United States District Court,
W.D. Virginia, Abingdon Division.

GENERAL CREATION LLC, et al,
Plaintiffs.
v.
LEAPFROG ENTERPRISES, INC,
Defendant.

Nov. 18, 2002.

Patent holder brought infringement action against competitor over patent directed toward toy designed to produce audio signals corresponding to text of particular books. Construing the claims in the patent, the District Court, Jones, J., held that: (1) "book" meant set of pages having related content, fastened along one side and encased between covers; (2) "actuator" meant device that activated memory storage means; (3) "switch means" meant structure that switches, had at least a first and second condition, and was electronically connected to memory storage means; (4) "memory storage means" meant non-removable integrated circuit that stored electronic data corresponding to written material on said pages of book and supplemental book and produced audio signals; and (5) "written material" meant words, figures, or pictures.

Claims construed.

Phrase "written material," in patent directed toward toy designed to produce audio signals corresponding to text of particular books, meant words, figures, or pictures.

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Howard C. McElroy, Bundy McElroy Hodges, Abingdon, Virginia, and James G. Gilliland, Jr., K.T. Cherian, and Robert A. McFarlane, Townsend and Townsend and Crew LLP, San Francisco, California, for Defendant.

OPINION AND ORDER

JONES**, District Judge.**

In this patent infringement action, following a so-called Markman proceeding, I construe as a matter of law the disputed claims of the subject patent.

I

The plaintiffs, General Creation LLC and General Creation International Limited (collectively "General Creation"), are the licensee and owner respectively of U.S. Patent No. 5,795,213 ("the '213 patent"), which is entitled "Reading Toy." They assert this patent against the defendant LeapFrog Enterprises, Inc. ("Leapfrog"). LeapFrog in turn has filed a counterclaim for a declaration of noninfringement and invalidity. FN1

FN1. General Creation initially named Knowledge Universe LLC ("Knowledge Universe") as an additional defendant. Knowledge Universe filed a motion to dismiss or in the alternative, to transfer venue to the United States District Court for the Central District of California. In response, General Creation moved to amend the complaint to dismiss Knowledge Universe and the motion was granted. LeapFrog also joined in Knowledge Universe's motion to transfer venue. After briefing and argument, the motion to transfer was denied. *See* General Creation LLC v. Leapfrog Enterprises, Inc., 192 F.Supp.2d 503 (W.D.Va.2002).

The claims of the '213 patent cover a toy designed to produce audio signals corresponding to the text of particular books. Unlike prior art devices that provided audio signals from an external storage medium, this invention stores the electronic data internally and the audio signals are activated by manipulating certain parts of the toy.

The inventor Richard P. Goodwin initially filed an application for this patent on April 22, 1997. Upon review by the Patent Office, the original claims were rejected. The patent examiner asserted that the claims were "anticipated by [the] Wiener" patent, the prior art that provided audio signals from an external storage medium. (Pls.' Br. Ex. B at 34.) After consulting with the patent examiner, the inventor amended his claims to more specifically define the relationship between the toy, the data storage means, and the books. (*See* id. at 38.) The inventor included those amendments in his Response to the Office Action. Additional telephone conversations were held between the inventor and the patent examiner and the final amended claims were disclosed in a Supplemental Response filed by the inventor on April 9, 1998. (*See* id. at 48.) Thereafter, the final amended claims were approved and the '213 patent was issued.

The parties have briefed and argued the proper construction of certain claims of the '213 patent and the issues are ripe for decision.

II

[1] A patent infringement action normally consists of two steps. First, there must be a construction of the patent claims to determine the scope of the inventor's patent. This process, called claim construction, is a matter of law exclusively for the court. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 970-71 (Fed.Cir.1995), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Once the scope of the claims has been determined, a jury then decides whether the accused product infringes on the patent claims as properly construed. *See* id. at 976. The determination of infringement is a question of fact. *See id.*

[2] In determining the proper construction of a claim, I must begin by consulting intrinsic evidence, including the claim language itself, the specification, and the prosecution history, if any. *See id.* at 979. This intrinsic evidence is the "most significant source of the legally operative meaning of the disputed claim language." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996).

[3] [4] While the specification and prosecution history are properly considered as intrinsic evidence, the

claim construction process "must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to 'particularly point[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention.' " Interactive Gift Express, Inc. v. Compuserve Inc., 256 F.3d 1323, 1331 (Fed.Cir.2001) (quoting 35 U.S.C. s. 112, para. 2). In construing the claim language, I must determine the "ordinary meaning" of the claim term as understood by one of "skill in the art." Intellicall, Inc. v. Phonometrics, Inc., 952 F.2d 1384, 1387 (Fed.Cir.1992).

[5] [6] Once the ordinary meaning of the claim language is determined, the specification, the entire written description of the invention, is consulted to ascertain whether the inventor intended to use the claim language in a manner inconsistent with this meaning. *See* Vitronics, 90 F.3d at 1582 citing Markman, 52 F.3d at 979. "The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication." *Id*. If there is a dispute as to the ordinary meaning of claim language, the specification is "the single best guide" to resolve the dispute. *Id*.

[7] [8] If the claim language and the specification provide a clear construction, it becomes unnecessary to consult the prosecution history. *See* Interactive Gift Express, 256 F.3d at 1334. The prosecution history is the "complete record of all the proceedings before the Patent and Trademark Office, including any express representations made by the applicant regarding the scope of the claims." Vitronics, 90 F.3d at 1582. However, if the claim language remains ambiguous, the prosecution history can be used to exclude any interpretation that was disclaimed during prosecution. *See* Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576 (Fed.Cir.1995).

[9] If, after consulting the intrinsic evidence, all claim language can be unambiguously construed, it is improper to further rely on extrinsic evidence. *See* Vitronics, 90 F.3d at 1583 ("The claims, specification, and file history, rather than extrinsic evidence, constitute the public record of the patentee's claim, a record on which the public is entitled to rely."). However, extrinsic evidence, such as expert testimony, inventor testimony, and technical treatises, may be consulted if ambiguity persists. *See id*. In the present case, the parties agree that extrinsic evidence is not required. FN2

FN2. Leapfrog has submitted an example of a Baby Bear Read-Along toy made by General Creation, but I have not considered that item in construing the claims.

[10] While this analysis applies to most claim language, if a claim contains a means-plus-function limitation, a different analysis ensues. As a general rule, a claim must recite specific structure, material, or acts to meet the standards of patentability. 35 U.S.C.A. s. 112, para. 2 (West 2001). However, if a claim is in means-plus-function format, the relevant statute provides that the claim elements are stated not in terms of structure, but in terms of the function that the element performs:

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

35 U.S.C.A. s. 112, para. 6. Unlike general format elements, construction of means-plus-function elements *requires* the court to look beyond the claim language to determine the structure that the claim element takes.

[11] [12] Thus, before construing particular claim language, I must first determine whether the claim is in general format or means-plus-function format. This is a question of law. *See* Personalized Media Communications, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 702 (Fed.Cir.1998). There is a presumption that if the claim element uses the word "means," the claim element is in means-plus-function format. *See* York Prods., Inc. v. Cent. Tractor Farm & Family Ctr., 99 F.3d 1568, 1574 (Fed.Cir.1996). However, this presumption is rebutted if the claim either recites no function or recites sufficient structure for performing the claimed function. *See* Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1427-28 (Fed.Cir.1997); Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed.Cir.1996).

[13] If I find that a claim element is in means-plus-function format, I must first determine the function of the claim element from the claim language. *See* Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1258 (Fed.Cir.1999). I must then determine the structure that corresponds to the function as described in the specification or prosecution history. *See id*.

The parties dispute the meaning of six claim terms in the '213 patent. By applying the applicable principles of claim construction, I find the following to be the proper construction of the disputed terms.

III

The specific claim language in dispute in the '213 patent is set forth as follows in bold:

What is claimed is:

1. A learning device for audibly relating **written material** to a listener comprising:

(a) a **book** comprising:

(i) a first page containing a first **written material**, said first **written material** being capable of audio interpretation;

(ii) a second page containing a second **written material**, said second **written material** being capable of audio interpretation;

(b) a **supplemental book** comprising:

(i) a third page containing a third **written material**, said third **written material** being capable of audio interpretation;

(ii) a fourth page containing a fourth written material, said fourth written material being capable of audio interpretation;

(c) a portable toy having an interior, said portable toy comprising the following elements, at least several of which are within said interior:

(i) an electric power source;

(ii) a first **actuator**;

(iii) a second **actuator**;

(iv) a **switch means** having at least a first condition and a second condition; and

(v) a **memory storage means** for storing electronic data corresponding to the written material on said pages of the book and the supplemental book, which **storage means** is electronically connected to said **switch means** and said first and second **actuators** and produces audio signals including:

(1) a first audio signal upon actuation of said first **actuator** when said **switch means** is in said first condition;

(2) a second audio signal upon actuation of said second **actuator** when said **switch means** is in said first condition;

(3) a third audio signal upon actuation of said first **actuator** when said **switch means** is in said second condition;

(4) a fourth audio signal upon actuation of said second **actuator** when said **switch means** is in said second condition;

(d) wherein said first audio signal is an audio interpretation of said first **written material**;

(e) wherein said second audio signal is an audio interpretation of said second **written material**;

(f) wherein said third audio signal is an audio interpretation of said third **written material**;

(g) wherein said fourth audio signal is an audio interpretation of said fourth **written material**;

2. The learning device of claim 1, wherein said first **written material** is a first set of words, and wherein said second written material is a second set of words.

....

10. The learning device of claim 1, wherein said third **written material** is a third set of words, and wherein said fourth **written material** is a fourth set of words.

('213 patent, col. 4, ll. 40-67 & col. 5, ll. 1-27 & col. 6, ll. 23-26.)

A. THE MEANING OF "BOOK."

[14] The first disputed term is "book." General Creation asserts that the proper construction of "book" is "a first set of two or more pages having related content." (Pls.' Br. at 12.) LeapFrog argues for a more limited construction. Specifically, that "book" be construed as "a set of written, printed pages fastened along one side and encased between protective covers." (Def.'s Br. at 25.)

Both parties have relied on various dictionary definitions of "book" to support their claim construction

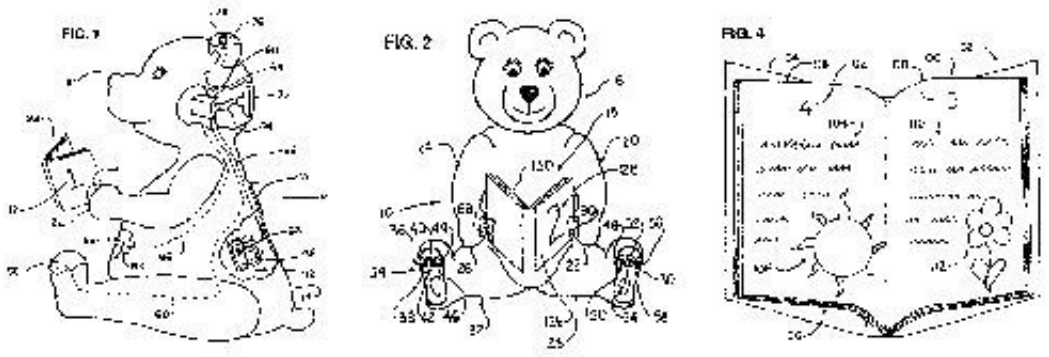
arguments. However, "the dictionary definitions of common words are often less useful than the patent documents themselves in establishing the usage of ordinary words in connection with the claimed subject matter." Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1299 (Fed.Cir.1999). Indeed the court is to construe claims from the point of view of a person of "skill in the art." Intellicall, Inc., 952 F.2d at 1387. Certainly such a person would not begin by looking to a dictionary, but instead would look to the claim language and the specification in the context of the person's particular field of expertise. *See* Toro Co., 199 F.3d at 1299.

Thus, I must start by analyzing the claim language itself. The plain language of the claim does not specify whether the "book" has a cover. However, the plain language does imply that the pages are bound together in some fashion. The claims identify the "book" as having at least two pages containing different "written material" ('213 patent, col. 4, ll. 40-50), that said "written material" is a "set of words" ('213 patent col. 5, ll. 24-26), and that the "set of words" on each page combine to "comprise a story" ('213 patent, col. 5, ll. 27-28). This sequence implies that the pages are interrelated and must be fastened together in some manner to create a story. Beyond this implication, the claim language provides little guidance as to what the inventor meant by "book."

Because the claim language sheds little light on the proper construction of "book," I must determine its ordinary meaning. "Book" must be given the ordinary meaning as determined by one of skill in the art, who in this case is a toy inventor or toy manufacturer experienced in the field of educational toys. Such a person would likely construe "book" to mean more than just a set of loose pages having related content. This is further supported by the fact that the patent is described as a "child's toy." ('213 patent, col. 1, l. 5.) The ordinary meaning of a "book" that a "child" would play with implies that there is a binding of the pages and a cover to protect the pages. A child could not likely play with a set of loose pages in any satisfactory manner. The pages, if not bound together and encased in some sort of cover, would be lost or destroyed. A toy inventor or manufacturer, experienced in the art of making and marketing educational toys, would not intend such an invention for children. Thus, the ordinary meaning of "book" is "a set of pages having related content, fastened along one side and encased between covers." Since this is the ordinary meaning, I must look to the specification to determine if the inventor intended a different meaning in the context of the '213 patent.

The specification does not indicate that the inventor intended to deviate from the ordinary meaning of "book." The language of the specification identifies that the "book" has a cover: "The book is provided with a cover 94 and a plurality of pages 96." ('213 patent, col. 2, ll. 62-63.) The language also implies that the pages are fastened together on one side: "the book 92 may be opened as shown in FIG. 4 to a particular page" ('213 patent, col. 3, ll. 29-30); "the book 92 would be opened to a particular page." ('213 patent, col. 3, ll. 49-50.) The Abstract also describes the "book" as having "a plurality of numbered pages containing parts of a story." ('213 patent, Abstract.) Identifying the pages as numbered indicates that they are somehow bound together to form a set. Further, the drawings identify the "book" as having a cover and pages fastened along one side:

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The only "book" that is described in the specification and illustrated by the drawings in the '213 patent is a "book" that has a cover and is bound on one side. This confirms that "book" was used by the inventor in accordance with its ordinary meaning.

[15] Precedent has clearly established that the specification cannot be used to limit broader claim terms. *See, e.g.,* Johnson Worldwide Assoc., Inc. v. Zebco Corp., 175 F.3d 985, 992 (Fed.Cir.1999); SRI Int'l v. Matsushita Elec. Corp. of America, 775 F.2d 1107, 1122 (Fed.Cir.1985). However, this is not such a case. The claim language here is not broader than that which is set out in the specification. The claims state that the "book" is comprised of pages containing written material that, taken together, comprise a story. ('213 patent, claims 1, 2, 3, 10, 11.) If the inventor intended this invention to be loose sheets of paper with related content, he could have claimed it that way. Instead, the inventor chose to use the word "book." From the viewpoint of an educational toy inventor or manufacturer, a "book" consists of pages that are bound together and protected by a cover. The specification and the drawings confirm that this is clearly the invention the inventor intended. Thus, this construction does not impose limits on the claims drawn from the specification. Instead, any limits on the claim come from using the word "book" which has a very specific ordinary meaning. Like many patents that have been previously construed, the specification, at least in context, merely states what the invention *is* and what the claim describes. *See, e.g.,* Modine Mfg. Co. v. United States Int'l Trade Comm'n, 75 F.3d 1545, 1551 (Fed.Cir.1996) ("[W]hen the preferred embodiment is described in the specification as the invention itself, the claims are not necessarily entitled to a scope broader than that embodiment."); Wang Labs., Inc., v. Am. Online, Inc., 197 F.3d 1377, 1381-83 (Fed.Cir.1999) (narrowly construing "frame" based on the specification and the drawings); Toro Co., 199 F.3d at 1301-02 (construing "including" to mean "permanently attached" based on the specification and the drawings, despite the fact that the claim language did not contain such a limitation).

Accordingly, "book" will be construed as "a set of pages having related content, fastened along one side and encased between covers."

B. THE MEANING OF "SUPPLEMENTAL BOOK."

[16] The second disputed term is "supplemental book." The parties have agreed that the "supplemental book" must contain content unrelated to the first book. (*See* Pls.' Br. at 13-14; Def.'s Br. at 31.) Therefore, for the reasons stated above, "supplemental book" will be construed as "a second set of pages having related content, fastened along one side and encased between covers, such content being unrelated to the content of the first book."

C. THE MEANING OF "ACTUATOR."

[17] The third disputed term is "actuator." General Creation argues that "actuator" should be construed as a "switch to activate the toy." (Pls.' Br. at 16.) LeapFrog asks the court to construe "actuator" more specifically as "a pressure switch," because, it asserts, a pressure switch is the *only* type of "actuator" disclosed by the inventor in the specification. (Def.'s Br. at 32-35).

Again, I begin my analysis with the claim language. Claim 1 provides that the memory storage means produces audio signals "upon actuation of said ... actuator." ('213 patent, col. 5, ll. 4-15.) However, there is no further indication as to the structure of the "actuator." Thus, I must determine the ordinary meaning of "actuator" as defined by a toy inventor or toy manufacturer, experienced in educational toys. Unlike "book," as discussed above, "actuator" is a broad term, capable of many interpretations. An "actuator," as argued by General Creation, can be anything that activates something else, including but not limited to a switch, a lever, or an infrared light reader. (Pls.' Br. at 15.) These types of actuators, as well as many others, are used in toys and are known to toy inventors and toy manufacturers. Thus, the ordinary meaning of "actuator" is "anything that activates something else." As this is the ordinary meaning, I must look to the specification to determine if the inventor intended a different meaning in the context of the '213 patent.

LeapFrog contends that because the specification discloses only pressure switches as actuators, the term "actuator" should be construed as "pressure switch." (Def.'s Br. at 31-37.) However, I find that the specification does not so limit the claim.

First, pressure switches are not the only type of "actuator" referenced by the inventor in the specification. While the preferred embodiment focuses on the use of pressure switches, the summary of the invention portion of the specification uses only the general term "actuator." ('213 patent, col. 1, ll. 34-62.) Also, both the summary of the invention portion and the preferred embodiment identify a remote control as an example of an actuator that could be used with this toy. ('213 patent, col. 1, ll. 58-59 & col. 4, ll. 8-19.) A remote control is a device that combines both pressure switches and infrared signals, two different types of "actuators."

[18] Second, even if pressure switches were the only type of actuators disclosed in the preferred embodiment, the inventor "is not confined to that particular mode of use since the claims of the patent, not its specifications, measure the invention." SRI Int'l, 775 F.2d at 1122. Instead, the preferred embodiment and the other parts of the specification should be used only to determine if the inventor intended to deviate from the ordinary meaning given to a claim term. *See* Vitronics, 90 F.3d at 1582 citing Markman, 52 F.3d at 979.

LeapFrog contends that the rule set forth in Gentry Gallery, Inc. v. Berkline Corp., 134 F.3d 1473 (Fed.Cir.1998), applies in this case. *Gentry Gallery* held that in certain circumstances, "claims may be no broader than the supporting disclosure." *Id*. at 1480. However, the *Gentry Gallery* case is distinguishable. In *Gentry Gallery,* the specification was "crystal clear that a particular (i.e., narrow) understanding of a claim term [was] an 'essential element of [the inventor's] invention." Johnson Worldwide Assocs., 175 F.3d at 993 (quoting Gentry Gallery, 134 F.3d at 1479). Here, the specification, by referring to the "actuator" as a pressure switch, a remote control or a general actuator, makes it clear that the invention does not require a particular type of actuator. Because more than one type of actuator is disclosed and because there is no indication that a pressure switch must be used in this invention, the specification is consistent with the broader, ordinary meaning of actuator.

While the claim language does not specify what type of structure the "actuator" takes, it does specify that the function of the "actuator" is to activate the memory storage means. The memory storage means "produces audio signals" ('213 patent, col. 5, ll. 2-3) and the audio signals are produced "upon actuation of said ... actuator." ('213 patent, col. 5, ll. 4-5). Accordingly, "actuator" will be construed as "a device that activates the memory storage means."

D. THE MEANING OF "SWITCH MEANS."

[19] The fourth disputed term is "switch means." With this term, there is disagreement between the parties as to whether it is in means-plus-function format. General Creation asserts that although use of the word "means" creates a presumption of means-plus-function format, the presumption is rebutted because there is only structural language in the claim and no indication of function. (Pls.' Br. at 16.) LeapFrog contends that the presumption is not rebutted because the claim language does recite a function and does not describe the structure of the element. (Def.'s Br. at 39.)

[20] I find that this claim limitation is not in means-plus-function format. There is a presumption that s. 112, para. 6, applies here given the "means" language and the claim language does recite the function of the "switch means." However, the presumption is rebutted because "switch means" is written with sufficient structural language.

The '213 claims provide the invention with a "switch means having at least a first condition and a second condition." ('213 patent, col. 4, ll. 63-64.) "Switch means" is again described later in claim 1 in association with the "memory storage means":

(v) a memory storage means for storing electronic data corresponding to the written material on said pages of the book and the supplemental book, *which storage means is electronically connected to said switch means* and said first and second actuators and produces audio signals including:

(1) a first audio signal upon actuation of said first actuator when said *switch means is in said first condition;*

(2) a second audio signal upon actuation of said second actuator when said *switch means is in said first condition;*

(3) a third audio signal upon actuation of said first actuator when said *switch means is in said second condition;*

(4) a fourth audio signal upon actuation of said second actuator when said *switch means is in said second condition;*

('213 patent, col. 4, ll. 65-67 & col. 5, ll. 1-15) (emphasis added.)

If a claim is in means-plus-function format, s. 112, para. 6, provides that the claim elements are stated not in terms of structure, but in terms of the function that the element performs. 35 U.S.C.A. s. 112, para. 6. Here, the function of the "switch means" becomes clear by looking at its relationship with the "memory storage means." Specifically, the function of the "switch means" is to determine which audio signal the "memory storage means" produces, depending on which "condition" the "switch means" is in. The "memory storage means" actually *produces* the audiosignal, but the "switch means" *directs* the "memory storage means" to

play a particular signal. For example, if the "first actuator" is activated and the "switch means" is in "first condition," the "memory storage means" is directed to produce the "first audio signal." ('213 patent, col. 5, ll. 4-6.) This function is further elaborated upon in the specification, where the "switch means" is described as the "control pressure switch" and the "memory storage means" is described as the "control unit":

The control pressure switch 76 is *used to program* the control unit 64 to play the audio signals of the particular audio response set which corresponds with the particular book being read.

('213 patent, col. 3, ll. 22-25) (emphasis added.)

[21] If the '213 patent claims described the function of the "switch means" without describing a corresponding structure, "switch means" would be in means-plus-function format and would be construed accordingly. However, "where a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format." Sage Products, 126 F.3d at 1427-28. Here, the claim language recites sufficient structure to rebut the presumption that "switch means" is in means-plus-function format.

First, the term "switch" itself is a structural term. Dictionary definitions make it clear that a "switch" is a *type* of device that takes its name from the function it performs. *See Merriam-Webster's Collegiate Dictionary,* 1193 (10th ed.1996) ("a device for making, breaking, or changing the connections in an electrical circuit"); *Webster's II New Riverside University Dictionary,* 1171 (2d ed.1988) ("a device for breaking or opening an electrical circuit or for diverting current from one conductor to another"). Indeed, "many devices take their names from the functions they perform. The examples are innumerable, such as 'filter,' 'break,' 'clamp,' 'screwdriver,' or 'lock.' " Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed.Cir.1996). The fact that "switch" "does not call to mind a single well-defined structure" is not dispositive. *See id*. What matters is that "the term, as the name for the structure, has a reasonably well understood meaning in the art." *Id*. Because the term "switch" itself imparts structure, its use rebuts the presumption that s. 112, para. 6, applies. *See also* Cole, 102 F.3d at 531 (holding that "perforation means" is not in means-plus-function format because "perforation" describes the structure that performs the tearing function); Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1365 (Fed.Cir.2000) (holding that "baffle means" is not in means-plus-function format because "baffle" imparts structure sufficient to rebut the presumption that the term is in means-plus-function format).

While "switch" itself is a structural term, the claims further define the structure of the "switch." The "switch means" is described as "having at least a first condition and a second condition." ('213 patent, col. 4, ll. 63-64.) The "switch means" is also "electronically connected" to the "memory storage means." ('213 patent, col. 5, l. 1.)

Construing "switch means" to be in means-plus-function format would also be inconsistent with the prosecution history of the '213 patent. The inventor's original claims, filed April 22, 1997, contained a "switching means," as it was then called, in claim 11, a dependent claim of claim 1. The claim language provided for a "switching means for designating an active response selected from the group consisting of said first response set and said second response set." (Pls.' Br. Ex. B at 20.) However, the claims were rejected as "being anticipated by [the] Weiner [patent]." (Id. at 34.) The patent examiner specifically noted that the "switching means" in claims 11 and 20 was met by Wiener. (*See* id.)

The inventor subsequently amended his claims on January 14, 1998, to overcome the rejection. The original

"switching means" was brought into claim 1 and claim 1 provided for "a switch having a first position and a second position." (Id. at 40.) The "switch" was further described in relation to the "signal producing means," what is now known as the "memory storage means." (*See* id.) Similar to the '213 patent, the "signal producing means" produced a certain signal depending on what position the "switch" was in. Telephone conversations between the patent examiner and the inventor in April of 1998 resulted in the inventor submitting amendments on April 9, 1998. These amendments put the claim language in its present form and the '213 patent was issued. There were many changes made in the supplemental amendments, but there are only two changes relevant here. "Switch" was changed to "switch means" and "position" was changed to "condition." The description of the function of the "switch means" in relation to the "memory storage means" remained the same. There is no indication as to why these particular changes were made.

This prosecution history does not support a construction of "switch means" as a means-plus-function element. The original claim language was clearly in means-plus-function format. A presumption arose given the "means" language, a function was clearly stated, and no structure was disclosed. However, this claim language was rejected as being anticipated by the Weiner patent. Thus, the inventor, in his first amendment, removed the word "means" and described "switch" in terms of its structure. In the second amendment, "means" was again added to the claim language, but additional description of the structure was also added. The "switch means" has a first and second condition and is electronically connected to the memory storage means. Thus, although "switch means" was originally a means-plus-function element, it did not return to that status again, despite the addition of the word "means." A description of the structure of the "switch" remains in the claim language, preventing a means-plus-function construction.

As "switch means" is not in means-plus-function format, I must construe it accordingly. I must start by analyzing the claim language itself. As described above, the claim language discloses that the "switch means" has a "first condition and a second condition" and is "electronically connected" to the "memory storage means." ('213 patent, col. 4, ll. 63-64.) The claim language does not further describe the form that the "switch means" takes. Thus, I must determine the ordinary meaning of "switch means" as determined by one of "skill in the art." Intellicall, 952 F.2d at 1387. Like "actuator," "switch means" is a broad term, capable of many interpretations. There are likely many toys that employ a switch which, depending on its position, determines the activity that the toy will perform. Thus, the ordinary meaning of "switch means" is "a structure that switches."

As this is the ordinary meaning, I must look to the specification to determine whether the inventor intended to deviate from the ordinary meaning. The specification provides the following description of the "switch means":

The toy may also be provided with a plurality of books and a *switching means* so that actuators cause the toy to read different stories depending on the particular book being read.

('213 patent, col. 1, ll. 60-61) (emphasis added.)

A *control pressure switch 76* is located in an ear 78 of the toy 10 and connected by a wire 80 to the control unit 64.

('213 patent, col. 2, ll. 50-51) (emphasis added.)

To trigger the control unit 64 to provide audio signals which correspond to the particular book 92 being

used, the *control pressure switch 76* in the ear 78 is depressed the number of times indicated by the unique numeric code 124.... The *control pressure switch 76* is used to program the control unit 64 to play the audio signals of the particular audio response set which corresponds with the particular book being read. In the case identified in FIG. 1, the *control pressure switch 76* would be depressed once to match with the unique numeric code 124 of the book 92.

('213 patent, col. 3, ll. 14-27) (emphasis added.)

Once the *control pressure switch 76* has been depressed the appropriate number of times, the control unit 64 is thereby programmed to "read" the corresponding pages 130 of the supplemental book 126 as described above.

('213 patent, col. 4, ll. 3-7) (emphasis added.)

Similar to "actuator," the specification does not support a finding that "switch means" be construed as a "pressure switch," as LeapFrog contends. (Def.'s Br. at 46-47.) Instead, the specification is consistent with the broad ordinary meaning of "switch means."

First, pressure switches are not the only type of "switch" referenced by the inventor in the specification. The preferred embodiment focuses on pressure switches, but the summary of the invention uses only the general term "switching means." ('213 patent, col. 1, l. 61.)

Second, even if pressure switches were the only type of "switch" disclosed, as discussed above, it is the claims and not the specification that measures the invention. *See* SRI Int'l, 775 F.2d at 1122. Again, the analysis of *Gentry Gallery* does not apply here because it is not "crystal clear" that a pressure switch is an "essential element" of this invention.

Accordingly, "switch means" will be construed as "a structure that switches, has at least a first and second condition, and is electronically connected to the memory storage means."

E. THE MEANING OF "MEMORY STORAGE MEANS."

[22] The fifth disputed term is "memory storage means." The parties have agreed that this term is in means-plus-function format. There is a presumption that s. 112, para. 6, applies because of the word "means" and that presumption is not rebutted because the claim specifically describes the function of the "memory storage means." Thus, I must construe this term to determine its function and the corresponding structure described in the specification that performs this function.

The court's construction of a claim's function is simply to identify the function stated in the claim. *See* Micro Chem., Inc., 194 F.3d at 1258. The claim language identifies two functions of the "memory storage means." The first function is to "stor[e] electronic data corresponding to the written material on said pages of the book and supplemental book." ('213 patent, col. 4, ll. 65-67.) The second function is to "produce" one of four specifically identified "audio signals." ('213 patent, col. 5, ll. 2-15.)

The more difficult task in construing means-plus-function elements is determining the structure that performs the identified function. Under the statute, the claims "shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C.A. s. 112, para.

6. There is considerable dispute between the parties as to what structure stores the data and produces the audio signals. General Creation asserts that there are three structures disclosed in the specification capable of performing the functions of the "memory storage means": an integrated circuit, a tape drive and a compact disc drive. (Pls.' Br. at 20.) LeapFrog contends first that the specification does not disclose sufficient corresponding structure and that the claim language should accordingly be deemed indefinite under 35 U.S.C.A. s. 112, para. 2. (Def.'s Br. at 49.) In the alternative, LeapFrog contends that if the disclosure in the specification is sufficient, the structure should be limited to a "non-removable integrated circuit" based on representations made by the inventor in the prosecution history and the specification. (*See id*. at 51.) I will address each of these arguments in turn.

[23] [24] Claims are required to be definite. Section 112, para. 2, provides that claims must "particularly point[ ] out and distinctly claim[ ] the subject matter which the applicant regards as his invention." 35 U.S.C.A. s. 112, para. 2. If the claims are in means-plus-function format, the inventor still must comply with this requirement. Section 112, para. 6, provides that when a claim is expressed without a "recital of structure... such claim shall be construed to cover the corresponding structure, material or acts described in the specification and equivalents thereof." 35 U.S.C.A. s. 112, para. 6. The appropriate inquiry here is whether the corresponding structure is "disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation." Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1382 (Fed.Cir.1999). Further, "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed.Cir.1997). If no corresponding structure is disclosed, the claim is indefinite and invalid.

[25] The burden of proving that "memory storage means" is indefinite under s. 112, para. 2, is on the challenging party, and it must provide "clear and convincing evidence" on this point. *See* 35 U.S.C.A. s. 282 (2001); *N*. Am. Vaccine, Inc. v. Am. Cyanamid Co., 7 F.3d 1571, 1579 (Fed.Cir.1993) (holding that patent is presumed valid and party attacking patent has burden of proving facts by clear and convincing evidence). I do not find that LeapFrog has met its burden here.

The function of the "memory storage means," as disclosed in the claim language and as discussed above, is essentially to "store electronic data" and "produce audio signals." ('213 patent, col. 4, ll. 65-67 & col. 5, ll. 2-15.) In order to be indefinite under s. 112, para. 2, there must be nothing in the specification that would alert a person skilled in the art, a toy inventor or toy manufacturer, as to what structure corresponds to those functions. This is not the case. The specification discloses a "control unit" ('213 patent, col. 2, l. 33) which is "preferably an integrated circuit (IC) chip" ('213 patent, col. 2, l. 33) that "produce[s] a signal which travels to a speaker through wires to create sound." ('213 patent, col. 2, ll. 45-46.) The specification further provides that the "control unit is programmed with a plurality of 'audio response sets' [and][e]ach audio response set is a collectionof audio signals which correspond to the pages of a particular book." ('213 patent, col. 3, ll. 18-22.) The specification clearly indicates that the "control unit" is the structure that performs the functions of the "memory storage means." The specification also indicates that an "integrated circuit (IC) chip" is the preferred embodiment of the "control unit." ('213 patent, col. 2, l. 33.) While "control unit" is a broad term, an IC chip is cited as an example of a control unit and it is more than probable that a toy inventor or toy manufacturer would understand the term "control unit" to mean a type of programming chip that stores and plays data. Further, there are many toys that use such programming chips, including the Wiener patent, cited as the prior art. Given these facts, I do not find that LeapFrog has shown that "memory storage means" is indefinite. Thus, I will construe the corresponding structure of the "memory storage means."

As noted above, the specification discloses a "control unit" as the structure that performs the functions of the "memory storage means." General Creation argues that this "control unit" can be in the form of an integrated circuit, a tape drive or a compact disc drive. (Pls.' Br. at 20.) LeapFrog contends that, based on representations made by the inventor during the prosecution history and the specification, the "control unit" can be construed only as a "non-removable integrated circuit." (Def.'s Br. at 51-53.)

In addition to the "integrated circuit" discussed above, the specification does disclose that "an internal tape drive or compact disc drive may be provided to allow the toy to be updated with additional audio information." ('213 patent, col. 4, ll. 27-29.) However, based on the prosecution history and further disclosures in the specification, I find that the only structure corresponding to the "memory storage means" is a "non-removable integrated circuit."

First, representations made during the prosecution history limits the structure of the "memory storage means." The inventor amended his claims several times prior to obtaining the '213 patent because of similarities between the '213 patent and the Wiener patent. The inventor's original claims were rejected on October 16, 1997. One basis for rejection, as noted by the patent examiner, was that "the claims ... read on Weiner" because "the stored text is not required to be in the portable toy," i.e., the stored text is removable. (Pls.'s Br. Ex. B at 34.) The inventor subsequently amended his claims on January 14, 1998, and those amendments related primarily to the "signal producing means" and the "means ... for simultaneously coupling ... [the] signal producing means ... to [the] actuator." (Id. at 40-41.) The function of the "signal producing means," which later became the function of the "memory storage means," was to "produce audio signals." (*See* id.) The patent examiner conducted an interview with the inventor based on these amendments and the remarks made during this interview are crucial in determining the structure of the "memory storage means."

One amendment, presumably made to overcome the initial rejection, proposed a "means at least partially within said interior of said portable toy for simultaneously coupling" two "signal producing means" with two "actuators." (Id.) In regard to this amendment, the patent examiner noted:

[W]einer specifically teaches the use of *removable* read-only memory devices to allow an unlimited number of sounds to be produced by the unit. Because the read-only device is removable, there is no teaching or suggestion and, indeed, no advantage to providing means for coupling a plurality of read-only memory devices at once.... Conversely, Weiner teaches away from Applicant's claims, as amended, since Applicant's claims are directed to a first signal producing means and a second signal producing means simultaneously coupled to a sound producing means through at least a portion of the interior of the portable toy.... Applicant's limitation of the connection means at least partially within the portable toy defeats the primary teaching of Weiner. Applicant's claimed interior coupling of signal producing means for separate books within the portable toy would *inhibit the removal of the data storage device* from the Weiner device and *would not allow replacement of the data storage device with another data storage device*. Accordingly, Weiner teaches away from Applicant's newly amended claims.

(Id. at 42-43) (emphasis added.)

The inventor clearly represented here that the "data storage device," that which later became the "memory storage means," was not removable in the '213 patent. Further, the inventor represented that the "data storage device" could not be replaced with another "data storage device." Indeed, the patent examiner made

it very clear that these are *the* facts that made the inventor's newly amended claims distinguishable from Wiener. The "memory storage means" language was introduced in a subsequent amendment but this device was not a new feature to the toy. It was simply a new name for the "data storage device," a structure that performed functions previously disclosed, namely storing data, coupling the switch means to the actuators, and producing audio signals.

[26] The law provides that "the prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." Southwall Techs., Inc., 54 F.3d at 1576. It is clear that the '213 patent issued only after the inventor distinguished his invention from Wiener on the ground that the "memory storage means" was not removable and not replaceable. Tape drives and compact disc drives would allow the "replacement of the data storage device with another data storage device," which is exactly what was disclaimed by the inventor. Thus, based on the prosecution history, the structure corresponding to "memory storage means" must be "non-removable" and cannot take the form of a tape or compact disc drive.

The specification further supports this result. The following appears in the description of the prior art portion of the specification:

It is known in the art to provide portable toys with a *tape* or similar medium to play audio signals which represent the text of a story.... A *major drawback associated with such prior art devices is the inability to manipulate the toy* to provide audio signals representative of particular pages of the book.... Accordingly, it would be desirable to provide a reading toy which could be easily manipulated to provide audio signals representative of text on desired pages of an associated book. *The difficulties encountered in the prior art discussed hereinabove are substantially eliminated by the present invention*.

('213 patent, col. 1, ll. 12-31) (emphasis added.)

[27] The inventor is thus pointing out that his invention is distinguishable from and better than the prior art *because* the memory storage device does *not* take the form of a tape player or compact disc player. Tapes and compact discs are exactly the type of memory storage devices that prevent the user of the toy from "manipulating the toy to provide audio signalsrepresentative of particular pages," a cornerstone of the '213 patent. In addition, the specification makes no mention of how these types of memory storage devices would work within the '213 patent as claimed, such as how they would be connected to the actuators and switch means. The law is clear that when an inventor distinguishes "the claimed invention [from] the prior art, [he] is indicating what the claims do not cover, [and is] by implication surrendering such protection." Ekchian v. Home Depot, Inc., 104 F.3d 1299, 1304 (Fed.Cir.1997); *see also* Tronzo v. Biomet, Inc., 156 F.3d 1154, 1159 (Fed.Cir.1998). Thus, the specification further supports LeapFrog's argument that the structure of the "memory storage means" cannot be construed to include tape drives or compact disc drives.

As "memory storage means" is a means-plus-function element, "such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C.A. s. 112, para. 6. There are three "corresponding structures" disclosed in the specification: an integrated circuit, a tape drive, and a compact disc drive. However, the prosecution history and specification disclaim the use of tape drives and compact disc drives. Accordingly, the only structure described in the specification that corresponds to the function of the "memory storage means" is a "non-removable integrated circuit."

F. THE MEANING OF "WRITTEN MATERIAL."

[28] The final disputed term is "written material." Here, the primary disagreement is whether "written material" encompasses figures or pictures that may appear on a page of the book, or whether the term is limited to words.

The claim language itself provides guidance as to what the inventor intended by "written material." Claim 1 states that the audio signals produced by the toy are "audio interpretation[s]" of the "written material." Although "written material" is not further described in claim 1, claim 2 and claim 10 specify that for these claims, "written material" is a "set of words." ('213 patent, col. 5, l. 26 & col. 6, l. 24.) Claim 1 does not so limit "written material." Thus, it is clear that the inventor intended "written material" to encompass something broader than just words. If the inventor intended "written material" to only mean words, there would be no reason to further specify in claims 2 and 10 that, at least for those claims, "written material" consisted of words.

The specification and prosecution history further supports a broad construction of "written material." Claim 1 states that the "written material" is capable of "audio interpretation" and the specification specifically describes what can be audibly interpreted by the toy. The toy can provide "an audible translation of the text" or alternatively the toy can provide "an audible translation of pictures or figures." ('213 patent, col. 3, ll. 44-49.)

Finally, the prosecution history reveals that the word "symbol" was originally used in the claim language and was later amended to "written material." (Pls.' Br. Ex. B at 40, 49.) Something can be "written material" without being a "symbol." This indicates that the inventor intended to broaden the scope of what could be audibly translated by the toy to include words, figures, or pictures.

Accordingly, "written material" will be construed as "words, figures, or pictures."

IV

For the foregoing reasons, it is **ORDERED** that the following terms in the '213 patent will have the meanings as indicated:

A. "Book" means a set of pages having related content, fastened along one side and encased between covers.

B. "Supplemental book" means a second set of pages having related content, fastened along one side and encased between covers, such content being unrelated to the content of the first book.

C. "Actuator" means a device that activates the memory storage means.

D. "Switch means" means a structure that switches, has at least a first and second condition, and is electronically connected to the memory storage means.

E. "Memory storage means" means a non-removable integrated circuit that stores electronic data corresponding to the written material on said pages of the book and supplemental book and produces audio signals including:

(1) a first audio signal upon actuation of said first actuator when said switch means is in said first condition;

(2) a second audio signal upon actuation of said second actuator when said switch means is in said first condition;

(3) a third audio signal upon actuation of said first actuator when said switch means is in said second condition;

(4) a fourth audio signal upon actuation of said second actuator when said switch means is in said second condition.

F. "Written material" means words, figures, or pictures.

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