in dispute. SunRace Roots Enter. Co., Ltd. v. SRAM Corp., 336 F.3d 1298, 1303 (Fed. Cir. 2003) (SunRace). Moreover, "claim differentiation takes on relevance in the context of a claim construction that would render additional, or different, language in another independent claim superfluous." AllVoice Computing PLC v. Nuance Commc'ns, Inc., 504 F.3d 1236, 2007 U.S. App. LEXIS 23949, at *23 (Fed. Cir. 2007). In addition, a claim construction that gives meaning to all the terms of a claim is preferred over one that does not do so. See Merck & Co. 395 F.3d at 1372; Alza Corp. v. Mylan Labs. Inc., 391 F.3d 1365, 1370 (Fed. Cir. 2004) (Alza) (affirming the district court's rejection of both parties' claim construction where those constructions meant that "the inclusion of the word 'base' in the claims would be redundant"). Differences between the claims are helpful in understanding the meaning of claim terms. Phillips, 415 F.3d at 1314.

The preamble of a claim may be significant in interpreting a claim. Thus, "a claim preamble has the import that the claim as a whole suggests for it." Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp., 55 F.3d 615, 620, 34 U.S.P.Q.2d 1816, 1820 (Fed. Cir. 1995). If said preamble, when read in the context of an entire claim, recites limitations of the claim, or if the claim preamble is "necessary to give life, meaning, and vitality" to the claim, then the claim preamble should be construed as if in the balance of the claim. Kropa v. Robie, 187 F.2d 150, 152 (CCPA 1951) (Kropa); see also Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997) (Rowe); Corning Glass Works v. Sumitomo Elec. U.S.A., Inc., 868 F.2d 1251, 1257 (Fed. Cir. 1989) (Corning Glass). Indeed, when discussing the "claim" in such a circumstance, there is no meaningful distinction to be drawn between the claim preamble and the rest of the claim, for only together do they comprise the "claim." If, however, the body of the claim fully and intrinsically sets forth the complete invention, including all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble may have no significance to claim construction because it cannot be said to constitute or explain a claim limitation. See Rowe, 112 F.3d at 478; Corning Glass, 868 F.2d at 1257; Kropa, 187 F.2d at 152.

The specification of a patent "acts as a dictionary" both "when it expressly defines terms used in the claims" and "when it defines terms by implication." Vitronics, 90 F.3d at 1582. For example, the specification "may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents." Phillips, 415 F.3d at 1323 quoting Iredto Access, Inc. v. Echostar Satellite Corp., 383 F.3d 1295, 1300 (Fed. Cir. 2004). Importantly, a person of ordinary skill in the art is deemed to read the claim term not only in the

context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. Phillips, 415 F.3d at 1314. Whatever ambiguity may exist with respect to the claim language may be resolved by an examination of the specification. Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002) ("The specification may assist in resolving ambiguity where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.")

A patentee may deviate from the conventional meaning of a particular claim term by making the intended meaning of a particular claim term clear (1) in the specification or (2) during the patent's prosecution history. Lear Siegler, Inc. v. Aeroquip Corp., 733 F.2d 881, 889 (Fed. Cir. 1984). If using a definition that is contrary to the definition given by those of ordinary skill in the art, however, the patentee's specification must communicate a deliberate and clear preference for the alternate definition. Kumar v. Ovonic Battery Co., Inc., 351 F.3d 1364, 1368 (Fed. Cir. 2003), citing Apple Computers, Inc. v. Articulate Sys., Inc., 234 F.3d 14, 21 n.5 (Fed. Cir. 2000). In ascribing to an alternative definition rather than the ordinary meaning, the intrinsic evidence must "clearly set forth" or "clearly redefine" a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term. Bell Atl. Network Servs., Inc. v. Covad Communs. Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001).

The prosecution history, including "the prior art cited," is "part of the 'intrinsic evidence.'" Phillips, 415 F.3d at 1317. The prosecution history "provides evidence of how the inventor and the PTO understood the patent." Id. Thus, the prosecution history can often inform the meaning of the claim language by demonstrating how an inventor understood the invention

and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would be otherwise. Vitronics, 90 F.3d at 1582-83; see also Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005) ("The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution" quoting ZMI Corp. v. Cardiac Resuscitator Corp., 844 F.2d 1576, 1580 (Fed. Cir. 1988)); Southwall Techs., Inc. v. Cardinal IG Co., F.3d 1570, 1576 (Fed. Cir. 1995); see also Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295, 1306 (Fed. Cir. 2007), citing Microsoft Corp. v. Multi-tech Sys., Inc., 357 F.3d 1340, 1350 (Fed. Cir. 2004) ("We have held that a statement made by the patentee during prosecution history of a patent in the same family as the patent-in-suit can operate as a disclaimer.") The prosecution history includes any reexamination of the patent. Intermatic Inc. v. Lamson & Sessions Co., 273 F.3d 1355, 1367 (Fed. Cir. 2001).

In addition to the intrinsic evidence, the administrative law judge may consider extrinsic evidence when interpreting the claims. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, including inventor testimony and expert testimony. This extrinsic evidence may be helpful in explaining scientific principles, the meaning of technical terms, and terms of art. See Vitronics, 90 F.3d at 1583; Markman, 52 F.3d at 980. However, "[e]xtrinsic evidence is to be used for the court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims." Markman, 52 F.3d at 981. Also, the Federal Circuit has viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms. Phillips, 415 F.3d at 1318. In addition, while extrinsic evidence may be useful, it is unlikely to result in a reliable interpretation

of patent claim scope unless considered in the context of the intrinsic evidence. Phillips, 415 F.3d at 1319.

Patent claims should be construed so as to maintain their validity. However, that maxim is limited to cases in which a court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous. Phillips, 415 F.3d at 1327. If the only reasonable interpretation renders the claim invalid, then the claim should be found invalid. See, e.g., Rhine v. Casio, Inc., 183 F.3d 1342, 1345 (Fed. Cir. 1999).

A. The Claimed Phrases From Claim 7: "support means" and "locking means"

Complainant argued that the claimed phrase "support means" should be construed to be structural elements that claim 7 specifies "comprise" the support means. (CBr at 14.) Thus it argued that the "support means" of claim 7 is made up of at least the structural elements recited in claim 7; that a person having ordinary skill in the art would be aware of U.S. Patent No. 4,691,888 to Cotterill, German Patent No. DE 430 585, and other "prior art references" in 1989; that the structural elements recited in claim 7 that comprise the "support means" are linkage elements, a first element, a second element, pivotal connections and a locking means with the locking means including locking members having engagement faces; and that a person having ordinary skill in the art would know that a support means having a first element, a second element, and a pair of linkage elements can maintain a substantially constant platform attitude throughout movement by incorporating a parallelogram linkage or a non-parallelogram linkage. (CFF 5.2, 5.4, 5.5, 5.6, 5.7, 5.8.) Hence, it concluded that the claim element "support means" is not means-plus-function and thus is not governed by 35 U.S.C. §112 ¶ 6. (CBr at 14.)

Respondents argued that claim 7 does not recite sufficient structure for performing the

supporting function and hence "support means" is a means-plus-function claim limitation in claim 7 and is thus governed by 35 U.S.C. §112 ¶ 6. (RBr at 9.) In support, it was argued that claim 7 does not recite sufficient structure for one of ordinary skill in the art to perform the functional recitation "throughout such movement the attitude of said support platform remains substantially constant;" that the specification of the '097 patent reveals that a parallelogram linkage performs said function; that claim 7 does not recite a parallelogram linkage nor nonparallel linkages with an adjustable pivot; that claim 7 also recites insufficient structure for one of ordinary skill in the art to perform the functional recitation "release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element in the desired positions;" that claim 7, in addition, recites insufficient structure for one of ordinary skill in the art to perform the functional recitation "wherein the pivotal connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements… such longitudinal displacement being effective to move said locking members between their released and locked positions;" that the embodiments of the specification that perform the functions of claim 7 would not operate without either an elongated slot or a telescoping link arm; that the corresponding structure, according to the '097 patent, to the "displaceable longitudinally" functional recitation is an elongated slot containing a pin or a telescoping link; that claim 7 does not recite either an elongated slot nor a telescoping link arm; that claim 7 does not recite an elongated slot, hole, boss, or telescoping link arm capable of performing the longitudinal displacement function of claim 7; that a "big hole" may also be used to perform the recited functions of the locking means limitation, but one is not recited in claim 7;

that the corresponding structure to the functional recitation "release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element" is a counterweighted support platform and/or a biasing spring; and that claim 7 does not recite either a biasing spring or a gravitationally biasing support platform. (RRCFF 5.2 A to 5.2 M.)

The staff argued that although the claim 7 limitations recite functions corresponding to the "means", claim 7 is "mostly structural" in its recitations and recites sufficient structure for performing the recited functions so that claim 7 should not be construed pursuant to 35 U.S.C. § 112, ¶ 6. (SBr at 7.)[3]

In 1996, the Federal Circuit in Greenburg v. Ethicon, 91 F.3d 1580 (Fed. Cir. 1996) in finding that a district court erred in construing a claim at issue found that the claimed language "detent mechanism" of claim 1 of a '501 patent[4] was not within the purview of 35 U.S.C. § 112 ¶ 6 as the district court had found. The Federal Circuit, in commenting on the origin of 35 U.S.C. § 112 ¶ 6, stated:

> As this court has observed, "the record is clear on why paragraph

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[3] The claimed phrase "locking members being movable relative to each other upon the exertion of a force to one of these two elements" is construed by the staff but not explicitly by the private parties. Portions of said phrase also appear in complainant's and respondents' arguments, yet do not appear to have substantive consequences.

[4] Claim 1 of the '501 patent in issue read in part:

> A surgical instrument comprising. . . a pair of handle members . . . and said one handle having a cooperating detent mechanisim defining the conjoint rotation of said shifts in predetermined intervals... .

> six was enacted."[5] In re Donaldson Co., 16 F.3d 1189, 1194, 29 U.S.P.Q.2D (BNA) 1845, 1849 (Fed. Cir. 1994) (in banc). In Halliburton Oil Well Cementing Co. v. Walker, 329 U.S. 1, 71 U.S.P.Q. (BNA) 175, 91 L. Ed. 3, 67 S. Ct. 6 (1946), the Supreme Court held invalid a claim that was drafted in means-plus-function fashion. Congress enacted paragraph six, originally paragraph three, to overrule that holding. In place of the Halliburton rule, Congress adopted a compromise solution, one that had support in the pre-Halliburton case law: Congress permitted the use of purely functional language in claims, but it limited the breadth of such claim language by restricting its scope to the structure disclosed in the specification and equivalents thereof. See Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1041-42, 25 U.S.P.Q.2D (BNA) 1451, 1453-54 (Fed. Cir. 1993); In re Fuetterer, 50 C.C.P.A. 1453, 319 F.2d 259, 264 n.11, 138 U.S.P.Q. (BNA) 217, 222 n.11 (CCPA 1963).

91 F.3d at 1582 (emphasis added.) The fact that a particular mechanism recited in a claim however is defined in functional terms does not necessarily make that element a section 112 ¶ 6 element. Thus the Court in Greenburg observed:

> First, the fact that a particular mechanism -- here "detent mechanism" -- is defined in functional terms is not sufficient to convert a claim element containing that term into a "means for performing a specified function" within the meaning of section 112(6). Many devices take their names from the functions they perform. The examples are innumerable, such as "filter," "brake," "clamp," "screwdriver," or "lock." Indeed, several of the devices at issue in this case have names that describe their functions, such as "graspers," "cutters," and "suture applicators."

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[5] Paragraph six reads:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

> "Detent" (or its equivalent, "detent mechanism") is just such a term. Dictionary definitions make clear that the noun "detent" denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms. See Random House Unabridged Dictionary 541 (2d ed. 1993) ("a mechanism that temporarily keeps one part in a certain position relative to that of another, and can be released by applying force to one of the parts"); Webster's Third New International Dictionary 616 (1968) ("a part of a mechanism (as a catch, pawl, dog, or click) that locks or unlocks a movement"); G.H.F. Nayler, Dictionary of Mechanical Engineering (4th ed. 1996) ("A catch or checking device, the removal of which allows machinery to work such as the detent which regulates the striking of a clock."). It is true that the term "detent" does not call to mind a single well-defined structure, but the same could be said of other commonplace structural terms such as "clamp" or "container." What is important is not simply that a "detent" or "detent mechanism" is defined in terms of what it does, but that the term, as the name for structure, has a reasonably well understood meaning in the art.

Id. at 1583 (emphasis added).

In Cole v. Kimberly-Clark 102 F.3d 524 (Fed. Cir. 1996) the Federal Circuit found that a district court correctly ruled that the claimed "perforation means . . . for tearing" in a claim 1 of a '239 patent was not a means-plus-function element under § 112, ¶ 6. In support the Court found that to invoke § 112 ¶ 6, the alleged means-plus-function claim element must not recite a definite structure which performs the described function; that patent drafters conventionally achieved this by using only the words "means for" followed by a recitation of the function performed; that merely because a named element of a patent claim is followed by the word "means," however, does not automatically make that element a "means-plus-function" element under 35 U.S.C. § 112, ¶ 6; that merely because an element does not include the word "means" does not automatically prevent that element from being construed as a means-plus-function element; that

the Court found no reason to construe any of the claim language in said claim 1 as reciting means-plus-function elements within the meaning of § 112, ¶ 6; that for example, the "perforation means . . . for tearing" element of Cole's claim fails to satisfy the statute because it describes the structure supporting the tearing function (i.e., perforations); that the claim describes not only the structure that supports the tearing function, but also its location (extending from the leg band to the waist band) and extent (extending through the outer impermeable layer); that an element with such a detailed recitation of its structure, as opposed to its function, cannot meet the requirements of the statute; that the claim drafter's perfunctory addition of the word "means" did nothing to diminish the precise structural character of this element; that the district court correctly recognized that words in a patent claim are construed as they would be understood by a reader skilled in the relevant art unless it appears that the inventor used the words differently; that since there is no evidence to suggest that "perforation" has any meaning other than the dictionary definition accepted by the court, the Court looks to that definition which reads as follows:

> a hole, or one of a number of holes, bored or punched through something, as those between individual postage stamps of a sheet to facilitate separation.

citing Webster's Encyclopedic Unabridged Dictionary (1989); and that it construes the "perforation means . . . for tearing" to mean "perforations" as did the district court and further construes "perforations" in view of the above dictionary definition. Id. 102 F.3d at 530, 531. Thus as the Federal Circuit reiterated in Al-Site Corporation v. VSI International, Inc. 174 F.3d 1308, 1318 (1999), according to the express terms of § 112, ¶ 6, the statute governs only claim elements that do not recite sufficient structure or material for performing the claimed function

and therefore the presumption that § 112 applies is overcome if the claim itself recites sufficient structure for performing the claim function.

Referring to asserted claim 7 in issue, the preamble of said claim uses the phrase "[a] support means for supporting a support platform from a fixed base whereby the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base." Claim 7 thus invokes the statutory presumption by using the words "means for" and following those words by the functional language "supporting a support platform from a fixed base... ." See supra and TriMed, Inc. v. Stryker Corp. 514 F.3d 1256, 1259 (Fed. Cir.2008). However as the Federal Circuit has made clear supra, the fact that a claimed element (in claim 7 "support means") is followed by a recitation of functions performed does not automatically make that element a "means-plus-function" element under 35 U.S.C. § 112 ¶ 6. What is in issue is whether sufficient structure for the claimed support means of claim 7 for performing the specified claimed functions is recited in claim 7.

Said claim 7 includes transitional language, viz. "said support means comprising."[6] It cannot be disputed that the recited claimed structure of the support means in claim 7 following "said support means comprising" includes multiple structural elements, including: "a first element," "a second element," "a pair of linkage elements," "a first locking member ... having a first engagement face" and "a second locking member" (which has a second engagement face).

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[6] Certain transitional language has customary meaning in patent law. Thus the word "comprising" includes all the elements that follow in the body of the claims, including additional unrecited elements. (See, e.g., In re Skvorecz, 580 F.3d 1262, 1267 (Fed. Cir. 2009); Cias, Inc. v. Alliance Gaming Corp., 504 F.3d 1356, 1360-61 (Fed. Cir. 2007).)

(RRCFF 5.4.)[7] As stated, supra, the Federal Circuit in commenting on the origin of 35 U.S.C. § 112 ¶ 6 stated that "Congress permitted the use of purely functional language in claims, but it limited the breadth of such claim language by restricting its scope to the structure disclosed in the specification and equivalents thereof." (See Greenburg at 1582.) The administrative law judge finds that asserted claim 7 is not "purely functional." Further, the Federal Circuit has stated that the alleged means-plus-function claim element must not recite a definite structure which performs the described function. (See Cole.) However, the administrative law judge finds that all functional language with respect to the support means in asserted claim 7 is associated with a structure that is recited as performing the functions. Thus, he finds that the recitations in claim 7 go beyond just mentioning the structure, but describe certain aspects of that structure such as spacing and how the structures are connected. As in Cole, the administrative law judge finds that claim 7 in essence recites definite structures in such detail that said claim can not be interpreted as a means-plus-function claim.

Respondents argued that the support means of said claim 7 requires that the movement of the support platform between a first position and a second position recited in the preamble of claim 7 be such that throughout such movement "the attitude of said support platform remains substantially constant," and said claim 7 is governed by § 112 ¶ 6. However, the administrative law judge finds that the specific language of the claim does not support such an argument. Thus he finds that the "substantially constant attitude" recited in the body of claim 7 is part of the

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[7] Complainant argued that both parties agree that claim 7 includes the following structures comprising the support means "a first element ... a second element ... a pair of linkage elements ... pivotally fixed ... at spaced intervals ... pivotally mounted ... at spaced locations spaced on said second element ... first and second locking members having engagement faces." (CRBr at 5.)

description associated with the claimed structural components "a pair of linkage elements." In other words, the function of maintaining a constant attitude is a limitation describing how the structure of a pair of linkage elements should act when attached to other elements in certain ways. Hence, the fact that more than one "spacing" of the linkage elements on the "first element" and "second element" is supported by the language of the claim would not render the structure insufficient, because the administrative law judge finds that all the physical components to perform the function are recited in the claims.

Regarding "a locking means for locking," complainant argued that the means-plus-function presumption where a claim contains the word "means" is overcome if the claim recites sufficient structure or material for performing the recited function; that language identifying a particular structure to a person having ordinary skill in the art qualifies as sufficient structure; that one of ordinary skill in the art would know numerous locking members with releasable engagement faces; that locking members having engagement faces are structural terms; that the specification provides non-limiting examples of locking members; and that the language of claim 7 does not limit locking members to a particular configuration, type of locking, or type of support. (CBr at 23-24.) Complainant argued that therefore respondents' means-plus-function construction is erroneous and the language of claim 7 overcomes the means-plus-function presumption. (Id. at 24.)

Respondents argued that the words "means for" create a presumption of a means-plus-function claim and that, while the words are rebuttable if the claim recites sufficient structure for performing the function in its entirety, argued that claim 7 does not recite any structure capable of performing the "longitudinal displacement" functions of said claim; that claim 7 does not

recite a biasing spring or gravitationally biasing support platform to re-engage engagement faces as stated in said claim; that therefore claim 7 does not recite sufficient structure to perform the claimed function; and that, because the presumption is not overcome, claim 7 is a means-plus-function claim. (RBr at 13-15.) Respondents further argued that the embodiments of the '097 patent present structures that perform the required functions. (Id. at 15-16.)

The staff argued that all of the elements following the word "comprising" are structure elements; that with such extensive structure indicated in claim 7, the "means" language can be ignored; and that asserted claim 34 provides even further structure for "locking means". (SBr at 8-13.)

Claim 7 recites, in relevant part, with structural elements underlined,

> said support means further comprising a locking means for locking said support platform in a range of positions including said second position, said locking means comprising a first locking member supported on one of said elements and having a first engagement face engagable with a second engagement face provided on a second locking member provided on another of said elements, said locking members being movable relative to each other upon the exertion of a force to one of these two elements for moving said locking members to a released position at which the engagable faces are disengaged for subsequent movement of said support platform relative to said base to any of a plurality of desired positions, release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element in the desired positions wherein the pivotal connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements, said first locking member being provided on said one link element and said second locking member being provided on the other of said elements, such longitudinal displacement being effective to move said locking members between their released and locked positions.

(JX-2 at 1:48-2:4 (emphasis added).) Thus, the claimed "locking means" is a part of the claimed "support means", treated supra. Independent claim 7 does recite "locking means for" language, which creates a presumption of being a means-plus-function claim. However, as the Federal Circuit has made clear, supra, the fact that a claimed element is followed by a recitation of certain functions performed does not automatically make that element a "means-plus-function" element under 35 U.S.C. § 112 ¶ 6. Thus, it must be determined whether sufficient structure for the claimed locking means of claim 7 for performing the specified claimed functions is recited in claim 7. The language of claim 7 recites that the said locking means is "for locking said support platform in a range of positions including said second position" and that said locking means comprises "a first locking member" and "a second locking member." However, the language of claim 7 recites that each of said locking members 1) is supported on one of said elements (see "first element" and "second element" of the support means, supra) 2) has an "engagement face" that is "engagable" with the other engagement face 3) is movable relative to another locking member upon the exertion of a force to one of these two elements for moving said locking members and 4) has the pivotal connection of one link element to one of said first and second elements that is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements. Thus, the administrative law judge finds that the physical structures to perform the locking means are present in the claim, and, as with the support means treated, supra, multiple ways of the locking members engaging are supported. As stated, supra, the Federal Circuit in commenting on the origin of 35 U.S.C. § 112 ¶ 6 stated that "Congress permitted the use of purely functional language in claims, but it limited the breadth of such claim language by restricting its scope to the structure disclosed in the specification and equivalents

thereof." (See Greenburg 91 F.3d at 1582.) (emphasis added). However, the recitation of locking means in asserted claim 7 is not "purely functional," as the administrative law judge finds that there are several structural components recited as part of the locking means. The Federal Circuit has stated that an alleged means-plus-function claim element must not recite a definite structure which performs the described function. (See Cole.) However, the administrative law judge finds that all functional language with respect to the locking means in asserted claim 7 is associated with a claimed structure that is recited as performing the functions. Thus, the recitations in the claim go beyond just mentioning the structure, but describe certain aspects of that structure such as placement relative to each other and how the structures interact. As in Cole, a claim reciting definite structures in such detail should not be interpreted as a means-plus-function claim. In addition, several dependent claims further define certain structures recited in asserted claim 7, highlighting further that claim 7 is not primarily functional. For instance, asserted claim 34 reads:

> A support means as claimed at claim 7 wherein locking members are adapted to be frictionally interengagable when engaged with each other.

(JX-2 at 3:8-15.) Several unasserted claims of the '097 patent, including claims 4, 26, and 42, also provide more specifics regarding the structures of the locking means. For example, unasserted claim 26 reads:

> A support means as claimed at claim 7 wherein the one engagement face has convex V-shaped profile and the other engagement face has a concave V-shaped profile.

(JX-2 at 3:4-6.) Hence, rather than providing insufficient structure, claim 7 recites a structure broadly enough to perform locking means in several possible ways that are also described, inter

alia, in dependant claims.

Based on the foregoing, the administrative law judge finds that asserted claim 7 is not a means-plus-function claim.

B. The Claimed Phrase From Claim 7: "at least partially below the fixed base"

Complainant argued that the "fixed base" in the claimed phrase is the structure to which the claimed support means is adapted to be attached and that, consistent with the ordinary meaning, "below a fixed base" in the claimed phrase means "below the level of, but not necessarily underneath or beneath the fixed base." (CBr at 21.)

Respondents argued that the experts agree that the claim term "below" in the claimed phrase "at least partially below the fixed base"[8] does not necessarily mean "underneath" or "beneath," but only "below the level of." (RBr at 29.) Respondents further argued that there are no size or shape restrictions on the "fixed base" in the '097 patent. (Id. at 30.)

The staff argued that "at least partially below the fixed base" means "at least partially 'below the level of the fixed base surface to which the support means is mounted.'" (SBr at 18.)

Finding no dispute in the matter, the administrative law judge finds that "at least partially below the fixed base" means "at least partially below the level of, but not necessarily underneath or beneath, the fixed base." Because asserted claim 7 recites "a support means for supporting a support platform from a fixed base" (JX-2 at 1:35-36), the administrative law judge finds that the "fixed base" in the claimed phrase is the structure to which the claimed support means is adapted to be attached. Because the asserted claims do not explicitly limit the size or shape of the "fixed

[8] Respondents did not devote a portion of their claim construction section in their RBr to the claimed phrase "at least partially below the fixed base."

base" (JX-2 at 1:35-2:4, 3:8-16), the administrative law judge finds no limitations on the size or shape of the "fixed base," as long as the size and shape of said "fixed base" do not interfere with any of the other limitations of claim 7.

C. The Claimed Phrases From Claim 7: "displaceable logitudinally" and "longitudinal displacement"

Complainant argued that analysis of figures 20 and 21 of the '097 patent and the testimony of complainant's expert Pratt indicate that "longitudinal displacement" means that "the distance between pivotal connections has increased in a direction of a line drawn between the pivotal connections." (CBr at 30-31.)

Respondents argued that, to a person having ordinary skill in the art, "displaceable longitudinally" means "capable of movement in the direction of the line connecting the location of the pivot to the location of the pivot on the other end of the link element." (RBr at 18.) Respondents also argued that a person having ordinary skill in the art would understand the claim language to mean that the distance between the pivots on each end of a link arm can change. (Id. at 19.)

The staff, in general agreement with respondents, argued that "displaceable longitudinally" means that "a pivot of a link element is capable of movement in the direction of the line connecting the location of the pivot to the location of the pivot on the other end of the link element." (SBr at 18.) The staff further argued that the parties appear to be in agreement, generally, that "longitudinal displacement" of the "pivotal connections" means that the distance between the pivotal connections can change (increase or decrease). (Id.)

It is undisputed that "displaceable longitudinally" means that "the distance between

pivotal connections increases or decreases." (CFF 5.64 (undisputed).) The dispute is whether any displacement must specifically be in the direction of a line connecting the pivots, as respondents and staff argued, or whether said displacement may occur in a direction not parallel with the line connecting the pivots but still resulting in a change in distance between the pivots, as complainant's construction allows.

The administrative law judge finds that claim 7 of the '097 patent clarifies "longitudinal displacement" by requiring that it be "effective to move said locking members between their released and locked positions." (JX-2 at 2:2-4.) He also finds that the specification's only reference to longitudinal movement appears in its explanation of the sixth embodiment, wherein a link member moves longitudinally by virtue of the elongate slot of one of the pivotal connections. (JX-1 at 5:20-22, Figures 11-12.) The specification further describes the elongate slot as "substantially parallel to the main axis of the one link member 15." (Id. at 5:14-15.) In figures 11 and 12 of the '097 patent, which depict the sixth embodiment, a line connecting the pivots of link element 15, i.e. the "main axis" of said link element, would contain the elongate slot's long dimension. (Id. at Figures 11-12.) The administrative law judge finds that said elongate slot would allow movement along that line and that therefore "displaceable longitudinally" means "capable of movement in the direction of the line connecting the location of the pivot to the location of the pivot on the other end of the link element."

D. The Claimed Phrases From Claim 7: "pivotally fixed" and "pivotally mounted"

Complainant argued that the claimed phrases "pivotally fixed" and "pivotally mounted" have the same meaning and should be construed as "connected to allow rotation." (CBr at 33.) Complainant further argued that said phrases "cannot be construed so narrowly as to eliminate an

explicitly claimed configuration, particularly where the Applicant never disclaimed that claim scope in the specification or during prosecution" (CBr at 34); and that there is nothing in the '097 patent intrinsic record to limit said phrases to mean anything other than connected to allow rotation (CBr at 35).

Respondents argued that claim 7 recites that the linkage elements are pivotally fixed at one end and pivotally mounted at the other end; that a person of ordinary skill in the art upon reading the '097 patent specification and file history, and in conjunction with said person's knowledge, would understand that the claim term "fixed" means "not capable of movement;" that this understanding found in the claims, specification, and file history is confirmed by the general understanding of "fixed" which is "securely placed or fastened; stationary;" and that a person of ordinary skill would understand from the claims, specification, and prosecution history of the '097 patent that "mounted" means "attached," which is also consistent with said general understanding of the term "mounted." (RBr at 17.) Respondents further argued that in asserted claim 7, the word "pivotally" is before the words "fixed" and "mounted" to indicate that pivotal (rotational) movement is possible in each case, and thus "fixed" and "mounted" indicate whether or not the axis of the pivot may be translated; that a person of ordinary skill in the art would understand the claims and specification of the '097 patent to describe something that is "pivotally fixed" to be "capable of rotational movement about one axis and not capable of other movement;" and that a person of ordinary skill would also understand that "pivotally mounted" means "capable of rotational movement about an axis, but not necessarily restricted from other movement" in the context of the claims and specification of the '097 patent. (RBr at 17.)

The staff argued that "pivotally fixed" means "capable of rotational movement about one

axis and not capable of other movement" and that "pivotally mounted" has a broader definition and means merely "attached and capable of (but not necessarily restricted to) rotational movement about one axis." (SBr at 16.)

The pertinent language of claim 7 reads:

> a pair of linkage elements each pivotally fixed at one end to said first element at spaced intervals on said first element and each pivotally mounted at the other end to said second element at spaced locations spaced on said second element for movement of the support platform between the first and second positions and throughout such movement the attitude of said support platform remains substantially constant ... wherein the pivotal connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements, said first locking member being provided on said one link element and said second locking member being provided on the other of said elements, such longitudinal displacement being effective to move said locking members between their released and locked positions.

(JX-2 at 1:41-48,1:63-2:5 (emphasis added).) Thus, the administrative law judge finds that the plain language of claim 7 indicates that a "pivotal connection" may be either "pivotally mounted" or "pivotally fixed." Asserted claim 7 does not disclose whether "pivotally mounted" or "pivotally fixed" connections allow non-rotational movement, other than to require that the pivotal connections on either end of one of the link elements be displaceable longitudinally from each other. (Id. at 1:35-2:4.) Asserted claim 7 however requires that the connection between linkage elements and the first element, which attaches to the support platform, be "pivotally fixed," and that the connection between linkage elements and the second element, which attaches to the fixed base, be "pivotally mounted." (Id. at 1:41-47.)

Regarding the specification, complainant argued that the depiction of the seventh

embodiment in Figure 16 shows the connection between a linking element and the first element, i.e. a "pivotally fixed" connection, involving movement in a slot to effect "longitudinal displacement." (CBr at 34.) Complainant thus argued that "pivotally fixed" must allow for movement other than rotation, so as not to conflict with the seventh embodiment of the specification. (Id.) The specification however states that, in the seventh embodiment, the central axis of the elongate slot is oblique to the central axis of the related link element. (JX-1 at 6:2-5.) In contrast the specification states that the sixth embodiment's elongate slot is substantially parallel to the main axis of the related link member, then proceeds to state that said link member is therefore caused to move longitudinally. (Id. at 5:13-22.) This use of the term "longitudinally" is the only appearance of the word in any form in the '097 patent specification. (Id., generally.) While some claims of the original application leading to the '097 patent did not include the "displaceable longitudinally" limitation, the claims of the '097 patent after reexamination all include such limitation. (Id. at, e.g., 7:17-60; JX-2, generally.) The administrative law judge finds that, consistent with his construction of "displaceable longitudinally," supra, the seventh embodiment does not depict an embodiment with "longitudinal displacement" as required by asserted claim 7; and that the seventh embodiment is outside of the scope of said asserted claim. The other embodiments and figures in the '097 patent all have pivotal connections between the locking elements and the first element, i.e. "pivotally fixed" connections, that allow only rotational movement. (Id., generally.) The sixth, eighth, and ninth embodiments have pivotal connections between the locking elements and the second element, i.e. "pivotally mounted" connections, that also allow linear movement of the locking elements. (Id. at 5:5-49, 6:26-65, Figs. 11, 12, 17-21.) The administrative law judge therefore finds that "pivotally fixed"

connections are "capable of rotational movement about one axis and not capable of other movement," and "pivotally mounted" connections are "capable of rotational movement about an axis, but not necessarily restricted from other movement."

E. The Claimed Phrase From Claim 7: "pivotal connection"

Complainant argued that a person having ordinary skill in the art would understand the claimed phrase "pivotal connection" to mean "a connection position, or range of connection positions, having an axis about which rotation is allowed" and that said claimed phrase does not mean "a shaft or pin that joins something for rotation" because the claim language, specification, and prosecution history do not limit a pivotal connection to be at the same exact location of a pivot rod or pin. (CBr at 29-31.)

Respondents argued that construing the claimed phrase "pivotal connection" to mean "a connection position or a range of positions having an axis about which rotation is allowed" would not make sense in relation to the '097 patent; that pivotal connections cannot exist when the device is in a locked position; and that when a pivotal connection exists, it will always be coincident with the center line of pivot pin 30. (RBr at 18-19.)

The staff argued that the "pivotal connection" is defined by the connection point between the first or second element and the link element with which it connects where pivoting occurs; that asserted claim 7 supports a finding that said claimed phrase "pivoted connection" should be defined as more than just the pivot pin or pivotal axis; that asserted claim 7 uses said claimed phrase to refer to a connection between things; that said claimed phrase is therefore "the connection between the link element and the first or second element where pivoting occurs;" and that, though the "pivotal connection" is not the pivot pin or pivotal axis itself, it is coincident

with the location of the pivot axis, regardless of whether there is an elongate slot allowing for translatable movement, because the location of the pivot axis is the point at which pivoting occurs. (SBr at 16-18.)

Asserted, independent claim 7 discloses "the pivotal connection of one link element to one of said first and second elements" and "the pivotal connection of the one link element with the other of said elements." (JX-2 at 1:63-67.) Said claim also discloses that these two pivotal connections are "displaceable longitudinally from" each other. (Id.) The administrative law judge finds that the sixth embodiment, as shown in figures 11 and 12; the eighth embodiment, as shown in figures 17-19; and the ninth embodiment, as shown in figures 20 and 21, each have an elongate slot in the linking element and pivot pins on the element attached to the fixed base. (JX-1 at 5:5-37, 6:26-46, Figs. 11, 12, 17-21.)[9] Regarding the sixth embodiment, the specification discloses that the link member is caused to move on the pivot pin by virtue of the elongate slot. (Id. at 5:20-22.) Because, as found supra (Section XI.D), the opposite end of the link member is pivotally fixed to the element supporting the support platform, that pivotal connection moves with the link arm and the elongate slot therein. The eighth and ninth embodiments have generally similar forms to the sixth embodiment, with exceptions not relevant to the disputes regarding the claimed phrase "pivotal connection." (Id. at 6:26-46.) In each of those embodiments as the entire support means moves into and out of the locked position, the distance changes between the pivot pin on the element attached to the fixed base and the pivotal connection connecting the linking element and the element attached to the support platform. (Id.

[9] The single use of the claimed phrase "pivotal connection" in the specification (JX-1 at 6:54-60) does not pertain to the question of whether the pivot pin, the elongate slot, or any other structure determines the location of the pivotal connection.

at 5:5-37, 6:26-46, Figs. 11, 12, 17-21.) Thus, the administrative law judge finds that the language of asserted claim 7 requires displacement of the pivotal connections from each other, and the embodiments in the specification show displacement of the pivot pins relative to each other. The administrative law judge therefore finds that the location of a "pivotal connection" is coincident with the location of the pivotal axis, where the pivot pin is located.

Moreover while complainant's expert Pratt testified that a pivotal connection does not exist at the pivot point 30 in the locked position, he also stated, regarding pivotal connections, that "pivotal connection is coincident with its axis of rotation," and again, "pivotal connection is where I am indicating with the laser pointer. It is at the center line or the axis of this pivotal connection." (Tr. at 592.) Respondents' expert Wood testified that "a pivotal connection, according to a person of ordinary skill in the art, is a pivot that would be a shaft or pin about which something turns or rotates." (Tr. at 1207.) Thus both complainant's and respondents' experts agreed that where a pivotal connection exists, it is always coincident with the pivot axis or pivot pin. The administrative law judge therefore finds that the expert testimony is consistent with his findings regarding the location of the "pivotal connection."

Complainant argued that a "pivotal connection" can be a range of connection positions, alluding to the elongate slot, which allows movement of the pivot pin. However, in the sixth, eighth, and ninth embodiments, as the entire support means moves into and out of the locked position, the distance remains constant between the elongate slot and the pivotal connection connecting the linking element and the element attached to the support platform. (JX-1 at 5:5-37, 6:26-46, Figs. 11, 12, 17-21.) The administrative law judge thus finds that the location of a pivotal connection cannot be a "range of connection positions."

F. The Claimed Phrase From Claim 7: "throughout such movement the attitude of said support platform remains substantially constant"

Complainant argued that "platform attitude," as referred to in the claimed phrase, means "the angle of the plane passing through the platform support relative to some reference plane, such as the horizontal plane or the plane of a tabletop;" that substantially constant platform attitude is considered while the platform moves from one position to another while in an unlocked configuration; and that said claimed phrase should be construed to have its plain and ordinary meaning. (CBr at 21-22.)

Respondents argued that complainant's and respondents' experts proposed similar definitions of "attitude," recited in the claimed phrase, differing only in that respondents' expert Wood construed said term as "the angle of [the support] platform with respect to the horizon," while complainant's expert Pratt testified that said term denotes the angle of the plane passing through the platform support relative to some reference plane like the horizontal plane or the tabletop. (RBr at 18.)

The staff argued that "movement" in said claimed phrase means "movement of the support platform between the first and second positions;" that the plain and ordinary meaning of said claimed phrase applies; and that complainant's and respondents' experts concurred on the meaning of said claimed phrase. (SBr at 19.)

The administrative law judge finds that "throughout such movement the attitude of said support platform remains substantially constant" means "when moving between the first and second positions, the angle between the support platform and a reference, such as the horizontal plane, the plane of a tabletop, or the horizon, stays substantially the same," which is consistent

with the plain language of the claim and with the constructions proffered by the parties.

G. The Claimed Phrases From Claim 7: "supported on" and "provided on"

Complainant argued that both "provided on" and "supported on" should have their plain and ordinary meaning as "integral with or attached to" because asserted claim 7 of the '097 patent uses both terms interchangeably and consistently with the plain meaning. (CBr at 32.)

Respondents argued that "provided on" requires that elements touch one another; that "supported on" does not have this requirement; and that "integral with" does not have the same meaning as "attached to." (RBr at 19.)

The staff argued that the '097 patent and its prosecution history support the ordinary meaning of "supported on" and "provided on," and thus not limiting either claimed phrase in issue to direct contact between elements, and that there is no indication that construction of "supported on" or "provided on" changes whether washers can be used between elements. (SBr at 21.)

Asserted claim 7 claims, inter alia, "a second engagement face provided on a second locking member," and locking members "supported on" or "provided on" other elements. (JX-2 at 1:51-2:4.) The specification of the '097 patent uses the phrase "provided on" to refer to engagement faces on locking members and to locking members or other locking-related structures on other elements. (JX-1 at, e.g., 1:30-31, 3:21-27, 5:6-10.) The specification also uses the phrase "supported on" as used in the asserted claim and also to refer to the support platform's relationship to the element on which it rests and to locking surfaces on elements. (JX-1 at 1:27-28, 4:62-63; 6:30-31.) Asserted claim 7 and the specification disclose no further explanation as to whether any of these relationships between elements involve direct contact or

whether they may instead involve washers between the elements. (JX-1, generally; JX-2, generally.) The administrative law judge therefore finds that the intrinsic evidence makes no distinction between the claimed phrases "supported on" and "provided on," and that the intrinsic evidence does not require that either involve direct contact of elements.

The administrative law judge finds that "provided on" can encompass relationships wherein one element is "integral with" another or relationships wherein one element is "attached to" another; that "supported on" can likewise encompass both types of relationships between elements; and that complainant expert Pratt's testimony supports the meaning of both "provided on" and "supported on" to be "integral with or attached to." Thus the administrative law judge finds that both "supported on" and "provided on" mean "integral with or attached to."

H. The Claimed Phrase From Claim 34: "frictionally interengagable"

Complainant argued that "frictionally interengagable," which is found in the claimed phrase "locking members are adapted to be frictionally interengagable" of claim 34 of the '097 patent, relies on coulomb friction between two surfaces, such that the locking members must be specifically adopted to resist relative motion between the surfaces; that this type of frictional interengagement is distinct from the friction occurring between blocking surfaces; and therefore that a person having ordinary skill in the art would understand said claimed phrase to mean "engagable such that relative motion between the locking members is resisted by friction at the interfaces." (CBr at 36.) Complainant further argued that the patentee never expressly surrendered any subject matter, so the prosecution history does not limit asserted claim 34. (CRBr at 15-16.)

Respondents argued that a person having ordinary skill in the art would understand the

claimed phrase "locking members are adapted to be frictionally interengagable" to mean "friction retards movement between the locking members when they engage;" that therefore said claimed phrase excludes locking members that move relative to one another orthogonally, that is, at a 90° angle; that the '097 patent applicant in the prosecution conceded that serrated ratchets and pawls were within the scope of claim 34 by acquiescing to the following statement of the Examiner, made during prosecution history: "inasmuch as the locking members will engage, there will be friction between them;" and that complainant's expert Pratt contradicted himself during his testimony, admitting that a device with serrated teeth for locking members practiced claim 34. (RBr at 20.)

The staff argued that all locking mechanisms in the '097 patent and the related prior art have friction acting on the locking mechanisms in some way, if only because some friction is always present between engaged machine parts; that if "frictionally interengagable" involved any type of locking mechanism in which there is friction between the engagement faces, then asserted dependant claim 34 would have the same scope as asserted independent claim 7, from which claim 34 depends, and would therefore lack "patentable" significance; that adding a friction limitation would not have overcome the reexamination rejection because the Examiner noted that "inasmuch as the locking members will engage, there will be friction between them;" that therefore said claimed phrase means something more specific than respondents' construction; that said claimed phrase describes the ninth embodiment of the '097 patent, which shows a locking mechanism that relies only on the friction between engagement faces rather than on serration and pawl arrangements; and that therefore "frictionally interengagable" means "capable of locking interengagement by application of a frictional force sufficient to maintain a locked

position during normal use." (SBr at 21-22.)

Claim 7, from which claim 34 depends, includes "a locking means . . . comprising a first locking member . . . having a first engagement face engagable with a second engagement face provided on a second locking member." (JX-2 at 1:49-54.) The only additional limitation disclosed by asserted claim 34 requires that the "locking members are adapted to be frictionally interengagable when engaged with each other." (JX-2 at 3:7-15 (emphasis added).) It is undisputed that all of the locking mechanisms of the devices in the '097 patent and the related prior art have friction acting on them in some form or another, if for no other reason than because some friction is always present between parts of a machine that engage each other. (SFF I.54 (undisputed).) However, pursuant to the doctrine of claim differentiation, a specific limitation in a dependent claim raises a presumption that the limitation is not present in the independent claim, especially when the only difference between the independent and dependent claims is the limitation in dispute. Phillips, 415 F.3d at 1315; SunRace, 336 F.3d at 1303. Hence, the administrative law judge finds that not all locking means with engaging locking members, as recited in claim 7, are "frictionally interengagable."[10] Moreover, unasserted, dependent claim 4,

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[10] Prosecution history of the '097 patent further confirms the applicability of claim differentiation to asserted dependent claim 34 as it depends from asserted independent claim 7. In amending claim 34, the patentee stated:

> the Examiner asserts that claim[] . . . 34 . . . repeated subject matter already recited in claim 7. . . . Patentee amended claim 34 to remove the repeated subject matter, to depend from allowable claim 7, and to include the claim limitations from previously canceled claim 5, from which claim 34 had originally depended. Patentee respectfully requests that the Examiner remove the § 112 rejections of pending claim[] . . . 34.

(JX-3 at HMN00181810.) The Examiner subsequently removed the § 112 rejection of pending

which also depends from asserted independent claim 7, discloses only the limitation that "one of the locking members is serrated." (JX-2 at 1:28-29.) Thus, unasserted, dependent claim 4 and asserted, dependent claim 34 each disclose different types of locking members. Pursuant to the doctrine of claim differentiation, the administrative law judge finds that the scope of asserted, independent claim 7 includes some locking members that are not serrated. This finding is further shown by the specification of the '097 patent, which, in discussing the ninth embodiment, draws a distinction between serrated and frictionally interengagable locking surfaces, stating that:

> The exception provided by the ninth embodiment . . . relates to the nature of the locking inter-engagement between the locking surfaces. In previous embodiments the locking inter-engagement is effected through complementary serrated formation provided on the opposed locking surfaces. In the case of the ninth embodiment the locking surfaces are frictionally inter-engaged.

(JX-1 at 6:39-46 (emphasis added).) Furthermore, the '097 patent does not mention friction in its descriptions of any of the other embodiments, nor does the patent specification mention friction anywhere else. (See, generally, JX-1.) The administrative law judge therefore finds that locking means effected through serrated formations are one type of locking means, yet that locking means effected through serrated formations are not "frictionally interengagable" in the context of the '097 patent. The administrative law judge further finds that, in contrast with the locking means in the first through eighth embodiments, the ninth embodiment's locking with "frictionally interengagable" locking members is effected through friction. Thus, the administrative law judge finds that, to qualify as "frictionally interengagable" locking members,

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claim 34 and allowed claim 34 as amended. (Compare JX-3 at HMN00181806 with JX-2 at 5:8-16.) Thus, the administrative law judge finds that the Examiner had previously considered whether asserted claim 34 repeated subject matter from asserted claim 7 and had determined that the amended version of claim 34 did not do so.

locking members must involve friction as the principle on which they rely and not merely as an incidentally present force. Hence, the administrative law judge finds that a person having ordinary skill in the art would understand the claimed phrase "frictionally interengagable" to mean "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use," which is distinct from a serration arrangement. This finding is consistent with complainant's undisputed assertion that "[f]rictional locking relies on coulomb friction between the two surfaces." (CFF 5.100 (undisputed)(emphasis added).)

Regarding respondents' assertion that prosecution history necessitates inclusion of serrated ratchets and pawls in construction of "frictionally interengagable" locking means, respondents cited the Examiner's comments from reexamination that stated that "inasmuch as the locking members will engage, there will be friction between them." (RFF 67 (citing JX-3 at HMN00181644).) The Examiner's statement concerned cancelled original claim 5 as well as the original version of unasserted claim 6, which claims recited "support means . . . wherein locking members are adapted to be frictionally interengagable when engaged with each other," a phrase appearing in asserted claim 34 as it was amended during reexamination. (JX-3 at HMN00181615, 644; JX-1 at 7:55-60; JX-2 at 3:8-15.) However, neither cancelled original claim 5, nor the original version of unasserted claim 6, nor any of the claims from which said claims originally depended, contained the limitation of a longitudinally displaceable pivotal connection, a limitation present in asserted claim 7, from which asserted claim 34 depends. (JX-1 at 7:16-60; JX-2 at 1:65, 3:8.) Thus, the administrative law judge finds that the scope of asserted claim 34, which contains an element not present in original claims 5 and 6, viz. the limitation of a longitudinally displaceable pivoted connection, differs from the scope of cancelled original

claim 5 and the original version of unasserted claim 6. The administrative law judge therefore finds that the Examiner's rejection of said claims 5 and 6 does not apply to asserted claim 34. Furthermore, while claim 5 was cancelled after the remarks, supra, said claim depended from claim 1, which was simultaneously cancelled. (JX-3 at HMN00181677-78.) Likewise, claim 6 was amended, but the claimed phrase "frictionally interengagable" remained in said claim, and still remains in claim 6 in the reexamination certificate. (JX-3 at HMN00181678; JX-2 at 1:32-33.) Based on the foregoing, the administrative law judge finds that the Examiner's comment, which respondents used to support their argument, is no basis for inclusion of serrated ratchets and pawls within the scope of asserted, dependent claim 34.

XII. Infringement

Resolution of the question of infringement of patent claims requires a two-step analysis. First, the patent claims must be construed, as a matter of law, to determine their scope and meaning. Second, a factual inquiry must be conducted in order to compare the claims, as properly construed, to the accused device or process. See MBO Labs., Inc. v. Becton, Dickinson & Co., 474 F.3d 1323, 1329 (Fed. Cir. 2007); see also Zelinski v. Brunswick Corp., 185 F.3d 1311, 1315 (Fed. Cir. 1999) (citing Markman, 52 F.3d at 976).

The second step of the infringement analysis, which is a factual inquiry, focuses on whether the patent claims encompass the accused device or process literally or under the doctrine of equivalents. Zelinski, 185 F.3d at 1315. The complainant bears the burden of demonstrating infringement by a preponderance of the evidence. Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc., 424 F.3d 1293, 1310 (Fed. Cir. 2005). To prove literal infringement, a complainant must show that an accused product contains every limitation in the asserted claims. WMS

Gaming Inc. v. Int'l Game Tech., 184 F.3d 1339, 1350 (Fed. Cir. 1999). Alternatively, the accused products may also infringe the patent claims under the doctrine of equivalents if the differences between the accused products and the claimed invention are "insubstantial." Desper Prods. Inc. v. QSound Labs, Inc., 157 F.3d 1325, 1338 (Fed. Cir. 1998). Equivalency of an element of a claim to an element of an accused device is determined on an element-by-element basis at the time of infringement. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 40 (1997); Certain Electric Robots and Component Parts Thereof, Inv. No. 337-TA-530, Final Initial and Recommended Determinations, 2005 ITC LEXIS 868, at *107 (Dec. 19, 2005) (unreviewed).

"[P]rosecution history estoppel limits the broad application of the doctrine of equivalents by barring . . . equivalents . . . relinquished . . . during prosecution." Conoco, Inc. v. Energy & Envtl. Int'l, 460 F.3d 1349, 1363 (Fed. Cir. 2006); see also Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 733-34 (2002). Prosecution history estoppel arises in two ways: (1) by making a narrowing amendment to the claim ("amendment-based estoppel") or (2) by surrendering claim scope through argument to the patent examiner ("argument-based estoppel"). Deering Precision Instruments v. Vector Distribution Systems, Inc., 347 F.3d 1314, 1324-25 (Fed. Cir. 2003).

Specifically, amendment-based estoppel arises when a patentee makes "a narrowing amendment to satisfy any requirement of the Patent Act . . . ." Festo, 535 U.S. at 736. Amendments that do not narrow a claim's scope or do not affect patentability do not create amendment-based estoppel. However if the prosecution record shows no reason for the amendment, it is presumed that the narrowing amendment was made to satisfy the requirements

of patentability. Id. at 736, 739. Therefore, a patentee bears the burden of showing that narrowing amendments were not made for patentability purposes. Id.

Argument-based estoppel arises when a patentee makes statements that differentiate his invention from the prior art. See, e.g. Deering, 347 F.3d at 1326-27. A patentee invokes argument-based estoppel whenever the prosecution history "evince[s] a clear and unmistakable surrender of subject matter." Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc., 170 F.3d 1373, 1376-77 (Fed. Cir. 1999) (citation omitted). The court applies an objective test to determine when subject matter has been "clearly" and "unmistakably" surrendered: would "a competitor . . . reasonably believe that the applicant had surrendered the relevant subject matter." AquaTex Industries, Inc. v. Techniche Solutions, 419 F.3d 1374, 1382 (Fed. Cir. 2005)(quoting *Cybor*, 138 F.3d at 1457.) If the court determines that the patentee "clearly" and "unmistakably" surrendered equivalents, argument-based estoppel bars the elements at issue from encompassing the disavowed equivalents. Deering, 347 F.3d at 1326-27.

A. Accused Products

It is undisputed that the accused products can be organized into three categories: rear wedge-lock (or rear wedge brake) products (Rear Wedge Brake products), in which the wedge lock is located at the fixed base side of the assembly; the front wedge-lock products (Front Wedge Brake products), in which the wedge lock is located at the support platform side of the assembly; and the brake-shoe products (Brake Shoe products). (SFF II.1 (undisputed).) It is also undisputed that the Rear Wedge Brake products include the Original Momentum, Original Ovation, Revised Momentum, Revised Ovation, Original Momentum Sit/Stand, Original Ovation Sit/Stand, Bravo, and E2 products; that the Front Wedge Brake products unclude the

Elite, Pinnacle 1, and Pinnacle 2 products; and that the Brake Shoe products include the Revised Momentum sit/stand and the Revised Ovation sit/stand products (model numbers 8454D and 8458D). (CFF 6.1, 6.42, 6.88; RFF 286 (all undisputed).) It is further undisputed that, within each of these categories, the products all operate in substantially the same way. (RFF 281, 283, 285 (all undisputed).) The parties have agreed that the COMPX Classic Series, 9425 Series, 7070D Series, Duet Series, Evolution Series, Daytona Series, and 5846 Series products do not infringe the '097 patent. (RFF 287 (undisputed).) It is undisputed that JPX-10 is a representative Rear Wedge Brake product; that JPX-12 is a representative Front Wedge Brake product; and that JPX-14 is a representative Brake Shoe product. (SFF II.2, 9, 16 (undisputed).)

B. Front and Rear Wedge Brake Products

1. Claim 7

Complainant argued that both the accused Front and Rear Wedge Brake products practice all limitations of asserted claim 7. (CBr at 39-43.) Specifically regarding the "longitudinally displaceable" limitation, complainant argued that the pivotal connections are 5.56" apart in the unlocked configuration; that a locking force applied to the lower linkage element causes the right-side pivot pin to move to the right while the left side pin simultaneously moves in a direction coincident with a line through the pivotal connections; the displacement of the pivotal connections causes the distance between the pivotal connections to decrease to 5.5"; and that this movement means that the pivotal connections are displaceable longitudinally from each other. (CBr at 44-46.) Complainant further argued that the accused Front and Rear Wedge Brake products practice the same function of longitudinally displacing pivotal connections to move locking members into an out of engagement; that said products accomplish this in substantially

the same way as required by the claims because the pivot pins move longitudinally; that said products thereby achieve the same result of locking members into and out of engagement; and that therefore said products infringe asserted claim 7 under the doctrine of equivalents, even if the claim construction requires that pivot pins themselves displace longitudinally with respect to each other. (CBr at 47-48.) Regarding "ensnarement" of prior art, complainant argued that applying the doctrine of equivalents does not ensnare prior art because Bultman, U.S. Patent No. 1,176,272 (JX-64), does not allow displacement of pivotal connections. (CBr at 48-49.)

Respondents argued that the accused Front and Rear Wedge Brake products do not have identical or equivalent structure to satisfy the "support means" limitation because they do not have identical or equivalent structure to satisfy the "locking means" limitation within the "support means" limitation; that said accused products do not perform the functions of the "locking means" limitation because they do not practice the "displaceable longitudinally" limitation therein and because said accused products do not contain identical or equivalent structure to serrations or V-shaped grooves, which are corresponding structures to "locking means;" that because the distance between the pivot pins of said accused products does not change except within manufacturing tolerances, the pivots in said products do not displace longitudinally; that, during the reexamination, cancellation of claim 1 and amendment involving asserted claim 7 made the doctrine of equivalents unavailable for the "displaceable longitudinally" claim limitation; that even if the doctrine of equivalents were available, said accused products do not perform substantially the same function as the "longitudinal displacement" limitation, which has the function "to allow pivotal connections to be displaced relative to one another in the longitudinal direction;" that said accused products use clamping and

not longitudinal displacement of pivotal connections relative to one another to effect engagement; that said accused products have a wedge "supported on," rather than "provided on," a link element; that, in said accused products, friction between the ramp and the wedge does not cause the locking; that the accused Front Wedge Brake products have linkage elements pivotally mounted, but not pivotally fixed, to the first element adapted to be mounted to the support platform; and that therefore the accused Front and Rear Wedge Break products do not infringe the '097 patent literally or under the doctrine of equivalents. (RBr at 52-67.)

The staff argued that the pivotal connections of the accused Front and Rear Wedge Break products are not displaceable longitudinally from one another; that because the pivots in said accused products are not displaceable from each other at all, said accused products do not meet the "displaceable longitudinally" limitation under the doctrine of equivalents; that the accused Front Wedge Break products have link elements not pivotally fixed to the first element adapted to be mounted to the support platform; and that therefore the accused Front and Rear Wedge Break products do not infringe the '097 patent. (SBr at 24-28.)

It is undisputed that the accused Front and Rear Wedge Brake products are adapted to be mounted to a fixed base; that said accused products are adapted to be mounted to a support platform capable of attaining a first position at least partially below the fixed base and a second position in front of the fixed base; that said support platform ranges between these positions as the linkage arms articulate; and that said accused products include a first element adapted to mount a support platform and a second element adapted to be mounted to a fixed base. (CFF 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.48, 6.49, 6.50, 6.51, 6.53, 6.54 (all undisputed).)

It is further undisputed that the accused Rear Wedge Brake Products include a pair of

linkage elements each pivotally fixed at one end to the first element at separate and distinct spaced intervals on the first element and each pivotally mounted at the other end to the clevis (second element) at separate and distinct spaced locations on the clevis; and that the linkage elements are capable of rotation when unlocked to allow movement of the support platform between the first and second positions. (Compare CFF 6.11 with RRCFF 6.11A.)

The parties dispute whether the linkage element connections to the first element in the accused Front Wedge Brake products meet the "pivotally fixed" limitation. The administrative law judge found, supra, that "pivotally fixed" connections are "capable of rotational movement about one axis and not capable of other movement." The accused Front Wedge Brake products have a pivotal connection with a translatable pivot between a linkage element and the "first" element adapted to be mounted to the support platform, i.e., a pivotal connection that is not "pivotally fixed." (CX-261C.) Moreover, respondents' expert Wood, whose constructions of "pivotally mounted" and "pivotally fixed" are consistent with those of the administrative law judge, testified that, in the accused Front Wedge Brake products, the linking element is "pivotally mounted" but not "pivotally fixed" to the first element. (Tr. at 1286.) The administrative law judge therefore finds that the accused Front Wedge Brake products do not include "linkage elements each pivotally fixed at one end to said first element," as required by asserted independent claim 7 of the '097 patent.

It is undisputed that the accused Front and Rear Wedge Brake products can lock the support platform in a range of positions including said second position. (Compare CFF 6.12, 6.57 with RRCFF 6.11A, 6.57.)

The administrative law judge found, supra, that "displaceable longitudinally" means

"capable of movement in the direction of the line connecting the location of the pivot to the location of the pivot on the other end of the link element" and also that the location of a "pivotal connection" is coincident with the location of the pivotal axis, where the pivot pin is located. It is undisputed that the distance between the pivot pins of the Front and Rear Wedge Brake products does not change except within manufacturing tolerances. (RFF 306 (undisputed).) The administrative law judge therefore finds that the accused Front and Rear Wedge Brake products do not have pivotal connections that are "displaceable longitudinally" from each other, and thus that said accused products do not literally meet the "displaceable longitudinally" limitation of asserted claim 7 of the '097 patent.

Complainant asserts that, if not literally infringing, the accused Front and Rear Wedge Brake products meet the "longitudinally displaceable" limitation under the doctrine of equivalents. It is undisputed that asserted, reexamined claim 7 is an independent claim, but original claim 7 depended from original claim 1 and that claim 1 was cancelled during the reexamination. (RFF 314, 315 (both undisputed).) Asserted, reexamined claim 7 consists of original claim 1 plus original claim 7, which included the "displaceable longitudinally" limitation. (Compare JX-1 at 7:16-48 with JX-2 at 1:35-2:4.) Thus, original dependent claim 7 was rewritten in independent form during the reexamination. However, the Federal Circuit has ruled that "rewriting of dependent claims into independent form coupled with the cancellation of the original independent claims creates a presumption of prosecution history estoppel." Honeywell Int'l Inc. v. Hamilton Sundstrand Corp., 370 F.3d 1131, 1134 (Fed. Cir. 2004). The Court in Honeywell further stated that it had consistently held that "canceling a broader independent claim and replacing it with a dependent claim rewritten into independent form was a

'clear surrender of the broader subject matter' that presumptively barred application of the doctrine of equivalents." Id. at 1143. Again, it is undisputed that original dependent claim 7 was rewritten in independent form during the reexamination. Complainant did not attempt to overcome the presumption set forth in Honeywell, but merely stated that the prosecution history does not provide a reason for the amendment. (CRRFF 313.) The administrative law judge therefore finds that the doctrine of equivalents does not apply to the "displaceable longitudinally" limitation of asserted independent claim 7 of the '097 patent.

Because the accused Rear Wedge Brake products lack longitudinally displaceable pivotal connections, the administrative law judge finds complainant has not shown, by a preponderance of the evidence, that they infringe asserted independent claim 7 of the '097 patent. Because the accused Front Wedge Brake products lack linkage elements each pivotally fixed at one end to said first element and longitudinally displaceable pivotal connections, the administrative law judge finds that complainant has also not met its burden in establishing that said Front Wedge Brake products infringe asserted independent claim 7 of the '097 patent.

2. Claim 34

Regarding infringement of asserted dependent claim 34 by the Front and Rear Wedge Brake products, complainant argued that locking members' engagement faces frictionally interengage to lock the device and keep themselves engaged, therefore practicing the "frictionally interengagable" limitation of said asserted dependent claim. (CBr at 49.)

Respondents argued that, in the accused Front and Rear Wedge Brake products, friction between the ramp and the wedge is not sufficient to cause locking; that clamping across the link arms causes locking; and that therefore said accused products do not practice the "frictionally

interengagable" limitation of asserted dependent claim 34. (RBr at 67.)

The staff argued that the Front and Rear Wedge Brake products do not infringe asserted dependent claim 34 because they do not infringe asserted independent claim 7, from which asserted claim 34 depends. (SBr at 24-28.)

With respect to whether the accused Front and Rear Wedge Brake products include "locking members [that] are adapted to be frictionally interengagable when engaged with each other," as disclosed by asserted dependent claim 34 (JX-2 at 3:9-16; CFF 6.39-41, 6:85-87), the administrative law judge has found, supra, that "frictionally interengagable" means "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use." Based on the administrative law judge's examination of JPX-10 and JPX-12 subsequent to the evidentiary hearing, and with reference to CX-283.6C and CX-283.7C, the interfaces between the linking elements and the first or second elements are of greater area than the interfaces between the locking members. (JPX-10; JPX-12; CX-283.6C; CX-283.7C.) The administrative law judge further finds that the wedges, which are locking members, are of smoother texture than the linking elements and the first and second elements. (JPX-10; JPX-12.) Because the surface area and roughness between the linking elements and first or second elements are greater than between the locking members, the administrative law judge finds that the interface between the linking elements and first or second elements is primarily responsible for the friction keeping the accused Front and Rear Wedge Brake products in the locked position, rather than the locking members as required by asserted claim 34. Regarding JPX-10, the accused Rear Wedge Brake product, complainant's expert Pratt testified that

> the first locking member, which is supported on the lower link, is pushed up the ramp of the clevis, exerting a tensile force on the bolt, which clamps the side walls of the link member, the upper link, and the clevis [second element] side walls into intimate contact to frictionally lock this thing in whatever position I put it

(Tr. at 741 (emphasis added).) Pratt further testified that his infringement analysis regarding JPX-12, the accused Front Wedge Brake products, was no different than for the accused Rear Wedge Brake products. (Tr. 801.) Thus, complainant's expert Pratt's testimony is consistent with the administrative law judge's finding that the friction between the linking elements and the first or second elements is primarily responsible for the locking in said accused products. Because the friction between the locking members is itself insufficient to maintain a locked position in normal use, as the linking elements and the first or second elements are primarily responsible for the locking in said accused products, the administrative law judge finds that the locking members of the accused Front and Rear Wedge Brake products are not frictionally interengagable in the context of the asserted '097 patent.

The administrative law judge has found, supra, that the accused Front and Rear Wedge Brake products do not infringe asserted independent claim 7. The administrative law judge has further found, supra, that said accused Front and Rear Wedge Brake products do not have frictionally interengagable locking members. Based on the foregoing, the administrative law judge finds that said Front and Rear Wedge Brake products do not infringe asserted dependent claim 34 of the '097 patent.

C. Brake Shoe Products

1. Claim 7

Complainant argued that all limitations of claim 7 are contained in the Brake Shoe

products, as per a chart contained in CBr at 51-55. Specifically, complainant argued that the Brake Shoe products are support means for supporting a support platform and that the first bracket element is adapted to mount a support platform (CBr at 50-51; CFF 6.96); that the first bracket element and support platform are attached to a second bracket element by a pair of linkage arms 15 and 16, all of which form a "four bar linkage" (CFF 6.99); that this second bracket element is adapted, through an attached slide plate, to mount to a slide track assembly fixedly attached to the underside of a work surface that acts as a fixed base (CFF 6.97; CFF 6.92); that the first bracket element (and attached support platform) ranges between first and second positions as the linkage arms articulate, including positions in front of and partially below the fixed base (CFF 6.99); that bracket part 14 functions as the first element and is adapted to be mounted to the support platform (CFF 6.96); that second element 13 is an inverted U-shaped bracket riveted to a slide plate (CFF 6.92; CFF 6.97); and that this unitary component is adapted to be affixed to a fixed base by mounting within a slide track assembly fixedly attached to the work surface/fixed base underside (CFF 6.92).

Complainant also argued that the Brake Shoe products include two linkage elements consisting of an upper arm 16 and a lower arm 15 (CFF 6.99); that the upper and lower arms are pivotally fixed at one end to the first element because they are connected to allow rotation at the connections when the device is unlocked (CFF 6.99); that these connections are at spaced intervals because they are separate from each other at all times (CFF 6.99); that the upper and lower arms are pivotally mounted at the other ends to the second element because they are mounted to allow pivoting at spaced locations when the device is unlocked (CFF 6.99); that these pivotal connections are at spaced locations because they are separate from each other at all times

(CFF 6.99); and that as shown in CX-283.12C, the outer arm pivot point (upper pivot) is spaced away from the inner arm pivot point, and that this element is met whether or not the support means is construed as means plus function with parallelogram linkages as linked structures, because evidence presented at the hearing established that non-parallelogram linkages are equivalent structures to parallelogram linkages, particularly in terms of maintaining the platform at a substantially constant attitude (CFF 6.99).

Complainant further argued that the Brake Shoe products include a locking means that locks the support platform in a range of positions (CFF 6.100; CFF 6.101); that the first locking member 36 is attached to, and moves with, the lower linkage element 15 (CFF 6.103); that the first locking member 36 includes the first engagement face (CFF 6.104); that this first engagement face engages with a second engagement face provided on the second locking member 35 which is a three-quarter moon shaped brake shoe attached to the inside of the second element 13 (CFF 6.104); that upon a force exerted to the link element through tilting the first element, the first locking member moves relative to the second locking member to disengage and allow the platform assembly to move relative to the fixed base to the position desired by the operator (CFF 6.105); that the locking members release from each other when a force is applied to the support platform (CFF 6.105); that the force moves the first engagement face away from the second engagement face to allow repositioning the platform to any of a plurality of desired positions (CFF 6.105; CFF 6.105); that when the force is released, it is effective to cause the engagement faces to re-engage to retain the second element relative to the first element in the desired positions (CFF 6.106); that the pivotal connection of the lower linkage element and the second element exists where the linkage element 15's curved slot mounts to the pivot pin

attached to the second element (CFF 6.107); that the curved slot allows the lower linkage element 15's pivotal connections at either end of the lower linkage element 15 to displace longitudinally from one another (CFF 6.108); that longitudinal displacement allows the distance between the lower linkage element's pivotal connection on the first element and the lower linkage element's pivotal connection on the second element to be increased or decreased (CFF 6.109); and that the Brake Shoe products have a first locking member 36 provided on the lower link element 15 and a second locking member 35 provided on the second element 13. (CFF 6.103; CFF 6.110.)

In addition, complainant argued that the first locking member is attached to the end of lower linkage element 15, facing toward the second element 13. (CFF 6.103; CFF 6.110); that the second locking member is a three-quarter moon shaped brake shoe attached to the inside of the second element 13 (CFF 6.103; CFF 6.110); that when a force is applied to the support platform or first element 14, longitudinal displacement of the lower link element's pivotal connections is effective to disengage the first locking member engagement face from the second locking member engagement face, thus moving them between their released and locked positions (CFF 6.111); and that subsequent release of that force causes longitudinal displacement in the opposite direction thus causing the locking member engagement faces to reengage to lock the first element and platform in the desired position (CFF 6.111).

Respondents argued that the claimed phrase of asserted claim 7 "throughout such movement the attitude of said support platform remains substantially constant" is a functional limitation of the "support means" limitation, which includes the "locking means" limitation; that both a counterweighted support platform and a parallelogram linkage are corresponding structure

to the "support means" limitation; that the combination of these would allow for this function to be performed, but that complainant failed to identify a parallelogram linkage in any of the accused devices; that complainant did not identify what party, if any, attaches a support platform to the accused devices; and that complainant presented no evidence that the accused devices contain identical or equivalent structure to the "support means" or "locking means" limitation under respondents' construction. (RBr at 69-70.)

The staff argued that the evidence shows that the Brake Shoe products meet every limitation of claim 7 and therefore infringe asserted claim 7. (SBr at 28; see also SFF II.19-II.40.)

It is undisputed that each of the Brake Shoe products is a keyboard support mechanism configured to be mounted to a fixed base, such as a desk; that the support platform of the Brake Shoe products can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base; that each of the Brake Shoe products has a bracket, or first element, adapted to be mounted to the keyboard support platform; that each of the Brake Shoe products has a bracket or assembly (sometimes referred to by the parties as a "clevis assembly") that is adapted to be affixed to a fixed base, such as a desk; that each of the Brake Shoe products has two linkage elements (arms) that connect the first element (bracket) on the keyboard side of the mechanism to the second element (bracket/assembly) on the fixed base (desk) side of the mechanism; and that the pivotal connections between the linkage elements and the first element and, separately, the linkage elements and the second element, are at "spaced intervals" because there is space between them at all times. (SFF 11.19, SFF 11.21, SFF 11.22, SFF 11.23, SFF 11.24, SFF 11.26, SFF 11.28, SFF 11.29 (all undisputed).)

Further, it is undisputed that these pivotal connections allow the support platform to

move due to pivoting of the link elements on the first and second elements; that each of the Brake Shoe products has a first component of the locking mechanism (a first locking member) that is supported on the end of the lower link element that faces the second element and moves with the lower link element; and that the first locking member on the Brake Shoe products has an engagement face on the end of the lower link arm that engages with a second engagement face provided on a second component of the locking mechanism (a second locking member) which is an ear-shaped brake-shoe attached to the inside of the second element (the bracket/assembly on the fixed base side). (SFF 11.29, SFF 11.32, SFF 11.33 (all undisputed).)

It is also undisputed that, in the Brake Shoe products, applying a force to tilt the keyboard support platform (or first element) causes the locking members to release from one another because the second locking member (and second engagement face) is pulled away from the first locking member (and first engagement face); that while disengaged, the keyboard support platform can be repositioned relative to the base to any of more than one desired positions within the range of possible positions; that in the Brake Shoe products, when the force to the keyboard support platform (or first element) is released, the weight of the keyboard support platform side of the mechanism moves the lower link element toward the second element, which reengages the first and second engagement faces and holds the second element relative to the first element in the position at which the user releases the force to the platform (or first element); that the pivotal connection of the lower link element to the second element (desk side) in the Brake Shoe products is displaceable from the pivotal connection of the lower link element to the first element (keyboard support platform side) because the movement within the arcuate slot provided on the lower link element on the end towards the second element allows the distance between the lower

link element's pivotal connections to the first and second elements be increased or decreased; that, more specifically, the front pivotal connection in the Brake Shoe product moves about half an inch, whereas the rear pivotal connection is fixed, and the distance between the two connections on the lower link therefore increases and decreases; that in the Brake Shoe products, when a force is applied to the keyboard support platform/first element, longitudinal displacement of the lower link arm disengages the first engagement face of the first locking member from the second engagement face of the second locking member; and that release of that force to the keyboard support platform/first element causes the link arm to move towards the second element (on the fixed base side) and reengage the first locking member with the second locking member. (SFF 11.34, SFF 11.35, SFF 11.36, SFF 11.37, SFF 11.38, SFF 11.40 (all undisputed).)

It is further undisputed that the Brake Shoe products are adapted to be mounted to a fixed base through a slide plate which is inserted into a slide track, attached to the underside of a work surface (CFF 6.92 (undisputed)); that the Brake Shoe products include a locking means for locking the support platform in a range of positions including the second position (CFF 6.100 (undisputed)); and that the first locking member of the Brake Shoe products is provided on the lower link element and the second locking member is the brake shoe and is provided on the clevis/second element (CFF 6.110 (undisputed).)

Moreover, it is undisputed that the Brake Shoe products include a pair of linkage elements each pivotally fixed at one end to the first element at separate and distinct spaced intervals on the first element and each pivotally mounted at the other end to the clevis at separate and distinct spaced locations spaced on the clevis, and that the linkage elements are mounted to be capable of rotation to allow movement of the support platform between the first and second

positions. (CFF 6.99 (undisputed in relevant part).)[11] Thus, in view of what is undisputed, the administrative law judge finds that the only element of asserted claim 7 remaining in dispute with respect to the accused Brake Shoe products is "throughout such movement the attitude of said support platform remains substantially constant ...."

With respect to said element in dispute, the administrative law judge has found in the claim construction section, supra, that said element, viz. "throughout such movement the attitude of said support platform remains substantially constant," is construed as "when moving between the first and second positions, the angle between the support platform and a reference, such as the horizontal plane, the plane of a tabletop, or the horizon, stays substantially the same." It is undisputed that JPX-14 is a representative Brake Shoe Product (SFF II.16 (undisputed)) and that CX-367C, page CompX0071748, is a fair and accurate representation of the physical COMPX Brake Shoe products (CFF 6.91 (undisputed)). The first element adapted to be mounted to a support platform, as recited by asserted claim 7, is the part labeled B458160. (CX-367C at CompX0071748.) The administrative law judge examined JPX-14 after the evidentiary hearing and found that there are instructions imprinted on JPX-14 explaining how to move said first element, viz. "TO RAISE: ☐GRASP TRAY ☐LIFT" and "TO LOWER: ☐TILT TRAY UP ☐LOWER." He further found that, beginning with said part in a first position, when said part is

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[11] Thus, respondents state in RRCFF 6.99A:

> The Brake Shoe products include a pair of linkage elements each pivotally fixed at one end to the first element at separate and distinct spaced intervals on the first element and each pivotally mounted at the other end to the clevis at separate and distinct spaced locations on the clevis. The linkage elements are capable of rotation to allow movement of the support platform between the first and second positions. (same citations as CFF 6.99 above)

tilted up and pushed down, said part moves and that when the tilt is no longer maintained (that is, when said part is released), said part stops and is in a locked, second position. Thus, while moving between said first position and said second position, the administrative law judge found that the first element adapted to be mounted to a support platform remains at substantially the same tilt. The administrative law judge notes that JPX-14 also has part number 5732150, which is a knob which can be tightened to hold said first element at a certain angle. (See JPX-14; CX-367C at CompX0071748.) In examining JPX-14 subsequent to the evidentiary hearing, the administrative law judge both loosened and tightened said knob, and found that said knob had no effect on the process of lowering said part.[12] Based on the foregoing, the administrative law judge finds that the accused Brake Shoe products do practice the claimed element, "throughout such movement the attitude of said support platform remains substantially constant ...." Thus, the administrative law judge finds that the accused Brake Shoe products do practice each element of asserted claim 7 and therefore complainant has established, by a preponderance of the evidence, that said products infringe said claim.

With respect to respondents' argument that complainant failed to identify a parallelogram linkage in any of the accused devices, and that complainant did not present any evidence that the accused devices contain identical or equivalent structure to the "support means" or "locking means" limitation under respondents' construction, the administrative law judge has found, supra, that asserted claim 7 is not a means-plus-function claim, and that a parallelogram linkage

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[12] With respect to the process of raising said first element, the administrative law judge found during said examination that when said knob was tightened, said first element remained at the same tilt throughout the motion. He further found that when the knob was loosened, it was unnecessary to change the tilt of said first element during said motion.

is not a requirement of the claims.

Respondents argued that complainant failed to identify an infringer because complainant did not identify what entity attaches a support platform to the accused devices. However, the language of claim 7 reads in pertinent part:

> A support means for supporting a support platform from a fixed base ...

(JX-2 at 1:35-36.) Thus, the plain language of asserted claim 7 discloses an invention "for supporting a support platform from a fixed base ...," and does not claim the support platform itself.

2. Claim 34

Claim 34 depends from claim 7 and includes the further limitation "wherein the locking members are adapted to be frictionally interengagable when engaged with each other." (JX-002: col. 3, lines 7-15.)

Complainant argued that the Brake Shoe products include this dependent limitation as well as all limitations from independent claim 7. (CFF 6.81 – 6.96.) Specifically, complainant argued that, in the Brake Shoe products, the first locking member engagement face engages with the second locking member engagement face through friction sufficient to maintain the first and second locking members in a locked position, and thus effective to cause the locking members' engagement faces to re-engage to retain the second element relative to said first element in the desired positions (CFF 6.112; CFF 6.113) and hence the locking members are frictionally interengageable and do not lock through blocking (CFF 6.114; CFF 6.115).

Respondents argued that friction between the lower link arm and the brake shoe is

insufficient to cause locking; that the Brake Shoe products operate by applying an actuating force from the lower link arm to a brake shoe, and that said actuating force causes the brake shoe to rotate and frictionally engage the upper link arm, causing locking; that the engagement between the brake shoe and the upper link arm cannot meet the limitation of claim 34 because the claim does not permit the upper link arm to be one of the locking members because the pivotal connections on the upper link arm are not displaceable longitudinally, while said claim requires that "said first locking member being provided on said one link element;" and that said one link element must be the lower link element, not the upper link element, because the lower link element is the one that is displaceable longitudinally. (RBr at 68-69.)

The staff argued that the evidence shows that the Brake Shoe products meet every limitation of claim 34 and therefore infringe asserted claim 34. (SBr at 28; see also SFF II.19-II.42.)

The administrative law judge has found, supra, that each element of claim 7, from which claim 34 depends, is practiced by the accused Brake Shoe products. Thus, it must be determined if said Brake Shoe products practice claim 34, which reads:

> A support means as claimed at claim 7 wherein locking members are adapted to be frictionally interengagable when engaged with each other.

(JX-2 at 3:8-15.) The administrative law judge has found in the claim construction section, supra, that said element of claim 34 is construed as "capable of locking engagement by application of only a frictional force sufficient to maintain a locked position during normal use," which is distinct from a serration arrangement. It is undisputed that the upper link element on the Brake Shoe products engage frictionally with the brake shoe on said products. (CFF 6.113

(undisputed).) Moreover, respondents' expert Wood testified:

Q. Where is the braking force on this brake shoe product?

A. It is between -- in this picture [RDX-1A.50] there's a dark region that looks like a three-quarter moon that has a bolt through it, a pivot point through it. You can see the hexagonal bolt pin that goes through it. That brake force occurs between that element -- that element, that brake shoe, and the upper link arm, which we can see -- the best way to describe the upper link arm in this photo for the record would be it's actually inside. Or if we look at a -- if you look at an axis that goes into the picture, it's inside and partially being covered up by that three-quarter moon. That's the upper link arm that interacts with the surface of the brake shoe as it rotates to cause frictional engagement for sufficient force to lock the mechanism.

* * *

Q. Dr. Wood, where is the force that actuates the brake shoe applied?

A. It's initially applied at the support platform.

Q. And then where does it go from there?

A. Goes through the support platform through the first element. And in the picture on RDX-1A.50 it would be on the -- it would travel or be transmitted down the lower link element which is shown as -- on the photo in the upper left-hand corner, which has the pivot going through a[n] arcuate slot, and it's the ear-shaped portion that's furthest out in the picture.

Q. And how does the actuating force then get transmitted through the brake shoe to create the braking force?

A. The force then gets transmitted into the pivot. That force is then transmitted into an insert that goes in here where that slot is. That insert then interacts with an ear or a projection from the brake shoe, which I described earlier from the exhibit, where there was a brake pivot point just below that, as well as an actuating force was shown with an arrow with three heads on it. That ear is shown just inside that lower link element I described. The force gets transmitted from the insert to the brake shoe at that point, and then

sliding occurs at that point because there's a compression between the two.

Q. So in summary, Dr. Wood, an actuating force on the lower link arm causes a brake shoe to pivot and brake against an upper link arm, correct, sir?

A. Correct. Where the locking surfaces are.

(Tr. at 1257-61 (emphasis added).) Thus, respondents' expert has stated that the locking of the Brake Shoe products use "frictional engagement for sufficient force to lock the mechanism..." and that an actuating force on one link arm causes a brake shoe to brake against another link arm. In addition, complainant's expert Pratt testified:

Q. And the same question for the brake shoe product, does that use frictional locking?

A. It does.

Q. And that friction is sufficient to lock the product?

A. It is.

(Tr. at 1014.) Thus, based on the undisputed findings and the testimony of both private parties' experts, the administrative law judge finds that the accused Brake Shoe products practice asserted claim 34 and therefore that complainant has established, by a preponderance of the evidence, that said products infringe asserted claim 34.

Respondents have argued that the engagement between the brake shoe and the upper link arm cannot meet the limitation of claim 34 because the claim does not permit the upper link arm to be one of the locking members because the pivotal connections on the upper link arm are not displaceable longitudinally. Said asserted claim 7, however, reads in pertinent part:

wherein the pivotal connection of one link element to one of said

> first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements, said first locking member being provided on said one link element and said second locking member being provided on the other of said elements...

(JX-2 at 1:63-2:2 (emphasis added).) Thus, based on the plain language of the claims, there is no limitation as to which specific link element must be displaceable longitudinally. It is undisputed that the Brake Shoe products have a link element that is displaced longitudinally. (SFF II.40 (undisputed).)

XIII. Domestic Industry

As a prerequisite to finding a violation of Section 337, complainant 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)(2). The domestic industry requirement of section 337 consists of two prongs: the technical prong and the economic prong. Certain Variable Speed Wind Turbines and Components Thereof, Inv. No. 337-TA-376, USITC Pub. 3003, Comm'n Opinion at 14-17 (1996).

A. Technical Prong

For purposes of satisfying the technical prong of the domestic industry requirement, the test for claim coverage is the same as the test for claim coverage used in patent infringement determinations. See Print Cartridges, Inv. No. 337-TA-446, Comm'n Op. at 6, (May 2, 2002). Thus, the patent claims are construed, then the complainant's products are compared against the construed claims to determine whether it practices each and every claim limitation. See id. at 6-9. To satisfy the technical prong of the domestic industry requirement, complainant Humanscale need only establish that it practices one of the asserted claims of the '097 patent. Id. at 5 n.3.

Complainant argued that its KM mechanism, an exemplary mechanism, performs the limitations of asserted independent claim 7 and asserted dependent claim 34, as do the G series (including variants C, AD, and SM) and DS models; that, specifically regarding "support means," the KM product is a support means for supporting a support platform; and that, specifically regarding the limitation "wherein the locking members are adapted to be frictionally interengagable when engaged with each other" of asserted dependent claim 34, the KM mechanism's locking member engagement faces are non-serrated surfaces that wedge into each other, creating friction that resists motion. (CBr at 79-84.)

Respondents argued that complainant's products have a non-parallelogram linkage and that, because said products do not have a parallelogram linkage structure for "support means," they do not practice asserted independent claim 7. (RBr at 73-74.)

The staff argued that complainant's KM product, an exemplary product for this analysis, practices each and every limitation of asserted independent claim 7; that complainant's expert Pratt has testified that the KM product also satisfies the "frictionally interengagable" limitation of asserted dependent claim 34; and that therefore complainant's product satisfies the technical prong. (SBr at 62-66.)

It is undisputed that the KM product is a keyboard support mechanism configured to be mounted to a fixed base, such as a desk, where the platform is moveable between a position, at least partially below the fixed base, to a second position in front of the fixed base. (SFF V.3; SFF V.5; CFF 8.6 (all undisputed).) Further, the KM product has a bracket, or first element, adapted to be mounted to the keyboard support platform, and Humanscale's KM device has a second element including an attached slide plate, adapted to be affixed to a fixed base through a slide

track assembly fixedly attached to the underside of a work surface, such as a desk. (SFF V.6; SFF V.7; CFF 8.8; CFF 8.9 (all undisputed).)

It is further undisputed that the KM product has two linkage elements (arms) that connect the first element (bracket) on the keyboard side of the mechanism to the second element (bracket/assembly) on the fixed base (desk) side of the mechanism, and on the keyboard side of the mechanism, the linkage elements are "pivotally fixed" to the first element; and these connections are at "spaced intervals" because there is space between them at all times. (SFF V.8; SFF V.10 (all undisputed); SFF V.9 (undisputed in relevant part)[13].) Also, on the fixed base (e.g., desk) side of the mechanism, the linkage elements are "pivotally mounted" to the second element, where they are capable of pivotal movement, and these connections are at "spaced locations" because there is space between them at all times. (SFF V.11, SFF V.12 (all undisputed).) These pivotal connections allow the support platform to move due to pivoting of the link elements on the first and second elements. (SFF V.13 (undisputed).) Moreover, the KM product contains a locking mechanism (comprised of elements enumerated below) that locks the keyboard support platform in a range of positions, including in front of the fixed base (e.g., desk). (SFF V.15 (undisputed).)

It is also undisputed that the KM product has a first component of the locking mechanism (a first locking member) that is "supported on" the lower link element by being part of and incorporated into the end of the locking member facing toward the second element. (SFF V.16, CFF 8.13 (all undisputed).) The first locking member on the KM products has an engagement

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[13] SFF V.9 was undisputed by respondents, and complainant objected only with respect to the construction of pivotally fixed. Complainant did not object to these connections being pivotally fixed.

face on the end of the lower link arm that engages with a second engagement face provided on a second component of the locking mechanism (a second locking member) which is an arcuate locking member attached to the second element (the bracket/assembly on the fixed base side). (SFF V.17; CFF 8.14 (all undisputed).) The Humanscale KM device is further repositioned by applying a force to tilt the keyboard support platform (or first element) which causes the locking members to release from one another because the lower link arm and first locking member (and first engagement face) are pulled away from the second locking member (and second engagement face); and that once the device is in the desired position, the force is released and the platform locks into position. (SFF V.18; CFF 8.7 (all undisputed).) While disengaged, the keyboard support platform of the KM product can be repositioned relative to the base to any of more than one desired positions within the range of possible positions. (SFF V.19 (undisputed).)

It is further undisputed that, in the KM product, when the force to the keyboard support platform (or first element) is released, the weight of the keyboard support platform side of the mechanism moves the lower link element toward the second element, which reengages the first and second engagement faces and holds the second element relative to the first element in the position at which the user releases the force to the platform (or first element). (SFF V.20 (undisputed).) The Humanscale KM device locking members also are moveable relative to each other, and upon exertion of a force to one of the two elements for moving the locking members to a released position at which the engageable faces are disengaged for subsequent movement of the support platform. (CFF 8.15 (undisputed).) In the Humanscale KM device, the locking members are further moved into and out of engagement by rotating the support platform about its upper pivot axis, and this moves the locking member engagement faces in and out of

engagement. (CFF 8.16 (undisputed).) The pivotal connection of the lower link element to the second element (desk side) in the KM product consists of a connection between an elongate slot and pivot pin, which is displaceable from the pivotal connection of the lower link element to the first element (keyboard support platform side) because the movement of the pivot pin within the elongate slot provided on the lower link element on the end towards the second element allows the distance between the lower link element's pivotal connections to the first and second elements to be increased or decreased. Also the Humanscale KM device has pivotal connection on the lower linkage element that is displaceable longitudinally from the pivotal connection of the link element to the other member, which longitudinal displacement causes the distance between the pivotal connections to increase or decrease. Moreover in the Humanscale KM device, the longitudinal displacement is effected to move the locking members between their released and locked positions. (SFF V.21, CFF 8.18, CFF 8.21 (all undisputed).)

In addition for the KM product, it is undisputed that the first locking member is provided on the fixed base end of, and incorporated into, the lower link arm, and the second locking member is an arcuate member bolted onto the second element (the bracket/assembly on the fixed base side) to engage with the first locking member on the adjacent end of the link arm and that the Humanscale KM device has a first locking member on the end of the first link element and a second locking member that is attached to the second element/clevis. (SFF V.22, CFF 8.20 (all undisputed).)

In the KM product, it is undisputed that when a force is applied to the keyboard support platform/first element, longitudinal displacement of the lower link arm (described supra.) disengages the first engagement face of the first locking member from the second engagement

face of the second locking member; that release of that force to the keyboard support platform/first element causes the link arm to move towards the second element (on the fixed base side) and reengage the first locking member with the second locking member; that in the Humanscale KM device, once the force to one of the two elements is released, the weight of the platform and other things supported by the platform is sufficient to reengage the engagement faces; that as the Humanscale KM device's first element is rotated, the lower link translates back and forth, which increases or decreases the distance between the pivotal connections, causing the engagement faces to go into or come out of engagement; and that applying a force to the lower link element through the first element moves the locking members between their released and locked positions. (SFF V.23, CFF 8.17, CFF 8.22 (all undisputed).)

Also, it is undisputed that friction is created between the KM device locking members by wedging the end of the lower link element into a 45 degree pocket created between the second element and the cam mounted on the inside of the second element; and that complainant's expert Pratt has opined that the KM product satisfies the "frictionally interengagable" limitation of claim 34 as construed by the staff. (SFF V.24, CFF 8.25 (all undisputed).) Moreover, it is further undisputed that the KM device's locking members are adapted to be frictionally interengageable because they resist relative motion between themselves, solely through friction at the interface, and the KM device's locking members are smooth, non-serrated surfaces and would not lock if made of frictionless materials. (CFF 8.24 (undisputed).) Thus, in view of what is undisputed, the administrative law judge finds that the only element of asserted claim 7 remaining in dispute with respect to the KM product is "throughout such movement the attitude of said support platform remains substantially constant...."

With respect to said element in dispute, the administrative law judge has found in the claim construction section, supra, that said element is construed as "when moving between the first and second positions, the angle between the support platform and a reference, such as the horizontal plane, the plane of a tabletop, or the horizon, stays substantially the same." The administrative law judge has, subsequent to the evidentiary hearing, performed an examination of JPX-001, which is a KM product. (See, inter alia, SFF V.3; CFF 8.6 (all undisputed), which cite to JPX-001.) Beginning in a first position, the administrative law judge found that sufficient weight (e.g., a keyboard) needed to be placed on the first element adapted to be mounted to a support platform for the KM product to lock. Once said weight was in place, the administrative law judge found that applying pressure downward on said first element lowered the position of the first element, that ceasing the pressure halted the movement, and that the first element remained where it was when pressure ceased. In raising said first element, the administrative law judge found that pressure upwardly applied to the first element raised the support platform, that ceasing the pressure halted the movement, and that the first element remained where it was when pressure ceased. The administrative law judge did not find it necessary to tilt or change the angle of the first element in order to perform either the raising or the lowering of said first element. While in motion, the first element remained parallel to the ground at all times. Therefore, based on his examination, the administrative law judge finds that the KM product does practice the claimed element "throughout such movement the attitude of said support platform remains substantially constant." Based on the foregoing, including his examination and the undisputed facts, the administrative law judge finds that the KM product meets the limitations of both claim 7 and claim 34, and therefore that complainant has met its burden to prove the technical prong of

domestic industry.

Respondents argued that the KM product cannot practice asserted claim 7 because it does not have a parallel linkage. It is undisputed that the KM product has a non-parallelogram linkage. (SFF V.25 (undisputed).) However, the administrative law judge has found, supra, that a parallelogram linkage is not required by asserted claim 7.

B. Economic Prong

The requirements for the economic prong of the domestic industry are set forth in Section 337(a)(3):

> [A]n industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent . . .
>
> (A) significant investment in plant and equipment;
>
> (B) significant employment of labor or capital; or
>
> (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. §1337(a)(3).

The economic prong issue has been addressed by summary determination in Order No. 27. Specifically, complainant moved for a summary determination that the economic prong of the domestic industry has been satisfied in Motion Docket No. 670-18. Order No. 27 granted said Motion No. 670-18. Respondents petitioned to the Commission for review of that initial determination, and that petition for review is currently before the Commission.

At the hearing complainant further established that it engages in activities including assembly, quality control testing, design, and engineering of articles incorporating the keyboard support mechanisms at issue in this investigation. Thus, according to complainant's

representative King, keyboard support systems constitute approximately{ }of Humanscale's revenue. (Tr. at 156-57.) King indicated that at least{ } employees at Humanscale are dedicated full-time to the production of Humanscale's keyboard support systems. (Tr. at 157; CX-225C.) According to King, salaries to Humanscale employees in the first eleven months of 2008 attributable to keyboard support systems were approximately{ } (Tr. at 160-61.) Since 2006, King testified that Humanscale has expended approximately { } on engineering related to its allegedly practicing products. (Tr. at 165-166.) Complainant's witness Washkevich further testified regarding the manufacturing and assembly activities of Humanscale in California and New Jersey with regard to the allegedly practicing products. (Tr. at 261-75; CX-229C.) Washkevich also testifed that Humanscale has{ } of floor space dedicated to its allegedly practicing products in New Jersey { } of dedicated floor space in California{ } (Tr. at 265-66.) Washkevich further testified as to the equipment at the New Jersey facility dedicated to Humanscale's allegedly practicing products, including a CNC router{ } an air compressor { } a vacuum pump { } a dust collector { }and a cover { } totalling approximately { } (Tr. at 284-89; CX-714C; CDX-19C.)

The administrative law judge stands by his Order No. 27. However, he has made reference to the evidentiary hearing for the benefit of the Commission.

XIV. Validity

A. Priority/Effective Filing Date

In issue is the effective filing date of asserted claims 7 and 34 of the '097 patent. The parties agree that July 1, 1992 is the filing date of the continuation-in-part application that led to

the '097 patent. (See SFF III.1 (undisputed).) This July 1, 1992 date applies as the effective filing date of said claims, unless priority to an earlier filing can be established.[14] The '448 parent application (RX-102), to which the '097 patent claims priority, was filed on October 31, 1990. (See Section VII, supra.) Complainant and the staff argued that, based on the '448 parent application, the effective filing date of said claims 7 and 34 is October 31, 1990. (CBr at 61-62; SBr at 39.) Respondents argued that said claims are not entitled to the earlier date and that the effective filing date of said claims is July 1, 1992. (RBr at 21-23.)

A patent application that complies with the requirements of 35 U.S.C. § 120 may claim the priority benefit of an earlier filed United States application. "[I]n a chain of continuing applications, a claim in a later application receives the benefit of the filing date of an earlier application so long as the disclosure in the earlier application meets the requirements of 35 U.S.C. § 112, ¶1,[15] including the written description requirement, with respect to that claim." Tech. Licensing Corp. v. Videotek, Inc., 545 F.3d 1316, 1326 (Fed. Cir. 2008) (Tech. Licensing); see also 35 U.S.C. § 120. In Tech. Licensing, the Federal Circuit, finding that the trial court did

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[14] The statute that provides for such an entitlement is 35 U.S.C. § 120, though it does not use the term "priority."

[15] Section 112, ¶ 1 states:

> 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, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112.

not clearly err in determining that there was clear and convincing evidence that the application in issue did not show that an inventor was in possession of the invention in issue as of a certain filing date, stated:

> . . . the disclosure of the earlier filed application must describe the later claimed invention 'in sufficient detail that one skilled in the art can clearly conclude that the inventor invented the claimed invention as of the filing date sought.' Lockwood v. Am. Airlines, Inc., 107 F.3d 1565, 1572 (Fed. Cir. 1997) [(Lockwood)]. While the earlier application need not describe the claimed subject matter in precisely the same terms as found in the claims at issue, Eiselstein v. Frank, 52 F.3d 1035, 1038 (Fed. Cir. 1995), the prior application must 'convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of the invention,' Vas-Cath, 935 F.2d at 1563-64.

Id. at 1331-32 (emphasis added). Thus, the test for sufficiency of support in a parent application is whether the disclosure of the parent application reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter. Id.; see also Ralston Purina Co. v. Far-Mar-Co., 772 F.2d 1570, 1575 (Fed. Cir. 1985) (Ralston). "Precisely how close the original description must come to comply with the description requirement of 35 U.S.C. § 112 must be determined on a case-by-case basis." Ralston, 772 F.2d at 1575.

Respondents challenged the priority date of October 31, 1990 for asserted claims 7 and 34 and, as a result, the validity of said claims. See id. at 1573-74; 35 U.S.C. § 282. Thus, the burden of persuasion is on respondents to demonstrate a lack of section 112 support by clear and convincing evidence. Id. "When an alleged infringer attacks the validity of an issued patent, our well-established law places the burden of persuasion on the attacker to prove invalidity by clear and convincing evidence." Tech. Licensing, 545 F.3d at 1327.

Respondents' burden of persuasion never shifts to complainants. PowerOasis, Inc. v.

T-Mobile USA, Inc., 522 F.3d 1299, 1303, 1305 (Fed. Cir. 2008); Pfizer, Inc. v. Apotex, Inc., 480 F.3d 1348, 1360 (Fed. Cir. 2007) (Pfizer). The Federal Circuit has stated that:

> Since we must presume a patent valid, the patent challenger bears the burden of proving the factual elements of invalidity by clear and convincing evidence. That burden of proof never shifts to the patentee to prove validity. 'The presumption [of validity] remains intact and [the burden of proof remains] on the challenger throughout the litigation, and the clear and convincing standard does not change.'
>
> It is true that once a challenger has presented a prima facie case of invalidity, the patentee has the burden of going forward with rebuttal evidence. But, all that means is that even though a patentee never must submit evidence to support a conclusion by a judge or jury that a patent remains valid, once a challenger introduces evidence that might lead to a conclusion of invalidity--what we call a prima facie case--the patentee 'would be well advised to introduce evidence sufficient to rebut that of the challenger.'
>
> However, this requirement does not 'in substance shift the burden of persuasion,' because 'the presumption of validity remains intact and the ultimate burden of proving invalidity remains with the challenger throughout the litigation.'

Pfizer, 480 F.3d at 1360 (internal citations omitted) (emphasis added); see also Certain Condensers, Parts Thereof and Prods. Containing Same, Inv. No. 337-TA-334, 1994 ITC LEXIS 733, at *16 (Comm. Op. Feb. 1994). This means that respondents have the ultimate burden of proving the defense of invalidity based on, e.g., anticipating prior art, and thus have the burden of going forward with evidence that there is such anticipating prior art, which in respondents' view means art that is prior to the July 1, 1992 continuation-in-part application date of the '097 patent. See Tech. Licensing, 545 F.3d at 1327. However, it also means that, once respondents have introduced allegedly anticipating prior art, complainant "has the burden of going forward with

evidence either that the prior art does not actually anticipate, or, as was attempted in this case, that it is not prior art because the asserted claim is entitled to the benefit of a filing date prior to the alleged prior art." Id. This requires complainant to "show not only the existence of the earlier application, but why the written description in the earlier application supports the claim," i.e., produce sufficient evidence and argument to show that an ancestor to the '097 patent, with a filing date prior to the that of the alleged prior art, contains a written description that supports all the limitations of asserted claims 7 and 34. Id. In view of such evidence, respondents must convince the administrative law judge by clear and convincing evidence that complainant is not entitled to the benefit of the earlier filing date. See id. at 1328.

Respondents argued that July 1, 1992, the filing date of the continuation-in-part application, is the effective date of the '097 patent, including asserted claims 7 and 34, because neither the '448 parent application nor the AU '578 application[16] "enable or describe the full scope of" claims 7 and 34. (RBr at 24.) Respondents further argued that the AU '578 application, published more than one year beforehand, on May 9, 1991, is thus prior art, "unless a bonafide priority claim can be established." (Id. at 21-22.)

Respondents also argued that the '448 parent application and the AU '578 application each disclose "substantially the same seven embodiments," which respondents alleged do not encompass the inventions claimed in asserted claims 7 and 34 of the '097 patent. (Id. at 20-21.) Rather, respondents asserted that the inventions of claims 7 and 34 are included in the disclosure of the '097 patent's two additional embodiments, not present in the '448 parent application or the AU '578 application. (Id. at 21.) Specifically, respondents argued that:

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[16] See Section VII, supra.

> The eighth and ninth embodiments of the '097 patent disclose using solely gravitational biasing to reengage the engagement faces of the locking members to lock the support platform. (RFF 83; RFF 88.) The ninth embodiment of the '097 patent discloses V-shaped groove locking members which rely solely on friction for locking and further improve locking by using different angles on the V-shaped grooves. (RFF 77; RFF 83.) The first seven embodiments of the '097 patent, i.e., the embodiments disclosed in the '448 application and the AU '578 publication, do not disclose the engagement faces having V-shaped grooves and the solely gravitational biasing of locking members having displaceable pivots of the eighth and ninth embodiments. (RFF 75; RFF 77; RFF 83; RFF 88.)

(Id. (emphasis added); see also RRBr at 25-26.)

Respondents argued that the additional embodiments of the '097 patent broadened the meaning of certain claim terms "as those terms would be understood by a person of ordinary skill in the art when reading the patent specification." (Id. at 24-25; RRBr at 31.) For example, with respect to claim 7, respondents argued that:

> Claim 7 encompasses both V-shaped grooves and gravitational biasing of a longitudinally displaceable pivotal connection without a spring. Complainant's expert, Dr. Pratt, testified that claim 7 covers locking members that are frictionally engageable by wedging, as shown in FIGS. 20 and 21 of the '097. (RFF 80.) However, the earlier priority applications do not include FIGS. 20 and 21, and do not disclose V-shaped grooves or locking members that perform wedging and rely solely on friction. (RFF 73; RFF 86.) Dr. Pratt further testified that the scope of claim 7 includes the ability to adjust the height of the support platform to an infinite number of different positions, which is shown only in the ninth embodiment of the '097 patent. (RFF 81; RFF 89.)[17]
>
> Therefore, a person of ordinary skill in the art, when reading the

[17] Complainant, in response to this assertion, argued that RFF 89 does not cite complainant's expert Pratt's testimony and that the Pratt testimony respondents cited in RFF 81 does not mention the ninth embodiment or whether or not the ability to adjust the height of the support platform is shown only in the ninth embodiment. (CRBr at 50.)

> '097 patent specification, would understand the recited "engagement faces" to include the V-shaped grooved engagement faces of the ninth embodiment. (RFF 77; RFF 83; RFF 87; RFF 88.) Similarly, a person of ordinary skill in the art, when reading the '097 patent specification, would understand the claim terms "first position," "second position", "range of positions," and "plurality of desired positions," to include the infinite number of positions recited in the ninth embodiment. (RFF 81; RFF 89.)

(Id. at 24 (emphasis added); see also RRBr at 30-31.) Thus, respondents argued that because the '448 parent application does not refer to V-shaped grooves or an infinite number of height positions, the written description requirement is not met for claim 7 of the '097 patent.

In addition, with respect to asserted claim 34, respondents argued that the seven embodiments in the '448 parent application and AU '578 application "only disclose serrated-type locking members that use blocking." (Id. at 25.) Specifically:

> Every embodiment of the '448 parent application uses serrated-type locking members that use blocking. None of the embodiments of the '448 parent application rely on friction alone for locking, as required by the Staff's construction of claim 34. (RRCFF 7.27A) Respondents' expert, Dr. Wood, testified that serrated-type locking is preformed in a "substantially different" way from the friction-only locking using V-shaped grooves, and the Complainant's expert, Dr. Pratt, agreed that the locking shown in the ninth embodiment of the '097 patent is "completely different" from the locking shown in the earlier embodiments. (RRCFF 7.27B-C) Thus, use of friction that is alone sufficient for locking is not disclosed.

(RRBr at 32 (emphasis added).) Respondents further argued that, while it may have been obvious to incorporate non-blocking (solely frictional) locking members into a support platform, obviousness is not the correct standard for determining priority. (RBr at 25-26; RRBr at 32-33.) Respondents asserted that "[s]imply because something is obvious under the proper

considerations does not mean that it can be added in a CIP [continuation-in-part] years later and then claimed and still relate back to the original filing date." (Id. (citing Lockwood, 107 F.3d at 1572).) Thus, respondents asserted that the '097 patent is not entitled to a "bonafide priority claim" because the '448 parent application and the AU '578 publication do not enable or describe the full scope of claims 7 and 34, i.e., which includes gravitational biasing without a spring and frictionally interengageable locking members. (Id. at 22, 24.)

Complainant argued that, as a continuation-in-part, the lineage of the '097 patent can be traced back to the filing date of the '448 parent application, i.e., October 31, 1990. (CBr at 60-61.) Complainant asserted that "any claim of the '097 Patent whose limitations were fully disclosed, either expressly or inherently, in the '448 Parent Application" is entitled to the filing date of said parent application. (Id.) Hence, it is argued that independent claim 7 and dependent claim 34, which depends from claim 7, are entitled to the priority date of October 31, 1990, because the '448 parent application discloses all of the limitations of each of said claims. (Id. at 61; CRBr at 47.) Complainant argued that the '448 parent application enables and conveys to a person of ordinary skill in the art a work surface support system that 1) is gravitationally biased without the use of a spring and 2) has frictionally interengageable locking members. (CBr at 62, 65.) More specifically, complainant argued:

> [T]he seven embodiments of the '448 Patent Application, including the submitted drawings, disclose the full scope of Claims 7 and 34 including: gravitational biasing with displaceable pivots without use of a spring; and engagement surfaces that have been adapted to be frictionally interengageable.

(Id. at 61-62 (emphasis added).) Thus, complainant argued that the AU '578 application is not prior art to claims 7 and 34 of the '097 patent because it was published on May 9, 1991 and is

only prior art to claims that have a priority date after May 9, 1992. (Id. at 60.)

Complainant argued that "[c]laim 7 is entitled to an October 31, 1990, priority if the '448 Parent Application discloses the claimed support means with a longitudinally displaceable pivotal connection incorporating gravitational biasing." (Id. at 62.) Complainant further argued that figure 11 of the '448 parent application includes all of the limitations of claim 7 of the '097 patent. (Id. at 64.) Specifically, with respect to the use of a spring, complainant argued that:

> Any assertion that Figure 11 of the '448 Parent Application requires the use of a biasing spring to engage the locking members, is an improperly restrictive interpretation of Figure 11 that imports a limitation. A person having ordinary skill in the art would understand a spring is not required to reengage the locking members of the embodiment of Figures 11 and 12. (CFF 7.11.) The embodiment of the '097 Patent shown by Figure 11 does not have to be configured to incorporate a spring to reengage the locking elements because gravity would act naturally to cause the locking members to brought into engagement without the use of a spring. (CFF 7.18.)

(Id. at 63 (emphasis added); see also CRBr at 49.) Complainant further asserted that figure 12 discloses the fifth embodiment without a biasing spring. (CBr at 63-64 (citing Vas-Cath, 935 F.2d at 1564, for the proposition that drawings alone may be sufficient to meet the written description requirement); CRBr at 48-49 (noting that respondents' expert "Dr. Wood did not discuss or explain, however, any relevant to the fact that Fig. 12 of the '448 Parent Application discloses the fifth embodiment without a spring.").) Thus, complainant argued that figures 11 and 12 and the fifth embodiment of the '448 parent application "reasonably convey to one of ordinary skill in the art on its face that the inventor was in possession of a support structure that used gravitational biasing to bring the locking members and associated engagement faces into engagement with or without the aid of a spring as of October 31, 1990." (CBr at 64.)

In addition, according to complainant, "[c]laim 34 is entitled to an October 31, 1990, priority date if the '448 Parent Application discloses the claimed locking means with engagement surfaces that are adapted to be frictionally interengable [sic]." (Id. at 62.) Complainant argued that the specification and figures contained in the '448 parent application describe and illustrate pawl members engaging with "locking surfaces." (Id. at 65-66 (citing a passage in the '448 parent application that refers to the fourth, fifth, sixth, and seventh embodiments); CRBr at 53-54.) Complainant then asserted that the '448 parent application "contains no limitation restricting the type of surfaces that may comprise the locking surfaces," i.e., the surfaces may be toothed or toothless (frictional). (CBr at 66 (but conceding that figures 1-13 all show pawl members with toothed locking surfaces); CRBr at 53-54.)

Complainant further argued that toothless ratchets and pawls, which rely on friction to restrict movement between locking surfaces, are explicitly set forth in both the '578 AU application and the '448 parent application and that "[f]rictional engagement pawls were generally known by one skilled in the art as of 1989." (CBr at 66-67; CRBr at 50-51.) Complainant argued that the AU '578 application, to which the '448 parent application claims priority, discloses both toothed and toothless frictional engagement surfaces. (Id. at 66-67.) Complainant further argued that respondents' expert Wood opined that a person of ordinary skill in the art in 1989 would be aware that some pawls engage by blocking and others by frictional engagement. (CRBr at 51.) Thus, according to complainant, the inventor of the '097 patent had possession of frictional engagement subject matter at least as of the October 30, 1990 filing date of the '448 parent application. (CBr at 66-68.)

The staff agreed with complainant that the evidence supports the position that claims 7

and 34 of the '097 patent are entitled to an effective filing date of October 31, 1990. (SBr at 34; SRBr at 17-18.) The staff argued that the claims which encompass the original seven embodiments, e.g., claim 7, are entitled to the earlier filing date and that, with respect to claim 34, "a person of ordinary skill in the art would have reasonably understood the inventor to be in possession of other means of locking beyond blocking, including friction." (SBr at 34; see also SRBr at 17.) The staff also argued that respondents' argument with respect to alleged broadening by the eighth and ninth embodiments added to the '097 patent is "flawed" because:

> [A]n independent claim is not necessarily entitled only to the later priority date of the dependent claims simply because it needs to be construed broadly enough to encompass these later dependent claims. Moreover, expert testimony supports, for example, that a person of ordinary skill in the art reading the earlier disclosure related to the first seven embodiments would understand that other locking mechanisms, including toothless ratchets (or similar structures) capable of infinite locking positions within a certain range using friction rather than blocking (SFF III.3), and the use of gravitational biasing with and without springs (SFF III.3A), were in the possession of the inventor. See, e.g., Turbo Care Div. of Demag Delaval Turbomach. Corp. v. Gen. Elec. Co., 264 F.3d 1111, 1118 (Fed. Cir. 2001) (disclosure in the patent must reasonably convey to one of ordinary skill in the art that the inventor "possessed" the claimed subject matter at the time of the invention); Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555 (Fed. Cir. 1991) (same). For example, the parent 1990 application and the Australian provisional application both specifically call out a "pawl and locking surface" (which could be frictional or blocking) that are "inter-engagable over a range of movement." (SFF III.5) (emphasis added).

(SBr at 35 (emphasis added); see also SRBr at 17.) Thus, according to the staff, "the different locking and biasing means do not need to be explicitly disclosed in the earlier disclosure in order to provide sufficient enablement and written description for the full scope of the broader claims." (Id. at 36.)

In response to the evidence and arguments of complainant and the staff, respondents asserted that complainant and the staff applied the wrong legal standard to determine the appropriate priority date by confusing the "written description" and "enablement" requirements of section 112, paragraph 1 and by "improperly relying on the knowledge of one of ordinary skill in the art to expand the scope of the '448 parent application beyond what that application disclosed." (RRBr at 21.) Respondents argued that, to establish priority to an earlier parent application, said earlier application must meet both the written description and enablement requirements and that, here, complainant and the staff relied on the knowledge of a person of ordinary skill in the art to satisfy the written description requirement. (Id. at 22-24.)

The administrative law judge finds that here, like in Tech. Licensing, complainant seeks the benefit of the filing date of an earlier filed application and compliance with the written description requirement turns on whether the disclosure of the earlier '448 parent application provides "adequate support" for claims 7 and 34 at issue. See 545 F.3d at 1324.[18] The ultimate question, then, is whether the disclosure of the '448 parent application satisfies the written description requirement with respect to claims 7 and 34 and, particularly with respect to dependent claim 34, the "frictionally interengagable" limitation.

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[18] In Tech. Licensing, the alleged infringer contended that an independent claim and those claims that depended from it were entitled to an effective filing date of 1995 because the only written description support in the asserted patent (the last to issue from a chain of continuation and continuation-in-part applications) for these claims could be found in the new matter that was added in 1995. 545 F.3d at 1324. Therefore, in the alleged infringer's view, art from 1993 was anticipatory prior art rendering the claim invalid. Id. The patent owner responded that the claims were entitled to a 1992 filing date, when the original application was filed, because the written description of the original application allegedly provided adequate support for the claims at issue. Id. Thus, the patent owner argued that the aforementioned art from 1993 was not available as prior art to invalidate the claims. Id.

The administrative law judge finds that complainant has satisfied its burden of producing evidence that claim 7 of the '097 patent is entitled to the benefit of an effective filing date of October 31, 1990, the filing date of the earlier '448 parent application to which the '097 patent claims priority. Complainant has shown both the existence of the earlier '448 parent application, and why the written description in that application supports claim 7 of the '097 patent. See, e.g., Tech. Licensing, 545 F.3d at 1327-28. However, the administrative law judge finds that complainant has not satisfied its burden of producing evidence that claim 34 of the '097 patent is entitled to the benefit of an earlier priority date and thus claim 34 has an effective filing date of July 1, 1992, the filing date of the continuation-in-part application that led to the '097 patent.

With respect to claim 7, the administrative law judge has examined the '448 parent application, (RX-102), and compared it to claim 7 of the '097 patent, (JX-001), and agrees with complainant and the staff that the specification of the '448 parent application describes each and every element of claim 7 of the '097 patent. Generally, the specification of the '448 parent application contains material similar to that in the specification of the '097 patent, with the exception of the description of the eighth and ninth embodiments in the specification of the '097 patent. (Compare RX-102 at CompX014001-011 with JX-001.) For example, the '448 parent application and '097 specification each state that:

> According to a preferred feature the pawl member and locking surface are gravitationally biased into locking inter-engagement.

(RX-102 at CompX014001; JX-001 at col.1, ll. 39-41.)

The issue regarding claim 7 is whether there is support in the '448 parent application for gravitational biasing of a longitudinally displaceable pivotal connection, i.e., gravitational biasing

to bring members into engagement, with or without a spring. (See RBr at 24 and CBr at 62.) In the '448 parent application, the administrative law judge finds no specific mention of a spring with respect to gravitational biasing prior to the discussion of the fifth embodiment. There, the application states:

> In the case of the fifth embodiment shown at Figures 9 and 10 the pivotal inter-connection between the first member and the support platform 11 is similar to that of the first embodiment except that the second member is formed as a single element. In addition, the one link member 15 is telescopic in nature and is provided with a biasing means which can take the form of a spring accommodated within the link element between its pivotal mountings between the first and second members 13 and 14 which biases the link member to its minimum length. The locking surface 19 is mounted to the first member 13 and it is provided intermediate of the length of the one link member 15. The pawl member 17 is mounted to the one link member 15 such that it is biased into engagement with the locking surface 19 as a result of the action of the biasing spring 27 which is provided in the one link member 15. ...
>
> In the case of the fifth embodiment which is shown at Figures 11 and 12 the locking arrangement comprises a locking surface which is provided on the end of the one link element 15 adjacent the first member 13 while the pawl member 17 comprises a fixed stop 17 which is provided on the first member 13. ... A biasing spring 28 is provided between the first and second members 13 and 14 to extend between the pivot for the one link member 15 on the second member 14 and the pivot of the other link member 16 on the first member 13. As a result the one link member 15 is biassed [sic] to a position at which the pivot pin engages the end of the elongate slot closest to the second member 14 and as a result the locking surface 19 is biassed [sic] into engagement with the pawl member 17.

(RX-102 at CompX014008-009 (emphasis added).) The administrative law judge finds that the '448 parent application specifically states that the biasing means "can take the form of a spring," not that it is required to take the form of a spring. In addition, figures 10 and 12 depict the fifth

embodiment without a spring. Thus, the administrative law judge finds that this discussion in the '448 parent application supports complainant and the staff's position that gravitational biasing can be achieved with or without a spring.

Further, in the discussion of the first through third embodiments, the '448 parent application states that each embodiment includes 1) a pawl member and a locking surface that are inter-engageable in a range of positions to hold the support platform at a variety of heights and 2) a pawl member that is biased under the influence of the gravity into engagement with the locking surface as a result of the presence of a counter weight. (Id. at CompX014003-005.) With respect to the seventh embodiment, the application states:

> A suitable biassing [sic] means is provided between the link members to bias pawl member 17 into engagement with the locking surface. That biassing [sic] means can also serve to bias the platform towards an uppermost position whereby the biassing [sic] force may partially or completely overcome the influence of gravity.

(Id. at CompX014011.) Thus, the administrative law judge finds that the specification of the '448 parent requires only a "biasing means," which could be a spring, as indicated with respect to the fifth embodiment, or the presence of a counter weight, as indicated with respect to the first through third embodiments. The administrative law judge further finds that these additional disclosures in the '448 parent application also provide support for the position that gravitational biasing can be achieved with or without a spring.

The administrative law judge finds that respondents' argument that the addition of the eighth and ninth embodiments of the '097 patent broadened the meaning of certain claim terms, e.g., that "engagement faces" would include the V-shaped grooved engagement faces of the ninth

embodiment, (see RBr 24-25; RRBr at 30-31), misapprehends the purpose of the written description requirement. The question is whether the disclosure of a species in the '448 application supports the claim language in claim 7 that is directed to a genus, e.g., "engagement faces" and "desired positions." See Bilstad v. Wakalopulos, 386 F.3d 1116, 1123-24 (Fed. Cir. 2004). The Federal Circuit applies the rule that "disclosure of a species may be sufficient written description support for a later claimed genus including that species." Id. at 1124. "[A] patent claim is not necessarily invalid for lack of written description just because it is broader than the specific examples disclosed." See Martek Biosciences Corp. v. Nutrinova, Inc., 579 F.3d 1363, 1371 (Fed. Cir. 2009). The '448 parent application describes inter-engageable elements that lock together via teeth, serrations, and notches. (See RX-102 at CompX014003-011.) It is undisputed that one skilled in the art reading the '097 patent would understand that there are different species of locking mechanisms, such as pawls and ratchets, and complementary serrated engagement faces, that could be used to position a support platform. (See CFF 7.99 (undisputed).) In addition, the '448 parent application describes movement from one position to another, states that the pawl and locking surface, e.g., are engageable in a range of desired positions (so that the support platform may be adjusted to a height satisfactory to the user), and states that the support platform is capable of movement with respect to being raised/lowered as well as pivotal movement. (See RX-102 at CompX014003-011.) The administrative law judge finds that these disclosures of the '448 parent application are sufficient written description support for the "engagement faces" and "desired positions" language recited in claim 7.

Based on the foregoing, the administrative law judge finds that respondents have not met their burden in establishing, by clear and convincing evidence, that claim 7 of the '097 patent is

not supported by the '448 parent application, pursuant to sections 120 and 112. The administrative law judge thus finds that claim 7 of the '097 patent is entitled to the benefit of an October 31, 1990 priority date, the date on which the '448 parent application was filed.

With respect to claim 34, the administrative law judge has examined the '448 parent application, (RX-102), and compared it to claim 34 of the '097 patent, (JX-002), and agrees with respondents that the specification of the '448 parent application does not describe each and every element of claim 34 of the '097 patent.

The issue regarding claim 34 is whether there is support in the '448 parent application for frictionally interengagable, i.e., non-serrated or non-toothed, locking members. Complainant argued that the '448 parent application does not contain any limitations with respect to the types of surfaces that may comprise the locking surfaces and thus the surfaces may be toothed or toothless (frictional). (CBr at 66; CRBr at 53-54.) However, complainant also admitted that figures 1-13 of the '448 parent application all show pawl members with toothed locking surfaces. (Id.) The administrative law judge finds no support for complainant's assertion that toothless ratchets and pawls are explicitly set forth in the '448 parent application. (See id. at 66-67.)

The administrative law judge found, supra, that, to qualify as frictionally interengagable locking members, locking members must involve friction as the principle on which they rely and not merely as an incidentally present force. (See Section XI.H, supra.) The administrative law judge also found in Section XI.H, that, outside of the claims and the discussion of the ninth embodiment, the specification of the '097 patent does not mention friction. The administrative law judge thus finds that the '448 parent application also does not mention friction as it is used in claim 34 of the '097 patent, i.e., none of the embodiments rely on friction alone for locking. (See,

generally, RX-102.)

The '448 parent application must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the invention. Tech. Licensing, 545 F.3d at 1331-32. Complainant argued that a person of skill in the art would have been aware of pawls that engage by frictional engagement in 1989 and, as a result, would have understood that the inventor was in possession of the invention of frictionally interengagable locking members. (CBr at 66-68; CRBr at 50-51.) The administrative law judge disagrees. While it is undisputed that, as early as 1989, a person having ordinary skill in the art would be aware that frictional pawls were available and that non-blocking toothless ratchets and frictional engagement surfaces could be used in place of mechanical blocking surfaces, such as serrations, (see CFF 7.29-7.32; RFF 243 (all undisupted)), it is also undisputed that the locking shown in the ninth embodiment of the '097 patent is completely different from that shown in the first eight embodiments and that the V-shaped groove of the ninth embodiment would not have been obvious in the late 1980s. (See id. at RFF 78-79.) In addition, the specification of the '097 patent states:

> In previous embodiments the locking inter-engagement is effected through complementary serrated formation provided on the opposed locking surfaces. In the case of the ninth embodiment the locking surfaces are frictionally inter-engaged.

(JX-001 at col. 6, ll. 42-46 (emphasis added).) This passage was added to the continuation-in-part application; it was not a part of the '448 parent application. (See, generally, RX-102.) The administrative law judge finds that there is no description in the disclosure of the earlier filed '448 parent application that provides sufficient detail for one skilled in the art to conclude that

the inventor possessed the claimed invention as of the filing date sought. This is similar to the result in Tech. Licensing in which the Federal Circuit stated:

> More importantly, a comparison of Figure 3 [in the original '323 application] with Figure 16 in the '250 patent does not address whether the '323 application itself has sufficient written description for claim 33. The pertinent question is not whether a person skilled in the art could look at both Figure 3 and Figure 16 and determine that the resistors in the former perform a similar function to the resistors in the latter. Rather, the issue is whether a person skilled in the art would understand from the earlier application alone, without consulting the new matter in the '250 patent, that the inventor had possession of the claimed 'other circuit' in 1992 when the '323 application was filed.

Tech. Licensing, 545 F.3d at 1334 (emphasis added); see also Lockwood, 107 F.3d at 1572. Thus, the administrative law judge finds that a person skilled in the art would not understand the '448 parent application to show that the inventor was actually in possession of the subject matter of claim 34, i.e., frictionally interengagable locking members, as of 1990.

Based on the foregoing, the administrative law judge finds that respondents have met their burden in establishing, by clear and convincing evidence, that claim 34 of the '097 patent is not supported by the '448 parent application, pursuant to §§ 120 and 112. The administrative law judge thus finds that claim 34 of the '097 patent is not entitled to the benefit of an October 31, 1990 priority date, the date on which the '448 parent application was filed, but rather has an effective filing date of July 1, 1992, the filing date of the continuation-in-part application that led to the '097 patent.

B. Anticipation

Although a patent is presumed valid upon issue, see 35 U.S.C. § 282, it is invalid as anticipated if it "was known or used by others in this country, or patented or described in a

printed publication" before the claimed invention, or if it was "patented or described in a printed publication . . . more than one year prior" to the filing date. 35 U.S.C. §§ 102(a) and (b). For anticipation, "all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim." Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1383 (Fed. Cir. 2001) (emphasis added).

Respondents argued that the '097 patent is invalid as anticipated by German Patent DE 3323780 (Kompauer) (JX-63); that complainant's expert Pratt agreed that every limitation of the '097 patent is disclosed in Kompauer; and that Kompauer was not considered by the Patent Office during the prosecution or reexamination of the '097 patent. (RBr at 29-31.)

Complainant argued that Kompauer does not disclose "a support platform that is movable between a first position at least partially below the fixed base and a second position in front of the fixed base," and thus does not anticipate claim 7 of the '097 patent. (CBr at 69.) Complainant also argued that because Kompauer does not disclose that the locking members are "adapted to be frictionally interengageable," it does not anticipate claim 34 of the '097 patent. (Id. at 70-71.) Complainant further argued that respondents' "assertion that 'even the Complainant's expert agrees that the Kompauer references [sic] discloses every claim limitation of Claim 7' is disingenuous and misstates and mischaracterizes Dr. Pratt's testimony." (Id. at 55.)

The staff argued that, because Kompauer does not disclose that the support platform is "movable between a first position at least partially below the fixed base and a second position in front of the fixed base," the evidence does not establish that Kompauer discloses each and every limitation of claims 7 or 34. (SBr at 38.)

It is undisputed that Kompauer, published on March 8, 1984, is prior art to the asserted claims of the '097 patent and was not considered by the Patent Office during the prosecution and reexamination of said patent. (Id., SFF III.6-7 (undisputed).)

1. Claim 7

Complainant's expert Pratt admitted that the Kompauer reference discloses the following underlined limitations recited in claim 7:[19]

> A support means for supporting a support platform from a fixed base (see RFF 111 (undisputed))
>
> whereby the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base,
>
> said support means comprising a first element adapted to be mounted to the support platform (RFF 97 (undisputed))
>
> a second element adapted to be affixed to said fixed base,
>
> a pair of linkage elements each pivotally fixed at one end to said first element at spaced intervals on said first element and each pivotally mounted at the other end to said second element at spaced locations spaced on said second element for movement of the support platform between the first and second positions and (CFF 7.78 (undisputed))
>
> throughout such movement the attitude of said support platform remains substantially constant (RFF 116 (undisputed))
>
> said support means further comprising a locking means for locking said support platform in a range of positions including said second position, (RFF 117-118 (undisputed))
>
> said locking means comprising a first locking member supported on one of said elements and having a first engagement face

[19] The staff did not argue that the limitations underlined in the cited portion of the '097 patent are not disclosed by Kompauer.

engagable with a second engagement face provided on a second locking member provided on another of said elements, (RFF 119-20 (undisputed))

said locking members being moveable relative to each other upon the exertion of a force to one of these two elements for moving said locking members to a released position at which the engagable faces are disengaged for subsequent movement of said support platform relative to said base to any of a plurality of desired positions (RFF 121 (undisputed))

release of the force being effective to cause said engagement faces to re-engage to retain said second element relative to said first element in the desired positions. (RFF 122 (undisputed).)

wherein the pivotal connection of one link element to one of said first and second elements is displaceable longitudinally from the pivotal connection of the one link element with the other of said elements (RFF 123 (undisputed))

said first locking member being provided on said one link element and said second locking member being provided on the other of said elements (RFF 124 (undisputed))

such longitudinal displacement being effective to move said locking members between their released and locked positions. (RFF 125 (undisputed).)

The dispute between the parties regarding the remaining limitations centers on which structures disclosed by Kompauer correspond to the claimed "second element" and the claimed "fixed base" of claim 7 of the '097 patent.

Complainant, in support of its argument that asserted claim 7 is not anticipated, contended that "[f]oot (item 4) in Kompauer corresponds to the claimed second element of the '097 Patent, therefore the foot (item 4) of Kompauer cannot correspond to the 'fixed base' of Claim 7 of the '097 Patent because the second element is required to be 'adapted to be affixed to said fixed base.'" (CFF 7.80, quoting JX-2 at 1:40-41.) Complainant also argued that "[o]nly

item 5 of Kompauer can possibly be the fixed base, as that term is used in Claim 7 of the 097 Patent." (CFF 7.81.) Moreover, complainant argued that "the top of carrier 2, which corresponds to the first element in Claim 7, cannot be lowered below the bottom of foot 5, which corresponds to the fixed base in Claim 7" and thus "Kompauer does not disclose a support means that can be lower than any 'fixed base' of Kompauer." (CFF 7.82-83.)

Respondents argued that "[i]n Kompauer, the engagement disk 15 corresponds to the second element of the claim 7 of the '097 patent." (RRCFF 7.80A.) Respondents further argued that "[i]n Kompauer, foot 4 corresponds to the fixed base of claim 7 of the '097 patent" and that "FIGS. 2 and 3 of the Kompauer reference show the support platform 2 at least partially below the fixed base 4." (RRCFF 7.82B-C.) Respondents also argued that complainant's expert Pratt agreed that figure 3 of Kompauer "shows the top of carrier element 2 below the top of fixed base 4." (RRCFF 7.82 citing Tr. at 1614-1615.)

The staff, in agreement with complainant that asserted claim 7 is not anticipated, argued that "[r]espondents acknowledge that the 'support platform' of Kompauer is 'table top (1)' and that the 'fixed base' is comprised of 'foot 4 and 5.'" (SBr at 38.) The staff also argued that "[t]he figures from Kompauer upon which Respondents rely do not actually show a table top in any position partially below the fixed base, nor does the written portion of the specification specifically describe any such configuration." (SBr at 38.) The staff further argued that "[f]igures 2 and 3, upon which Respondents rely ... do not even include the table top in the figures." (Id.) Thus, the staff argued, "Kompauer does not expressly disclose a device capable of achieving a position in which the support platform 'is at least partially below the fixed base.'" (SFF III.9.)

The invention in Kompauer relates to "a height adjustable table or the like with a foot

frame, which exhibits at least one stably constructed foot, on which is mounted so as to be vertically adjustable a carrier, which is holding the table top and which is lockable selectively at its respectively set height level." (JX-63 at CompX02666.) According to Kompauer:

> The table can be used in general as a workbench whenever it is a matter of being able to adjust quickly and in an uncomplicated way the height of the table top, while at the same time a high degree of stability is guaranteed. This is important, for example, in the case of workbenches for young adults, school benches, office tables, and also in the case of tables for industrial purposes, since it is also possible to erect another element, whose height is also supposed to be correspondingly adjustable, on the table top or, instead of the table top, on the foot frame.

(Id. at CompX002670-71.)

It is undisputed that the articulated levers (elements 8 and 9) in Kompauer correspond to the link elements of claim 7 of the '097 patent. (See CFF 7.78 (undisputed).) With respect to these articulated levers, the Kompauer reference states:

> [T]he carrier is mounted on the foot by means of a parallelogram lever mechanism, which has two parallel articulated levers, which are spaced apart one above the other and which are linked at one end to the foot and at the other end to the carrier, forming a coupling rod, so as to be swivellable about parallel articulated axes [and] the foot exhibits a stationary engagement disk, which has engagement recesses, with which engagement recesses an engagement element, arranged at the end of one of the articulated levers, can be brought into engagement while at the same time the articulated lever locks into a fixed position.

(JX-63 at CompX002667 (emphasis added).) With respect to the limitation that the link elements are "each pivotally fixed at one end to said first element at spaced intervals on said first element," it is undisputed that the carrier (element 2) of Kompauer corresponds to the "first element" of asserted claim 7 of the '097 patent. (CFF 7.82 (undisputed in relevant part).) Thus,

the administrative law judge finds that the carrier (element 2) of Kompauer discloses the "first element" of claim 7 of the '097 patent.

With respect to the claimed limitation that the link elements are "each pivotally mounted at the other end to said second element at spaced locations spaced on said second element," complainant's expert Pratt testified that the Kompauer translation shows that the foot (element 4) corresponds to the "second element" of claim 7 of the '097 patent:

> Q. Dr. Pratt, in what respect did you disagree with Dr. Wood's analysis of the asserted claims in view of the Kompauer reference?
>
> A. I disagreed with Dr. Wood's characterization of what the fixed base was. For example, Dr. Wood, if we refer to, in the Kompauer reference, if we were to refer to figure 1, Dr. Wood testified that the two link members 8 and 9, were mounted to both a first element, which in the Kompauer reference is identified by number 2, and also to item 4.
>
> Well, I do agree with Dr. Wood and the Kompauer translation clearly states that the two linkage elements are pivotally connected to both items 2 and items 4. I don't think there is any dispute in that regard.
>
> However, that would make item 4 the second element in terms of the '097 patent. Not the fixed base. So the fixed base would have to be something that item 4 connects to. And the only thing that comes close is item 5 in this figure.

(Tr. at 1547 (emphasis added).) Pratt's testimony is supported by Kompauer, which states that the levers "are linked at one end to the foot and at the other end to the carrier." See supra. Based on the foregoing, the administrative law judge finds that the foot (element 4) of Kompauer discloses the second element of claim 7 of the '097 patent.

With respect to said "second element" limitation, respondents' expert Wood testified:

> Q. Okay. Well, if you can look where your red line begins, it says

"which has two parallel articulated levers, 8 and 9. Do you see that?

A. I do.

Q. And those are the link elements of Kompauer as corresponding to claim 7 of the '097 patent; is that correct?

A. Yes, those are the link elements of Kompauer.

Q. You see as that sentence continues "which are spaced one above the other and which are linked at one end to the foot (4)," do you see that language?

A. I do.

Q. And so is that describing to you, as one skilled in the art, that the link elements of Kompauer are attached to foot 4?

A. They are, through the engagement disk 15, which is the second element.

(Tr. at 1470-1471.) Kompauer, however, states that the levers are "linked at one end to the foot...." See supra. With respect to the engagement disk, Kompauer states that the foot "exhibits a stationary engagement disk, which has engagement recesses" and that the levers bear "an engagement element" that "can be brought into engagement" with the engagement recesses. See supra. Thus, the administrative law judge finds that Kompauer does not support Wood's interpretation that the lever is connected to the foot through the engagement disk.

With respect to the "fixed base" limitation of claim 7 of the '097 patent, asserted claim 7 states that the second element is "adapted to be affixed to said fixed base." Thus, the administrative law judge finds that the second element is a distinct element from the fixed base. Because the administrative law judge has found, supra, that the foot (element 4) of Kompauer discloses the 'second element' of claim 7 of the '097 patent, the administrative law judge now

finds that the foot (element 4) cannot be the fixed base, but must instead be adapted to be affixed to said fixed base. In addition, Kompauer discloses:

> The foot frame 3 has two housing-like, vertical, stable feet 4, which are arranged in the vicinity of the front rim edge of the table top 1 and sit on two longitudinal foot components 5, which extend in the direction of the rear rim edge of the table top 1 and are rigidly connected together by means of a transverse rail 6.

(JX-63 at CompX002672.) Complainant's expert Pratt testified that:

> Q. ... [T]hat would make item 4 the second element in terms of the '097 patent. Not the fixed base. So the fixed base would have to be something that item 4 connects to. And the only thing that comes close is item 5 in this figure.
>
> Q. So, Dr. Pratt, just so the record is clear, what is missing under Dr. Wood's analysis.
>
> A. Under Dr. Wood's analysis, the second element is missing.
>
> Q. And is that the same result under your claim construction?
>
> A. No, under my analysis, the second element is item number 4, and so the fixed base is either item 5 or it is something else. It is probably not even item 5 because the Kompauer patent makes clear that item 5 is a component of item 4.

(Tr. at 1547-1548.) Respondents' expert Wood also testified as follows:

> Q. You understand that foot 4 is fixed to element 5 in Kompauer?
>
> A. That's true.

(Tr. at 1471-1472.) Thus, the administrative law judge further finds that the foot (element 4) of Kompauer is adapted to be affixed to the longitudinal foot components (element 5) and that the longitudinal foot components (element 5) are the fixed base, as recited in claim 7 of the '097 patent.

Respondents argued that "the engagement disk 15 corresponds to the 'second element' of claim 7, while foot 4 corresponds to the fixed base." (RRBr at 40.) However, the administrative law judge finds that Kompauer does not disclose that the elements 8 and 9 are pivotally mounted to the engagement disk 15 as required by claim 7. Rather, he finds that Kompauer discloses that:

> The lower articulated lever bears on the end of its short lever arm 9b an engagement element in the shape of an index bolt 14, whereas an engagement disk 15 is arranged on the foot 4. Said engagement disk is provided with engagement recesses 16, with which the index bolt 14 can engage, in order to lock the articulated lever 9 and, thus, the parallelogram lever mechanism 7 in its respective position.

(JX-63 at CompX002673 (emphasis added).) Thus, he finds no disclosure that articulated lever 9 is "pivotally mounted" to the engagement disk 15. Instead he finds that Kompauer discloses that the articulated lever bears an engagement element which may engage with recesses in the engagement disk. See supra. Therefore, the administrative law judge finds that engagement disk 15 cannot be the "second element" as recited by claim 7.

With respect to the limitation of a "support platform" in the claimed phrase "whereby the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base," it is undisputed that Kompauer discloses said support platform. (RFF 97 (undisputed).) Kompauer also discloses a table top (element 1), regarding which respondents' expert Wood testified that "element number 1, which is a table top, . . . would be a support platform." (Tr. at 1331; see also Tr. at 1343.) Complainant's expert Pratt did not refute Wood's testimony that the table top (element 1) of Kompauer "would be a support platform." Thus, administrative law judge finds that the table top (element 1) of Kompauer discloses the "support platform" recited in claim 7 of the '097 patent.

The administrative law judge found, supra, that the support platform is disclosed by the table top (element 1) and that the fixed base is disclosed by the longitudinal foot components (element 5) of Kompauer. Thus in order to show the disputed claimed limitation that "the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base," Kompauer must disclose that the table top is movable between a first position at least partially below the longitudinal foot components and a second position in front of the longitudinal foot components. However Kompauer includes only a single figure (Figure 1) depicting the table top (element 1), in which figure the table top (element 1) is depicted on top of the carrier (element 2). (JX-63, Fig. 1.) With respect to Figure 1 of Kompauer, complainant's expert Pratt testified:

> Q. JX-63, please. Let's go to figure 1. Dr. Pratt, JX-63 for the record is the Kompauer reference. I am directing your attention to foot 4 and 5. And then with reference to table 1, Dr. Pratt, isn't it true that the carrier 2 cannot move below foot 4 and 5?
>
> A. Think the figure shows that, and I testified during my deposition testimony that the top of carrier 2 can be lowered below the top of foot number 4, but the way this is configured, it can't be lowered below the bottom of foot 4 or the bottom of foot 5. That's correct.

(Tr. at 1630 (emphasis added).) Thus, according to Pratt, the support platform ("top of the carrier 2") cannot go below the fixed base ("the bottom of foot 4 or the bottom of foot 5"). Wood's testimony regarding this limitation was exclusively with reference to the foot (element 4) of Kompauer being the fixed base of claim 7, and thus is not relevant given that the foot (element 4) cannot be the fixed base. (See, e.g., Tr. at 1331-38.) Further, the administrative law judge can find no portion of the specification of Kompauer that discloses that the table top may be adjusted such that it is partially below the longitudinal foot components. Therefore, the administrative

law judge finds that Kompauer does not disclose said limitation of claim 7 of the '097 patent.

Respondents argued that Wood "specifically demonstrated that Kompauer discloses this limitation, by using additional demonstrative drawings and a video animation showing the operation of Kompauer." (RRBr at 36-37, citing RDX-1A.63, RDX-1A.85, and RDX-1A.86.) They argued that said demonstratives indicate that "the top of the support platform 2 is below the top of fixed base 4." (RRBr at 38.) However, as found supra by the administrative law judge, "the foot (element 4) cannot be the fixed base" as recited by claim 7. Further, the administrative law judge found supra that the table top (element 1), not the carrier (element 2), of Kompauer is a support platform.[20] The table top (element 1) is not visible in the cited demonstratives, and in order to anticipate, "all of the elements and limitations of the claim must be shown in a single prior reference...." Karsten Mfg., supra (emphasis added). Thus the administrative law judge finds that Kompauer does not disclose that "the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base."

For the foregoing reasons, the administrative law judge finds that respondents have not established, by clear and convincing evidence, that Kompauer anticipates asserted independent claim 7 of the '097 patent.

2. Claim 34

Claim 34 of the '097 patent recites:

> A support means as claimed at claim 7 wherein locking members are adapted to be frictionally interengagable when engaged with each other.

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[20] Respondents' expert Wood testified similarly. (Tr. at 1331.) With respect to element 2 of Kompauer, which respondents argued is a support platform, the administrative law judge has found, supra, that "the carrier (element 2) of Kompauer discloses the 'first element' of claim 7."

(JX-2 at 3:7-15.) The administrative law judge found, supra, that "frictionally interengagable" means "capable of locking interengagement by application of a frictional force sufficient to maintain a locked position during normal use." (See Section XI.H, supra.) Thus, the administrative law judge found that locking members must involve friction as the principle on which they rely and not merely as an incidentally present force. (Id.)

The administrative law judge has reviewed Kompauer (JX-63) and finds no disclosure related to frictional forces particularly with respect to the way in which he construed claim 34 of the '097 patent. Furthermore, respondents' expert Wood testified as follows:

> A. Okay. Would this ratchet and pawl system still lock, provide locking for what is described in the Kompauer, if there was no friction, counsel, is that your question?
>
> [By Mr. Leja]
>
> Q. That's correct.
>
> A. Yes, it would, because there is blocking.

(Tr. at 1482.) Thus, the administrative law judge finds that friction is not the principle on which the Kompauer embodiments rely, and thus Kompauer does not disclose locking members that are frictionally interengagable as required by claim 34.

Additionally, claim 34 depends from claim 7 and thus includes all of the limitations therein. Kompauer does not disclose each and every limitation of claim 7, thus it also does not disclose each and every limitation of claim 34.

For the foregoing reasons, the administrative law judge finds that respondents have not established, by clear and convincing evidence, that Kompauer anticipates claim 34 of the '097 patent.

C. Obviousness

In issue is the validity of claims 7 and 34 of the '097 patent based on obviousness. Specifically, the parties dispute whether the following references: Kompauer (JX-63);[21] the AU '578 application (JX-61)[22]; Australian Publication AU-A-75700/87 (Adam)[23] (JX-69); U.S. Patent No. 1,176,272 to Bultman (Bultman)[24] (JX-64); U.S. Patent No. 790,207 to Holtz (Holtz)[25] (JX-67); U.S. Patent No. 420,069 to Hood (Hood)[26] (RX-103); and, U.S. Patent No. 4,372,612 to Wiers (Wiers)[27] (JX-70), either alone or in combination, render claim 7 and/or claim 34 of the '097 patent obvious.

The administrative law judge found, supra, that neither claim 7 nor claim 34 is invalid

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[21] It is undisputed that Kompauer was not considered by the Patent Office during prosecution or reexamination of the '097 patent. (See SFF III.6-7 (undisputed).)

[22] The administrative law judge found that the AU '578 application is not prior art with respect to claim 7 of the '097 patent. (See Section XIV.A, supra); Thus, the AU '578 application cannot render claim 7 obvious. However, the administrative law judge found that the AU '578 application is prior art with respect to claim 34. (Id.)

[23] It is undisputed that Adam is prior art to the '097 patent because it was published on January 21, 1988. (See JX-69; SFF III.25 (undisputed).) It is also undisputed that Adam was considered by the Patent Office during reexamination of the '097 patent. (See JX-3; SFF III.26 (undisputed).)

[24] It is undisputed that Bultman is prior art to the '097 patent because it issued on March 21, 1916. (See JX-64; SFF III.59 (undisputed).)

[25] It is undisputed that Holtz is prior art to the '097 patent because it issued on May 16, 1905. (See JX-67; SFF III.65 (undisputed).)

[26] It is undisputed that Hood is prior art to the '097 patent because it issued on January 28, 1890. (See RX-103; SFF III.71 (undisputed).)

[27] It is undisputed that Wiers issued on February 8, 1983. (See JX-70; RFF 246 (undisputed).) However, it is disputed whether Wiers is prior art to the '097 patent. Complainant and the staff argued that Wiers is not analogous art to the '097 patent. (See infra.)

based on anticipation by Kompauer. (See Section XIV.B, supra.) In doing so, the administrative law judge found that each of the limitations of independent claim 7, from which claim 34 depends, is disclosed by Kompauer[28] except for the disputed claim limitation that "the support platform is movable between a first position at least partially below the fixed base and a second position in front of the fixed base." (Id.)

Specifically, with respect to said disputed limitation[29], the administrative law judge found that no portion of the specification of Kompauer discloses that the table top (i.e., support platform) may be adjusted such that it is partially below the longitudinal foot components (i.e., fixed base), as required by claim 7. (Id.) Thus, he found that Kompauer does not anticipate claims 7 and 34. (Id.) Regarding dependent claim 34, he further found that Kompauer does not disclose the claim limitation "frictionally interengagable." (Id.) Referring to claim construction, the administrative law judge found that, to be considered frictionally interengagable, locking members must involve friction as the principle on which they rely and that, thus, Kompauer does not anticipate claim 34 because there is no disclosure related to frictional forces in Kompauer, i.e., friction is not the principle on which the Kompauer locking members rely. (Id.) Thus, in light of the findings in Section XIV.B, supra, in issue in this obviousness section is whether a person of ordinary skill in the art of support platforms would have 1) known that a support

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[28] In particular, the administrative law judge found that the table top (element 1) of Kompauer discloses the "support platform" recited in claim 7 of the '097 patent; that the carrier (element 2) discloses the "first element"; that the foot (element 4) discloses the "second element"; and, that the longitudinal foot components (element 5) disclose the "fixed base."

[29] The parties agree that the first element of claim 7 of the '097 patent requires the support platform to be "movable between a first position at least partially below the fixed base and a second position in front of the fixed base." (See SFF III.8 (undisputed).)

platform can be movable between a first position at least partially below a "fixed base" and a second position in front of the fixed base; 2) known that locking members can be frictionally interengagable as the administrative law judge has construed that term; and, 3) had good reason to combine such knowledge with the disclosures of Kompauer alone, Kompauer in combination with Adam, Bultman, Holtz, Hood and/or Wiers, or the AU '578 application alone, to arrive at the invention(s) of the '097 patent. See, e.g., Perfect Web Techs., Inc. v. InfoUSA, Inc., 587 F.3d 1324 (Fed. Cir. 2009); see also KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 418-19 (2007) (KSR).

Respondents and the staff both argued that claims 7 and 34 are obvious and thus it is their burden to overcome the presumption that the asserted '097 patent is valid. Tech. Licensing, 545 F.3d at 1327. Again, the burden of persuasion never shifts to complainant. Id. Rather, the risk of "decisional uncertainty" remains on the party or parties asserting invalidity. Id. Thus, it is respondents' and/or the staff's burden to prove by clear and convincing evidence that any of the alleged prior art references, alone or in combination, render obvious claims 7 and 34 of the '097 patent. See PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007) (stating, "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so."). Failure to do so means that respondents and the staff lose on this point. Tech. Licensing, 545 F.3d at 1327.

Included within the presumption of validity is a presumption of non-obviousness. Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 714 (Fed. Cir. 1984). Regarding

non-obviousness, the patent statute dictates that a person is not entitled to a patent if the differences between the claimed invention 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." 35 U.S.C. §103; see also Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1371 (Fed. Cir. 2008) (stating, "differences between the prior art reference and a claimed invention, however slight, invoke the question of obviousness, not anticipation.").

The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of fact. In re Dembiczak, 175 F.3d 994, 998 (Fed. Cir. 1999). The underlying factual inquiries relating to non-obviousness include: 1) the scope and content of the prior art; 2) the level of ordinary skill in the art; 3) the differences between the claimed invention and the prior art; and, 4) secondary considerations of non-obviousness, such as long-felt need, commercial success, and the failure of others. See Graham v. John Deere Co., 383 U.S. 1, 17 (1966).

Obviousness may be based on any one of the alleged prior art references or a combination of the same, and what a person of ordinary skill in the art would understand based on his knowledge and said references. If all of the elements of an invention are found, then:

> [A] proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure.

Velander v. Garner, 348 F.3d 1359, 1363 (Fed. Cir. 2003) (emphasis added) (internal citations

omitted). Further, the critical inquiry in determining the differences between the claimed invention and the prior art is whether there is a reason to combine the prior art references. See C.R. Bard v. M3 Sys., 157 F.3d 1340, 1352 (Fed. Cir. 1998). For example:

> [A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.

KSR, 550 U.S. at 418-19 (emphasis added). However, the Supreme Court has rejected a "rigid approach," regarding a patent challenger's obligation to demonstrate a "teaching, suggestion, or motivation to combine" in the prior art. Id. at 419-22. The Court stated that:

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. Sakraida and Anderson's-Black Rock are illustrative-a court must ask whether the improvement is more than the predictable use of prior art elements according to their established function.
>
> Following these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement. Often, it will be necessary for

> a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicitly. See In re Kahn, 441 F.3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusions of obviousness"). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

Id. at 417-18 (emphasis added). Further, a suggestion to combine need not be express and may come from the prior art, as filtered through the knowledge of one skilled in the art. See Certain Lens-Fitted Film Pkgs., Inv. No. 337-TA-406, Order No. 141 at 6 (May 24, 2005). "[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." KSR, 550 U.S. at 420-21.

Respondents argued that claims 7 and 34 of the '097 patent are invalid for obviousness based on two individual prior art references, i.e., Kompauer and the AU '578 application[30]. With respect to Kompauer generally, respondents argued that Kompauer "renders obvious claims 7 and 34" of the '097 patent, citing their expert Wood's testimony that Kompauer "renders obvious the limitations of claim 7." (RBr at 28 (citing Tr. at 1328); RRBr at 35, 40-43.)[31] Regarding claim 7,

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[30] The administrative law judge has found that the AU '578 application is not prior art to claim 7. (See Section XIV.A, supra.)

[31] Respondents similarly argued that the AU '578 application "renders obvious claims 7 and 34." (RBr at 30.)

Wood also testified about Kompauer as follows:

> Q. So using your definition of one of ordinary skill in the art, would someone using your definition of ordinary skill in the art be able to attach a tabletop to element 2 or attach a support means to element 2 that was at least partially below the fixed base? Would that have been an obvious variation?
>
> A. Yes. And it is clear to me if you look at figure 3, since the element 2 is inside the structure of the fixed base, it has free movement inside of that structure so that it can go below. And, in fact, it does show that it is below.

(Tr. at 1335-36 (emphasis added).) Respondents further argued that the teachings of Kompauer "are applicable to a wide range of adjustable support mechanisms for supporting platforms" and should not be limited as applicable only to drafting tables, as suggested by complainant. (RRBr at 42.)

Regarding claim 34 and Kompauer, respondents argued in their opening brief that both experts testified that "in the late 1980s it would have been obvious to one of ordinary skill in the art to incorporate non-blocking (i.e. solely frictional) toothless ratchets and pawls into a keyboard support system." (RBr at 31; RRBr at 41-42.) Complainant's expert Pratt testified that one skilled in the art "would understand that pawls and ratchets, complementary serrated engagement faces and frictional engagement faces could be used, they're just one among the number of different kinds of locking elements that might be used to position a support platform at one of a number of positions." (Tr. at 955.) Respondents' expert Wood testified:

> Q. Okay. Do you agree with that testimony, it would be obvious to substitute a frictional pawl or ratchet for a blocking pawl or ratchet?
>
> A. Yes, that is my testimony.

Q. Okay. Based on your understanding of one skilled in the art at the time of the invention, would it have been obvious under either the Complainant's, the Respondent's, or the staff's construction, would claim 34 be obvious under any of those constructions?

A. Yes, in my opinion, they would be.

(Tr. at 1360 (emphasis added).) Wood also testified:

Q. Can we take a look at, pull up JX-63 and figure 4, which I believe is Kompauer. Figure 4. Taking a look at figure 4, are you familiar with the pawl engagement faces on figure 4?

A. Yes.

Q. If the pawl engagement faces on figure 4 were made of frictionless material, would this pawl still function to stop or lock the linkage elements from rotation?

A. And only because I didn't hear you, counsel, I think you said frictionless, is that true?

JUDGE LUCKERN: Yes, he did, frictionless material.

THE WITNESS: Okay. Would this ratchet and pawl system still lock, provide locking for what is described in the Kompauer, if there was no friction, counsel, is that your question?

BY MR. LEJA:

Q. That's correct.

A. Yes, it would, because there is blocking.

(Tr. at 1481-82 (emphasis added).) Thus, according to respondents, claim 34 is obvious based on Kompauer. (RRBr at 42-43.)

Respondents further argued that asserted claim 34 is invalid as obvious in view of the AU '578 application based on similar reasons they argued for Kompauer. (RRBr at 41-43.) With respect to the AU '578 application, respondents' expert Wood testified that:

Q. Under [complainant's] construction and your definition of locking versus frictional pawls, does [the AU '578 application] render obvious claim 34?

A. In that case it would, in the sense just as stated here, that it is obvious that that [sic] friction pawls, or, excuse me, serrated surfaces, there would be a combination with friction pawls.

* * *

Q. Under the staff's construction, would claim 34 be obvious over the Australian publication?

A. With combination of -- with serrated pawls, excuse me, with pawls that are friction pawls or toothless ratchets.

Q. Okay. And is that combination obvious to one of ordinary skill in the art?

A. Yes.

Q. And that's under both the staff's and Complainant's construction?

A. Yes, sir.

(Tr. at 1388-89 (emphasis added).) In addition, complainant's expert Pratt testified:

Q. Is it the case, sir, that one skilled in the art in 1989 would know that any time you needed a locking means for a support platform, that one skilled in the art would understand that pawls and ratchets and complementary serrated engagement faces and frictional engagement faces would be obvious?

* * *

THE WITNESS: It's my opinion that one skilled in the art in 1989 would have known that these are among the types of locking members that could have been incorporated to achieve the goals of this or the function of this support platform, yes.

(Tr. at 957-958 (emphasis added); see also id. at 1615 (agreeing that a pawl with teeth and a pawl without teeth would have been well-known to anyone skilled in the art at the time of the Kompauer reference).) However, he also testified that:

Q. Dr. Pratt, Figures 20, 21, and 22 of the '097 patent has frictional engagement in a direction perpendicular to the plane of the V, correct?

A. That's correct.

Q. And that frictional engagement in a direction perpendicular to the plane of the V is completely different from the embodiment shown in the '097 patent, in Figures 1 to 18, correct, sir?

A. Yes.

Q. The V shaped groove in Figure 22 is not obvious over the 1989 disclosure, correct?

* * *

THE WITNESS: With regard to the V, I understand that to be new matter that was introduced in about 1992. I'm not sure that, in my opinion, I don't, I just don't -- I'm not sure myself whether a V shaped groove would have been obvious to one skilled in the art at the time the application was made for the patent. I do know, as I testified earlier, that frictional engagement would have been obvious. I mean, frictional engagement for support systems, even keyboard support systems was in the prior art and frictionless pawls. I mean, friction pawls or toothless pawls were in common usage in the 1980s and well before that. I'm just not sure that a V-shaped groove would have been obvious to somebody skilled in the art in the late '80s.

BY MR. MEEKER:

Q. And it's your understanding that the V-shaped groove is nonobvious over the other frictional engagement mechanisms because it has both lateral and transverse engagement forces, correct, sir?

* * *

THE WITNESS: Well in answer to your question I haven't looked at this V-shaped groove situation for a few months now. It's true that the V-shaped groove would have both transverse and lateral resistance to motion or movement between the two locking

members I and it's also true that the V-shaped groove -- that the prior art that I referenced earlier in the late '80s, the toothless pawls and friction pawls, that I'm aware of at any rate, don't incorporate V-shaped grooves are lateral, a combination of lateral and transverse resistance to the relative motion.

So I think that that's probably a good argument as to why it wouldn't have been obvious to one skilled in the art at the time to incorporate a V-shaped groove. This is in the late '80s.

(Tr. at 939-44 (emphasis added).)

Respondents also argued that claims 7 and 34 of the '097 patent are invalid for obviousness based on combinations of prior art references, i.e., the combination of Kompauer and Adam, the combination of Kompauer and Bultman, the combination of Kompauer and Holtz, the combination of Kompauer and Hood, the combination of Kompauer and Wiers, and/or the combination of Kompauer, Wiers, and any of the other aforementioned references. Specifically, respondents argued that any or all of these combinations "render[] obvious claims 7 and 34," based on respondents' expert Wood's testimony that one of ordinary skill in the art would have understood that the locking means of Kompauer could be "readily combined" with the support means of each of the additional references to make the invention of claim 7, (RBr at 31-32, 33-34, 35-36, 37-38, 40; RRBr at 44-45), as well as the alleged disclosure by Kompauer of the limitations of claim 34. (RBr at 32-33, 34-35, 36, 38-39; RRBr at 44-45.) For example, Wood testified as follows with respect to the combination of Kompauer and Adam:

Q. So is it your opinion then that one of ordinary skill in the art would -- it would be obvious to combine the well, what is your opinion concerning the combination, sir?

A. That, in fact, it is obvious to perform this combination, that the combination does meet each and every claim limitation of claim 7 of the '097 patent, and there are no differences between those and

the claimed invention.

* * *

Q. Okay. So with a person of ordinary skill in the art, with respect to the support means for supporting a support platform from a fixed base whereby the support platform is movable between a first position at least partially below the fixed base, and a second position in front of the fixed base, how is that limitation met by this combination?

In other words, with respect to the claim language on the screen, which claim elements are you -- do you believe are rendered obvious by the Kompauer reference and which claim elements are rendered obvious by the Adam reference, sir?

A. Did you want me to go through each one?

Q. If you can just identify them by color and tell me which reference meets which, and why the combination would be within the skill of the art.

A. It is the support means from the Adam reference. In particular, you know, counsel, it would be the only issue here in doing that is that there's pivots described in the, in some of these limitations that would be from the Adam reference and items like that, whereas the locking means, longitudinal displacement would come from the Kompauer reference as a person of ordinary skill in the art would understand that for the reasons that I mentioned.

Q. So they are intermixed is what you are saying?

A. To the extent that it is language that is crossing across limitations, just lining up colors to each one –

Q. Is a hard thing to do?

A. It is not completely hard. For example, the locking means from Kompauer is clear that it would be combined with the support means from Adam.

For example, just in general, the yellow, green, light blue, and pink would be, in general, what a person of ordinary skill in the art

would understand they are getting from Adam in terms of a first element, which is, depending on how you look at it, 18 or 19 from figures 3 and 4 of JX-69.0015.

The second element is reference, depending on how you look at it, 14 or 15, which is from figures 3 and 4 of that same exhibit.

Likewise, there's two link elements, 22, they are both 22, there is an upper one and lower one shown in figure 3 and 4 with their pivots pivotally fixed to the first element and then under the combination with Kompauer pivotally mounted with respect to the second element.

And then with respect to the Kompauer reference, focusing on the locking means that would be red, purple, gray, and dark blue limitations that we have described from claim 7 of the '097 patent, just in general. And that would be from Kompauer, as I previously described, and just to discuss the elements, the engagement disk 15 with recesses or engagement faces 16, the link 9 which would now be from link 22 of Adam, with an oblong slot or hole from Kompauer.

And I don't see the reference number here, counsel, so I don't recall the reference number from that figure.

And then the locking member 14, which is the index bolt with engagement faces, which would be part of link element 22, the lower link element of Adam, such that there is longitudinal displacement with that combination with the slot now at the lower pivot 22 as attached to 15 or 14 depending on how you describe that second element, which I previously did from figures 3 and 4.

Q. Okay. And what I would like to do now, Doctor, so let me get your opinion. Does the combination of Adam and Kompauer render claim 7 obvious for the reasons you have just described?

A. Yes.

Q. Does the combination of Kompauer and Adam render ... claim 34 obvious under your construction?

A. Yes.

Q. And does the combination of Kompauer and Adam render ... claim 34 obvious under the staff's construction?

A. ... Under the staff's construction, yes, with the combination from a frictionless pawl and toothless ratchet.

Q. Which -- is that or isn't that -- is that obvious to one skilled in the art?

A. Yes, that combination is obvious.

(Tr. at 1395-1400 (emphasis added).) Further, as for "reasons to combine," respondents alleged that the references "are in the same technical field of adjustable support mechanisms for support platforms" and solve similar problems "relating to supporting and locking an adjustable platform in a range of position[s] [sic]." (RBr at 33, 35, 37, 39, 40-41; RRBr at 44-45.) For example, Wood testified as follows with respect to reasons to combine Kompauer and Adam:

Q. . . . Now, Dr. Wood, what is your opinion with respect to the combination of Kompauer and Adam with respect to invalidity of claim 7?

A. Well, first of all, both these references are in the scope and content of the prior art. There is a reason to combine these, there are reasons to combine these references. First of all, they are in the same technical field of adjustable support mechanisms or support platforms. The Kompauer reference teaches devices that is a support platform, devices that are atop a floor or a table that move between positions and that likewise lock at intermediate positions.

* * *

A. And likewise the Adam reference teaches a device that does support keyboards or the like and it is a support platform. In my opinion, they do solve similar problems, and what can be combined here, a person of ordinary skill in the art would understand based on those reasons for combination, would be the support means, the remaining support means from Adam and the locking means from the Kompauer reference.

(Tr. at 1393-94 (emphasis added).) Wood also testified in a similar fashion with respect to the combinations of Kompauer and the other references - each time incorporating the locking means of Kompauer with the support means of the additional reference. (Tr. at 1405-42.)

In response to complainant's arguments, infra, that Kompauer should not be combined with Adam, Bultman, Hood, or Holtz, i.e., because (i) extensive modifications would be required, (ii) Wood's invalidity opinions are inconsistent, and (iii) combining references would result in a system having two locking means, respondents asserted that said arguments are flawed both legally and factually. (RRBr at 45-48.) Respondents argued that complainant's first argument is an attempt to make the combination of Kompauer and Adam sound complicated and technical and that, to the contrary, the field of mechanical arts is well-known and predictable. (Id. at 47.) Respondents also argued that "[a]lthough the Complainant describes three allegedly 'required' steps, no analysis or rationale is provided to describe why any of these steps [to combine the references] is required in the first place." (Id. at 46.) With respect to systems allegedly resulting in two locking systems, respondents argued:

> Clearly, one of ordinary skill in the art when implementing a combination of Kompauer with Adam, Bultman, Holtz, or Hood, would not include both locking systems. Rather, one of ordinary skill would understand from the references that certain locking components from Kompauer (e.g., engagement disk 15 with engagement faces 16, link 9 with an oblong slot 120), could be easily combined into the remaining support means of another adjustable keyboard support reference.

(RRBr at 48 (emphasis added).) Finally, regarding Wiers, the remaining alleged prior art reference, respondents argued that:

> Complainant's arguments notwithstanding, one of ordinary skill would recognize that the Wiers patent and the '097 patent are in

> same technical field. For example, the Wiers patent states, '[t]he present invention relates to a mechanism for pivotally locating a vertical seat back with respect to an associated horizontal seat cushion in an adjustable manner,' and '[i]t is yet an additional object of the present invention to provide a seat reclining mechanism which utilizes the friction developed by the interaction of two mating V-shaped surfaces when one of the V-shaped surfaces is forced into greater engagement with the second V-shaped surface upon movement of the second surface.' (RRCFF 7.122A-B) The '097 patent discloses a similar locking mechanism which utilizes the friction developed by the interaction of two mating V-shaped surfaces when one of the V-shaped surfaces is forced into greater engagement with the second V-shaped surface upon movement of the second surface. (RRCFF 7.121) Accordingly, one of skill in the art would understand that Wiers and the '097 patent are from the same technical field, and can be used to solve similar problems. (RRCFF 7.121-RRCFF 7.122A-B.)

(RRBr at 50 (emphasis added).)

The staff agreed with respondents that Kompauer renders both claims 7 and 34 obvious. (SBr at 41-44.) Specifically, the staff argued:

> Kompauer does not anticipate claims 7 or 34 because it does not expressly or inherently disclose a support platform that is 'movable between a first position at least partially below the fixed base and a second position in front of the fixed base,' [however] the Staff submits that, based on the record established at trial, this missing element would have been obvious to a person of skill in the art.
>
> Specifically, Respondents' expert, Dr. Wood, established at trial using demonstrative aids that a person of skill in the art would understand that the table top in Kompauer could be configured in such a way that would allow the table top to be 'movable between a first position at least partially below the fixed base and a second position in front of the fixed base.'

(Id. at 41 (emphasis added).) In addition, the staff argued that claim 34 is obvious because Wood so testified. (Id. at 43-44 (citing Tr. at 1358-60).)

The staff also agreed with respondents that claims 7 and 34 of the '097 patent are invalid for obviousness based on combinations of prior art references, i.e., the combination of Kompauer and Adam, the combination of Kompauer and Bultman, the combination of Kompauer and Holtz, and the combination of Kompauer and Hood. (SBr at 45-57.) The staff argued that the evidence supports a finding that a person of skill in the art would have reason to combine Kompauer and Adam because "they are directed to the same problem of designing a height-adjustable work surface quickly and easily without requiring separate locking devices that need to be released and tightened again by hand." (Id. at 45.)[32] The staff included a table in its brief that lists the limitations of claim 7 and purports to explain how Adam and Kompauer meet said limitations. (Id. at 45-50.)[33] Regarding claim 34, the staff argued that both experts "clearly and unambiguously testified that friction pawls and toothless ratchets (which rely on friction, rather than blocking) were well known to those of skill in the art at the time of the invention, thereby satisfying the additional limitation of claim 34." (Id. at 51, 53, 55, 57 (emphasis added).)

With respect to the combination of Kompauer and Wiers, and/or the combination of Kompauer, Wiers, and any of the other prior art references, the staff argued that "there is insufficient reason to combine Wiers with the other references because, unlike the other asserted references, Wiers is not in the relevant art of support platforms." (SRBr at 19) (emphasis added). However, the staff did not believe that this affects the validity of claims 7 and 34 because the

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[32] Similarly, the staff argued that Kompauer and Bultman, Kompauer and Holtz, and Kompauer and Hood are "directed to the same problem of designing a pivoted adjustable bracket that can be adjusted easily and accurately to desired positions." (Id. at 52, 54, 56.)

[33] The staff referred to tables set forth in respondents' claim charts for the remaining references. (Id. at 52, 54, 56.)

other references and the experts' testimony render the claims obvious. (Id.)

Complainant argued that Kompauer is not pertinent prior art because it relates to a drafting table that rests upon the floor. (CBr at 68; CRBr at 61.)[34] According to complainant, "[t]he table top of Kompauer can never move below the entirety of item 5 (or the entirety of the combination of foot 4 and item 5), which rest on the floor. Thus, Kompauer does not clearly and convincingly disclose and one skilled in the art could not expect to modify the table top such that it was to be movable to a position below the level of the floor." (CRBr at 61.)

Complainant also argued that, if Kompauer is pertinent, it does not render claims 7 and 34 obvious because "there is no evidence that clearly and convincingly proves that one of ordinary skill in the art would be motivated to apply a frictional engagement surface to the blocking mechanism of the adjustable drafting table of Kompauer." (Id. at 72; CRBr at 60-66.) Complainant further argued that respondents relied on conclusory opinions and thus did not meet their burden of proving obviousness by clear and convincing evidence. (Id. at 72-73.) Specifically, with respect to claim 34, complainant asserted that:

> One skilled in the art reading the '097 Patent would understand that there are different specifies [sic] of locking mechanisms, such as pawls and ratchets, complementary serrated engagement faces and frictional engagement faces that could be used to position a support platform. (CFF 7.99.) However, there is no evidence that clearly and convincingly proves that one of ordinary skill in the art would be motivated to apply a frictional engagement surface to the ratcheting locking mechanism (blocking) of the adjustable drafting table of Kompauer. (CFF 7.100; CFF 7.101.)

(CRBr at 64 (emphasis added).) Complainant also asserted that respondents' expert Wood did

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[34] Complainant argued that the AU '578 application is not prior art to claims 7 and 34 of the '097 patent because said claims have a priority date of October 31, 1990, which pre-dates the publication date of the AU '578 application. (CRBr at 67.)

not opine that it would be obvious to substitute a frictional pawl for the blocking pawl of Kompauer. (Id. at 66.)

Complainant argued that claims 7 and 34 of the '097 patent are also not invalid for obviousness based on combinations of prior art references, i.e., the combination of Kompauer and Adam, the combination of Kompauer and Bultman, the combination of Kompauer and Holtz, or the combination of Kompauer and Hood. (CBr at 73-76; CRBr at 69-70.) Complainant argued that any such combination would require "substantial modification to each reference." (Id. at 73; CRBr at 72-73.) "These modifications are not simply moving some components around or interchanging the pawl with the locking members." (CRBr at 72.) For example, complainant argued that the locking mechanism of Kompauer would need to be modified as follows in order to combine it with any of the other references:

> First, the engagement teeth must be moved to the opposite side, facing toward, rather than away from, the linkage arm.
>
> The ratchet teeth must then be reshaped to put them into an arc that is centered on the pivot axis of the linkage arm. This allows the locking member on the link arm to engage and disengage uniformly throughout its range of motion.
>
> Finally, the pivot pin must be relocated to allow the locking member on the link element to move into and out of engagement with the ratchet teeth.

(CBr at 74; CRBr at 73.) Complainant further argued that "[c]ombining the Kompauer 'locking mechanism' into Adam, Bultman, Holtz, or Hood would result in a device with redundant locking mechanisms." (Id. at 75; CRBr at 73.)

Complainant asserted that respondents did not present evidence to show why or how a person of ordinary skill in the art would modify and combine the references to create the devices

claimed in the '097 patent. (Id. at 73; CRBr at 67-68.) According to complainant, Adam, Bultman, Hood and Holtz each disclose a different type of supporting mechanism with different types of locking means. (CRBr at 71.) Complainant asserted that:

> Adam is a height adjustment frame that relies on a ratcheted, telescoping locking mechanism;
>
> Bultman is a wall bracket support that uses a trigger to operate the locking mechanism;
>
> Holtz is a dental wall bracket that relies on use of a gravity pawl to lock the structure; and,
>
> Hood is a dental bracket that relies on a ratchet and pawl to lock the structure.

(Id. at 72.) Thus, complainant argued:

> Respondents have offered testimony that certain elements of Claim 7 are found in Kompauer and some are found in the Support Means references, but they have not offered any testimony demonstrating what a combined Kompauer, Adam, Bultman, Hood or Holtz references would look or perform like.

(Id. at 71.)

Complainant also argued that claims 7 and 34 of the '097 patent are not invalid for obviousness based on the combination of Kompauer and Wiers, or the combination of Kompauer, Wiers, and any of the other aforementioned references. (Id. at 76-78; CRBr at 75-78.) Complainant argued that there is no evidence that Wiers and the '097 patent solve the same problems, i.e., Wiers is not analogous art, because Wiers addresses the problem of preventing unwanted seat back rotation. (Id. at 76; CRBr at 75.) Complainant also argued that a person of ordinary skill in the art could not combine Wiers with any of the other references to obtain the invention of claim 34. (Id. at 77-78; CRBr at 77-78.)

It is undisputed that the art relevant to the '097 patent is "support platforms," which could be used to support a tray of tools, e.g., at a dentist's office. (See RFF 91 (undisputed).) Also, the administrative law judge has found that a person of ordinary skill in support platforms in 1989 would have a Bachelor of Science degree in mechanical engineering or an equivalent foreign degree and have at least about three years of experience in the design of support platforms. (See Section X, supra.)

1. Claim 7

In issue is whether claim 7 of the '097 patent is obvious, i.e., whether a person of ordinary skill in the art would have known that a support platform can be movable between a first position at least partially below a "fixed base" and a second position in front of the fixed base, based on his or her knowledge and i) Kompauer alone, ii) the combination of Kompauer and Adam, iii) the combination of Kompauer and Bultman[35], iv) the combination of Kompauer and Holtz, v) the combination of Kompauer and Hood, vi) the combination of Kompauer and Wiers[36], or vii) the combination of Kompauer, Wiers, and any of the other aforementioned

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[35] The administrative law judge finds that Bultman (JX-64) is relevant prior art to the '097 patent, i.e., it involves "support platforms." However, he also finds that it is unclear, based on the disclosures of Kompauer and Bultman, whether a person of ordinary skill in the art would know if a support platform can be moved to the various positions relevant to the '097 patent. Thus, the administrative law judge finds that the combination of Kompauer and Bultman does not render claim 7 of the '097 patent obvious. The administrative law judge, however, emphasizes that his findings regarding the combination of Kompauer and Bultman do not affect his findings regarding each of the other Kompauer combinations, discussed infra, some of which, e.g., Kompauer and Adam, do render claim 7 obvious.

[36] Wiers (JX-70) is titled "Infinitely Variable Seat Recliner Mechanism." (Id.) Wiers relates to "an automobile seat recliner which can be adjusted to locate a seat back in any given position." (Id. at CompX072975 (emphasis added).) The administrative law judge finds that Wiers discloses that one object of the invention is "to provide a [sic] infinitely variable seat recliner which is capable of developing large locking forces to lock the seat back in the adjusted

references.

a. Kompauer

The administrative law judge finds that Kompauer (JX-63) is relevant prior art to the '097 patent, i.e., it involves "support platforms." In particular, as the administrative law judge found in the anticipation section, Kompauer relates to a height adjustable table or the like. (See Section XIV.B, supra.) He further finds that it is unclear, based on the disclosures of Kompauer alone, whether a person of ordinary skill in the art would know if a support platform can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base, as claimed in the '097 patent. Thus, the administrative law judge finds that Kompauer alone does not render claim 7 of the '097 patent obvious.

b. The Combination Of Kompauer And Adam

Adam (JX-69) is titled "Height Adjustment Frame for the Shelf of a Keyboard Desk." (Id.) Adam relates to a "height adjustment means for a work surface," such as the separate work surface of a desk, which provides support for a computer keyboard, or dental tool trays, drafting tables, etc., and "in particular to a height adjustment means for a work surface that quickly and easily adjusts the height of the surface," and has a "locking means" for holding the work surface at different heights. (Id. at HMN00180325-326.) Thus, the administrative law judge finds that Adam is relevant prior art to the '097 patent, i.e., it involves "support platforms." The administrative law judge further finds that the record establishes that Adam and Kompauer are in the same technical field, i.e., support platforms, and also solve similar problems, i.e., adjusting a

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position under high load conditions." (Id. (emphasis added).) Thus, the administrative law judge finds that Wiers is not relevant prior art to the '097 patent, i.e., it does not involve "support platforms," and thus may not be used to render claim 7 or claim 34 of the '097 patent obvious.

support platform to place it at a particular height or level. In addition, respondents' expert Wood testified that a person of ordinary skill in the art would be motivated to combine Adam with Kompauer because they are in the same technical field and solve similar problems. (Tr. at 1393-94.) Hence, the administrative law judge finds that a person of ordinary skill in the art would have reason to combine the teachings of Kompauer and Adam. See, generally, KSR, 550 U.S. 398; see also Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356, 1367 (Fed. Cir. 2008) (Sundance) (stating, "Just as with the claim at issue in KSR, the segmented truck cover claimed in the '109 patent represents the 'mere application of a known technique to a piece of prior art ready for the improvement.' It would have been obvious to replace the one-piece cover in Cramaro with the segmented cover of Hall. Indeed, the benefits of combining Hall and Cramaro would have been inescapably obvious to a person of ordinary skill in the art at the time of the invention of the truck cover claimed in the '109 patent.").

Adam claims, e.g., a height adjustment means "wherein the fixed surface comprises the underside of a desk and the work surface comprises a keyboard support surface." (Id. at HMN00180333.) The administrative law judge finds that Adam discloses and claims a work surface that "can be releasably held in a plurality of positions," (id. at HMN00180327, HMN00180331 (emphasis added)), and discloses that work surface height can be "adjusted to allow the operator [of the computer] to find the most comfortable position for the keyboard in relation to their physical requirements" by a variety of means. (Id. at HMN00180325.) He finds that Adam discloses that a clamping/locking means is engaged to hold the work surface once it has reached the desired height, (id. at HMN00180326), and that said locking means may be engaged via notches. (Id. at HMN00180332.) He also finds that Adam discloses that, in a

preferred embodiment, "[t]he support arms 22 are arranged such that they form a paralellogram-type arm and allow for movement of the work surface 11 in relation to the desk 10 while being moved up and down." (Id. at HMN00180329 (emphasis added).) Further, "[t]he novel combination of the ratchet locking means 32 with support arms 22, that are urged upwardly by spring members 24, enable the height of the work surface 11 to be changed simply by depressing the work surface 11." (Id. at HMN00180330.)

In addition, it is undisputed that the support platform of Adam is attached to a bracket 18 that is in turn pivotally connected by linkage elements 22 to another bracket 14 that is attached to the fixed base (e.g., desk). (See SFF III.29 (undisputed).) It is also undisputed that the support platform of Adam can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base. (Id. (citing Figure 3).)

The administrative law judge finds that, based on the disclosures of Kompauer and Adam, a person of ordinary skill in the art would have known that a support platform can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base, as claimed in the '097 patent. Thus, the administrative law judge finds that the combination of Kompauer and Adam does render claim 7 of the '097 patent obvious.

c. The Combination Of Kompauer And Holtz

Holtz (JX-67) relates to an improvement in dental brackets in which one object of the invention is to "provide a simple, inexpensive, and efficient [dental bracket] of great strength and durability capable of ready adjustment to swing it vertically and horizontally and to vary its length for arranging the table at the proper elevation and in the proper position." (Id. at CompX044454 (emphasis added).) "A further object of the invention is to improve the

construction of the locking mechanism for holding the bracket in its adjusted position and to arrange both the gravity-pawl and the clamping means for holding the sliding bar adjacent to the handpiece, whereby either locking device may be adjusted or manipulated without releasing the hold on the handpiece." (Id.) Thus, the administrative law judge finds that Holtz is relevant prior art to the '097 patent, i.e., it involves "support platforms." The administrative law judge further finds that the record establishes that Holtz and Kompauer are in the same technical field, i.e., support platforms, and also solve similar problems, i.e., adjusting a support platform to place it at a particular height or level. In addition, respondents' expert Wood testified that a person of ordinary skill in the art would be motivated to combine Holtz with Kompauer because they are in the same technical field and solve similar problems. (Tr. at 1423-24.) Hence, the administrative law judge finds that a person of ordinary skill in the art would have reason to combine the teachings of Kompauer and Holtz. See, generally, KSR 550 U.S. 398; see also Sundance, 550 F.3d at 1367.

The administrative law judge finds that Holtz discloses that "[t]he dental bracket will permit the table to be rotated, to be swung horizontally, and to be raised and lowered, and the said table is firmly supported at the proper elevation by the locking mechanism, which is readily operable to change the position of the table." (Id. at CompX044455.) He further finds that the support platform of Holtz can thus be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base.

The administrative law judge finds that, based on the disclosures of Kompauer and Holtz, a person of ordinary skill in the art would have known that a support platform can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base,

as claimed in the '097 patent. Thus, the administrative law judge finds that the combination of Kompauer and Holtz does render claim 7 of the '097 patent obvious.

d. The Combination Of Kompauer And Hood

Hood (RX-103) relates to an improvement in brackets used by dentists "as a receptacle for their instruments and other articles they may be using in their various operations, the object being to produce a simple, strongly-constructed, and ornamental bracket, which may be turned to the right or left and adjusted vertically to any desired altitude." (Id. at HMN00183008.) The administrative law judge finds that Hood discloses a "bracket-shelf, mounted upon a pivot projecting upward from the bar, so that the shelf may be turned in any direction. To permit the shelf to be adjusted vertically a portion of the upper side of the lower tubular arm is removed and a double ratchet placed within the same." (Id.) Thus, the administrative law judge finds that Hood is relevant prior art to the '097 patent, i.e., it involves "support platforms." The administrative law judge further finds that the record establishes that Hood and Kompauer are in the same technical field, i.e., support platforms, and also solve similar problems, i.e., adjusting a support platform to place it at a particular height or level. In addition, respondents' expert Wood testified that a person of ordinary skill in the art would be motivated to combine Hood with Kompauer because they are in the same technical field and solve similar problems. (Tr. at 1434-35.) Hence, the administrative law judge finds that a person of ordinary skill in the art would have reason to combine the teachings of Kompauer and Hood. See, generally, KSR, 550 U.S. 398; see also Sundance, 550 F.3d at 1367.

The administrative law judge finds that Hood discloses that the shelf "may be adjusted vertically as desired." (Id. (emphasis added).) He also finds that Hood discloses a "pawl attached

to the lower side of the upper arm" that "engages with the teeth of th[e] ratchet and supports the arms and shelf in any desired position." (Id. (emphasis added).) When "it is desired to elevate or lower the shelf carried by the bracket," the pawl is raised out of the teeth of the ratchet. (Id. at HMN00183009 (emphasis added).) In one embodiment of Hood, "[a] shelf L is carried upon the bar I, being retained in position by a pivot i, projecting upward from the bar. This shelf carries the instruments, and, as shown, may be turned into any desired position, and raised or lowered to suit the wants of the operator." (Id.) Thus, the administrative law judge finds that the support platform of Hood can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base.

The administrative law judge finds that, based on the disclosures of Kompauer and Hood, a person of ordinary skill in the art would have known that a support platform can be moved to various positions, including (1) partially below the fixed base and (2) in front of the fixed base, as claimed in the '097 patent. Thus, the administrative law judge finds that the combination of Kompauer and Hood does render claim 7 of the '097 patent obvious.

e. Secondary Considerations

Complainant argued that the parties agree that secondary considerations can support a finding of non-obviousness. (CRBr at 78). An analysis of secondary considerations is an essential component when considering the obviousness or non-obviousness of patent claims. Graham, 383 U.S. at 17-18). These considerations include the following factors: whether the product covered by the claims in issue was commercially successful due to the merits of the claimed invention rather than due to advertising, promotion, salesmanship, or features of the product other than those found in said claims; whether there was a long felt need for a solution to

the problem facing the inventors, which was satisfied by the claimed invention; whether others in the field tried, but failed, to solve the problem solved by the claimed invention; whether others copied the claimed invention; whether the claimed invention achieved unexpectedly superior results over the closest prior art; whether others in the field praised the claimed invention or expressed surprise at the making of the claimed invention; and whether others accepted licenses under the patent in issue because of the merits of the claimed invention. Id. In order to accord any weight to secondary considerations, a nexus must be established between the evidence and the merits of the claimed invention. In re GPAC Inc., 57 F.3d 1573, 1580 (Fed. Cir. 1995). The Federal Circuit has recognized that a weak showing of secondary considerations of non-obviousness does not overcome a strong prima facie showing that the claims are obvious. Leapfrog Enters., Inc. v. Fisher-Price, Inc., 485 F.3d 1157, 1162 (Fed. Cir. 2007); see also Agrizap, Inc. v. Woodstream Corp., 520 F.3d 1337, 1344 (Fed. Cir. 2008).

Complainant relied on the testimony of complainant's King and referenced the commercial success of its adjustable keyboard support systems, the fact that its products won awards for ease of use, and a long felt need in the industry for its products. (CRBr at 78.) Respondents argued that the evidence supports their obviousness analysis of asserted claim 7. (RRBr at 53.)

The administrative law judge finds no evidence indicating any nexus between (1) any sales, awards or any alleged long felt need and (2) the alleged patentable features of the invention as claimed in claim 7. In addition, complainant admitted that it did not put forth any evidence of copying of the invention of claim 7. (RFF 272 (undisputed).) With respect to others accepting licenses under the '097 patent, complainant paid only{ } for the '097 patent and{

} (RX-29C at 125; RFF 279 (undisputed).)

Moreover, the administrative law judge has found that asserted claim 7 is obvious over certain prior art.

Based on the foregoing, the administrative law judge finds that secondary considerations do not support the patentability of asserted claim 7 of the '097 patent.

f. Conclusion

Based on the foregoing, the administrative law judge finds that respondents and the staff have met their burden in establishing, by clear and convincing evidence, that the differences between the claimed invention of claim 7 of the '097 patent and the prior art, i.e., the combination of Kompauer and Adam, the combination of Kompauer and Holtz, and/or the combination of Kompauer and Hood, which combinations were not before the Examiner during the prosecution or reexamination of the '097 patent in the Patent Office, are such that the subject matter as a whole would have been obvious to a person having ordinary skill in the art, viz., a person who has a Bachelor of Science degree in mechanical engineering or equivalent foreign degree and has at least about three years of experience in the design of support platforms, at the time the invention was made.

2. Claim 34

In issue is whether claim 34 of the '097 patent is obvious, i.e., whether a person of ordinary skill in the art would have known that locking members can be frictionally interengagable, as the administrative law judge has construed that term, based on his or her knowledge and i) Kompauer alone, ii) the combination of Kompauer and Adam, iii) the combination of Kompauer and Bultman, iv) the combination of Kompauer and Holtz, v) the

combination of Kompauer and Hood, vi) the combination of Kompauer and Wiers, vii) the combination of Kompauer, Wiers, and any of the other aforementioned references, or viii) the AU '578 application alone.

a. Kompauer

The administrative law judge has found that Kompauer (JX-63) is relevant prior art to the '097 patent. In addition, the administrative law judge has found that, to be considered frictionally interengagable, locking members must involve friction as the principle on which they rely. (See Section XI.H, supra.) The administrative law judge also found that Kompauer does not mention friction as it is used in claim 34 of the '097 patent, i.e., it does not disclose reliance on friction alone to engage the locking members. (See, generally, JX-63; Section XIV. A, supra.) He further finds, based on the disclosure of Kompauer alone, that a person of ordinary skill in the art would not know if locking members can be frictionally interengagable, as the administrative law judge has construed that term as recited in asserted claim 34 of the '097 patent. Thus, the administrative law judge finds that it has not been established, by clear and convincing evidence, that Kompauer alone renders claim 34 of the '097 patent obvious.

b. The Kompauer Combinations

Respondents and the staff only relied on the disclosure of Kompauer and the testimony of Pratt and Wood to meet the frictionally interengagable claim limitation of claim 34 for each of the Kompauer combinations they asserted. (See RBr at 32-36, 38-39; RRBr at 44-45, 48 (stating that the locking components from Kompauer could easily be combined with the support means of the other references); SBr at 41-44, 51, 53, 55, 57.) In other words, they did not rely on the disclosure of any other relevant prior art reference to meet the limitation "frictionally

interengagable." (See e.g., Tr. at 1395-1400 (Wood testified that "the locking means from Kompauer is clear that it would be combined with the support means from Adam") and Tr. at 1405-42.) Thus, for the reasons given with respect to Kompauer alone, the administrative law judge finds that none of the Kompauer combinations render claim 34 of the '097 patent obvious.[37]

c. The AU '578 Application

The administrative law judge finds that the AU '578 application (JX-61) contains a passage that does not appear in the '448 parent application. (Compare JX-61 at RUS00000564 with RX-102 at CompX014001.) Said passage states:

> In addition the locking engagement between the locking surfaces may be associated with any of the elements to effect the desired locking action. Furthermore the locking interengagement between the locking member may take any form appropriate to the circumstances and need not be restricted to the two particular forms of locking interengagement described in relation to the above embodiments.

(JX-61 at RUS00000564 (emphasis added).) However, respondents' expert Wood testified, e.g., that he could not identify any structural differences between the '448 parent application and the AU '578 application except for the omission of a spring in figure 12 of the '448 parent application. (Tr. at 1507-1508.)[38] Morever, the specification of the '097 patent states:

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[37] The administrative law judge notes that, because the parties did not rely on the disclosures of other prior art references to meet the frictionally interengagable limitation, he may not consider other prior art as evidence of the alleged invalidity of said claim. See, e.g., Lannom Mfg. Co. v. USITC, 799 F.2d 1572, 1579 (Fed. Cir. 1986).

[38] In addition, respondents argued regarding priority involving the AU '578 application that said application "only disclose[s] serrated-type locking members that use blocking." (RBr at 22, 24, 25.) More specifically, respondents argued that "[n]one of the embodiments of the '448 parent application rely on friction alone for locking." (RRBr at 32.) The embodiments of the

> In previous embodiments the locking inter-engagement is effected through complementary serrated formation provided on the opposed locking surfaces. In the case of the ninth embodiment the locking surfaces are frictionally inter-engaged.

(JX-1 at 6:42-46 (emphasis added).) This passage was added to the continuation-in-part application and it was not a part of the AU '578 application. (See, generally, RX-103.) Thus, the administrative law judge further finds that, like the '448 parent application, the AU '578 application also does not mention friction as it is used in claim 34 of the '097 patent, i.e., it does not disclose reliance on friction alone to engage the locking members. (See, generally, JX-61.) He also finds that it is unclear, based on the disclosures of the AU '578 application alone, whether a person of ordinary skill in the art would know if locking members can be frictionally interengagable, as the administrative law judge has construed that term as claimed in the '097 patent. Thus, the administrative law judge finds that the AU '578 application alone does not render claim 34 of the '097 patent obvious.

d. The Knowledge of a Person of Ordinary Skill in the Art

With respect to the knowledge of a person of skill in the art regarding frictional engagement faces and the effect of said knowledge on the alleged obviousness of claim 34, none of the references relied on by respondents and the staff suggest frictional engagement faces except for Wiers (JX-70), which the administrative law judge has found, supra, is not relevant prior art to the '097 patent. In addition, the administrative law judge finds that each of the following facts are undisputed:

> The AU '578 application, Adam, Bultman, Holtz, Hood, and

'448 parent application and the AU '578 application are the same. (Compare RX-102 with RX-103.)

> Kompauer references disclose engageable locking members that have serrations and pawls. (RFF 245 (undisputed).)
>
> In 1989, a person having ordinary skill in the art would know that some pawls engage by frictional engagement with a surface. (CFF 7.31 (undisputed).)
>
> In 1989, a person having ordinary skill in the art would know that both non-blocking frictional pawls/toothless ratchets and blocking pawls were available. (CFF 7.29, CFF 7.30 (all undisputed).)
>
> In 1989, a person having ordinary skill in the art would know that there different species of locking mechanisms, such as pawls and ratchets, complementary serrated engagement faces, and frictional engagement faces, could be used to position a support platform. (CFF 7.99 (undisputed).)
>
> In 1989, a person having ordinary skill in the art would know that non-blocking toothless ratchets and frictional engagement surfaces could have been used in place of mechanical blocking surfaces, such as serrations and pawls. (RFF 243 (undisputed).)
>
> Frictional pawls and toothless ratchets rely on friction, rather than mechanical blocking, to restrict movement between the locking surfaces. (CFF 7.32, SFF III.57 (all undisputed).)

However, the administrative law judge also finds that it is undisputed that:

> The locking shown in the ninth embodiment of the '097 patent is completely different from that shown in the first eight embodiments and that the V-shaped groove of the ninth embodiment would not have been obvious in the late 1980s.

(RFF 78-79 (emphasis added) (undisputed).) Further, despite Pratt's testimony that frictional engagement for support systems was known in the prior art generally, he also testified that he was unsure whether the type of frictional engagement mechanism described in the '097 patent would be obvious. (Tr. at 939-44.) Thus, the administrative law judge finds that there is no evidence that clearly and convincingly proves that one of ordinary skill in the art would be

motivated to use frictionally interengagable locking members, as the administrative law judge has construed that term in this investigation, with or in place of the non-frictional locking mechanisms of any of the alleged prior art references.

e. Conclusion

Based on the foregoing, the administrative law judge finds that respondents and the staff have not met their burden, by clear and convincing evidence, in establishing that the differences between the claimed invention of claim 34 of the '097 patent 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." See 35 U.S.C. §103. Thus, the administrative law judge finds that claim 34 is not invalid based on obviousness.

XV. Intervening Rights

Respondents argued that the scope of claim 34 was changed during reexamination (RBr at 46-47); that the accused products have been sold without significant change since 1999, prior to reexamination (RBr at 46); and that if claim 7 is found to be invalid and claim 34 is found to be infringed, the doctrine of intervening rights should thus preclude an injunction. (RBr at 47-48.)

The staff argued that respondents have not provided any evidence that the accused products do not infringe a claim of the original patent, and thus have not carried their burden to show intervening rights. (SBr at 60-61.)

In its reply to RBr and SBr complainant argued that respondents did not raise the affirmative defense of intervening rights in their response to the complaint, and thus waived the

defense[39] (CRBr at 79-81); that respondents' expert was precluded "from testifying beyond the scope of his expert report with respect to intervening rights" (CRBr at 81); that respondents failed to prove that each and every product in the investigation was purchased, offered for sale, or used within the United States before the '097 patent reexamination certificate issued (CRBr at 81-82); that respondents failed to prove that each and every product in this investigation is of the same configuration as the devices sold prior to the issuance of the reexamination certificate (CRBr at 81-82); and that respondents have failed to show that the scope of reexamined claim 34 is not substantially identical to the original claims. (CRBr at 83-85.)

In RRBr, respondents argued that testimony was offered to prove that the accused products have been sold, unchanged, since before the issuance of the reexamination certificate (RRBr at 54); that intervening rights apply when a claim's scope is narrowed during reexamination (RRBr at 55); that the test for intervening rights "is not whether an accused device falls within the scope of an original claim" (RRBr at 55); and that no original claim of the '097 patent included the same limitations as reexamined claim 34. (RRBr at 55-58.)

The statutory basis for the doctrine of intervening rights for reissued patents can be found in 35 U.S.C.§ 252, which reads in pertinent part:

> A reissued patent shall not abridge or affect the right of any person or that person's successors in business who, prior to the grant of a reissue, made, purchased, offered to sell, or used within the United States, or imported into the United States, anything patented by the reissued patent, to continue the use of, to offer to sell, or to sell to others to be used, offered for sale, or sold, the specific thing so made, purchased, offered for sale, used, or imported unless the making, using, offering for sale, or selling of such thing infringes a

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[39] The administrative law judge found that respondents did not waive the defense of intervening rights. See Order No. 26 at 12 (November 4, 2009).

valid claim of the reissued patent which was in the original patent.

35 U.S.C. § 252 ¶ 2 (emphasis added).[40] The defense of intervening rights is available to alleged infringers if reexamined claims are "substantively different" from those in the original patent. Id.; see also Seattle Box Co. v. Indus. Crating &Packing, Inc., 731 F.2d 818, 830 (Fed. Cir. 1984) (noting that where the reissued claims are substantively different from the original claims, the infringer "may properly raise a defense of intervening rights."). Thus, section 252 prohibits a patentee from obtaining, upon reexamination, claims that are infringed by a product that was in existence prior to the reexamination, unless the infringed claim was also in the original patent. The doctrine of intervening rights is an affirmative defense of infringement in a patent infringement action, which must be proven by clear and convincing evidence. Checkpoint Svs., Inc. v. USITC, 54 F.3d 756, 761 (Fed. Cir. 1995); Kaufman Co.. Inc. v. Lantech. Inc., 807 F.2d 970, 978 (Fed. Cir. 1986) (Kaufman).

With respect to the statutory requirement that respondents "prior to the grant of a ... [reexamination], made, purchased, offered to sell, or used within the United States, or imported into the United States, anything patented by the reissued patent, to continue the use of, to offer to sell, or to sell to others to be used, offered for sale, or sold, the specific thing so made, purchased, offered for sale, used, or imported" as required by 35 U.S.C. § 252, supra, respondents must show that the products at issue in the investigation are substantively identical to the products they made, sold, offered for sale or important prior to the issuance of the reexamination certificate of the '097 patent. To that end, respondents rely solely on the testimony of Corey Boland, President

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[40] The provisions of section 252 apply to reexamined patents in addition to reissued patents. See 35 U.S.C. § 307.

of respondent Waterloo Furniture Components Ltd., to establish that "front and rear wedge products have been marketed since 1999" and "the brake shoe products have been marketed since late 2007 or early 2008 with no changes in terms of its [sic] construction." (RBr at 46; RRBr at 54.)

Boland testified that he began working for respondent "COMPX" as a "director of engineering" in 2002, became "vice president of engineering" in 2006, and then became "president for CompX furniture components" in "May of 2008."[41] (Tr. at 1045-47.) With respect to the accused products, Boland testified:

> Q. Now, you were here, I think, this morning, during the testimony, and we referred, for a shorthand, to three types of think they were mechanisms, a wedge lock, front ended wedge lock, with a wedge in the back end and a drum brake.
>
> Do you recall that testimony?
>
> A. I do.
>
> Q. And do you have an understanding of those products?
>
> A. Yes, I do.

(Tr. at 1055-56 (emphasis added).) However, Boland did not explain the basis of said "understanding," and there is no testimony of Boland as to his understanding of the relevant features of the accused products compared with products in existence prior to issuance of said reexamination certificate. Moreover with respect to wedge lock products (viz., JPX-10 and JPX-12, the "Momentum Arm" and the "Pinnacle 2"), Boland testified:

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[41] Boland testified as a lay witness, not as an expert. (Tr. at 1065-66.)

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(Tr. at 1062-63 (emphasis added).) The administrative law judge finds no testimony by Boland as to what he considered a "significant change." Thus, it is unclear from Boland's testimony whether there were any changes made to the products which he considered "insignificant." Furthermore, as a lay witness, Boland's understanding of what changes are significant may not comport with changes that are significant in this investigation.

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(Tr. at 1063-64 (emphasis added).) The administrative law judge finds no testimony by Boland that he would have been aware of any changes to the product. As found supra with reference to Boland's "understanding" of the accused products at issue, it appears that there were at least changes. However the record is silent as to what those changes were.

Based on the foregoing, the administrative law judge finds that respondents have not established, by clear and convincing evidence, that products substantially identical to the accused products were made, purchased, used, or imported into the United States prior to the issuance of the reexamination certificate of the '097 patent.

XVI. Remedy

Complainant seeks the issuance of a permanent limited exclusion order against respondents, barring entry into the United States of all accused adjustable keyboard support systems and components thereof that infringe the '097 patent. {

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} Hence complainant argued that a cease and desist order should issue directed at the prevention of the sale in the United States of any existing inventory of accused products by respondents. (CBr at 95-98.)

Respondents argued that the only appropriate form of relief against respondents would be a limited exclusion order against respondent Waterloo Furniture Components Ltd. without bond and directed solely to further importation of products ruled to be infringing; and that those products of said respondent stipulated not to be subject to the infringement charges and those products found to be non-infringing should be specifically identified and excluded from any order for purposes of clarity and to avoid inappropriate conflict. {

} It is further argued that complainant has failed to show that a certification provision would not be unduly burdensome for third party imports. (RBr at 94-95.)

The staff argued that if the '097 patent is found to be valid and infringed, a limited

exclusion order as to respondents' infringing products, both branded and otherwise, should issue. The staff further argued that a certification process which would require third party importers of potentially excluded products to certify that their products are not manufactured by respondents would facilitate Customs' enforcement of any exclusion order. (SBr at 69-70.) {

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The Commission "has broad discretion in selecting the form, scope, and extent of the remedy in Section 337 proceedings." Certain Integrated Circuit Telecommunication Chips, Inv. No. 337-TA-337, (Comm'n Op.) at 21 (August 3, 1993). Pursuant to its statutory authority found at 19 U.S.C. § 1337 (d), the Commission may exclude from importation goods and products that form the basis for a finding of a violation of Section 337 which includes products that have been found to infringe the '097 patent directly, contributorily or by inducement after importation has occurred. Certain Flash Memory Circuits, Inv. No. 337-TA-382, (Comm'n Opn.) at 26 (June 26, 1997) ("The Commission has the authority to enter an exclusion order, a cease and desist order, or both."). Indeed, absent special circumstances, the statute requires such exclusion:

> If the Commission determines . . . that there is a violation of this section, it shall direct that the articles concerned . . . be excluded from entry into the United States, unless, after considering the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry.

19 U.S.C. § 1337(d) (emphasis added). Hence, a remedy excluding respondents' infringing

products from entry is mandatory if a violation of section 337 is found, unless the Commission finds that public interest factors militate against such remedy.

In addition, the scope of an investigation is defined by the notice of investigation. Certain Chemiluminescent Compositions, Inv. No. 337-TA-285, Commission Order (Jan. 13, 1989) (scope of investigation is defined by the notice of investigation). Thus any exclusion order may cover all products within that scope, i.e., "the articles concerned." 19 U.S.C. § 1337(d)(1). Moreover, Commission remedial orders have covered all products that infringe and are not limited to specified models or products. Certain Optical Disk Controller Chips and Chipsets and Products Containing Same, Including DVD Players and PC Optical Storage Devices, Inv. No. 337-TA-506, Commission Opinion at 56 (August 7, 2006) (public version)).

The Commission also has the authority to issue cease and desist orders where a respondent has a sufficient inventory of infringing goods in the United States," Certain NAND Flash Memory Circuits, Inv. No. 337-TA-526, 2005 ITC Lexis 859, Init. Determ. at *255 (Oct. 19, 2005) (citing Certain Plastic Encapsulated Integrated Circuits, Inv. No. 337-TA-315, U.S.I.T.C. Pub. No. 2574, Comm'n Op. at 37 (November 1992).)

In the event a violation is found, the administrative law judge recommends the issuance of a limited exclusion order prohibiting the importation into the United States of infringing articles whether they are private label products or brand-name products, "that are manufactured abroad or imported by or on behalf of [the respondents], or any of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns." See Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same, Inv. No. 337-TA-551, Limited Exclusion Order, ¶ 1 (May 30, 2007).

Moreover, he recommends that said order should not be limited to specifically-identified products, but rather extend to all infringing products. See e.g., Certain Integrated Repeaters, Switches, Transceivers and Products Containing Same, Inv. No. 337-TA-435, Commission Opinion at 23, USITC Pub. 3547 (Oct. 2002). To further facilitate Custom's enforcement of any recommended exclusion order, the administrative law judge also recommends a certification provision. See, e.g., Certain Condenser Parts Thereof, and Products Containing The Same, Comm's Op. at 239 (Sept 10, 1997).

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}[42] Hence, the administrative law judge recommends an appropriate cease and desist order against respondent Waterloo Furniture Components Ltd., should a violation be found.

XVII. Bond

Complainant argued that respondents' accused products directly compete with

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complainant's adjustable keyboard support systems; that complainant sells a keyboard support system, which is made up of the keyboard mechanism, keyboard tray, wrist pad, and various other components; that similar to complainant, respondents sell all of the components that make up an adjustable keyboard support system; that for example, customers can purchase keyboard trays and palm rests, along with the accused keyboard mechanism; that a plain price comparison between complainant and respondents' accused products is not possible because the parties sell their products at different levels of commerce and at varying prices; that both parties vary the prices of their products based on a variety of factors, including the type of customer, type of product, and order size; that respondents' pricelists demonstrate that they price the accused products in various categories and by corresponding prices, including OEM List Pricing, Distributor Pricing, International Pricing, and Transfer Pricing; and that flexible pricing policies and discounting policies are common in the adjustable keyboard support system business. Complainant further argued that the evidence shows that the '097 patent has never been licensed, and thus, no reasonable royalty rate can exist; and that the record demonstrates that respondents do compete with complainant in the relevant market. (CRBr at 95.) Accordingly, complainant requested that the administrative law judge set bond at one hundred percent of the entered value of the accused products. (CBr at 99.)

Respondents argued that it is undisputed that the allegedly patented mechanism which the complainant imports from China costs the complainant around{

} that any bond would be inappropriate because complainant imports its product from China at a much lower cost than the respondent; that while complainant directs its marketing efforts to the sale of

keyboard support "systems" that are installed at computer keyboard work stations by end users, and such systems include, inter alia, a key board support platform, a mechanism for adjustment of the elevation and attitude of a key board platform, a slide mechanism for horizontal positioning of the key board platform and support mechanism, a mouse platform, and optional other components, in contrast, respondents are suppliers of "mechanisms" for elevation and attitude adjustment and optional slide mechanisms and {

} since the "mechanisms" of respondents and complainant are incompatible and do not compete in the marketplace, the respective sales price of such mechanisms is not relevant; that rather, the relevant inquiry is the potential competitive impact upon complainant as measured by comparisons with direct competitions of complainant; that in the relevant market, complainant competes on the basis of alleged good will associated with its systems, but more importantly on deep discounting, viz. upwards of{ } that such discounts are offered to most all of complainant's customers except in limited circumstances to customers with respect to products sold at contract prices to the Federal Government; that because, complainant can engage in such massive discounting, and because the cost of the products are a fraction of the selling price, it is apparent that list pricing of component elements of complainant's system is of no import; that relevant information would include typical royalties associated with respect to such "mechanisms" in the field; that the burden of providing such information is that of complainant; and that in the absence of such proofs, judicial notice is deemed appropriate and

nominal rate such as 4-6% of respondents' list price for "mechanisms" applied to a base of projected infringing sales is deemed reasonable. (RBr at 84-86.) Respondents however also argued that in the relevant market, complainant "competes on the basis of alleged good will associated with its systems." (RBr at 85.)

The staff argued that representatives of both complainant and respondents testified at the hearing regarding the variability in pricing for their products and within the industry; that no reasonable royalty rate information has been provided and the staff understands that the '097 patent has not been the subject of any licenses to date; and that accordingly, complainant has established that it will be difficult to calculate an accurate bond based on price differentials or royalty rates and as such, the bond should be set at 100% of the entered value of the allegedly infringing products imported during the Presidential review period. (SBr at 72.)

Section 337(j)(3) provides for the entry of infringing articles upon the payment of a bond during the sixty-day Presidential review period. 19 U.S.C. § 1337(j)(3). Any bond is to be set at a level sufficient to "offset any competitive advantage resulting from the unfair method of competition or unfair act enjoyed by persons benefiting from the importation." Certain Dynamic Random Access Memories, Components Thereof and Products Containing Same, Inv. No. 337-TA-242, Commission Opinion on Violation, Remedy, Bonding and the Public Interest, USITC Pub. No. 2034, 1987 WL 450856 (U.S.I.T.C.) at 38 (1987). When reliable price information is available, the Commission has set the bond by eliminating the price differential between the domestic and the imported infringing product. Certain Digital Satellite System (DSS) Receivers and Components Thereof, Inv. No. 337-TA-392, Final Initial and Recommended Determination on Remedy and Bonding, U.S.I.T.C. Pub. No. 3418, 2001 WL

535427 (U.S.I.T.C.) at 336 (April 2001). Where reliable price information is not available, however, Commission precedent establishes that the bond should be set at 100%. Certain Semiconductor Memory Devices and Products Containing Same, ITC Inv. No. 337-TA-414, Recommended Determination on Remedy and Bonding, 1999 WL 1267282 (U.S.I.T.C.) at 6 (December 13, 1999), Certain Flash Memory Circuits and Products Containing Same, Inv. No. 337-TA-382, USITC Pub. 3046, Commission Opinion at 26-27 (July 1997).

While respondents have argued that the private parties do not compete and "rarely directly compete" in the marketplace (RBr at 85, 96) they also argued that in the relevant market, complainant competes on the basis of alleged good will associated with its systems. Hence, respondents argued that a normal rate such as 4-6 percent of respondents' list price for "mechanisms" applied to a base of projected infringing sales is deemed reasonable as a bond during the Presidential period relying on "judicial notice." (RBr at 85-86.) It is a fact however that the '097 patent has never been licensed. (SFF VIII.3 (undisputed in relevant part.)

While respondents propose said 4-6 percent, it is also undisputed that representatives of both complainant and respondents testified at the evidentiary hearing regarding the variability in pricing for their products and within the industry. (SFF VIII, 2 (undisputed).). {

} and that while complainant sells its products to a variety of customers, including OEMs, the federal government, state government, corporations, and retail stores, it has special discounting policy that allows its sales personnel to vary the price of an adjustable keyboard support system. (CFF

9.15, 9.16 (all undisputed).)

In view of the foregoing, the administrative law judge finds that it would be difficult to calculate an accurate bond based on price differentials or royalty rates and hence he recommends that any bond be set at 100 percent of the entered value of the infringing products imported, during the Presidential period, should a violation be found.

XVIII. Additional Findings

A. Parties

1. Complainant Humanscale is a New York corporation with its principal place of business located at 11 East 26th Street, 8th floor, New York, New York 10010. (JX-004C at 1.)

2. Humanscale manufactures components for the keyboard assembly process and assembles keyboard assemblies in Piscataway with various components. (Washkevich, Tr. at 161:5-14.)

3. Respondent COMPX International is a Delaware corporation with its principal place of business located at 5430 LBJ Freeway, Suite 1700, Dallas, Texas 75240. (Boland, Tr. at 1047–1048; CX-020C at 3; CX-507 at CompX011758.)

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7. Waterloo Furniture Components Ltd. is a wholly-owned Canadian subsidiary of COMPX International, with its principal place of business located at 501 Manitou Drive, Kitchener, Ontario, Canada N2C 1L2. (Boland, Tr. at 1045–1046, 1047, 1049, 1073; CX-020C at 3; CX-312C at 2.)

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9. {

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10. {

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11. Respondent Waterloo Furniture Components Ltd. imports and sells for importation into the United States and sells after importation in the United States adjustable keyboard support systems and components thereof. (Boland, Tr. at 1085–1086, 1094, 1095; CX-020C at 4, CX-312C at 6-7; JX-078 at 2-5.)

12. {

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B. Live Witnesses

13. In addition to complainant's expert Pratt, Robert King and Michael Washkevich testified live at the evidentiary hearing for complainant. (Tr. at 443.)

14. Robert King is founder and CEO of complainant (Tr. at 133).

15. Michael Washkevich is vice president of global operations for complainant

Humanscale. (Tr. at 257.)

16. In addition to respondents' expert Wood, Corey Boland testified live at the evidentiary hearing. (Tr. at 1643.)

17. Corey Boland is president for "COMPX furniture components" and vice president of respondent COMPX International which is the parent company to Waterloo Furniture Components Ltd.. (Tr. at 1047.)

CONCLUSIONS OF LAW

1. The Commission has in personam jurisdiction and in rem jurisdiction.

2. There has been an importation of accused products into the United States which are the subject of the unfair trade allegations.

3. It has not been established that asserted claims 7 and 34 are not valid under 35 U.S.C. § 102.

4. It has been established that asserted claim 7 is obvious under 35 U.S.C. § 103.

5. It has not been established that asserted claim 34 is not valid.

6. Respondents infringe claim 34 of the '097 patent.

7. Assuming claim 7 is valid, respondents infringe said claim.

8. A domestic industry exists with respect to the '097 patent.

9. Respondents have not established any intervening rights.

10. There has been a violation of Section 337.

11. If a violation is found by the Commission, the record supports issuance of a limited exclusion order barring entry into the United States of infringing adjustable keyboard support systems and components thereof with certification provision, the issuance of a cease and desist order against respondent Waterloo Furniture Components Ltd., and a bond set at 100 percent of the entered value of the infringing products imported during the Presidential period.

ORDER

Based on the foregoing, and the record as a whole, it is the administrative law judge's Final Initial Determination that there is a violation of section 337 in the importation into the United States, sale for importation, and sale within the United States after importation of infringing adjustable keyboard support systems and components thereof. It is also the administrative law judge's recommendation, should a violation be found, that a limited exclusion order issue barring entry into the United States of infringing adjustable keyboard support systems and components thereof with certification provision, the issuance of a cease and desist order against respondent Waterloo Furniture Components Ltd., and a bond set at 100 percent of the entered value of the infringing products imported during the Presidential period.

The administrative law judge hereby CERTIFIES to the Commission his Final Initial and Recommended Determinations. The briefs of the parties filed with the Secretary, are not certified, since they are already in the Commission's possession in accordance with Commission rules.

Further it is ORDERED that:

1. In accordance with Commission rule 210.39, all material heretofore marked in camera because of business, financial and marketing data found by the administrative law judge to be cognizable as confidential business information under Commission rule 201.6(a), is to be given in camera treatment continuing after the date this investigation is terminated.

2. Counsel for the parties shall have in the hands of the administrative law judge those portions of the final initial and recommended determinations which contain bracketed confidential business information to be deleted from any public version of said determinations, no later than March 1, 2010. Any such bracketed version shall not be served via facsimile on the

administrative law judge. If no such bracketed version is received from a party, it will mean that the party has no objection to removing the confidential status, in its entirety, from these initial and recommended determinations.

3. The initial determination portion of the Final Initial and Recommended Determinations, issued pursuant to Commission rules 210.42(a) and 210.42-46, shall become the determination of the Commission, unless the Commission, within that period, shall have ordered its review of certain issues therein or by order has changed the effective date of the initial determination portion. The recommended determination portion, issued pursuant to Commission rule 210.42(a)(1)(ii), will be considered by the Commission in reaching a determination on remedy pursuant to Commission rule 210.50(a).

Paul J. Luckern
Chief Administrative Law Judge

Issued: February 23, 2010

CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF

Inv. No. 337-TA-670

PUBLIC CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **Final Initial and Recommended Determinations** has been served by hand upon the Commission Investigative Attorney, Heidi E. Strain, Esq., and the following parties as indicated, on March 8, 2010.

Marilyn R. Abbott

Marilyn R. Abbott, Secretary
U.S. International Trade Commission
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CERTAIN ADJUSTABLE KEYBOARD SUPPORT SYSTEMS AND COMPONENTS THEREOF

Inv. No. 337-TA-670

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