

United States District Court,
D. Massachusetts.

AMESBURY GROUP, INC., and Amesbury Springs Ltd,
Plaintiffs.

v.

THE CALDWELL MANUFACTURING COMPANY,
Defendant.

No. Civ.A. 05-10020-DPW

Jan. 20, 2006.

Douglas J. Kline, Stephen D. Whetstone, Testa, Hurwitz & Thibeault, LLP, Jordan M. Singer, Safraz W. Ishmael, Goodwin Procter LLP, Boston, MA, for Plaintiffs.

David E. Lurie, Thomas E. Lent, Lurie & Krupp, LLP, Boston, MA, for Defendant.

MEMORANDUM AND ORDER

WOODLOCK, J.

Amesbury Group, Inc. and Amesbury Springs Ltd. (collectively, "Amesbury") commenced this action against The Caldwell Manufacturing Company ("Caldwell") for allegedly infringing three of Amesbury's patents related to window balances. These are: United States Patents numbered 5,365,638 (the " '638 patent") for "Spring Mounting for Sash Frame Tensioning Arrangements"; 6,598,264 (the " '264 patent") for "Block and Tackle Window Balance with Bottom Guide Roller"; and 6,820,368 (the " '368 patent") for "Snap Lock Balance Shoe and System for a Pivotal Window". In response, Caldwell has filed counterclaims seeking a declaration that it has not infringed any of the patents at issue and that Amesbury's patents are invalid in any event.

In order to frame the issues in this litigation, I resolve in this Memorandum the threshold dispute between the parties regarding the construction of various claim terms in this Memorandum and Order. *See* *Watts v. XL Systems, Inc.*, 232 F.3d 877, 880 (Fed.Cir.2000)("The determination of infringement is a two-step process. First, this court construes the claims and, second, we compare the properly construed claims to the accused device.")

I. CLAIM CONSTRUCTION

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corporation*, 415 F.3d 1303, 1312 (Fed.Cir.2005) *quoting* *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed.Cir.2004)). The Federal Circuit in *Phillips* recently set out a comprehensive framework for construing

claims.

Claim construction, notwithstanding its evidentiary underpinnings, is a question of law to be determined by a judge. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384, 390, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Courts are to give claim terms "their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312 *quoting* *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (1996). However, the ordinary and customary meaning of a claim is not necessarily the meaning understood by a layperson, but "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." FN1 *Id.* at 1313. This understanding provides "an objective baseline from which to begin claim interpretation." *Id.*

FN1. For purposes of claim construction, the "time of the invention" is the effective filing date of the patent application. *Phillips v. AWH Corporation*, 415 F.3d 1303, 1313 (Fed.Cir.2005).

"In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314. "In such circumstances, general purpose dictionaries may be helpful." *Id.* However, where the ordinary meaning of claim language as understood by a person of skill in the art is not readily apparent, *Phillips* directs district courts to a hierarchy of sources to aid in claim construction. The intrinsic record, including the claim terms themselves, the remainder of the specification, and the prosecution history, provides the best guidance as to the meaning of the claims. *Id.* at 1313-14. Extrinsic evidence, such as dictionaries, expert testimony, and learned treatises, may also play a valuable role in claim construction. However, in a departure from the line of cases led by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed.Cir.2002), *Phillips* urges caution in their use. *Id.* at 1319-1324.

Among the sources of intrinsic evidence, *Phillips* places primary importance on the claims themselves and the specification. The context in which a term is used in the asserted claim and the use of the term in other claims can be "highly instructive." *Id.* at 1314. The claims, "of course, do not stand alone." *Id.* at 1315. They "must be read in view of the specification, of which they are a part." *Id. quoting Markman*, 52 F.3d at 978. Thus, *Phillips* reaffirmed the long-standing principle that the specification "is the single best guide to the meaning of a disputed term." *Id.* at 1303. In addition to its statutory role as a "full" and "exact" description of the claimed invention, the specification may reveal a patentee's distinctive definition of a term or a disavowal of claim scope. *Id.* at 1316. The specification is such a valuable tool that it is "entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims." *Id.* at 1317. Nevertheless, *Phillips* warned of "the danger of reading limitations from the specification into the claim." *Id.* at 1323. The purpose of the specification is to enable one skilled in the art to make and use the invention. *Id.* Specific embodiments of the invention described for teaching purposes should not be imported into the claim as a limitation. *Id.* The distinction between proper claim construction and improper limitation turns on "whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature." *Id.* at 1323.

A court may also consult the prosecution history, which "consists of the complete record of the proceedings before the PTO [the Patent and Trademark Office] and includes the prior art cited during the examination of the patent", when construing a claim. *Id.* at 1317. Like the specification, the prosecution history "can inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether

the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.* See *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). However, the prosecution history is not a final product; it "represents an ongoing negotiation between the PTO and the applicant." *Phillips*, 415 F.3d at 1317. As such, it "often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.*

Although the *Phillips* court attached greater value to intrinsic evidence, it approved the use of extrinsic evidence in a limited fashion. Specifically, technical dictionaries are helpful to the extent that they assist a court to " 'better understand the underlying technology' and the way in which one of skill in the art might use the claim terms." *Id.* at 1318 quoting *Vitronics*, 90 F.3d at 1344. Expert testimony is also valuable for providing background on the technology at issue, explaining how an invention works, or describing a distinctive use of a term in a particular field. However, neither dictionaries nor expert testimony, are entirely reliable sources for claim interpretation for a variety of reasons. The *Phillips* court's greatest concern with extrinsic evidence, particularly dictionaries, is that it may lead judges to construe terms in an overbroad manner:

The problem is that if the district court starts with the broad dictionary definition in every case and fails to fully appreciate how the specification implicitly limits that definition, the error will systematically cause the construction of the claim to be unduly expansive.

Id. at 1321. Because dictionaries provide a broad array of definitions, "heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract." *Id.* The *Texas Digital* line of cases adopted this "dictionary down" approach, thereby reducing the role of the specification to a mere "check on the dictionary meaning of a claim term." *Id.* at 1320. In contrast, *Phillips* articulated a "claims up" approach, instructing courts to focus "at the outset on how the patentee used the claim term in the claims, specification, and prosecution history, rather than starting with a broad definition and whittling it down." *Id.* at 1321.

Ultimately, there is no "magic formula" for conducting claim construction when the ordinary meaning of the disputed terms as understood by a person of skill in the art is not readily apparent. *Id.* at 1324. The key lies in giving appropriate weight to each "source in light of the statutes and policies that inform patent law." *Id.* Accordingly, the claims and the specification are most significant, followed by prosecution history, and finally by extrinsic sources. *Id.*

Having set out the general principles, I now turn to explain the particular interpretative approach that is required for "means-plus-function" claims that invoke 35 U.S.C. s. 112, para. 6. Such claim[s] shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. s. 112, para. 6. This mandatory interpretative approach "restrict[s] a functional claim element's 'broad literal language ... to those means that are 'equivalent' to the actual means shown in the patent specification." ' *Al- Site Corp. v. VSI Int'l*, 174 F.3d 1308, 1320 (Fed.Cir.1999) quoting *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997).

The Federal Circuit "has established a framework for determining whether the elements of a claim invoke means-plus-function treatment." *Micro Chemical, Inc. v. Great Plains Chemical Co., Inc.*, 194 F.3d 1250, 1257 (Fed.Cir.1999).

If the word "means" appears in a claim element in association with a function, this court presumes that s. 112, para. 6 applies. This presumption collapses, however, if the claim itself recites sufficient structure, material, or acts to perform the claimed function. Without the term "means," a claim element is presumed to fall outside means-plus-function strictures. Once again, however, that presumption can collapse when an element lacking the term "means" nonetheless relies on functional terms rather than structure or material to describe performance of the claimed function.

Id. (internal citations omitted).

If a claim invokes means-plus-function treatment, the first step in construing it is to identify the function. *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1087 (Fed.Cir.2003). "The court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations. It is improper to narrow the scope of the function beyond the claim language. It is equally improper to broaden the scope of the claimed function by ignoring clear limitations in the claim language. Ordinary principles of claim construction govern interpretation of the claim language used to describe the function." *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1113 (Fed.Cir.2002).

The second step is to "examine the written description to determine the structure that corresponds to and performs that function." *ACTV*, 346 F.3d at 1087. "In order to qualify as corresponding, the structure must not only perform the claimed function, but the specification must clearly associate the structure with performance of the function." *Cardiac*, 296 F.3d at 1113.

With these principles in mind, I may proceed to consideration of the disputed claim terms in the '638, '264, and '368 patents respectively.

II. DISPUTED TERMS

A. '638 patent

1. *Background*-The '638 patent entitled "Spring Mounting for Sash Frame Tensioning Arrangements" was created to improve on a basic "coiled spring" window balance by eliminating the noise created by such springs when they are in use. [Amesbury's Brief, p. 2; '638 Patent Background, col. 1, 1. 46-47.]

Window balances are secured by an anchor in the hollow channels within the window jambs (the vertical sides of the window frame that contain tracks on their interior for the windows to slide up and down). A basic coiled spring window balance is sized to counter the weight of the window "sash" (the movable portion of the hung window that holds the panes of glass), allowing the sash to move up and down the window jamb and remain in any desired open position. ['638 Patent Abstract.] The outer end of the coiled spring balance is attached to the "shoe" or "sash frame support element", which is connected to the sash. This outer end of the spring uncoils and recoils as the sash slides up and down during use.

In the older spring balances the inner end of the spring was not secured to anything. ['638 Patent Background, col. 1, ll. 24-26, 34.] Instead the spring was mounted on a drum in the open space within the coil around which the spring rotated as the outer free end uncoiled and recoiled. The upper part of the inside of the coil rested on the drum with the lower part of the coil slung below the drum and not supported by it. ['638 Patent Background, col. 1, ll. 30-32.] The drum was either arranged to be stationary or to rotate with the spring as a guide, ['638 Patent Background, col. 1, ll. 22-23], but in either case the drum provided only a

"reaction member" that "retain[ed] the body of the spring loosely in a position in the channel" of the window jamb as the outer end uncoils. ['638 Patent Background, col. 1, ll. 37-39.] Securing the coiled spring in place in this way created the disadvantage "that the spring [was] not silent in use, possibly due to relative movement between the inner, free end of the spring and the spring support drum." ['638 Patent Background, col. 1, ll. 41-45.]

The '638 Patent alters how the coiled spring balance is held in place to eliminate the noise. Instead of being supported from within the coil, the patent allows the spring to rest on a mounting element, ['638 Patent Summary, col. 2, ll. 20-24], which appears to support the spring "from below" (when the springs are "used in vertical sash frames as is usual") by means of a "surface" or "arm" underneath the spring "being concavely curved to support the curved outer undersurface of the spring." ['638 Patent, col. 2, ll. 4-6, 17-18, 48-50, col. 4, ll. 20-21, 22-23.] The patent also envisions the possibility of having a "tube-like hub which, in use, loosely impales" the center of "the coiled ribbon spring", but the hub would not provide any support to the spring (except that it might provide minor support if the spring was fully extended, but that is not the function of the hub). ['638 Patent, col. 4, ll. 17-19; col. 2, ll. 55-58.]

The patent describes that the mounting element would preferably be secured to the frame by a fixing screw through "an aperture" in the mounting element. ['638 Patent, col. 2, ll. 14-16; *See also* Claim 2, col. 6, ll. 23-25.] If the mounting element had the tube-like hub, an "aperture" could run through the hub portion and thus through the middle of the coil "to receive ... a fixing screw by which the mounting element may be secured to the frame". ['638 Patent, col. 2, ll. 43-45.]

The patent describes how the mounting element is to include "formations" that cooperate with the "inwardly turned opposed flanges" FN2 of the window jamb channel to inhibit the rotation or twisting of the mounting element relative to the sash frame so that the mounting element remains "substantially stationary when the spring is in operation." ['638 Patent Summary, col. 2, ll. 59-67; Claim 1, cl. 6, ll. 11-15; Claim 8, col. 6, ll. 56-63.] The patent also allows for stacking or "inter-engagement" of mounting assembly units where more than one coiled spring is required.

FN2. The inwardly turned opposed (or opposite) flanges of the channel correspond to inwardly-turned protruding edges that run along both sides of the window jamb track (or channel). The mounting element for the coiled spring balance appears to fit inside the window jamb track or channel with the flanges partially closing off the side opposite the back of the track or channel.

Based on the parties' proposed claim constructions, there are only four disputed terms, all of which are part of the two independent claims at issue—Claims 1 and 8 set out below with the disputed terms in bold face italics.

Claim 1

A mounting assembly comprising a channel means having a rear wall, side walls and at extremities of said side walls, inwardly turned opposed flanges, a sash frame support means slidable in said channel means, a coiled ribbon spring having a first end engaged with said sash frame support means, and *a means for mounting said coiled ribbon spring*, the coiled body portion of said coiled ribbon spring having the other end of said coiled ribbon spring within the coil being positioned in said mounting means, said other end of said coiled ribbon spring being free and unattached to said mounting means and said mounting means being

secured in said channel means, said mounting means having a *raised spine* positioned between and in the same plane as said inwardly turned opposed flanges of said channel means whereby rotational motion of said mounting means is inhibited.

Claim 8

A mounting assembly comprising a channel means having a rear wall, side walls and at extremities of said side walls, inwardly turned opposed flanges, a sash frame support means slidable in said channel means, a coiled ribbon spring having an outer end engaged with said sash frame support means, and a means for mounting said coiled ribbon spring, the coiled body portion of said coiled ribbon spring with the other end of said coiled ribbon spring positioned in said mounting means, said mounting means being secured in said channel means and the mounting means having *projection means* positioned between said inwardly turned opposite flanges of the channel means within which the mounting means is positioned, whereby rotational movement of the mounting means is inhibited.

2. "*a means for mounting said coiled ribbon spring*"-Both parties agree that this term is a means-plus-function term. Nonetheless, Amesbury suggests that the term means "a body with a surface for supporting the coiled ribbon spring," whereas Caldwell argues that the correct construction of the term is a structure for mounting the coiled ribbon spring to the channel that has "a body with an opening to receive a fixing screw [or its equivalent] and an upper surface concavely curved to support the curved outer undersurface of the spring." I note that the patent refers to the disputed term as "mounting means" in subsequent parts of Claims 1 and 8.

The first step in construing a means-plus-function term is to identify the function. ACTV, 346 F.3d at 1087. Amesbury and Caldwell seem to agree that the recited function is simply "mounting the coiled ribbon spring" to the channel as stated in the claim. However, the parties dispute the degree to which the idea of "being secured" in the channel and the fixing screw itself must be incorporated into the meaning of the term.

To "construe the meaning of the words used to describe the claimed function" I must use "ordinary principles of claim construction." Lockheed Martin Corp. v. Space Systems/Loral, Inc., 324 F.3d 1308, 1319 (Fed.Cir.2003). Thus, I must give the term 'mounting' "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Phillips, 415 F.3d at 1312. In this case, I am satisfied that the ordinary meaning of "mounting" as understood by a person of skill in the art is readily apparent. This is not the case where the term has a "particular meaning in [the relevant] field of art", nor does it appear that the term is being used "idiosyncratically". *Id.* at 1315. Consequently, I will construe the term according to the "widely accepted meaning" of these "commonly understood words". Phillips, 415 F.3d at 1314. "In such circumstances, general purpose dictionaries may be helpful." *Id.*

Caldwell cites the definition of "mount" in the American Heritage Dictionary (3d ed 1992) at p. 1180-"to fix securely to a support"-which I find to be the ordinary meaning of the verb as understood by a person of skill in the art. However, in this claim, the "mounting means" is secured, in the passive voice sense, to the channel according to a later phrase in Claims 1 and 8. As a result, I conclude that it is readily apparent that the disputed term describes a means for enabling the coiled ribbon spring to be fixed to the window frame channel.

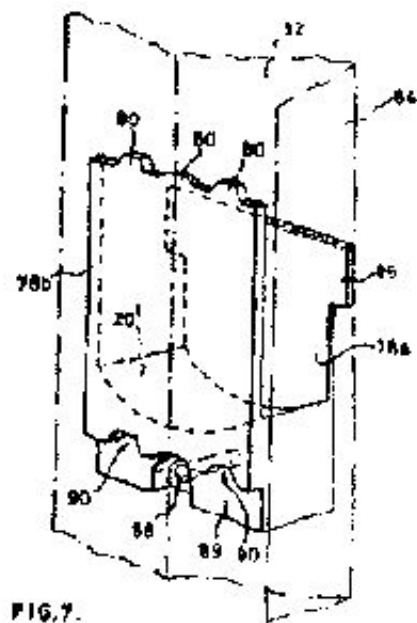
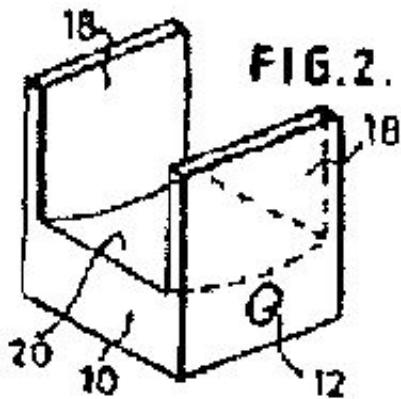
This function is consistent with the section of the specification cited by both parties. That section uses two verbs to describe the dual purposes of the 'mounting element'-"to receive, in use, a fixing screw by which the mounting element may be secured [to the window] frame" and "to support the curved outer undersurface

of the spring". [638 Patent, col. 2, 11. 13-19.] Together these enable the "mounting element" to 'mount' the coil spring. In drawing this conclusion, I note that the "mounting element" or "mounting means" alone does not "secure" the mounting element to the channel as suggested by Caldwell [Caldwell Brief, p. 5], nor is the fixing screw or its equivalent part of the element called a "mounting means". Rather, the "mounting means" "receive [s] a fixing screw by which the mounting element may be secured [to the window] frame or abutment". [638 Patent, col. 2, 11. 13-20] Thus, according to this patent, the fixing screw or its equivalent is the element that actually secures the "mounting element" to the wall and it is distinct from the "mounting element". This interpretation of the patent does not ignore the presence of the screw or its equivalent, but recognizes the relationship between the "mounting means" and the idea of securing the "mounting means" implicit in Claims 1 and 8.

The second step in the means-plus-function analysis is to identify "what structures disclosed in the written description correspond to the 'means' for performing that function," Lockhead Martin, 324 F.3d at 1319, and the "equivalents" of those structures. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1377 (Fed.Cir.2003). Here, both parties agree that the corresponding structure is the "mounting element" described in the following paragraph of the patent specification:

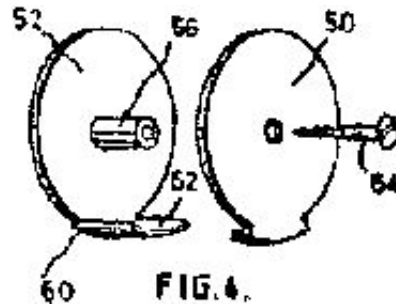
Preferably, the *mounting element* comprises a body portion having an aperture therein to receive, in use, a fixing screw by which the mounting element may be secured to said frame or abutment, an upper surface of the body portion being concavely curved to support the curved outer undersurface of the spring, thus providing said support surface.

[648 Patent, col. 2, 11. 13-19 (emphasis added).] This generic description fits all of the preferred embodiments. See for example Fig. 2 and 7 shown below, both of which have a body, an aperture or a bore to receive a fixing screw or something similar (noted as 12 in Fig. 2 and 88 in Fig. 7), and a concavely curved surface to support the spring coil (noted as 20 in Fig. 2 and 20' in Fig. 7).



Another description of the "mounting element" builds on the more generic description referenced above.

Alternatively, the *mounting element* may be configured such that there is a hub portion having an aperture therein to receive, in use, a fixing screw by which the mounting element may be secured to the frame or abutment; the hub portion being disposed such that in use the spring encircles such hub portion, the mounting element having an arm portion slung below said hub portion and disposed so as to support said outer undersurface of said spring.



['648 Patent, col. 2, 11. 42-50 (emphasis added).] This alternative is depicted in the preferred embodiments in Figures 3-5 with Fig. 4 shown below. Again there is a body and an aperture to receive a fixing screw and the "arm portion slung below said hub portion" (noted as 62) in these figures is described as the "curved support surface" which is "the counterpart of the support surface in the first [and other] embodiments" (noted as 20 in Figs. 2 and 7). ['638 Patent, col. 4, 11. 22-24.]

Formations that cooperate with the inwardly turned opposed flanges of the window jamb channel and interengagement formations are also envisioned as possible characteristics of the "mounting element."

Since an aperture (or bore) allowing a fixing screw to pass through the "mounting element" to secure it to the window frame is common to the simplest description and all of the preferred embodiments and drawings, Caldwell seeks to include "an aperture for a screw" as part of the construction of the term "mounting means". Amesbury does not adopt the addition of this phrase.

I agree with Amesbury; the term "mounting element", and therefore the disputed term, does not necessarily require an aperture for a fixing screw because the second last paragraph of the patent specification explains that "other methods of securing the mountings to a frame or abutment may be used." ['638 Patent, col. 5, 11. 51-52.] Thus, the body of the "mounting element" can be designed to receive a fixing screw, "two or more screw[s] [sic] or other fixings", or "[a]lternatively, pegs, spigots or catches could be used." ['638 Patent, col. 5, 11. 53-56.] As a result, Claims 1 and 8 encompass mounting elements similar to the ones depicted in the drawings that correspond to the 'means' for performing the 'mounting' function, but which use catches, for instance, to attach the back of the mounting element to the window jamb channel wall instead of a screw. Consequently, I disagree with Caldwell that the "only structures disclosed in the specification corresponding to the 'mounting means' are depicted in Figures 1 through 12." [Caldwell Brief, p. 6.]

This conclusion is supported by the doctrine of claim differentiation, which " 'create[s] a presumption that each claim in a patent has a different scope.' " Free Motion Fitness, Inc. v. Cybex Intern., Inc., 423 F.3d 1343, 1351 (Fed.Cir.2005) quoting Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187

(Fed.Cir.1998). "The difference in meaning and scope between claims is presumed to be significant '[t]o the extent that the absence of such difference in meaning and scope would make a claim superfluous.'" Free Motion Fitness, 423 F.3d at 1351 *quoting* Tandon Corp. v. United States Int'l Trade Comm'n, 831 F.2d 1017, 1023 (Fed.Cir.1987). The presumption applies in interpreting means-plus-function terms, even though "the stringencies of a means-plus-function limitation are not to be avoided by the mere addition of a dependent claim that recites the corresponding structure disclosed in the specification." Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc., 239 F.3d 1225, 1234 (Fed.Cir.2001).

Here, Claim 3 describes a "mounting assembly" where the "mounting means has a body portion having an aperture therein, a fixing screw positioned in said aperture by which the mounting means is secured relative to said channel means[.]" This claim describes the "aperture" element that Caldwell seeks to include in the general term "mounting means" in Claim 1. I find that the dependent claim limiting Claim 3 to a body with an aperture to receive a fixing screw confirms that the independent claims may encompass other methods of fixing. *See* Free Motion Fitness, 423 F.3d at 1351 (holding that the "dependent claims limiting the claim to a single cable confirm that the independent claims may encompass more than one cable").

Both parties seek to include the idea of a surface for supporting the coiled ribbon spring in the definition, but Caldwell argues that the definition should be more specific, suggesting that the phrase "upper surface concavely curved to support the curved outer undersurface of the spring" is more appropriate. In the hearing, Amesbury did not press the curvature issue except to say that the curvature of the surface is not required, important, and does not need to conform exactly to the curvature of the spring. I understand and adopt Amesbury's argument that the corresponding curvatures of the support surface and the spring do not need to conform exactly. [638 Patent, col. 4, 11. 8-10.] Since Claim 3 also specifies that the support surface of the mounting element is to be "concavely curved", the doctrine of claim differentiation also suggests that I should not limit the surface of the structure referenced by "mounting means" to those with surfaces that are "concavely curved". However, claim differentiation "is a 'guide, not a rigid rule" '. *Nomos Corp. v. Brainlab USA, Inc.*, 357 F.3d 1364, 1368 (Fed.Cir.2004) *quoting* *Autogiro Co. of Am. v. United States*, 181 Ct.Cl. 55, 384 F.2d 391, 404 (1967). It "does not override the requirements of s. 112, para. 6 when the 'claim will bear only one interpretation." *Id. quoting* *Autogiro*, 384 F.2d at 404. Here there is no comparable disclaimer anywhere in the specification that the mounting element can incorporate a surface to hold a coiled ribbon spring that is anything other than concavely curved. The only disclaimer is that the corresponding curvatures of the support surface and the spring do not need to conform exactly. [638 Patent, col. 4, 11. 8-10.] Thus, I find that the claim will only bear one interpretation-the mounting element must include a concavely curved surface to support the spring, but the corresponding curvatures do not need to conform exactly.

Construction: The term "mounting means" or "a means for mounting said coiled ribbon spring" in Claims 1 and 8 describes a structure for mounting a coiled ribbon spring to the window jamb channel. The structure has a body with a surface concavely curved to support the curved outer undersurface of the spring, but the corresponding curvatures of the two surfaces do not need to conform exactly. The design of the body also includes some method of fixing, such as aperture to receive a fixing screw, to secure the structure to a window jamb channel.

3. "*raised spine*"-Amesbury argues that "the term 'raised spine' should be construed in accordance with its plain and ordinary meaning; that is, a raised projection or protrusion." Caldwell argues for a more precise construction-"a raised, elongated, rectangular shape that fits snugly between the flanges of the channel means"-which it argues better corresponds with the ordinary and customary meaning for the term "spine".

Here again, I feel confident that the ordinary meaning of "raised spine" as understood by a person of skill in the art is readily apparent. This is not the case where the term has a "particular meaning in [the relevant] field of art", nor does it appear that the term is being used "idiosyncratically". *Phillips*, 415 F.3d at 1315. Thus, I will construe the term according to the "widely accepted meaning" of this metaphor. *Id.* at 1314.

It is unclear how Amesbury determined that "a raised projection or protrusion" is the plain and ordinary meaning of "raised spine". Caldwell, on the other hand, points me again to the American Heritage Dictionary (3d ed 1992), which includes the following definition for 'spine'-"Something that resembles or suggests a backbone, as: a. The hinged back of a book. b. The crest of a ridge." I find that this definition more accurately describes the ordinary meaning of this term as used in the context of Claim 1 and I agree with Caldwell that the words "raised projection or protrusion" do not sufficiently capture the concept of "raised spine" intended by the patentee's choice of that term in both Claim 1 and the specification. Rather, the ordinary meaning of the term "spine" is more specific than the broader terms "projection" or "protrusion", which may encompass simple knobs, bumps, or even a "poorly-hammered nail". The Federal Circuit gave some guidance in *International Rectifier Corp. v. IXYS Corp.*, a pre-*Phillips* case, where it disapproved of the district court's adoption of a synonym of the claim term as the definition because it "disregard[ed] entirely the distinction between the two terms set forth in the usage note." The court observed that "[h]ad the inventor meant [the synonym], he could have used that word. However, we must consider the word that the inventor actually chose and use the definitions of that term that are consistent with the written description." *International Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1374 (Fed.Cir.2004).

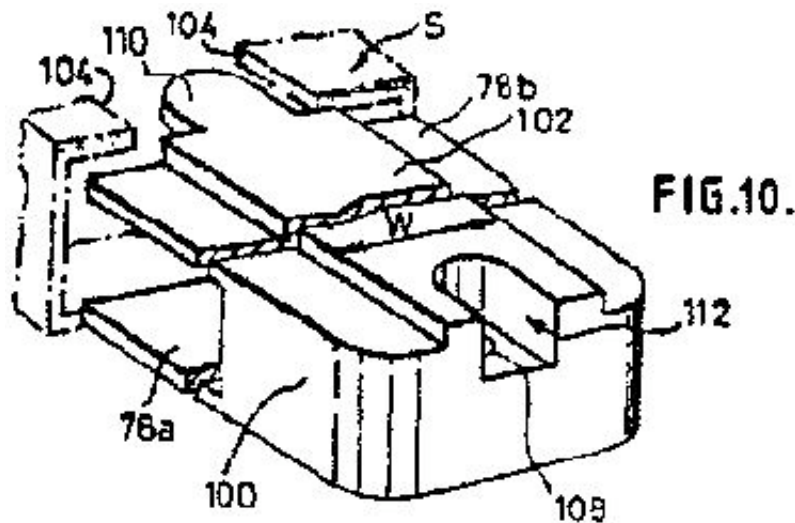
Having recognized the importance of fully capturing the proposed usage, I must disagree with Caldwell that the disputed term is necessarily limited to the elongated and rectangular shapes depicted in the patent drawings. To do so "would be to impermissibly read a limitation into the claims from the written description", *Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1308 (Fed.Cir.2003) *citing* *Comark*, 156 F.3d at 1186, and "the patent drawings depict[ing] a particular embodiment". *Id.* at 1306-07. *See also Phillips*, 414 F.3d at 1323.FN3

FN3. Amesbury points to the Federal Circuit's reversal on the meaning of "protrusion" in *Anchor Wall* for the proposition that shape-based limitations should not be included in the definition unless expressly set forth in the patent. However, I find the general principle re-affirmed in *Phillips* that claims should not be confined to the specific embodiments in the specification more compelling for purposes of construing the patent before me.

Here Caldwell argues for the inclusion of the adjectives elongated and rectangular because in Claim 1 the "raised spine" is supposed to be "positioned between and in the same plane as the inwardly turned opposed flanges of said channel means whereby rotational motion of said mounting means is inhibited." ['638 Patent, col. 6, 11. 12-15.] Similarly, an embodiment corresponding to this description is depicted in Figures 9, 10 and 11 and described as having a width "arranged such that it is a snug fit between open lip portions ... of a channel section sash frame member ... within which the mounting element is to be operatively received." ['638 Patent, col. 5, 11. 8-11.] Neither the Claim nor the description in the specification require the raised formation to be 'elongated' as it is depicted in Figures 9, 10 and 11 except to the degree that the term 'spine' imports such a characteristic. Furthermore, the raised formation in Figures 9, 10 and 11 is not even a true rectangle because of the inter-engagement projections sculpted into it. The Claim encompasses variously shaped raised formations that could be designed to have at least some of the edges positioned between and in the same plane as the inwardly turned opposed flanges with the requisite width thereby inhibiting

rotation. A rectangular shape is not necessarily required, and I note that the crest of a ridge is not normally rectangular. Furthermore, a rectangular shape would only fit snugly in the channel if the inwardly turned opposed flanges had straight edges. If for some reason a window jamb channel were designed with jagged flanges, for instance, a rectangular shape would not fit. Rather, the raised spine of the mounting element would have to have a shape that corresponds and cooperates with the jagged flanges, which is at bottom the defining characteristic of this component.

In conclusion, in an attempt to deconstruct the metaphor of "raised spine" I will not limit its meaning with descriptors not included in either the Claims or the specification. However, simply analogizing "raised spine" with "raised projection or protrusion" loses the ordinary meaning implicit in this common usage of spine. To the extent that Caldwell is suggesting that the meaning of the term "raised spine" ought to embody the qualifier that it be "positioned between and in the same plane as [the] inwardly turned opposed flanges of [the] channel ... whereby rotational motion of [the] mounting means is inhibited", I decline the invitation. To do so would make the remainder of the Claim just quoted redundant and unnecessary.



Construction-A raised portion of the mounting element that resembles or suggests the spine of the mounting element, shaped to cooperate with the window jamb flanges to inhibit the rotational motion of the mounting means.

4. "*projection means*"-Amesbury contends that the term "projection means" in Claim 8 is not a means-plus-function term. Rather, the term ought to be interpreted as though it just said "projection". In that respect, Amesbury argues that the term connotes "at least one projection or protrusion", with the word "projection" meaning "a part that juts out". By contrast, Caldwell argues that the term is a mean-plus-function claim and that the term should be construed more narrowly as "a means that projects from the mounting means and cooperates with the flanges of the channel, which is limited to the rectangular or elongated structure of a spine or rib. Furthermore, the spine or rib must fit snugly between the flanges." FN4

FN4. At the hearing, Caldwell proposed the following definition on page 18 of its handout:
Function: projecting between the inwardly turned opposed flanges and cooperating with the flanges of the channel means (jamb). The corresponding structure is a spine or rib.

The Federal Circuit has observed that "[i]f the word 'means' appears in a claim element in association with a function, this court presumes that s. 112, para. 6 applies. This presumption collapses, however, if the claim itself recites sufficient structure, material, or acts to perform the claimed function." *Micro Chemical*, 194 F.3d at 1257; *accord* *Allen Engineering Corp. v. Bartel Industries, Inc.*, 299 F.3d 1336, 1347 (Fed.Cir.2002); *but see* *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed.Cir.1997) ("Patent drafters conventionally [invoked the means-plus-function statute] by using only the words 'means for' followed by a recitation of the function performed. 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. s. 112, para. 6.").

In submissions following the *Markman* hearing, both parties cited to several more decisions of the Federal Circuit regarding the issue of whether a particular claimed term invokes the means-plus-function statute, and more particularly, whether a term that includes the word "means" recites sufficient structure or material for performing the claimed function to rebut the presumption. *See e.g.* *Altiris*, 318 F.3d at 1375-76 (finding that "*means of booting*" FN5 is a means-plus-function even though "commands" represent structure and the claim states a location); *Cole*, 102 F.3d at 531 (finding that "*perforation means*" FN6 is not a means-plus-function because the claim "describes the structure supporting the tearing function (ie.perforations) ... [and] also its location (extending from the leg band to the waist band) and extent (extending through the outer impermeable layer)"); *Wenger*, 239 F.3d at 1237 (finding that "*means defining a plurality of separate product coating zones*" FN7 is not a means-plus-function because, even assuming sufficient function, the "claim specifically recites structure including spray nozzles that are directed toward the sidewall of the reel, which" accomplish the function); *Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1365 (Fed.Cir.2000) (finding that "*second baffle means*" FN8 is not a means-plus-function because the term 'baffle' itself imparts structure and further, the "claims describe the particular structure of this particular baffle ('having inner surfaces for directing airflow ... radially outward ... and thereafter ... between said first baffle means and said air filter means') and the claims describe "details about the location and formational details"); *TI Group Automotive Systems (North America) v. VDO North America, L.L.C.*, 375 F.3d 1126, 1135 (Fed.Cir.2004) (finding that "*pumping means*" FN9 is not a means-plus-function because the claim recites "its structure ('including a nozzle and a venturi tube in alignment with the nozzle'), location ('being located within the reservoir in the region of the opening'), and operation ('the passage of fuel out of the nozzle and through the venturi tube causing fuel to be entrained through the opening into the interior of the reservoir')").

FN5. The relevant claim stated: "*means of booting* including a first set of commands ... resident on said storage device of said digital computer ..., and a second set of commands resident on a storage device external to said digital computer ..." *Altiris*, 318 F.3d at 1368.

FN6. The relevant claim stated: "*perforation means* extending from the leg band means to the waist band means through the outer impermeable layer means ..." *Cole*, 102 F.3d at 526.

FN7. The relevant claim stated: "*means defining a plurality of separate product coating zones* ..., each of said zones including at least one spray nozzle directed toward said sidewall ..." *Wenger*, 239 F.3d at 1229.

FN8. The relevant claim stated: "*second baffle means* disposed radially outwardly of said centrifugal fan means ... [and] having inner surfaces for directing the airflow from said centrifugal fan means inwardly of said primary housing and between said first baffle means and said filter means whereby air being introduced into said housing by said centrifugal fan means will be directed radially outwardly of said centrifugal fan means and guided by said first baffle means towards said second baffle means and thereafter by said second baffle means between said first baffle means and said air filter means." *Envirco Corp.*, 209 F.3d at 1363.

FN9. The relevant claim stated: "*pumping means* for pumping fuel into the reservoir, said means being located within the reservoir in the region of the opening and including a nozzle and a venturi tube in alignment with the nozzle, the passage of fuel out of the nozzle and through the venturi tube causing fuel to be entrained through the opening into the interior of the reservoir;" *TI Group*, 375 F.3d at 1131.

Turning to the patent at issue, I find that this is not a case where the drafter of the patent was as "clearly enamored of the word 'means' " as in *Allen Engineering*, 299 F.3d at 1348, where the Court ignored the word 'means', which appeared 32 times in the relevant claim, in all but one of the twelve 'means' limitations, or in *Cole*, 102 F.3d at 531, where the Court declined to construe any of the six elements that included the word 'means', which occurred in the claim 14 times, as means-plus-function terms. The '368 Patent used the word "means" 13 times, but only with respect to four limitations: channel means, sash frame support means, mounting means/means for mounting, and projection means. And as discussed above, at least "mounting means" or "means for mounting" is a means-plus-function. The question, therefore, is whether Claim 8 recites sufficient structure or material associated with 'projection means' to rebut the means-plus-function presumption.

Amesbury argues that the presumption is overcome in Claim 8 because the claim describes the structure carrying out the function of inhibiting the rotational movement of the mounting means (ie. a 'projection' or a 'thing or part that extends outward beyond a prevailing line or surface'), its location ("positioned between said inwardly turned opposite flanges of the channel"), and its extent (sufficient to cooperate with the channel flanges). *See Cole*, 102 F.3d at 531; Amesbury's Post *Markman* Hearing Brief, p. 2.

Claim 8 does not articulate the 'extent' of the "projection means", although the 'extent' suggested by Amesbury could be inferred. It is clear, however, that Claim 8 describes the location or position of the "projection means", namely "positioned between said inwardly turned opposite flanges of the channel." Location is a relevant factor and part of the structure according to the Federal Circuit. *See Cole*, 102 F.3d at 531; *TI Group*, 375 F.3d at 1135; and *Envirco*, 209 F.3d at 1365 (holding that "the claims recite sufficient structure, including details about the location and formational details"). However, as suggested by Caldwell, one could interpret *Altiris*, 318 F.3d at 1376, as implying that a location alone will not necessarily provide sufficient structure. Consequently, I find that the crucial question is whether the term "projection" imports sufficient structure like the term "perforation" in *Cole*, or whether the term is, as Caldwell argues, "functional and inherently meaningless" as "any three-dimensional object will project from the surface to which it is attached." [Caldwell's Supplemental Submission, p. 1.] As to this issue, I agree with Amesbury; "projection" imports sufficient structure to overcome the presumption.

The ordinary meaning of "projection" as understood by a person of skill in the art is readily apparent. In

Amesbury's initial submissions, they suggested the definition of "a part that juts out", and in the supplemental submission, Amesbury suggested the definition of a "thing or part that extends outward beyond a prevailing line or surface." I do not believe that it is necessary to adopt one or the other definition, because the debate seems to be whether or not "projection means" should be limited to the structures in the specification that correspond to and perform the function, namely the "raised spine" and the "locating rib", not over the definition of "projection".FN10

FN10. In construing "raised spine", Caldwell argued that "'spine' is not broad enough to encompass any 'projection' or 'protrusion' such as a knob or a bump." [Caldwell's Brief, p. 7.] Thus, it appears that Caldwell shares Amesbury's understanding of the term.

Construction-Projection(s).

5. "*whereby rotational movement of the mounting means is inhibited*"-This term appears in both Claims 1 and 8. The parties agree that the "whereby" clause only modifies the preceding clause describing the "projection means" in Clause 8, but the parties disagree about what the clause modifies in Claim 1.

Claim 1: "... and a means for mounting said coiled ribbon spring, ... and said mounting means being secured in said channel means, said mounting means having a raised spine positioned between and in the same plane as said inwardly turned opposed flanges of said channel means whereby rotational motion of said mounting means in inhibited."

Claim 8: "... and a means for mounting said coiled ribbon spring, ..., said mounting means being secured in said channel means and the mounting means having projection means positioned between said inwardly turned opposite flanges of the channel means within which the mounting means is positioned, whereby rotational movement of the mounting means in inhibited."

I find that as a matter of syntax, the "whereby" clause only modifies the preceding clause describing the raised spine. Amesbury's citation to *Idexx Laboratories, Inc. v. Abaxis, Inc.*, 222 F.Supp.2d 66, 73-74 (D.Me.2002) is unavailing. There is no rule that a "whereby" clause must modify the entire claim limitation. In fact, the Court in *Idexx* concluded that the "syntax of the sentence alone does not answer [the] debate" of whether the "whereby" clause at issue in that case modified only the three steps explicitly recounted or the entire description of the claimed method. *Id.*

"What controls here is no legal 'test' derived from some different fact situation but common sense interpretation of language according to the rules of grammar in the context in which it occurs." Application of Dean, 48 C.C.P.A. 1072, 291 F.2d 947, 952-53 (1961) (emphasis added). It seems clear that the "whereby" clause only modifies the description of the "raised spine", not that description and the preceding clause which is set off by a comma. There is certainly no basis in the syntax of Claim 1 to conclude, as Amesbury argues, that the rotation of the mounting means is inhibited "either by the structure of the mounting means alone or in conjunction with the way it is installed in the mounting assembly." It would actually make more sense if the "whereby" clause in Claim 8 modified both the of requirement of being secured in the channel and having projection means positioned in a certain way. However, the parties agree that even in Claim 8, the "whereby" clause only modifies the "projection means".

To the degree that there is any confusion or ambiguity in the syntax of Claim 1, I find that on balance the

prosecution history supports my conclusion that the "whereby" clause only applies to the "raised spine" described in Claim 1. I look to the prosecution history as urged by Caldwell, because the specification could be interpreted to add to the confusion and ambiguity Amesbury is attempting to exploit.

Some sections of the specification clearly link the prevention of rotation with the positioning of the "raised spine". For example, the description of the mounting element in Figures 7 and 8 explains that the width of the raised spine formation is arranged such that it is a snug fit between the open lip portions of a channel to inhibit a rotational, pivoting or twisting motion. [638 Patent, col. 5, 11. 7-13.] The specification makes this point even more clearly with respect to the "lateral ears" formation, which has the same purpose as the "raised spine", since the "lateral ears ... are intended to prevent rotation of the mounting element about a fixing screw ... received, in use, in recessed bore." [638 Patent, col. 4, 11. 44-47.]

In contrast, other parts can be read to mean that the fixing screw is also supposed to prevent rotation. According to the specification, "[t]he mounting element may be provided with formations conformed so as to cooperate with a portion of the sash frame within which the element is to be received, such that contact of said formations with said sash frame inhibits in a rotational, pivoting, or twisting sense of the element relative to the sash frame." [638 Patent, Summary, col. 2, 11. 59-64 (emphasis added).] The use of the word "may" in this description is confusing and misleading because both of the independent claims require respectively a "raised spine" or "projection means" that inhibits rotation. The Summary of the Invention then sets out in a separate paragraph that "[i]t will be apparent that the mounting element does not rotate or otherwise move with the spring but is substantially stationary when the spring is in operation." [638 Patent, Summary, col. 2, 11. 65-67.] The fact that the two sentences are separate paragraphs could be read to mean that even without the formation described in the first paragraph, the mounting element does not rotate. And the only explanation for non-rotation is that the mounting element is be secured to the window frame by a fixing screw.

Despite the ambiguity in the specification, the prosecution history "inform[s] the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317. Originally Claim 1 made no mention of the "raised spine ... whereby rotational motion of said mounting means is inhibited." The patent examiner denied the patent, rejecting Claims 1-5 and 8-9 because they were clearly anticipated by *Sterner's* "Coil spring counterbalance hardware assembly and connection method therefor", U.S. Patent No. 5,157,808 and *Foster's* "Spring sash counterbalance", U.S. Patent No. 3,992,751. It is only when the patentee sought to amend the claims in light of the rejection that he added "said mounting means having a raised spine positioned between and in the same plane as said inwardly turned opposed flanges of said channel means whereby rotational motion of said mounting means is inhibited." In explaining the change, the patentee emphasized that "[n]one of the cited art show anti-rotational means which interact with flanged channels to prevent rotation of the mounting means." Consequently, I find that the "whereby" clause only modifies the description of the "raised spine", not that description and the preceding clause which is set off by a comma.

Having reached this conclusion, however, I do not mean that the fixing screw or other fixing method that secures the mounting element to the window jamb channel cannot contribute to the substantially stationary position of the mounting element when the spring is in operation. There is nothing in the Claims or the specification that would prohibit attributing any anti-rotational effect to the method of fixing or securing the mounting element to the window jamb channel. The Claims recognize, for instance, that if a mounting element without a raised spine was fixed to the channel, it might not rotate or pivot under minimal stress.

But when the window sash was opened with a certain amount of force or opened a certain distance, the force might overcome the anti-rotational inertia effect of simply being secured by a fixing screw. Therefore, it is the addition of the "raised spine" in this patent that inhibits any rotation of the mounting element under any normal condition.

Construction-The mounting means is to be secured in the channel means. And the mounting means is to have a raised spine positioned between and in the same plane as said inwardly turned opposed flanges of said channel means whereby rotational motion of said mounting means is inhibited.

B. '264 patent

1. *Background*-The '264 Patent entitled "Block and tackle window balance with bottom guide roller" improves on the basic block and tackle window balance, and is an alternative to the coiled spring balance. Block and tackle balances use a combination of a spring and pulleys located within a U-shaped channel FN11 to balance the weight of the window sash at any position within the jamb pockets. ['264 Patent, col. 1, 11. 19-22.] In a basic block and tackle window balance, the channel holds a spring, two pulleys (one that moves pulling the spring and a fixed one) and a roller. A cord, which connects the pulleys together, is attached to a hook that connects to an opening in a window jamb pocket to secure the balance to the window jamb. ['264 Patent, col. 1, 11. 25-27.] The assembled channel is attached to the window sash by a "top guide" and a "bottom guide", which help guide the vertical motion of the window balance within the jamb. ['264 Patent, col. 3, 11. 23-27.] The components within the channel work in combination to allow the spring to provide the force to counterbalance the weight of the attached sash at any vertical position within the window frame. ['264 Patent, col. 3, 11. 48-51.]

FN11. This patent uses the word "channel" in a different way than the '638 patent. With respect to the coiled spring balance patent, "channel" referred to the window jamb track. Here, "channel" refers to an actual piece of the block and tackle balance that contains the springs and pulleys. A window jamb "pocket" in this patent seems to correspond with the window jamb "channel".

The travel distance of the window sash is limited by the length of the window balance. The '264 Patent increases the distance a window sash can travel by reconfiguring the placement of the bottom guide roller "in" or "within" the bottom guide, instead of "within" the channel as in prior art balances. This allows the sash to travel a greater distance before the bottom guide roller hits the jamb mounting hook.

Based on the parties' proposed claim constructions, it appears that there is only one disputed term and it is part of the independent Claim 1.FN12 That claim is identified by bold face in the claim language set out below.

FN12. Caldwell initially argued that the term "bottom guide axle mounted within the bottom guide", which is part of Claim 23 is disputed. However, Amesbury is only asserting Claims 1-7 and 9-21 of the '264 patent against Caldwell and does not make any arguments regarding the proper construction of this term.

Claim 1

A block and tackle window balance device comprising:

a channel comprising a first end and a second end;

a top guide connected to the first end of the channel;

a bottom guide connected to the second end of the channel;

a bottom guide roller rotatably mounted in the bottom guide;

a fixed pulley block unit connected to the channel;

a translatable pulley block unit moveable within the channel;

a spring comprising a first end and a second end, wherein the first end is fixed relative to the channel and the second end is connected to the translatable pulley block unit; and

a cord comprising a first cord end and a second cord end, wherein the cord is threaded through the translatable pulley block unit and the fixed pulley block unit and extends around the bottom guide roller, the first cord end being attached to the translatable pulley block unit and the second cord end being attachable to a jamb.

2. "*bottom guide roller rotatably mounted in the bottom guide*"-Amesbury argues that this phrase should be construed as meaning "a roller, mounted so as to permit rotation, in the portion of the bottom guide that is sized or configured to be received in and to slide in the jamb pocket, when installed." Caldwell has construed the phrase as requiring "the bottom guide roller to be mounted to the bottom guide and be located entirely within the bottom guide" and "external to the channel". This definition is both more limiting and more general than Amesbury's construction.

The parties do not appear to dispute the meaning of the term "bottom guide roller", rather they argue over the placement requirements implicitly included in Claim 1. In this case, the ordinary meaning of the claim language as understood by a person of skill in the art is not readily apparent. Consequently, I consider the Claim terms, the specification, and the prosecution history as to each of the disputed proposed elements of the definition.

a) "*Mounted in*" or "*Mounted to*": Claim 1 specifically uses the preposition "in" and Caldwell has not pointed to anything in the specification that requires the bottom guide roller to be mounted to the bottom guide. The focus of the specification is on where the roller is to be mounted, not on what. For instance, in the Summary of the Invention the patentee describes how the bottom roller "mounted proximate to the second end of the channel." [264 Patent, col. 2, ll. 5-6, 14-15.] But, the use of "proximate" in the Summary does not impose the limitation suggested by Caldwell that the roller must be mounted to the bottom guide. It is possible that the bottom roller could be "in", even entirely within, the bottom guide, yet be mounted to the channel via some link rather than being mounted to the bottom guide itself.

In addition, Claim 1 was initially rejected as being anticipated by *Fitzgibbon's* "Sash balances and components thereof", U.S. Patent No. 4,089,085, which disclosed a block and tackle window balance device comprising "a bottom guide roller rotatably mounted to the bottom guide". To read "mounted in" as "mounted to" would not distinguish '264 Patent from *Fitzgibbon's* patent and would ignore the distinguishing feature of the invention, namely the location of the roller as discussed more thoroughly in the next sub-

section.

b) "*in the Bottom Guide*" or "*entirely within the bottom guide and external to the channel*": The ordinary meaning of being mounted "in" an area could encompass the idea that the object may be both partially inside and outside the area. For example, a trash bag is "in" a trashcan even though a portion of it is hanging outside of the trashcan.FN13 Thus, the ordinary meaning of the roller being mounted in the bottom guide could encompass the idea that the roller is "in" the bottom guide, yet not necessarily mounted directly to the bottom guide, with part of the roller sticking out of the bottom guide and/or part of it within the overlapping section of the channel. This interpretation makes sense when one compares Claims 1 and 23, which describes a window balance device comprising a bottom guide including "a bottom guide axle mounted within the bottom guide, the bottom guide axle located outside the window balance channel; and a bottom guide roller rotatably mounted on the bottom guide axle." [264 Patent, col. 8, ll. 40-44.] Nonetheless, Caldwell argues that "in the bottom guide" should be construed more narrowly as "entirely within the bottom guide and external to the channel" based on the specification and alleged disclaimers in the prosecution history.

FN13. In Amesbury's Post *Markman* Hearing Brief filed on January 6, 2006, counsel for Amesbury brought the unreported and non-precedential opinion of *Cannon Rubber Ltd. v. The First Years, Inc.*, No. 05-1063, 2005 WL 3542910 (Fed.Cir. December 28, 2005) to this Court's attention. Under Fed. Cir. R. 47.6, this order is not citable as precedent. Consequently, I do not consider this case as precedent. Nonetheless, I incorporate the trashcan example and acknowledge that I have thought about the arguments considered in the case.

With respect to the prosecution history, Caldwell argues that the patentee disclaimed the idea of being mounted partially in and partially out of the bottom guide, and partially in the channel. I disagree.

Prosecution history "can inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317. Here, as mentioned above, it appears that Claim 1 was initially rejected as being anticipated by *Fitzgibbon's* "Sash balances and components thereof", U.S. Patent No. 4,089,085, which disclosed a block and tackle window balance device comprising "a bottom guide roller rotatably mounted to the bottom guide", by which the Patent Examiner meant that "the bottom guide roller 239 is rotatably mounted to bottom guide 215 in that roller 239 is rotatably mounted within fixed pulley unit 235, which is fixed to channel 205, which is fixed to bottom guide 215; thus, bottom guide roller 239 is 'rotatably mounted to' bottom guide 215." *See* Figures 2A and 2B of the Prior Art below. [Smalley Declaration, Exhibit J, at 000630, 000639.]

Given this prosecution history, it appears that the Examiner approved Claim 1 of the patent after the patentee explained that the subject matter of his invention was the relocation of the roller into the bottom guide, rather than mounting it in the channel above the bottom guide as in the prior art. From this response, it is not possible to conclude that the patentee explicitly disclaimed the ordinary meaning of "in" or limited his invention to configurations where the roller is entirely within the bottom roller and completely below the channel. Thus, this is not the case where the claim was narrowed in the way suggested by Caldwell in order for the patentee to obtain issuance over the prior art. *Elekta Instrument S.A. v. O.U.R. Scientific Intern., Inc.*, 214 F.3d 1302, 1308 (Fed.Cir.2000). Nonetheless, I turn to the specification to determine whether the written description shows an "express intent to impart a novel meaning" to the commonly understood word "in", and whether the written description "clearly redefine[s][the] claim term 'so as to put a reasonable competitor or one reasonably skilled in the art on notice that the patentee intended to so redefine that claim term.'" *Id.* at 1307 *quoting* *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed.Cir.1999).

As I understand Caldwell's argument, Claim 1 should be construed in the narrow sense suggested because of the repeated references in the patent supporting the idea that the invention allows the sash to travel a greater distance "because the bottom guide roller is located in the bottom guide, instead of within the rigid U-shaped channel as in prior art balances." [264 Patent, col. 5, ll. 64-66.] In particular, Caldwell points to the repeated references in the specification to the instruction that the bottom guide roller is to be located "within the bottom guide." [264 Patent, Abstract, col. 1, l. 51, col. 2, l. 52, col. 5, l. 42, col. 6, l. 18]. The use of "within" is significant, according to Caldwell, because of the Federal Circuit's reasoning in *TI Group*, 375 F.3d at 1136, with respect to the claim term "[the pumping] means being *located within* the reservoir". In that pre- *Phillips* case, the Federal Circuit affirmed the district court's construction of the term "within" as meaning "inside", because "[c]ertainly, in ordinary and customary usage, what is not outside is on the inside." *Id.* The Federal Circuit drew this conclusion because the dictionary definition proposed by the alleged infringer ("on the inside") and the one adopted by the district court ("inside") "are not so different as the definition" proposed by the patentee ("within the limits of, not outside or beyond.")

Here, it is true that the patent specifically describes the roller as mounted within the bottom guide four times. [The '264 Patent, Abstract, col. 1, l. 51, col. 2, l. 52, col. 5, l. 42, col. 6, l. 18.] However, I do not think it is appropriate to simply adopt the conclusion in *TI Group*, where both parties were essentially proposing the same limitation and where the claim itself used the words "located within". Looking further, then, I note that the '264 Patent also states that the bottom guide serves as "a frame for housing the bottom guide roller", [264 Patent, col. 4, ll. 44-45], that it "is located in the bottom guide, instead of within the rigid U-shaped channel as in prior art balances" [264 Patent, col. 5, ll. 64-66], and that it "is located outside of the rigid U-shaped channel." [264 Patent, col. 4, ll. 46-48.] Thus, in my opinion, the issue is whether or not these expressions in the specification show that the patentee intended to assign a more narrow definition to the phrase "mounted *in* the bottom guide".

As explained above in Section I, *Phillips* warned of "the danger of reading limitations from the specification into the claim." *Id.* at 1323. Specific embodiments of the invention described for teaching purposes should not be imported into the claim as a limitation. *Id.* The distinction between proper claim construction and improper limitation turns on "whether a person of skill in the art would understand the embodiments to define the outer limits of the claim term or merely to be exemplary in nature." *Id.* at 1323.

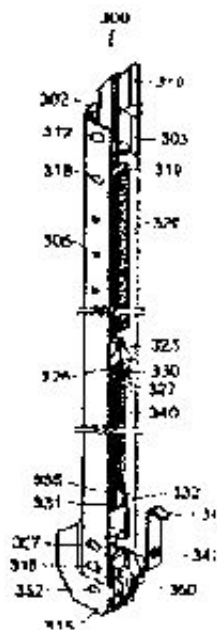


FIG. 4A

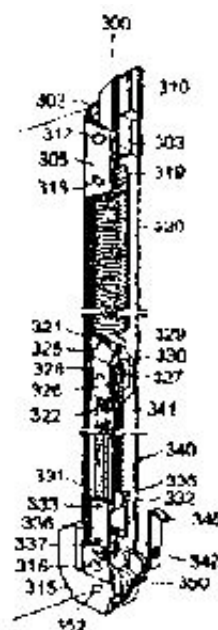


FIG. 4B

Given these principles, I will not import the limitation of "external to the channel", despite the parts of the written description cited above. Although the roller in Figures 4A and 4B shown above is certainly not "within" the channel in the way the rollers in Figures 2A and 2B are, it would be perfectly consistent with the patent for the roller to be within the section of the bottom guide that is itself fastened to the overlapping section of the channel also shown in Figures 4A and 4B. In such a configuration, the roller would not be "external" to the channel. In addition, Claim 2 specifically provides that "the bottom guide roller is located external to the channel." [264 Patent, col. 6, ll. 57-58; *see also* Claims 14 and 19.] Given the possibility that a portion of the roller might actually be located inside the part of the bottom guide that overlaps with the channel, I will apply the doctrine of claim differentiation, which "is at its strongest 'where the limitation sought to be 'read into' an independent claim already appears in a dependent claim," ' *Seachange Int'l, Inc. v. C-Cor, Inc.*, 413 F.3d 1361, 1368-69 (Fed.Cir.2005) *quoting* *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed.Cir.2004), with respect to this aspect of Claims 1 and 2. Thus, I exclude the proposed addition of "external to the channel" from the definition.

With respect to the idea of limiting "in" in Claim 1 to "entirely within", I also disagree with Caldwell. The focus of this patent is the relocation of the roller from the channel above the bottom guide, as in the prior art, to the bottom guide. This relocation "provides an increased range of travel within a window frame", [264 Patent, col. 1, ll. 9-10], because it is the roller hitting the jamb mounting hook that limits the travel distance in these kinds of window balance assemblies. [264 Patent, col. 6, ll. 11-12.] Thus, by moving the roller down into the bottom guide instead of above it, the "sash can travel a greater distance before the bottom guide roller 239/350 hits the jamb mounting hook 245/345, resulting in a greater travel distance." [264 Patent, col. 6, ll. 20-22.] Compare Figures 7B and 8B below.

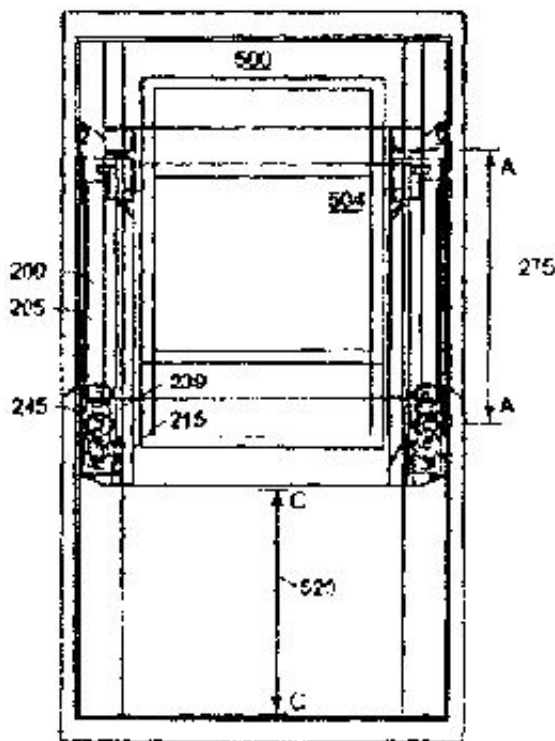


FIG. 7B
PRIOR ART

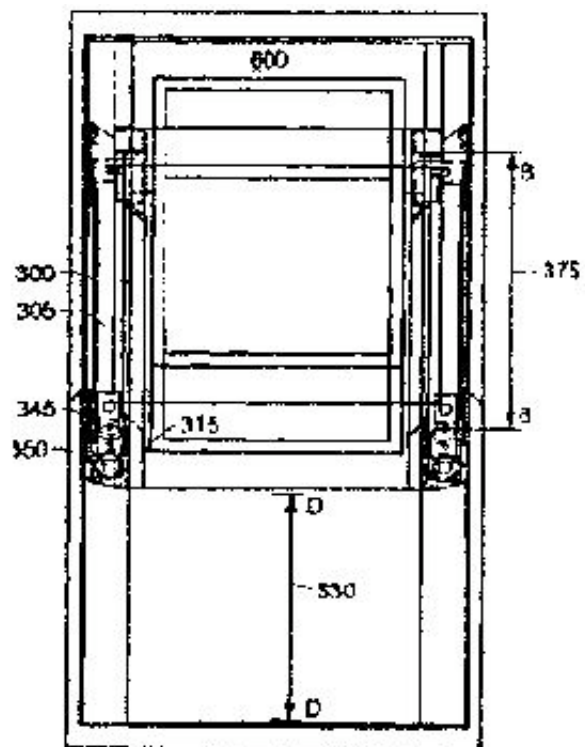


FIG. 8B

Relocating the roller "in" the bottom guide with either the portion that strikes the jamb mounting hook when the sash is raised extending partially outside the bottom guide, or even with a portion of the roller extending slightly above or below the bottom guide, would still allow one skilled in the art to make use of the invention and take advantage of the greater travel distance. In these configurations, one could not say that the roller would be "entirely within" the bottom guide. Consequently, while the specification describes or depicts an embodiment where the roller is "within" or framed by the bottom guide and while there is nothing in the specification describing or depicting the roller as partially outside the bottom guide, I am not convinced that "a person of skill in the art would understand the embodiments to define the outer limits of the claim term" rather than merely being "exemplary in nature." Phillips, 415 F.3d at 1323. Thus, I adopt the common meaning of the term "mounted in", namely that mounting the roller in the bottom guide does not exclude the possibility that the roller may not be entirely within the piece of the apparatus called a bottom guide.

c) "*so as to permit rotation*": Caldwell does not contest the addition of this phrase in the definition.

d) "*in the portion of the bottom guide that is sized or configured to be received in and to slide in the jamb pocket when installed*": There is nothing in the Claims, the specification, or the prosecution history that limits the location of the roller within the bottom guide. Claims 13 and 18 do describe a window balance device comprising "a bottom guide adapted to be connected to an end of a window balance channel and adapted to slide in a jamb pocket when installed in a window frame; and a bottom guide roller rotatably mounted in the bottom guide." [264 Patent, col. 7, ll. 43-45; col. 8, ll. 1-2, 19-23; See also Claim 23, col. 8, ll. 36-38.] However, the specific references in these Claims, undermine Amesbury's attempt to include this additional limitation in Claim 1.

Construction-A roller mounted in the bottom guide in a way that permits its rotation.

C. '368 patent

1. *Background*-The '368 Patent entitled "Snap Lock Balance Shoe and System for a Pivotal Window" improves the balance shoe element and details a method of assembling and installing the components of the inverted window balance system for tilt-in windows.

Tiltable or pivotal windows use a combination of balances and pivot bars to allow the window sashes to slide up and down in the window jamb and to rotate or tilt in to facilitate the cleaning of the outside surface of the sash glass.

Similar to the block and tackle balance, this model uses an inverted window balance that includes an extension spring connected to a system of pulleys housed within a rigid U-shaped channel, and a cord for connecting the system of pulleys to a jamb mounting attachment (ie.hook). A pivot bar connects with a balance shoe that is connected to the inverted window balance to allow the window sash to tilt in.

Balance shoes are used to guide the rotational movement of the window sashes with respect to the window frame when the sash is tilted in. The balance shoe includes a frame, a locking device that engages with the jamb track of the window frame when the pivot bar rotates, thereby locking the balance shoe in that location, a cam in communication with the locking device that has a keyhole opening for receiving a pivot bar attached to a window sash, and a "connecting device" for attaching the balance shoe within a window balance. The frame may also include a frame "pocket" sized to receive a fastener, which can further secure the balance shoe to the rigid U-shaped channel of the window balance.

Based on the parties' proposed claim constructions, it appears that there are only two disputed terms, both of which are part of the independent claim at issue-Claim 2. Based upon this independent Claim, Amesbury is asserting Claims 2-3, 6-8, and 11 against Caldwell.

Claim 2

A window balance system comprising:

a U-shaped channel comprising a plurality of openings;

a spring connected to a system of pulleys located within the U-shaped channel;

a cord with a first cord end and a second cord end, the first cord end connected and threaded through the system of pulleys, the second cord end connected to a jamb mounting attachment; and

a balance shoe, wherein the balance shoe comprises:

a frame comprising an enlarged first end and a second end, wherein the second end is adapted to be received by the U-shaped channel, and wherein the second end of the frame of the balance shoe further forms a pocket positioned in the second end of the frame adapted to mate with a rivet;

a locking member proximal to the enlarged first end;

a cam in communication with the locking member, and

a connecting device for attaching the balance shoe within the U-shaped channel of the window balance.

2. "*pocket*"-Amesbury argues that this phrase should be construed as meaning "a contour formed to mate with a rivet or fixed structure", whereas Caldwell has construed the phrase as "a U or C-shaped channel bounded on three sides with an opening designed to mate with a rivet."

The parties agree that, however described structurally, the "pocket" must be shaped to "mate" with something, which the parties agree means "to join or fit together" with that something. As to the 'something', Amesbury argues that the "pocket" must be "formed to mate *with a rivet or fixed structure*". However, Claim 2 specifically says that the "pocket" is "adapted to mate with a rivet". Thus, even though, the specification describes a "fastener, such as a rivet", [368 Patent, col. 6, l. 41], I find that the Claim is clear-the "pocket" must be shaped to mate (ie. "to join or fit together") with a rivet.

The crux of the debate revolves around what shape dimensions and descriptors should be included in the reference to "pocket" in Claim 2. I will consider the Claim terms, the specification, and the prosecution history to determine the structural description implicit in yet another metaphor.

Claim 2 states that the "second end of the frame of the balance shoe further forms a pocket positioned in the second end of the frame *adapted to mate with a rivet*." [368 Patent, col. 8, ll. 60-63.] In the Summary of the Invention, the patent describes a "frame pocket *sized to receive a fastener*", [368 Patent, col. 2, ll. 3-4], and how "[t]he balance shoe can be further secured to the rigid U-shaped channel with a fastener that *interfaces with a frame pocket* in the balance shoe." [368 Patent, col. 2, ll. 38-41.] The specification mentions the "pocket" four times. In the detailed description of the invention, the patent describes how "[t]o *accommodate the fastener*, the snap lock balance shoe can form a connection pocket *sized to receive or mate with the fastener*", [368 patent, col. 5, ll. 37-40], and how during installation one of the steps "is to slide the snap lock balance shoe into the rigid U-shaped channel such that the *fastener is received* in the connection pocket of the snap lock balance shoe." [368 patent, col. 6, ll. 42-46.]

Amesbury argues that nothing in the specification requires the "pocket" to have a specific shape, other than a shape capable of mating with a rivet. Thus, while conceding it may not be the best choice of words, Amesbury proposes the term "contour". On the other hand, Caldwell argues that describing the "pocket" as a "contour" shaped to mate with a rivet insufficiently describes what the patentee meant by "pocket". Instead "pocket" should be construed as "a U or C-shaped channel bounded on three sides with an opening" shaped to mate with a rivet.

Caldwell's reference to the file history and the deposition of the inventor, Gary Newman, to elucidate the patentee's understanding of the term "pocket" is unavailing. While some of the patentee's initial claims were rejected as being anticipated by *Schmidt*'s "Locking Slide Balance", U.S. Patent No. 5,301,467, FN15 that patent did not have a "pocket" to fasten the balance shoe *inside* the U-shaped channel of the window balance with a horizontal rivet as is described in the '368 Patent. Rather, the *Schmidt* '467 Patent described a new design for the "locking slide block", the component referred to as the "balance shoe" in the '368 Patent. The figures and the specification in the '467 Patent do not demonstrate how the "counter-balance spring", which is not shown, is attached to the metal plate at the top of the "locking slide block". It is clear from the patentee's response to the initial rejection, that what distinguishes the '368 Patent from the '467 Patent is that the 'top' or "second end" of the balance shoe is "adapted to be received by a U-shaped channel of a window

balance." The mating of the "pocket" and a rivet through the U-shaped channel referenced in Claim 2 is part of the design for securing the balance shoe within the U-shaped channel of the window balance.FN16 Consequently, neither party has identified anything in the file history that aids in the interpretation of the term "pocket". As to Mr. Newman's deposition, I will not treat a non-lawyer's response as an admission as to the proper construction, even though "[testimony against a patentee's own interest ... is perhaps the most persuasive extrinsic evidence." *Bristol-Myers Squibb Co. v. Tera Pharmaceutical USA, Inc.*, 288 F.Supp.2d 562, 585 (S.D.N.Y.2005). I have only been provided with a snippet of Mr. Newman's deposition testimony and I credit Amesbury's suggestion at the hearing that Mr. Newman may have been describing the "pocket" in the patent's figures rather than explaining what he as the inventor meant by choosing to use the term "pocket" in Claim 2.

FN15. The Examiner wrote that "Schmidt discloses a balance shoe assembly 20 ["locking slide block" in the patent] for a sash comprised of a frame 24 ["housing" in the patent], ..., a connecting device 28 ["metal plate" in the patent], which connects the shoe to a counter-balance spring and has a pocket therein, and is received within the frame 24, ..., and a frame pocket, which can receive a fastener." [Smalley Declaration, Exhibit L, at C000793] The "frame pocket" does not refer to the same component or element as the "pocket" in the '368 Patent; it refers to a "channel" at the 'bottom' of the block/shoe that receives the locking cam. The Examiner's other use of "pocket" seems to refer to the "pocket" in the "metal plate" at the 'top' of the "locking slide block" that attaches to the counter-balance spring. The *Schmidt* '467 Patent itself never uses the term "pocket". The patentee seems to have understood this distinction when responded to the rejection.

FN16. The other way that the shoe is attached within the window balance is by the "connecting device", also referred to in Claim 2.

Returning back to the specification, I find that the function of the "pocket" is clear-to receive a rivet, thereby aiding to secure the balance shoe within the U-shaped channel of the inverted window balance. This function defines the shape. Consequently, I find that the shape of the "rivet" in effect defines the shape of the interfacing pocket.

Neither of the parties has presented any argument on how the term "rivet" should be construed. However, I find that the ordinary meaning of "rivet" as understood by a person of skill in the art is readily apparent. Thus, I will construe the term according to the "widely accepted meaning" of these "commonly understood words". *Phillips*, 415 F.3d at 1314. The term "rivet" encompasses a variety of fasteners consisting of a shaft with heads on either end. Typically the shaft is a smooth cylinder, as depicted as 635 in Figure 6A shown below, for instance.

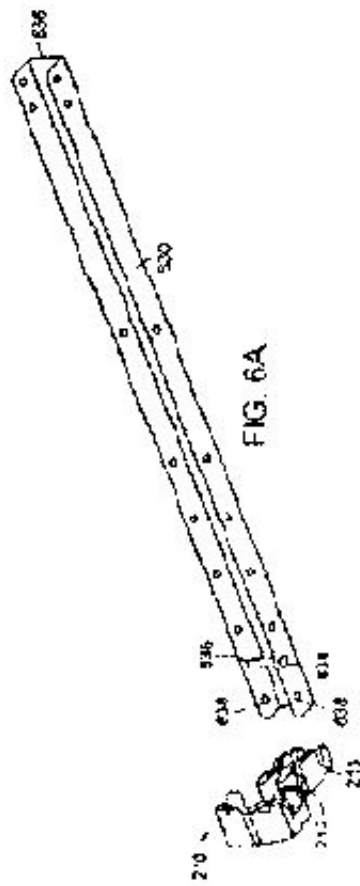


FIG. 6A

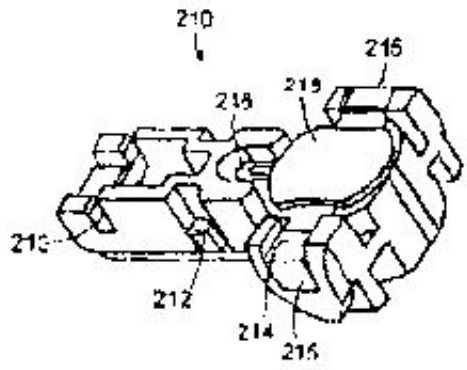


FIG. 3B

As a result, the "pocket" would typically have to be shaped to receive a smooth cylinder through the shoe. However, the patent does not require that the "pocket" and rivet match perfectly. As a result, the "pocket" could have a cylindrical contour with a diameter long enough to fit the rivet or the "pocket" could be a "U-shaped channel bounded on three sides", as depicted as 213 in Figure 3B shown above, with a height and depth long enough to fit the rivet. The problem with Caldwell's suggestion is that it requires the pocket to have sides, which denies the possibility that the indent might actually be a cylindrical match to the rivet without sides per se. Consequently, to the extent any ambiguity remains about the shape of the "pocket", I will adopt as a definition a notch shaped to mate with a rivet, thereby aiding to secure the balance shoe within the U-shaped channel of the inverted window balance.

Nevertheless, I will adopt Caldwell's suggestion that the definition of "pocket" must incorporate the idea that the rivet slides into the "pocket" through an opening. The installation discussion in the specification explains that "the snap lock balance shoe ["is to slide"] into the rigid U-shaped channel such that the fastener is received in the connection pocket of the snap lock balance shoe". [368 patent, col. 6, ll. 42-46.] In order for the balance shoe to be installed in this way, the "pocket" must have an opening into which the rivet can slide. Without incorporating the idea of an opening, one could erroneously interpret the term "pocket" to include a fully enclosed channel through the balance shoe, in which the rivet would have to be thread through rather than snapping in. However, it is clear from the specification that this is not what the patentee understood the term to connote.

Construction-A notch with an opening shaped to mate (ie. "to join or fit together") with a rivet, thereby aiding to secure the balance shoe within the U-shaped channel of the inverted window balance.

3. "*connecting device*"-The parties are in disagreement about what kinds of "things" can be considered a "connecting device" as understood in Claim 2 and about whether the "connecting device" must be construed as a separate element from the rivet that mates with the pocket.

As to the first issue, I agree with Amesbury that the term "connecting device" should not be limited to "retractable tabs", also referred to as "resilient tabs," as suggested by Caldwell in its written submissions. FN17 Claim 2 describes a window balance comprising a "connecting device for attaching the balance shoe within the U-shaped channel of the window balance" without including any specifics about the "connecting device". This wording contrasts with the specific description set out in Claim 1 (which is not at issue here) that defines a "connecting device" as one "comprising one or more resilient tabs for attaching the balance shoe within the U-shaped channel of the window balance, wherein the one or more resilient tabs extend at least partially through a corresponding number of the plurality of openings in the U-shaped channel." In addition, there are three claims that are dependant on Claim 2 that limit the scope of the "connecting device" in those claims. Claim 3 refers to "[t]he window balance system of claim 2 wherein the connecting device comprises a rivet"; Claim 4 refers to "[t]he window balance system of claim 2 wherein the connecting device comprises a screw"; and Claim 5 refers to "[t]he window balance system of claim 2 wherein the connecting device comprises a resilient tab". Given this important overlap, I turn again to the doctrine of claim differentiation.

FN17. At the hearing, Caldwell proposed the following definition on page 33 of its handout:
A pair of retractable tabs or a screw used for attaching the balance shoe in the channel, separate from the pocket that mates with a rivet.

As discussed above, "[t]he doctrine of claim differentiation 'create[s] a presumption that each claim in a patent has a different scope.'" ' *Free Motion Fitness*, 423 F.3d at 1351 *quoting* *Comark*, 156 F.3d at 1187. "The difference in meaning and scope between claims is presumed to be significant '[t]o the extent that the absence of such difference in meaning and scope would make a claim superfluous.'" ' *Id. quoting* *Tandon Corp.*, 831 F.2d at 1023. Caldwell misunderstands the law in stating that "[s]ince the dependent claim specifically limits the 'connecting device' to a screw, the independent claim 2 presumptively does not encompass that structure." *See id.* (holding that the "dependent claims limiting the claim to a single cable confirm that the independent claims *may encompass more than one cable*")

Here, Claims 3-5 incorporate Claim 2 and limit "connecting device" to three different types of fastening devices-rivet (Claim 3), screw (Claim 4), and resilient tabs (Claim 5). Consequently, these specific references support Amesbury's construction that "connecting device" in Claim 2 ought to be given the broader meaning described in the specification. The specification explains that the "connecting device" "can include one or more retractable tabs for engaging the right U-shaped channel" [368 Patent, col. 2, 11. 35-36] or "other connecting devices such as a screw." [368 Patent, col. 5, 11. 31-32.]

In addition, since Claim 1 specifically defines the connecting device as one comprising "one or more resilient tabs ..., [which] extend at least partially through a corresponding number of the plurality of openings in the U-shaped channel" and Claim 2 does not specify any limits, the term in Claim 2 should be given the broad meaning suggested by the specification.

Caldwell also incorrectly argues that "connecting device" should be limited to resilient tabs because dependent claims 3 and 4 are invalid for lack of enablement. As a basis for this argument, Caldwell cites to *Pandrol USA, LP v. Airboss Ry. Products, Inc.*, 320 F.3d 1354 (Fed.Cir.2003) and *The Toro Company v. White Consolidated Industried*, 199 F.3d at 1295 (Fed.Cir.1999) without pin cites for the proposition that because "[t]he patent drawings do not contain a picture of those claimed structures as required by 37 CFR s. 1.83(a), FN18 ... those claims are not enabled." In doing so, Caldwell misinterprets *Pandrol* and *Toro*, the later of which actually stands for the proposition that a claim may be limited to the embodiment depicted if that is the only embodiment and "no other structure is illustrated or described." *Toro*, 199 F.3d at 1301. "It is well established that the preferred embodiment does not limit broader claims that are supported by the written description." *Id.*

FN18. 37 C.F.R. s. 1.83 Content of drawing. (a) The drawing in a nonprovisional application must show every feature of the invention specified in the claims. However, conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (e.g., a labeled rectangular box). In addition, tables and sequence listings that are included in the specification are, except for applications filed under 35 U.S.C. 371, not permitted to be included in the drawings.

The enablement requirement in 35 U.S.C. s. 112, para. 1, "provides in pertinent part that the specification shall describe 'the manner and process of making and using [the invention], in such clear and 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 invention].'" ' *AK Steel Corp. v. Sollac and Ugine*, 344 F.3d 1234, 1243-44 (Fed.Cir.2003) *quoting* 35 U.S.C. s. 112, para. 1. "The enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the ["full scope of the"] claimed invention without undue experimentation." *Id.* at 1244 *quoting* *In re Wands*, 858 F.2d 731, 736-37 (Fed.Cir.1988).

The requirement for drawings, on the other hand, is set out in 35 U.S.C. s. 113, which provides that:

The applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented. When the nature of such subject matter admits of illustration by a drawing and the applicant has not furnished such a drawing, the Director may require its submission within a time period of not less than two months from the sending of a notice thereof. Drawings submitted after the filing date of the application may not be used (i) to overcome any insufficiency of the specification due to lack of an enabling disclosure or otherwise inadequate disclosure therein, or (ii) to supplement the original disclosure thereof for the purpose of interpretation of the scope of any claim.

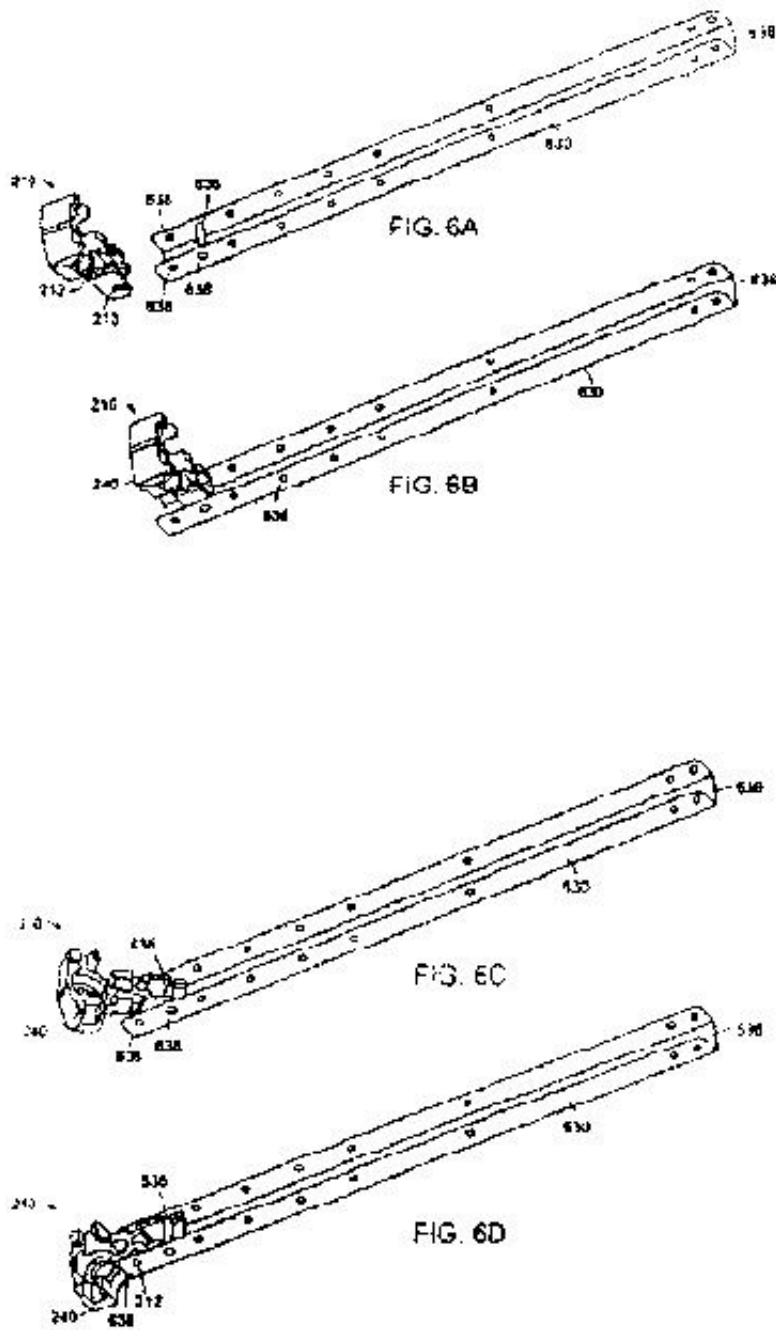
35 U.S.C. s. 113. Consequently, it appears to me, that drawings in a patent may help overcome any insufficiency of the specification due to lack of an enabling disclosure, but they are not to be scrutinized for proper "enablement" or depiction of every "claimed structure" under 35 U.S.C. s. 112, para. 1 as suggested by Caldwell. Although 37 CFR s. 1.83(a) of the PTO rules require that applications include drawings that "show every feature of the invention specified in the claims", I will not limit my construction of "connecting device" to retractable or resilient tabs because Claims 3 and 4 are not "enabled". "[T]he fact that the drawings are limited to a particular embodiment does not similarly limit the scope of the claims. Rather, [the patentee] is entitled to the full breadth of claim scope supported by the words of the claims and the written description." *TI Group*, 375 F.3d at 1138 *citing* *Anchor*, 340 F.3d at 1306-07 ("[T]he mere fact that the

patent drawings depict a particular embodiment of the patent does not operate to limit the claims to that specific configuration.") Here, it is clear that the written description supports a broader meaning of the claimed term "connecting device" than the depicted embodiment, which uses retractable or resilient tabs. Thus, Caldwell has failed to convince me that 37 C.F.R. s. 1.83(a) requires me to find that the other embodiments are not sufficiently "enabled."

As to the second issue, I am inclined to disagree with Caldwell that the "connecting device" must be a separate and distinct component of the window balance assembly from the fastener (rivet) that mates with the frame "pocket".

Claim 2 describes a window balance comprising a "connecting device for attaching the balance shoe within the U-shaped channel of the window balance" in addition to a balance shoe comprising a frame "wherein the second end of the frame of the balance shoe further forms a pocket positioned in the second end of the frame adapted to mate with a rivet." ['368 Patent, col. 8, 11. 59-62.] This compares with Claim 1 where the frame of the balance does not have a pocket and the connecting device is specifically described as "one or more resilient tabs [that] extend at least partially through a corresponding number of the plurality of openings in the U-shaped channel." ['368 Patent, col. 8, 11. 44-46.] It is clear that in "one embodiment of a method for securing the snap lock balance shoe within a rigid U-shaped channel with multiple openings" depicted in Figures 6A-6D shown below, ['368 Patent, col. 6, 34-36], the fastener (the rivet) and the connecting device (resilient tabs) are different structures. The specification explains that under this method:

The first step, shown in FIG. 6A, is to place a fastener 635, such as a rivet, in one of the pairs of openings in the rigid U-shaped channel. The next step, as depicted in FIG. 6B, is to slide the snap lock balance shoe into the rigid U-shaped channel such that the fastener is received in the connection pocket of the snap lock balance shoe. As shown in FIG. 6C, the snap lock balance shoe is then rotated down so that the front frame surface is aligned with a bottom wall of the rigid U-shaped channel. FIG. 6D shows the last step of attaching the snap lock balance shoe within the rigid U-shaped channel. In this step, the connecting device 212 of the snap lock balance shoe snaps into one of the pairs of openings located on the rigid U-shaped channel. ['368 Patent, col. 6, 40-53.]



Furthermore, in Figures 3A and 3B shown below, the patent depicts the connecting device 212 as "a pair of retractable tabs that snaps into the rigid U-shaped channel", [368 Patent, col. 5, 11. 29-31], and a connection pocket 213 that is sized to receive a "fastener located in the inverted window balance [that] can be used to further secure the connection between the snap lock balance shoe and the inverted window balance." [368 Patent, col. 5, 11.34-36.] This suggests that the rivet (635 in Figs. 6A-6D) is only supposed to *help* the separate and distinct component called the connecting device secure the balance shoe.

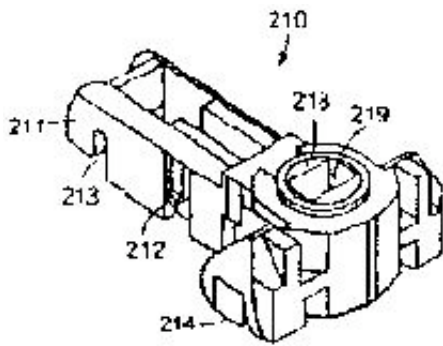


FIG. 3A

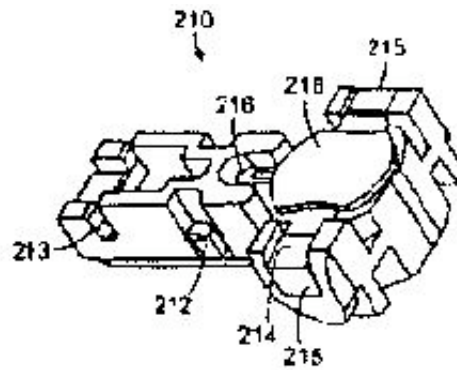


FIG. 3B

However, Figs. 3A and 3B only depict one embodiment of the snap lock balance shoe and Figs. 6A-6D only depict "one embodiment of a method for securing the snap lock balance shoe within the rigid U-shaped channel with multiple openings." ['638 Patent, col. 6, 11. 34-36.] The patent also explains that in "some [other] embodiments, the snap lock balance shoe is attached to the rigid U-shaped channel with the fastener 635. In other embodiments, the snap lock balance shoe is attached to the rigid U-shaped channel without the fastener 635." ['368 Patent, col. 6, 54-61.] The latter alternative embodiment appears to be captured by Claim 1 since that claim omits the "pocket" from the description of the balance shoe's frame. The former alternative embodiment appears to describe a balance shoe consisting of a pocket "adapted to mate with a rivet", wherein the rivet (the fastener) acts as the "connecting device for attaching the balance shoe within the U-shaped channel of the window balance." ['368 Patent, col. 8, 11. 62, 66-67.]

Since the function of the "connecting device" is to "attach[] the snap lock balance shoe directly within an inverted window balance", ['368 Patent, col. 5, 11. 19-21], Claim 2 ought to be construed to include the possibility that the rivet could serve as the "connecting device" when it locks into the frame "pocket" shaped to mate with it. Furthermore, the specification explains that the "connecting device can be integral with the frame", suggesting that as just described, the connecting device may not be integral to the frame and may be a "screw", ['368 Patent, col. 5, 1. 32], or the rivet in addition to or instead of resilient tabs. As a result, I will not construe "connecting device" in Claim 2 as a structure necessarily distinct from the rivet that mates with the pocket.

Construction-A device, such as a rivet, screw, or resilient tabs, that connects the balance shoe to the U-shaped channel of the inverted window balance.

APPENDIX: Summary of Claim Construction

I. The '638 Patent

Disputed Term	Court's Construction
"means for	The term "mounting means" or " " "a means
mounting said	for mounting said coiled ribbon spring"
coiled ribbon	describes a structure for mounting a coiled

spring" ribbon spring to the window jamb channel.

(Claims 1 & 8) The structure has a body with a surface concavely curved to support the curved outer undersurface of the spring, but the corresponding curvatures of the two surfaces do not need to conform exactly. The design of the body also includes some method of fixing, such as aperture to receive a fixing screw, to secure the

	structure to a window jamb channel.
--	-------------------------------------

"raised spine" A raised protrusion that resembles or suggests a spine of the mounting element, shaped to cooperate with the window jamb flanges to inhibit the rotational motion of

(Claims 1 & 8)

	the mounting means.
--	---------------------

"projection means" Projection(s)

(Claim 8)

--	--

"whereby rotational motion of said mounting means is inhibited" The mounting means is to be secured in the channel means. And the mounting means is to have a raised spine positioned between and in the same plane as said inwardly turned opposed flanges of said channel

(Claims 1 & 8) means whereby rotational motion of said mounting means is inhibited.

	mounting means is inhibited.
--	------------------------------

II. The '264 Patent

Disputed Term	Court's Construction
"bottom guide roller rotatably mounted in the bottom guide" (Claim 1)	A roller mounted in the bottom guide in a way that permits its rotation.

III. The '368 Patent

Disputed Term	Court's Construction
"pocket" (Claim 2)	A notch with an opening shaped to mate (ie. to join or fit together) with a rivet, thereby aiding to secure the balance shoe within the U-shaped channel of the inverted
	window balance.
"connecting device" (Claim 2)	A device, such as a rivet, screw, or resilient tabs, that connects the balance shoe to the U-shaped channel of the
	inverted window balance.

D.Mass.,2006.

Amesbury Group, Inc. v. Caldwell Mfg. Co.

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