

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHER DISTRICT OF ILLINOIS
EASTERN DIVISION

THE CHAMBERLAIN GROUP, INC.,

Plaintiff,

v.

TECHTRONIC INDUSTRIES CO.,
LTD., TECHTRONIC INDUSTRIES
NORTH AMERICA, INC., ONE
WORLD TECHNOLOGIES, INC.,
OWT INDUSTRIES, INC., ET
TECHNOLOGY (WUXI) CO. LTD.,
and RYOBI TECHNOLOGIES, INC.,

Defendants.

Case No. 16 C 6097

Judge Harry D. Leinenweber

MEMORANDUM OPINION AND ORDER

Before the Court is Plaintiff's Motion to Enforce the Court's Preliminary Injunction and for an Order to Show Cause Why Defendants Should Not Be Held in Contempt ("the Motion") [ECF No. 211]. The parties engaged in extensive briefing and offered testimony on the Motion, including at a hearing before the Court. For the reasons stated herein, the Court grants the Motion in part.

I. BACKGROUND

This litigation involves Plaintiff's claim of infringement with respect to patents it holds on a certain type of garage door opener ("GDO"). This Court granted Plaintiff's request for a preliminary injunction and, on September 20, 2016, entered an

order (the "PI order") prohibiting Defendants from further making, using, selling or offering to sell in the United States or importing into the United States any of their Ryobi GD200 garage door openers likely to infringe claims 1 and 5 of U.S. Patent No. 7,224,275 ("the '275 patent"). Independent claim 1 of the '275 patent claims a movable barrier operator comprising, as relevant, "a wireless status condition data transmitter [that] transmits a status condition signal that: corresponds to a present operational status condition defined, at least in part, by at least two operating states from the plurality of operating states." Dependent claim 5 recites the movable barrier operator of claim 1 "wherein the plurality of operating states includes at least one of" various different GDO operations, such as "moving a movable barrier in a first direction," "moving the movable barrier in a second direction," and "a lighting status change."

In the memorandum opinion accompanying its PI order, the Court held that Plaintiff demonstrated a likelihood of success on the issue of whether Defendants' Ryobi GD200 infringes Claim 1 of the '275 patent. Specifically, the Court noted that "the crux of the issue is the '275 patent's description of a self-aware controller in Claim 1." (ECF No. 107, Mem. Op., at 9.) Whereas Plaintiff's technical expert "purchased a Ryobi GDO and dismantled it and, with the assistance of CGI engineers,

conducted extensive testing," Defendants' infringement expert "did not examine the Ryobi GDO." (*Id.* at 7.) Plaintiff's expert testified that the Ryobi GDO "did not rely upon any external sensors to obtain the status conditions of the GDO," including "garage door open/shut, and garage lights on/off," which it was then "able to transmit . . . upon request." (*Id.*) Thus, both the Ryobi GDO and the patented invention "obtained and transmitted similar data without the aid of external sensors." (*Id.*) As the precise wording of the Court's ruling suggests, the finding of "similar data" transmission as between the original Ryobi GDO and the patented invention focuses on the substance of the data transmitted, not the number of signals required for transmission or, more broadly, the message format.

On December 6, 2016, Defendants filed a Notice of Redesign [ECF No. 203] in which they asserted that they successfully designed around the '275 patent. Their only change to the design of the original Ryobi GDO concerned the communication of GDO information to smart phone applications. As with the original, the redesigned Ryobi GDO's wireless status condition data transmitter is capable of signaling to the end user whether, for example, the garage door is open or closed, the lights on or off. Rather than transmitting, in a single signal, information corresponding to multiple changes in the status of the GDO, the redesigned Ryobi GDO transmits a signal that

contains information corresponding only to one such change. For example, if both door position and lighting have changed, then the redesigned product transmits one signal indicating the door change and a second successive signal, milliseconds later, communicating the lighting change. Vitrally, the data transmitted still corresponds to the same set of characteristics drawn from the same defined set of operating states of the same GDO. Only the transmission format has changed.

Defendants have imported the redesigned Ryobi GDO into the United States for sale at Home Depot. Following the notice of redesign and discovery of Defendants' importation of the redesigned Ryobi GDO, Plaintiff filed the Motion. Both parties submitted briefs, and the hearing on the Motion followed.

II. APPLICABLE STANDARDS

The primary question in a contempt proceeding is "whether the newly accused product is so different from the product previously found to infringe that it raises a fair ground of doubt as to the wrongfulness of the defendant's conduct." *TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 882-883 (Fed. Cir. 2011). The analysis centers on "those aspects of the accused product that were previously alleged to be, and were a basis for, the prior finding of infringement." *Id.* "[A] contempt proceeding does not open to reconsideration the legal or factual basis of the order alleged to have been disobeyed and thus become a

retrial of the original controversy." *Maggio v. Zeitz*, 333 U.S. 56, 69 (1948).

Where two products are functionally identical, a redesigned product is not colorably different. *Proveris Sci. Corp. v. Innovasystems, Inc.*, 739 F.3d 1367, 1371 (Fed. Cir. 2014). The moving party bears the burden of proving by clear and convincing evidence both that the newly accused product is not more than colorably different from the product previously found to infringe and that the newly accused product actually infringes. See, *Tivo Inc.*, 646 F.3d at 882; *Stotler & Co. v. Able*, 870 F.2d 1158, 1163 (7th Cir. 1989).

Judicial estoppel precludes a party who "successfully urges a particular position in a legal proceeding . . . from taking a contrary position in a subsequent proceeding where its interests have changed." *Cardpool, Inc. v. Plastic Jungle, Inc.*, 817 F.3d 1316, 1323 (Fed. Cir. 2016). In particular, prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquishes subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex Indus. v. Techniche Sol'ns*, 419 F.3d 1374, 1382 (Fed. Cir. 2005).

III. DISCUSSION

A. **The Redesigned Ryobi GDO Is Not More Than Colorably Different from the Ryobi GDO Subject to the Court's Preliminary Injunction Order.**

Although the parties dispute their legal significance, certain facts are uncontested. For one, the only feature of the original Ryobi GDO that was redesigned relates to the status condition signals sent by the wireless status condition data transmitter. To the extent that multiple status conditions of the GDO change (*i.e.*, the garage door opens and the lights turn on), the redesigned transmitter sends signals to the user's smart phone application serially (*i.e.*, one signal communicating an open garage door, and another signal the status of the lights). On the other hand, the wireless status condition data transmitter of the original Ryobi GDO sent one signal to a user's cell phone application that was capable of communicating multiple status changes.

For another, as between the original and redesigned Ryobi GDO, both the universe of data transmitted and end-user functionality remain unchanged. (See, *e.g.*, ECF No. 255, Hr. Tr., at 55:5-8.) Additionally, both the original and redesigned Ryobi GDOs employ what have been termed "Hall effect sensors," external to the GDO controller, to determine the position of the garage door. (*Id.* at 133:4-7.) Although the parties dispute whether the presence of these Hall effect sensors obviates the

"self-awareness" of a GDO controller, this facet of the original Ryobi GDO played no part in the Court's PI analysis; indeed, Defendants did not argue it. (*Id.* at 59:25-61:21.)

In arguing that the redesigned Ryobi GDO is more than colorably different from the original Ryobi GDO subject to the Court's PI, Defendants face an insurmountable legal obstacle: they redesigned an aspect of the accused product that played no role in the Court's PI infringement analysis. Federal Circuit law mandates that the Court consider whether changes in a redesigned product relate to a feature that was "previously alleged to be, and [was] a basis for, the prior finding of infringement." *TiVo Inc.*, 646 F.3d at 882; see, *Proveris*, 739 F.3d at 1371 n.1 (applying the *TiVo* analysis in light of whether the parties asserted that the claim "require[s] a particular feature"). Plaintiff did not assert, and the Court's PI analysis and opinion cannot fairly be read to find, likely infringement based on the original Ryobi GDO's transmission of a status condition signal communicating multiple fields of information about the GDO or relating to plural changes in the GDO's operating states.

On the contrary, the Court's opinion repeatedly characterized the concept of a "self-aware" controller as the "crux" of the Plaintiff's infringement case. (See, e.g., Mem. Op. at 7, 9.) Admittedly, the Court could have more clearly

described status conditions in the PI opinion as "garage door position" or "lighting mode" instead of "garage door open/shut[] and garage lights on/off"; the latter formulations more accurately describe the operating states that define what status condition is transmitted. However, any resulting confusion appears minimal in light of the admission by Defendants' expert that the Court also "mentioned [these] as status conditions." (ECF No. 256 at 220:20-221:12.)

By contrast, the Court heard no substantive argument at the PI hearing on whether the asserted claims require multiple fields of GDO information or plural changes in operating states to be transmitted in the status condition signal. Indeed, the '275 patent's specification says precisely the opposite - namely, that "[a] single data field can be used if desired to contain information that corresponds to the specified status condition." (ECF No. 1, Exhibit 2, at 6:46-48.) The specification goes on describe "another approach" involving "a plurality of fields (From field **1 41** to field N **43**)," with "each field corresponding to, for example, a particular monitored condition." (*Id.* at 6:48-51.) Thus, the specification contemplates both the original and redesigned Ryobi GDOs.

Had the Court effectively construed "a plurality of operating states" to connote the data that the status condition signal *actually transmits*, then Defendants' arguments would have

more purchase. But the Court repeatedly maintained that, far from encapsulating the granular packet of data transmitted, the plurality of operating states defines the GDO in a much broader sense. (See, e.g., Mem. Op. at 9 (“[The Ryobi GDO] piggybacked on the ‘275’s description of a self-aware controller defined by a plurality of operating states.”).) To the extent any language in the extensive PI hearing transcript can be read to furnish an ounce of support for Defendants’ redesign, two ounces of support evaporate. (See, e.g., ECF No. 120, PI Hearing Tr., at 606:6-16 (CGI counsel noting that, “for the status condition of what stage your garage door is in, those are two states”), 605:17-18 (“So the status condition for that is the garage door, and open and close are the two states of that.”).)

As noted, no one disputes that the original and redesigned Ryobi GDOs are functionally equivalent: they transmit the same substance and types of data and, crucially, function identically from the perspective of the end user. (See, *infra*, Section II.) This brings the Ryobi GDO within the ambit of the Court’s PI order. See, e.g., *Proveris*, 739 F.3d at 1371 (“[E]ven if Innova did make some small changes to the product’s software, a comparison of the User Manuals demonstrates that the two products are functionally identical. Thus, we agree with the district court that the ADSA product is not more than colorably different from the infringing OSA product.”). Defendants’

reading of *Ncube Corp. v. SeaChange Int'l Inc.*, 2013 WL 230358 (Fed. Cir. Jan. 8, 2013), does not compel a different result. As described above and unlike the situation in *Ncube*, the PI infringement analysis in this case did not turn on the feature of the product that was redesigned - that is, whether the status condition signal of the original Ryobi GDO corresponded to information about one or multiple status changes.

Nor is the redesigned Ryobi GDO colorably different because it engenders "data loss," "compromised performance," or otherwise represents a "product inferior to what [Defendants] previously had." *TiVo Inc.*, 646 F.3d at 880. Whatever human or financial capital Defendants expended to implement the aforementioned change to the wireless status condition data transmitter - whatever inefficiencies, bandwidth strains, or additional data costs the redesigned GDO engenders - both GDOs transmit the same data in status condition signals, and data transmission is functionally identical from the perspective of the end user.

Therefore, for all the above reasons, Plaintiff has shown by clear and convincing evidence that the redesigned Ryobi GDO is not more than colorably different from the Ryobi GDO subject to the Court's PI order.

**B. Under the Framework of the Court's PI Order,
the Redesigned Ryobi GDO Likely Infringes
at least Claims 1 and 5 of the '275 Patent.**

1. The Redesigned Ryobi GDO Directly Infringes

As Plaintiff has shown and the above analysis makes clear, the redesigned Ryobi GDO infringes under the terms of the PI because the redesign does not take the Ryobi GDO outside the asserted claims as understood and construed in the court's PI opinion. Because the redesigned Ryobi GDO still sends a signal that contains an operational status condition, which condition is defined by two or more operating states, it still literally infringes the claim.

Only the Plaintiff offered infringement testimony consonant with the construction and framework of the Court's PI opinion. Defendants' expert, on the other hand, admitted that his claim constructions differed from those used in his prior expert report. (See, Hr. Tr. at 187:15, 276:1-23.) As Plaintiff's counsel argued, Defendants' new construction improperly construes the claims in light of the accused device. (See, ECF No. 257 at 17-18 (citing *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (en banc)).) In view of the postponement of all *Markman*-related activities, which Defendants advocated (see, ECF Nos. 168, 193), the Court need not engage Defendants' claim construction briefings to decide this contempt proceeding.

**2. The Redesigned Ryobi GDO Infringes via
the Doctrine of Equivalents**

Although it finds that Plaintiff has clearly and convincingly shown literal infringement of the redesigned Ryobi GDO under the terms of the PI order, the Court finds it prudent, in light of the pending Federal Circuit appeal of the PI order, to explore an alternative infringement analysis of the redesigned Ryobi GDO under the doctrine of equivalents. To the extent the appeals court's opinion may cast doubt on whether the redesigned Ryobi GDO implicates a literal difference from the language of the asserted claims, Plaintiff has still clearly and convincingly shown that it infringes. Even if the asserted claims are construed as Defendants would have them, the redesigned Ryobi GDO performs substantially the same function in substantially the same way to yield substantially the same result as the original Ryobi GDO. See, *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950); *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997) (defining the doctrine to require that any difference between the feature in the accused product and the limitation literally recited in the patent claim must be "insubstantial").

During the hearing on the Motion, Plaintiff's expert convincingly testified that the redesigned GDO infringed via the doctrine of equivalents and differed only insubstantially from

the asserted claims. He noted that it took Defendants' engineer less than one day to develop the code to implement the redesign, that the end-user software was simply updated via now-ubiquitous "over-the-air update[s]" without any corresponding changes to hardware of the GDO, that the status condition signal still includes the same number of message fields, and that the redesigned GDO still employs the same components. (See, Hr. Tr. at 98:2-100:23.) Even Defendants' engineer conceded that the redesign did not alter end-user functionality and indeed was intended to preserve the *status quo*. (See, *id.* at 151:17-152:19.) The Court finds Dr. Rhyne's testimony both convincing and consistent with his seminal 1973 textbook, which draws precisely the same conclusion in the apposite scenario of "sending two statuses in one message versus sending two messages sequentially." (*Id.* at 100:24-102:4.)

Rather than attacking the sufficiency of this evidence, Defendants strenuously object that, because of arguments made during prosecution, Plaintiff is judicially estopped from arguing that the redesigned GDO infringes the asserted claims of the '275 patent via the doctrine of equivalents. Defendants hone in on the Doyle reference, over which the Examiner issued a rejection of independent claim 1 along with various dependent claims on March 16, 2005. That reference, Defendants contend, discloses transmitting a single operating state in the same

manner as the redesigned Ryobi GDO, and Plaintiff argued the same to overcome the rejection based on Doyle or, alternatively, relinquished relevant subject matter by canceling application dependent claim 4.

In the relevant amendment and remarks, the Applicant traversed Doyle by citing to Figure 2 of Doyle and its associated text, which disclose a mercury switch oriented within a radio frequency ("RF") transmitter where the mercury bead only causes transmission of the RF signal when the garage door is in *an intermediate position*. The Applicant contrasted this facet of Doyle, in which the transmitted RF signal is keyed to a *single position or state of Doyle's garage door*, with its amended claims, which "require a wireless status condition data transmitter to transmit a status condition signal that corresponds to a present operational status condition defined, at least in part, by **at least two operating states** from the plurality of operating states." See, File History, App. No. 10/447,663, June 15, 2005 Amendment, page 12 (emphasis in original).

Therefore, the Applicant did not distinguish over Doyle by claiming transmission of multiple fields of information or multiple status changes via the status condition signal, but instead by arguing that the information transmitted in (the cited embodiment of) Doyle could only ever be defined by one

operating state: a single intermediate position of a garage door, as opposed to the dual operating states of open/closed. Similarly, Applicant's cancelation of application dependent claim 4 and simultaneous amendment of claim 1 is more fairly read as an attempt to clarify that the already-claimed "potential operational status conditions" and "plurality of operating states" relate to each other. (See, Hr. Tr. at 285:3-286:22.) (The prior versions of the claims recited these as separate elements. See, '275 Patent File History, June 15, 2005 Amendment, page 2.) This helps explain why a conforming change was made not just to the wireless status condition data transmitter limitation of claim 1, but also to the controller limitation. Because the Applicant's arguments limit the contours of judicial estoppel, other embodiments in Doyle - to the extent they might relate, as Defendants argue, to determining the absolute position of the garage door based on two different RF signals - are irrelevant to whether Plaintiff has recourse to the doctrine of equivalents on the facts presented to the Court.

Plaintiff offered persuasive testimony with respect to the doctrine of equivalents, and Defendants, without challenging the substance of this evidence, erroneously argued that Plaintiffs were judicially estopped from invoking the doctrine. Thus, Plaintiff has shown by clear and convincing evidence that the

redesigned Ryobi GDO infringes claims 1 and 5 of the '275 patent under the doctrine of equivalents.

3. Defendants Have Waived their "Self-Aware" Argument

During the PI phase of this litigation, Defendants' technical expert, Dr. Madisetti, devoted the bulk of his testimony to arguing that self-awareness is not a limitation of claim 1. For example, Dr. Madisetti argued that, because many of the activities set forth in dependent claim 5 must implicate the use of external sensors, independent claim 1 could not require a self-aware controller. (See, Mem. Op. at 8.) Far from contesting infringement on the grounds that the original Ryobi GDO controller was not self-aware, this focus on invalidity throughout the PI phase suggested a tacit acceptance that the original Ryobi GDO contained a self-aware controller. The Court's PI Opinion states as much. (See, e.g., Mem. Op. at 8 ("This contention by Dr. Madisetti is more material to the issue of invalidity rather than the issue of infringement.").)

Defendants seek to persuade the Court of non-infringement by arguing that neither the redesigned nor the original Ryobi GDO controller is self-aware. This argument, presented for the first time in this contempt proceeding, has been waived and amounts to an improper request for reconsideration of the merits of the Court's PI order. Especially in light of their arguments against modifying the PI order to encapsulate indirect

infringement while the PI order is pending on appeal (see, ECF No. 115 at 2, 7; ECF No. 130 at 3-4; ECF No. 137 at 3-5), Defendants' attempt here to shoehorn into the limited scope of this proceeding new substantive issues is unconvincing. Defendants must live with the strategic choices they have made throughout this litigation.

IV. CONCLUSION

For the reasons stated herein, the Court grants the Motion to Enforce the Court's Preliminary Injunction [ECF No. 211] in part and will issue an Order to Show Cause why Defendants should not be held in contempt for violating the PI order. The Order (a) requires Defendants to notify Home Depot that all shipments after September 27, 2016, were in violation of the PI order and should be recalled; and (b) enjoins Defendants from inviting or accepting any further GDO purchase orders while the PI order is in effect. The Court directs the parties to brief the appropriate additional sanctions for Defendants' contempt of the PI order.

IT IS SO ORDERED.



Harry D. Leinenweber, Judge
United States District Court

Dated:1/23/2017