

United States District Court,  
N.D. Illinois.

**SOMFY, S.A,**  
Plaintiff.

v.

**SPRINGS WINDOW FASHIONS DIVISION, INC; Design Craft Fabric, Inc.; The Home Depot, Inc.; and Sears Roebuck and Co,**  
Defendants.

**March 22, 1999.**

## **MEMORANDUM OPINION AND ORDER**

**RUBEN CASTILLO, District Judge.**

Plaintiff Somfy, S.A. ("Somfy") sues Defendants for infringement of U.S. Patent NO. 5,328, 113 ("113 patent"). 35 U.S.C. s. 1 et seq. Plaintiff contends that defendant Springs Window Fashions Division, Inc. ("Springs") developed an infringing device by making an insubstantial change to Somfy's patented winding mechanism for window blinds, and that the remaining defendants wrongfully manufactured, sold, and/or marketed Springs' product. 35 U.S.C. s. 271. Currently before the Court is the construction of the relevant claims of the 113 patent. On February 26, 1999, this Court held a *Markham* hearing to allow the parties to present their views on this issue. This opinion resolves the question of claims construction of the 113 patent in favor of Defendants.

### **BACKGROUND**

In 1994, Somfy received a patent for its window-blind winding mechanism. Prior to Somfy's entry, the market for such unique devices was largely undeveloped, as previous mechanisms proved to be unreliable, or costly and bulky. Somfy considers its patented cord take-up system to be revolutionary for eliminating these deficiencies. Specifically, Somfy's system permits window blinds to be raised and lowered evenly, and it does so by means of a small and inexpensive device. According to the patent abstract, the device works as follows:

the device includes a winding drum on which there is fixed one end of the cord to be wound. This drum includes a smooth portion having a diameter which is greater than the initial diameter of the drum, is located at a distance from the cord fixing point, and is limited by a shoulder. The cord to be wound is guided approximately tangentially to this shoulder so that the turns formed on the portion of greater diameter are pushed back by the shoulder under the effect of the load, the length of the portion of greater diameter being such that the tension on the cord is zero in the turn leaving this portion of greater diameter. These loose turns are positioned beside each other on the portion of the drum ensuring an even winding without overlapping of the cord.

In March, 1998, Somfy representatives attended a trade show where Springs exhibited what Somfy believed to be an infringing device. Somfy conducted a detailed inspection of the Springs' device after the product became commercially available in August, 1998. Following its inspection, Somfy filed a motion for a preliminary injunction in this Court to prevent Defendants from manufacturing, marketing, or selling the Springs' device.

Somfy asserts that the Springs' device reads on the 113 patent because all of the elements of the '113 patent are present in the accused device with one insubstantial change: Springs replaced the shoulder utilized in the 113 patent with lips or fingers spaced slightly above and below the drums. Both Somfy's shoulder and Springs' fingers act as a blocking device, preventing the cord from winding beyond the drum.

Springs disputes that its device infringes the 113 patent, primarily because the Somfy patent requires the shoulder means to contact one end of the auxiliary drum while Springs' fingers, spaced slightly above and below the end of the auxiliary drum, do not come into contact with the drum. Despite the spacing, the Springs' device achieves its desired goal-blocking the cord-by spacing the fingers away from the drums by a distance less than the cord's diameter. Springs alleges that its design winds the cord more effectively because the spacing substantially reduces undesirable friction.

Springs further claims that its device cannot infringe because it was based upon a Domel patent, issued after and over the Somfy 113 patent. Springs emphasizes that in achieving its patent, Domel disclosed the Somfy prior art and distinguished the devices by convincing the patent examiner that while the 113 patent relies upon a shoulder that moves with the drums, his invention utilized one stationary finger spaced above the winding drum. Because its device also utilizes stationary fingers, Springs claims that its device cannot infringe the Somfy patent.

While this action began as a motion for a preliminary injunction, the Court and the parties have agreed to resolve the issues of claim construction and infringement on an expedited basis. The Court's current task is to construe Claim 1 of the 113 patent.

### **CLAIM 1 OF THE 113 PATENT**

Claim 1 of Somfy's 113 patent claims the following:

[A] A device for winding at least one suspension cord of a blind comprising a [B] winding drum, [C] one end of said suspension cord attached to said winding drum [D-E] an auxiliary drum means on said winding drum for ensuring that the cord is wound in even turns without overlapping, said auxiliary drum means having a smooth drum portion having a diameter which is greater than the diameter of the winding drum and located at a distance from the cord end, [F] a shoulder means on one end of said auxiliary drum means for moving successive cord windings axially away from the shoulder means and onto the auxiliary drum means as the cord windings are formed, and [G] guide means for guiding the cord to be wound onto the shoulder means so that the successive cord windings are formed on the auxiliary drum means and are pushed off the opposite end of the auxiliary drum means onto the winding drum under the effect of the shoulder means on the cord.

The parties offer conflicting interpretations of elements C, D, E, F, and G in Claim 1 of the 113 patent. Before construing these elements, we will set forth the background and standards guiding our construction of Claim 1.

## ANALYSIS

Congress enacted the Patent Act ("the Act") to encourage scientific advancement by granting inventors " 'the right to exclude others from making, using, offering for sale, selling, or importing the patented invention,' " in exchange for full disclosure of an invention. *Markman v. Westview Instrument, Inc.*, 116 S.Ct. 1384, 1387 (1996). This protection is not without its boundaries; although the Act affords protection for a specified process, machine, or design, a patent never shields the result achieved by that design. *Id.* at 1388. Accordingly, the burden lies with the inventor to fully disclose "the exact scope of an invention and its manufacture to 'secure to [the patentee] all to which he is entitled, [and] to apprise the public of what is still open to them.' " *Id.* at 1387 (quoting *McClain v. Ortmyer*, 141 U.S. 419, 424 (1891)).

A plaintiff satisfies its burden of proving infringement by demonstrating that every claim limitation is present in the accused device. *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed.Cir.1991) ("the failure to meet a single limitation is sufficient to negate infringement of the claim"). Courts also recognize that devices that do not literally infringe a patent may do so under the doctrine of equivalents. The doctrine of equivalents "functions to forbid not only exact copies of an invention, but products that go to 'the heart of the invention but avoid the literal language of the claim by making a noncritical change.' " *Markman*, 116 S.Ct. at 1388 (quoting H. Schwartz, *Patent Law and Practice I*, 82 (2d ed.1995)).

Resolving an infringement dispute is a two-step process. First, the Court must construe the patent claim. In determining its proper meaning, we begin with the claim language. Claim construction also requires us to consult the patent's written description and specification, and, when available, the prosecution history. *Spectrum Int'l Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1378 (Fed.Cir.1998). Courts should resort to extrinsic evidence, such as treatises, technical references, and expert testimony, only when the intrinsic evidence fails to clearly reveal the meaning of the patent claim language. *Id.* It is only after the Court has determined the meaning and scope of the claim that the Court compares the accused device to the properly construed claim.

While the parties offer competing interpretations of elements C, D, E, F, and G, FN1 we limit our discussion to the element F, because we find that our interpretation of element F precludes a finding of literal infringement. FN2 *Interstone Transfer Sys., Ltd. v. Hanger Management, Inc.*, 1997 WL 106109, (N.D.Ill. Feb. 10, 1997) ("Having found that the accused device fails to meet one limitation set forth in the asserted claims and thus does not literally infringe, the Court has limited its analysis accordingly, *Laitram*, 939 F.2d at 1535, and will not rule on issues presented in other subparagraphs of the asserted claims.")

FN1. To the extent that the parties disagree about the remaining elements, the Court finds as follows:  
Element C: The plain language of element C, the specification and embodiments, and the inventor's testimony (*Perache Dep.* at p. 132) requires the cord to be attached, or affixed, to the winding drum.

Elements D and E: Nothing in the plain language of these elements requires the corresponding "drum" structures to be limited to constant-diameter cylinders.

Element G: The plain language of element G and the specification and embodiments requires the guide

means to guide the cord (after the initial turns onto the drum) to come into contact with the shoulder means

FN2. The Court acknowledges that this finding exceeds the scope of its present assignment, claim construction. However, because we find that the Somfy patent requires contact between the shoulder means and the auxiliary drum means—a requirement that the Springs' device clearly does not satisfy—the Springs' device could not be an equivalent of the Somfy shoulder means under s. 112, para. 6.

## **Element F**

### **a. Means-Plus-Function Format**

The parties' dispute centers principally on the interpretation of the "shoulder means" in element F. Element F claims "a shoulder means on one end of said auxiliary drum means for moving successive cord windings axially away from the shoulder means and onto the auxiliary drum means as the cord windings are formed." This claim is largely written in a mean-plus-function format, and is therefore subject to the requirements of 35 U.S.C. s. 112. Section 112, sixth paragraph states:

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, materials, or acts described in the specification and equivalents thereof.

This provision enables inventors to draft claims without disclosing a definite structure by expressing limitations in a "means-plus-function" format, *B. Braun Med. Inc. v. Abbott Labs*, 124 F.3d 1419, 1424 (Fed.Cir.1997). "[T]he quid pro quo for the convenience of employing s. 112," is that the specification must clearly show what the limitation means. *Id.*; *see also Athletic Alternative, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed.Cir.1996) (rejecting the patentee's broad interpretation of the claim because the patentee particularly pointed out and distinctly claimed only the narrower interpretation). "Section 112 thus permits means-plus-function language in a combination claim, but with a 'string attached.' The 'attached string' limits the applicant to the structure, material, or acts in the specification and their equivalents. Indeed the section operates more like the reverse doctrine of equivalents than the doctrine of equivalents because it restricts the coverage of literal claim language." *Valmont Indus. Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed.Cir.1993) (quoting *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580 (Fed.Cir.1989)).

Because "the 'means' term in a means-plus-function limitation is essentially a generic reference for the corresponding structure disclosed in the specification," the Court must look to the specification to determine the corresponding structure and the equivalents thereof. *Chuminatta Concrete Concepts, Inc. v. Cardinal Indust. Inc.*, 145 F.3d 1303, 1308 (Fed.Cir.1998). First, however, we will set forth element F's function. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448 (Fed.Cir.1998) (finding that a determination of a claimed function is a question of law).

### **b. Claim Interpretation**

The function expressed in element F is to move successive cord windings axially away from the shoulder means and onto the auxiliary drum means as the cord windings are formed. The drafter did not stop there,

however, and included additional limitations that must be incorporated into the construction of the element. *See* O.I. Corp. v. Tekmar Co. Inc., 115 F.3d 1576, 1580-81 (Fed.Cir.1997). The drafter further defined this function by referencing a shoulder. *Unidynamics Corp. v. Automatic Prods. Int'l, Ltd.*, 157 F.3d 1311, 1319 (Fed.Cir.1998) (finding that "spring means tending to keep door closed" is within the ambit of s. 112 even though the claim recites a "spring", which is clearly structural language, because the recitation of this structure merely served to further specify the function of the means). Instead of reciting pure structure, the inventor's reference to the shoulder merely elaborates how the means works-the means moves the cord by blocking (or shouldering) the cord, and preventing the cord from winding beyond the auxiliary drum. *Laitram*, 939 F.2d at 1536 (finding that the recitation of some structure in a means-plus-function element does not preclude the applicability of s. 112, para. 6 when it merely serves to further specify the identified function).

The inventor further limited element F by describing the shoulder means as being "on one end of said auxiliary drum means." The parties' conflicting interpretations of "on one end" lies at the heart of this litigation. Springs argues that "on one end" requires the shoulder means to contact the auxiliary drum, while Somfy's interpretation indicates proximity as opposed to physical contact. Both parties have submitted equally compelling dictionary definitions to support their respective interpretations. WEBSTERS NINTH COLLEGIATE DICTIONARY (Merian-Webster, Inc.1990) (Springs relies on definition b: "used as a function word to indicate position on or in contact with an outer surface" and Somfy relies on definition c: "used as a function word to indicate position in close proximity with (a village on the sea)."). Because "on one end" is susceptible to two equally plausible definitions, we must proceed to examine the remaining intrinsic evidence to properly construe the claim.

The patent clearly discloses a structure that corresponds to the function described in element F. Consistent with the proffered definitions of a shoulder, the disclosed device is a "step-like change in the contour of [the drum], for opposing or limiting motion along it, for an abutment, etc." FN3 The rounded device displayed in the embodiments has a diameter that is greater than the diameter of the auxiliary drum.

FN3. The RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE (1980). *See also* DICTIONARY OF MECHANICAL ENGINEERING by G.H.F. Naylor (4th ed.): "That portion of a shaft or of a flanged structure where a sharp increase of diameter or other dimension occurs."

We note that each embodiment in the specification and drawings depicts a shoulder in contact with the auxiliary drum; if there is any space between the shoulder and the drum, it is invisible to the human eye. *Hoganas AB v. Dresser Indus.*, 9 F.3d 948, 951 (Fed.Cir.1993) (finding that the claim must put "competitors on notice of the scope of the claimed invention."). However, only one of the embodiments demands that the shoulder be in contact with the auxiliary drum, because this embodiment (Figure 7) teaches that the shoulder means and the drum means "may be made in a single piece." Col. 4, lines 23-26. Because Springs does not argue that the shoulder and the drum must be made in a single piece, but merely that the two contact each other, the specification language fails to conclusively support either parties' position.FN4

FN4. Somfy attempts to rely upon claim differentiation to bolster its position that the shoulder need not contact the auxiliary drum. The doctrine of claim differentiation provides that different claims should be presumed to cover different inventions; i.e., the Court should not interpret one claim so that it would read like another. However, the two claims that Somfy relies upon, Claim 5 ("the winding device as claimed in claim 2, wherein the lateral face of the shoulder means facing the auxiliary drum means is conical.") and

Claim 6 ("the winding device as claimed in claim 5, wherein the conical lateral face (9'a) is joined to the smooth drum portion (8') by a rounded portion (16) having a radius of the section of the cord to be wound") do not disclose that these are the only claims in which the shoulder and the drum may be joined. Rather, they merely disclose a different design or method for joining the shoulder and drum means. Therefore, this argument is without merit.

The patent's language is consistent with an interpretation requiring contact between the shoulder and the drum. The 113 patent's abstract states that the auxiliary drum is "limited by a shoulder." Similarly, Plaintiff addressed the Patent Office's questions regarding patentability over prior art by explaining that "none of the prior art references teach the auxiliary drum having **a should [er] means on one end and a free end** on the other end." Somfy fails to adequately explain how the drum means would be "limited by" the shoulder means if there was no contact between the two structures. We find, however, that even this language does not *conclusively* establish that the phrase "on one end" and the term "shoulder" require contact between the drum and the shoulder.

Because the intrinsic patent evidence (while favoring the Defendants' interpretation) is inconclusive, we turn to the extrinsic evidence. Beginning with the inventor testimony, we note that while the inventor insisted that the shoulder need not contact the drum means, he conceded that the patent did not disclose such a teaching. On the contrary, every embodiment reveals a shoulder directly contacting the auxiliary drum. The inventor agreed that "the patent also doesn't teach how you would design a unit that had a shoulder means that's not in contact with the auxiliary drum." Perache Dep. at p125. And when asked if "the shoulder that's disclosed in the patent and that was used in the Somfy devices as of 1994, the shoulder rotates with the auxiliary drum, correct?" A: "From-in "?" Q: "Right", the inventor responded: "Beginning of ", yes." Id., at p. 56. Finally, the inventor admitted that Somfy had tinkered with a prototype incorporating a shoulder spaced away from the drum. However, the inventor neither disclosed this embodiment to the Patent Office or the attorneys preparing his claim, nor did Somfy incorporate this embodiment into any of its initial designs.

In addition, Springs has introduced evidence that its device was based a design patented after and over the Somfy 113 patent-the Domel patent. During the patent application process, Domel distinguished his device from the Somfy patent on the grounds that his invention utilized a stationary finger placed above the drum and not a shoulder attached to and rotating with the drum. This allegedly allowed the inventor to reduce the friction created by Somfy's patented design. The patent examiner accepted these differences between the two devices as significant and granted Domel's patent application.

Springs' device, however, is not an exact replica of the Domel design-while the Springs' device utilizes two fingers, the Domel design utilized only one. Nevertheless, the Springs device differs from the Somfy device in the same manner that the Domel device does: the Springs device utilizes fingers spaced away from the auxiliary drum and is stationary. This evidence strongly suggests not only that the Somfy 113 patent is not entitled to the broad interpretation proffered by Somfy, but also that the difference between the Somfy and Spring devices is substantial enough to avoid a finding of infringement.

Upon review, the Court finds that both the intrinsic and extrinsic evidence favor Defendants' interpretation of element F. In drafting its patent, Somfy bore the burden of distinctly claiming its invention in order to put competitors on notice. This requirement "guard[s] against unreasonable advantages to the patentee and disadvantages to others arising from uncertainty as to their [respective] rights." General Elec. Cov. Wabash

Appliance Corp., 304 U.S. 364, 369 (1938). In failing to clearly disclose that the shoulder need not contact the drum, Somfy abandoned its right to protection for such a broad interpretation of its patent. Athletic Alternatives, 73 F.3d at 1581 ("Were we to allow [plaintiff] successfully to assert the broader of the two senses of 'between' against [defendant], we would undermine the fair notice function of the requirement that the patentee distinctly claim the subject matter disclosed in the patent from which he can exclude others temporarily."). Because the enabling disclosure reveals a shoulder contacting the auxiliary drum and because the plain language of the claim fails to teach a broader interpretation, we find that the shoulder means must be in contact with the drum means.

## CONCLUSION

While Somfy insists that its device was revolutionary, the 113 patent is written narrowly, covering only a shoulder in contact with the auxiliary drum. In light of our interpretation of the critical element of Claim 1, the Court believes that further briefing on the issue of equivalency would needlessly prolong this litigation. Chiuminatta, 145 F.3d at 1309 (ruling that because structures were substantially different from each other, no reasonable jury could find equivalency and judgment for the defendant was appropriate); Athletic Alternatives, Inc., 73 F.3d at 1579 (finding that a tennis racket splay pattern with two offset distances could not read on splay pattern with more than two offset distances). Instead, the Court believes that it would be more efficient to enter judgment in favor of Defendants so Plaintiff can proceed with any potential appeal. However, the Court requests the parties' views on this issue during the upcoming status hearing.

N.D.Ill., 1999.

Somfy S.A. v. Springs Window Fashions Div., Inc.

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