

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BAYER HEALTHCARE LLC,)
)
 Plaintiff,)
)
 v.) C.A. No. 03-189-GMS
)
 ABBOTT LABORATORIES,)
)
 Defendant.)

MEMORANDUM

I. INTRODUCTION

The above-captioned action is a suit for patent infringement in which Bayer Healthcare LLC (“Bayer”) accuses Abbott Laboratories (“Abbott”) of infringing several patents with its Architect immunoassay analyzer. Although Abbott denies that the Architect, as originally designed, infringes most of the asserted patents,¹ Abbott undertook to redesign the Architect in an attempt to definitively avoid Bayer’s patents. Bayer, however, believes the redesigned Architect still infringes independent claim 9 of U.S. Patent No. 6,436,349 (“the ‘349 patent”) and dependent claims 16, 18, and 21 of U.S. Patent No. 6,498,037 (“the ‘037 patent”). Presently before the court is Abbott’s motion for summary judgment of non-infringement as to all four claims asserted against the redesigned Architect. (D.I. 299.) For the following reasons, Abbott’s motion will be granted in part and denied in part.

¹On December 30, 2004, the court granted Bayer’s unopposed motion for partial summary judgment that the original Architect infringes claims 15-22 of U.S. Patent No. 6,498,037. (D.I. 260.)

II. JURISDICTION

The court has jurisdiction over this matter pursuant to 28 U.S.C. § 1331 (1993).

III. BACKGROUND

Both the '349 patent and the '037 patent relate to various improvements on “an automated analyzer for conducting binding assays of various liquids, [in] particular biological fluids for substances contained therein.” '349 patent, col. 1, ll. 8-11. In other words, the patents relate to improvements on an automated immunodiagnostic machine that detects the presence of various chemicals (e.g., hormones, markers of disease, etc.) in bodily fluid samples.

A. The '349 Patent

Claim 9 – the only claim of the '349 patent asserted against the redesigned Architect – describes a rotatable tray with concentric inner and outer rings of reagent container stations (i.e., reagent container holders). The rotation of the tray about its central vertical axis is driven by a first motor. In addition, the reagent container stations of the inner ring are capable of simultaneous rotation about their own respective vertical axes, independent from the rotation of the tray. That simultaneous and independent rotation is driven by a second motor in “mechanical communication” with a circular gear. The circular gear is in “mechanical communication” with satellite gears connected to each reagent container station of the inner ring. Thus, the second motor drives the circular gear, which in turn drives the satellite gears, resulting in the simultaneous rotation of each reagent container station of the inner ring about its own axis. The exact language of the claim reads as follows:

9. A reagent container transport mechanism, comprising:

a tray mounted for rotation about a primary vertical axis of rotation;

a plurality of inner reagent container stations disposed in a first circle on said tray, the first circle being concentric with the primary vertical axis of rotation, each of the plurality of inner reagent container stations having a respective vertical axis of rotation;

a plurality of outer reagent container stations disposed on the tray in a second circle larger than said first circle, the second circle being concentric with the primary vertical axis of rotation;

a circular gear disposed adjacent the tray and concentric with the first vertical axis of rotation;

a satellite gear disposed in mechanical communication with each of the plurality of inner reagent container stations and with the circular gear, each satellite gear being concentric with the vertical axis of rotation of the respective inner reagent container stations;

a first motor in mechanical communication with the tray for selectively rotating the tray;

a second motor in mechanical communication with the circular gear for selectively rotating the circular gear and thereby rotating each of the satellite gears and the respective inner reagent container stations; and

a computer controller for selectively operating the first and second motors.

'349 patent, col. 58, ll. 24-51.

B. The '037 Patent

Claims 16, 18, and 21 of the '037 patent are asserted against the redesigned Architect. All three of those claims depend from independent claim 15, which teaches a method of reading bar codes adhered to reagent containers. The reagent containers of claim 15 are disposed in two concentric rings rotatable about a common vertical axis. As the rings rotate, they pass in front of a scanning light beam capable of reading bar codes. However, because the bar code on any given reagent container may not be exposed to the reader as it passes through the light beam, the reagent containers are rotated about their respective axes in order to expose the bar code to the reader. Thus,

claim 15 reads as follows:

15. A method of handling reagents in random access fashion comprising:

providing a first set of containers, each containing at least one of a first set of reagents, along a first circular path having an axis of rotation, each of the containers having bar code about at least a portion of its periphery which identifies the reagent it contains;

providing a second set of containers along a second circular path, the second circular path being concentric with the first circular path;

rotating the first set of containers about the central axis;

scanning the bar code on one of the reagent containers of one of the first and second sets by passing a scanning light beam between two of the containers of the other of the first and second sets to determine the identity of the reagent contained therein; and

automatically rotating each reagent container of the first set about its respective axis while it is being scanned.

'037 patent, col. 58, ll. 1-20.

C. The Architect

As mentioned above, Abbott denies that its original Architect infringes most of the asserted patents. Nevertheless, Abbott deemed it prudent to redesign the Architect in such a way that it would, in Abbott's view, definitively avoid infringement of Bayer's patents. In relevant part, the original Architect has a plurality of gears disposed in a ring around a central vertical axis. Each of those gears drives the rotation of an individual container about its own vertical axis. The individual container gears are engaged by a much larger, ring-shaped gear (having inwardly-facing teeth) disposed around the ring. The larger ring-shaped gear is driven by a gear disposed at the end of a rotating motor shaft. Thus, when the motor shaft rotates, the gear at the end of the shaft drives the larger ring-shaped gear, which in turn drives the individual container gears, thereby causing the

containers to rotate simultaneously about their respective axes. (See D.I. 306 at 6.) The original Architect also has a stationary bar code reader mounted inside the ring of reagent containers. In order to ascertain the location of each container, the ring of containers is rotated about the central axis. When a given container comes into the reader's line of sight, rotation about the central axis is paused, and the light beam from the reader attempts to locate the bar code while the containers were being simultaneously rotated about their axes. Thus, while it is not necessary to simultaneously rotate all the containers in order to read the bar code of a single container, the nature of the design does not permit selective rotation. Once the bar code is located, rotation about the central axis resumes until the next container comes into the reader's line of sight. (See D.I. 301 at A259 ¶ 137.)

The redesigned Architect has essentially the same capabilities as the original Architect, however the means by which those capabilities are achieved differ to a certain extent. As to the mechanism for simultaneous rotation of the individual containers, Abbott replaced the large, ring-shaped gear with a chain similar to that found on a bicycle. Abbott also replaced the individual container gears, as well as the gear at the end of the motor shaft, with sprockets. The result is that the redesigned Architect employs roughly the same basic mechanical principles as the original Architect, but with different hardware: a sprocket (formerly a gear) at the end of a motor shaft drives a chain (formerly a ring-shaped gear) around a central axis, which in turn drives simultaneous rotation of individual container sprockets (formerly gears) around their respective axes. To put it succinctly, the only difference is that the redesigned Architect employs a chain-and-sprocket structure to achieve simultaneous rotation of the individual containers, whereas the original Architect employs the above-described gear structure. (See D.I. 306 at 6.)

As to the manner of searching for bar codes, the redesigned Architect, unlike the original Architect, does not continuously rotate the containers around their respective axes while the light beam from the reader is activated. Rather, the containers on the redesigned Architect are rotated around the central axis until a container enters the reader's line of sight, at which time the light beam is activated to search for that container's bar code. If no bar code is found, the light beam is deactivated and the containers are rotated about their respective axes a certain number of degrees. Rotation then pauses and the light beam is again activated to search for the bar code. The process continues until a bar code is found, or until an error message is generated. Once either of those two events occurs, rotation of the containers about the central axis resumes and continues until the next container enters the reader's line of sight. At no time do the containers on the redesigned Architect rotate about their axes while the light beam from the reader is activated. (See *id.* at B1509.) According to Abbott, these changes are sufficient to avoid the '349 patent and the '037 patent entirely. Thus, Abbott has moved for summary judgment of non-infringement as to the redesigned Architect.

IV. DISCUSSION

“Summary judgment is appropriate if, drawing all factual inferences in favor of the nonmoving party, there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law.” *Chimie v. PPG Indus. Inc.*, 402 F.3d 1371, 1376 (Fed. Cir. 2005). In the context of patent infringement, the court decides whether summary judgment is appropriate by first construing the disputed claim terms, and then applying that construction to the accused product. *Id.*

A. The ‘349 Patent

1. Claim Construction

Claim construction is a matter of law to be decided by the court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). To that end, the court must begin its analysis by inquiring how a person of ordinary skill in the art at the time of the invention would have defined the disputed claim terms. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). “Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to ‘those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.’” *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

The first and most obvious source is the claim language itself. *Phillips*, 415 F.3d at 1314. The second source is the specification, for “‘it is the single best guide to the meaning of a disputed term.’” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The third source of great value is the prosecution history. *Phillips*, 415 F.3d at 1317. It “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.* These three sources – the claim language, the specification, and the prosecution history – constitute what is known as “intrinsic evidence.” *See id.* at 1314-17. Also helpful are sources known as “extrinsic evidence,” including dictionaries and expert testimony. *Id.* at 1317. However, “extrinsic evidence [is generally] less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.* at 1318. Thus,

extrinsic evidence should be discounted when it is at odds with the intrinsic evidence. *See id.*

The parties' primary dispute regarding the '349 patent is the meaning of the term "gear" in claim 9, which is the only claim in that patent asserted against the redesigned Architect. As a general matter, the parties agree that a gear is "a toothed machine part, such as a wheel or cylinder, that meshes with another toothed part, to transmit motion or to change speed or direction." (D.I. 296.) However, Abbott contends that the court should construe the term to "exclude[] a sprocket and/or a chain." (Id.) Abbott argues that during prosecution, Bayer limited the invention of the '349 patent to the specific gear structure recited in order to secure an allowable claim. Bayer disagrees, and argues that it disclaimed nothing with regard to claim 9. Unfortunately, neither the claim language itself nor the specification is particularly instructive as to the proper construction of "gear." Therefore, the court must look to the prosecution history for guidance. *Phillips*, 415 F.3d at 1314-17.

As mentioned above, the prosecution history of a patent serves an important public-notice function because it is a written record of both the inventor's understanding of the invention, and the limitations the inventor may have placed on the invention in order to distinguish it from prior art. *See id.* at 1317. In other words, courts "refer to the prosecution history, when it is of record, to discern the applicant's express acquiescence with or distinction of the prior art as further indication of the scope of the claims." *Chimie*, 402 F.3d at 1377. "As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003). Nevertheless, there is "a 'heavy presumption' that claim terms carry their full ordinary and customary meaning." *Id.* at 1323. Thus, the doctrine of

prosecution disclaimer may not be invoked “where the alleged disavowal of claim scope is ambiguous.” *Id.* at 1324. Rather, the “heavy presumption” can be overcome only if “the patentee unequivocally imparted a novel meaning to those terms or expressly relinquished claim scope during prosecution.” *Id.* at 1323. “Consequently, for prosecution disclaimer to attach, [Federal Circuit] precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.” *Id.* at 1325-26.

In the case of the ‘349 patent, the original application was submitted with twelve claims of two types. Application claims 1, 3-5, 8-9, and 11 more-or-less described the physical arrangement of the reagent containers and the various axes of rotation, but did not describe the gear structure for driving the rotation of the containers. Application claims 2, 6-7, 10, and 12,² on the other hand, included the gear structure not present in the other claims. (D.I. 301 at A281-86.) Among the latter set, application claims 6, 7, and 10 described a “ring gear” for driving the satellite gears, whereas application claims 2 and 12 described a “circular gear” for driving the satellite gears.

In a March 2001 office action, the examiner rejected all twelve claims. Application claim 12 was rejected as being anticipated by U.S. Patent No. 5,580,524 to Forrest. (D.I. 301 at A288-95.) Figure 3 of Forrest depicts a portion of a circular arrangement of vertically-oriented cylinders (for holding reagent containers) capable of independent rotation about their respective axes. Figure 3 also depicts a wheel at the end of a motor shaft located outside the circle of cylinders, having an axis of rotation parallel to each cylinder’s axis of rotation. The wheel drives rotation of each cylinder about its respective axis, however it is oriented such that it is in tangential contact with only one cylinder at a time. Thus, as the circle of cylinders rotates about a central axis, only the cylinder in

²Application claim 12 was issued as claim 9 in the ‘349 patent.

contact with the wheel is rotated. The other cylinders remain stationary. (See *id.* at A1712.) In response to the examiner's rejection, Bayer argued:

Claims 1, 6, 8, and 12 recite the capability of simultaneously rotating the agitating assemblies and their respective reagent containers. In addition, these claims recite the structure for accomplishing this. For example, Claim 6 recites a ring gear, concentric with the primary vertical axis of rotation for the reagent tray and coupled to an agitating motor, in driving engagement with each of the satellite gears. In contrast, Forrest provides a motor 103 having a rubber wheel 101 or gear on a motor shaft 102. The rubber wheel is provided at a tangential location proximate a ring of reagent containers. Each container is spun, *one at a time*, as it passes the rubber wheel or gear.

(*Id.* at A307-08 (emphasis in original).)

In spite of Bayer's arguments, the examiner remained unconvinced and again rejected all twelve claims in a June 2001 office action. The examiner explained that Forrest incorporates by reference a European patent, which discloses additional motors for use with each cylinder, thereby enabling simultaneous rotation of the cylinders. (*Id.* at A327.) Subsequently, counsel for Bayer conducted an interview with the examiner and her supervisor. Bayer summarized that interview as follows:

Examiner Bex also indicated during this telephone call that the rejection of Claim 6 under 35 U.S.C. § 103(a) [obviousness] was being withdrawn on the basis that the cited prior art failed to disclose, teach or suggest, alone or in combination, a reagent transport apparatus in which each of plural agitating assemblies comprise a satellite gear in communication with a first reagent container holder and concentric with the vertical axis of rotation of the respective agitating assembly, and a ring gear, concentric with the vertical axis of rotation of a reagent tray, in driving engagement with each of the satellite gears, whereby rotation of the ring gear results in the rotation of each of the satellite gears about their respective axes of rotation. Thus, Claim 6 was indicated by Examiner Bex as being allowable. Claim 7 is also considered allowable as being dependent from Claim 6.

In general, Examiner Bex indicated that the remaining independent claims would also be allowable if similar limitations with respect to the satellite and ring gears were incorporated therein. For instance, the Examiner indicated that claim 12 would be allowable if the physical relationship between the satellite gear and inner reagent

container were more specifically defined.

(D.I. 301 at A340-41.)

With respect to application claim 12, Bayer amended it in the manner directed by the examiner during the interview. Importantly, that amendment did not change any of the pre-existing claim language describing the relationship between the circular gear and the satellite gears. (Id. at A347-48.) Thus, it is apparent that Bayer believed the gear structure of application claim 12 (i.e., the circular gear/satellite gear combination) to be equally as distinguishable from the prior art as the gear structure of application claim 6 (i.e. the ring gear/satellite gear combination). Moreover, after the interview, the application claims without gear structures were still rejected by the examiner as anticipated by Forrest. Therefore, it must have been Bayer's understanding that the gear structure, and not the simultaneous rotation of the containers about their respective axes, distinguished Forrest. In fact, Bayer went on to argue that the application claims without gear structures were distinguishable because simultaneous rotation in Forrest requires multiple motors, whereas the application claims only required one motor for that task. However, the examiner never accepted that argument. Instead, Bayer cancelled the claims not reciting the allowable gear structure, or amended them to include such a structure, in order to avoid the examiner's rejections:

Examiner Bex indicated that she had reviewed the claims in light of the previously applied references and the newly cited references . . . and had come to the conclusion that at least the subject matter of independent claim 6 was allowable. In particular, Examiner Bex indicated that the references failed to anticipate the specific gear structure of claim 6.

. . .

In light of this conclusion, and without prejudice to pursuing claims of differing scope in one or more continuing applications, claims 1-2, 10, and 13 are canceled herewith, and limitations similar to the gear structure recited in claims 6, 10 *or* 12 are incorporated into each of independent claims 8 and 14. The dependency of claims 3-5 has been amended to refer to claim 6.

(Id. at 372-73 (emphasis added).)³ Once again, Bayer demonstrated its understanding that the recited gear structure of application claims 6, 10, or 12 was crucial to patentability. Also noteworthy is the fact that Bayer believed, as is demonstrated by the emphasized language above, that the circular gear/satellite gear structure of application claim 12 distinguished the prior art to the same extent as the ring gear/satellite gear structure of application claims 6 and 10.

Finally, after the examiner allowed the claims reciting gear structures, both the examiner and Bayer wrote informative explanations of the reasons for allowance. The examiner commented as follows:

While the configuration of two sets of containers, both concentric about a primary axis of rotation and positioned on a rotatable tray is well-known in the art, none of the prior art specifically recite the use of a plurality of satellite gears in mechanical communication with each of the agitating assemblies holding one set of the containers. The satellite gears being concentric with the secondary axis of rotation. Additionally, the prior art fails to disclose a ring gear, concentric with the primary vertical axis of rotation, which is in mechanical communication with each of the respective satellite gears, such that rotation between the reagent tray and ring gear results in the simultaneous rotation of each of the satellite gears about their secondary vertical axis.

(Id. at A383.) Bayer then responded:

Thus, it is [Bayer's] interpretation of the reasons for allowance that the point of novelty with respect to the cited and applied art lies in the claimed arrangement of satellite gears and a ring gear for simultaneous rotation of each of the satellite gears about a respective secondary axis of rotation.

...

The purpose of the Interview, from the perspective of [Bayer], was to discuss the possible allowability of the present claims if specific structural elements (e.g., the ring gear and the satellite gears) were added to the independent claim not already reciting such elements. Given the urgency in prosecuting the present application . . . , a decision was made to preserve for another day the question of whether claims *without* such structural elements were distinguishable from the cited art.

³Application claims 2 and 10 recited gear structure, but they were canceled nonetheless. However, the important point to note is that no claims without the gear structure remained.

...
In sum, it was asserted by [Bayer] that, with the selective inclusion of specific structural elements relating to a ring gear and satellite gears, the application would be allowable over the cited art.

(Id. at A386-88 (emphasis in original).) Thus, both the examiner and Bayer agreed that the specific gear structure recited in the issued claims was the reason for allowance. Once again, no distinction was drawn between the ring gear/satellite gear structure and the circular gear/satellite gear structure.

Bayer also filed patent application 10/156,849 (“the ‘849 application”), which is a continuation of the ‘349 patent. The recited gear structure in the ‘849 application claims and the recited gear structure in the ‘349 patent claims are nearly identical. And, similar to the ‘349 patent, the ‘849 application describes a circular gear/satellite gear structure in independent claim 1, and a ring gear/satellite gear structure in independent claim 7. Significantly, all of the claims in the ‘849 application were rejected in an October 2002 office action as being anticipated by U.S. Patent No. 3,151,073 (“the ‘073 patent”) to Anthon, without regard to which gear structure (i.e., circular or ring) was employed.

Anthon describes a “centrifuging apparatus” having a chain disposed around the periphery of a ring of sprockets with which the chain is engaged. The chain is driven by another sprocket tangentially engaged with the outer side of the chain. Thus, when the drive sprocket rotates, it causes the chain to drive the rotation of each sprocket in the ring about its respective axis. (D.I. 301 at A509.) In rejecting the claims of the ‘849 application, the examiner explained the operation of Anthon in her own words:

Anthon teaches a circular ring gear 78 concentric with the primary vertical axis of rotation and coupled with the agitating motor, wherein the circular gear is rotatable by the motor and in communication with each of the satellite gears such that rotation of the circular gear about the primary axis of rotation causes each of the satellite gears to rotate about their [sic] respective secondary vertical axis simultaneously.

(D.I. 298 at A2182.) Bayer responded with the following argument:

As for both claims 1 and 7, a gear concentric with the primary vertical axis of rotation and coupled to an agitating motor is recited. The American Heritage Dictionary of the English Language, Fourth Edition, Copyright 2000, defines “gear” as “a toothed machine part, such as a wheel or cylinder, that meshes with another toothed part, such as a wheel or cylinder, that meshes with another toothed part to transmit motion or to change speed or direction.” The same dictionary defines “chain” as “a connected, flexible series of links, typically of metal, used especially for holding objects together or restraining or for transmitting mechanical power.” The roller chain 78 of Anthon can in no way be regarded as the same element as the recited gear.

(D.I. 301 at A448.) Thus, Bayer clearly and unmistakably distinguished chains from gears, at least insofar as the claims of the ‘849 application are concerned. However, “[t]he prosecution history of a related patent can be relevant if, for example, it addresses a limitation in common with the patent in suit.” *Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc.*, 265 F.3d 1294, 1305 (Fed. Cir. 2001). Thus, courts “presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.” *Omega*, 334 F.3d at 1334. Since the ‘849 application is a continuation of the ‘349 patent, and since there is no indication that Bayer intended “gear” to have a different meaning in the later application, the term must be construed identically in both. Consequently, the court’s construction of “gear” in the ‘349 patent must exclude chains.

The more difficult question is whether the court’s construction must also exclude sprockets. Although neither the prosecution history of the ‘349 patent, nor the prosecution history of the ‘849 application contain an explicit disclaimer of sprockets, Abbott contends that Bayer’s citation to the dictionary definition of “gear” was sufficient to act as a disclaimer. More specifically, Abbott argues that since a sprocket meshes with a chain, and not with another toothed part, sprockets do not

fit within Bayer's dictionary definition of "gear." Bayer responds by pointing to several sources that refer to sprockets as gears. Bayer also directs the court's attention to the last sentence of its response to the rejection in light of Anthon, in which Bayer merely distinguished chains, *not* sprockets. This last point is dispositive. Excluding sprockets from the definition of "gear" requires the court to infer that Bayer explicitly relinquished sprockets because it defined "gear" as "a toothed machine part . . . that meshes with another toothed part," whereas sprockets mesh with chains (which allegedly have no teeth). In the court's view, that inference is too tenuous to amount to a clear and unmistakable surrender of subject matter. Thus, the term "gear" will be construed as "a toothed machine part, such as a wheel or cylinder, that meshes with another toothed part, to transmit motion or to change speed or direction, and which excludes a chain."

2. Summary Judgment

After the claim construction disputes are resolved, the court must evaluate whether summary judgment is appropriate. *See Chimie*, 402 F.3d at 1376. In the context of a motion brought by the alleged infringer, summary judgment will be granted if one limitation of the claim in question does not read on an element of the accused product, either literally or under the doctrine of equivalents. *See id.* at 1376-77. However, "a patentee cannot recapture through the doctrine of equivalents subject matter already precluded by the doctrine of prosecution disclaimer." *AccuScan, Inc. v. Xerox Corp.*, 76 Fed. Appx. 290, 293 (Fed. Cir. 2003) (nonprecedential). Therefore, if the accused product does not literally infringe the patent because of prosecution disclaimer, the court need not engage in a doctrine-of-equivalents analysis.

As explained above, the doctrine of prosecution disclaimer does not exclude sprockets from the scope of "gear." However, application of that doctrine is not limited to the construction of

isolated terms. Rather, it can be invoked if “the patentee unequivocally imparted a novel meaning to those terms *or expressly relinquished claim scope* during prosecution.” *Omega*, 334 F.3d at 1323 (emphasis added). Insofar as the gear structure disclosed in claim 9 is concerned, Bayer’s theory of infringement is that the driving sprocket of the redesigned Architect corresponds to the circular gear, and the ring of sprockets corresponds to the circle of satellite gears. (D.I. 306 at B1066.) However, that is the precise chain-and-sprocket structure of Anthon that Bayer distinguished during prosecution of the ‘849 application. Thus, Bayer expressly relinquished the chain-and-sprocket *structure* of Anthon from the scope of both independent claim 1 (circular gear/satellite gear structure) and independent claim 7 (ring gear/satellite gear structure), even though it did not relinquish sprockets from the scope of the term “gear.” And since courts “presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning,” *Omega*, 334 F.3d at 1334, Bayer disclaimed the very structure it now accuses of infringing the ‘349 patent. Furthermore, Bayer explicitly acknowledged during prosecution that the reason claim 9 (application claim 12) was allowable was because of “the selective inclusion of specific structural elements relating to a ring gear and satellite gears” (D.I. 301 at A388), which, for the purpose of patentability, is equivalent to the inclusion of a circular gear and satellite gears. Accordingly, Abbott’s motion for summary judgment of noninfringement of claim 9 of the ‘349 patent will be granted.

B. The '037 Patent

1. Claim Construction

In the '037 patent, the parties dispute the meaning of the last limitation of claim 15: “automatically rotating each reagent container of the first set about its respective axis while it is being scanned.” Bayer proposes that the phrase be construed as “[a]utomatically rotating the containers of the first set about their axes during the time that the bar codes on those containers are read.” Abbott, on the other hand, proposes that the phrase be construed as “Automatically rotating each individual reagent container about its respective axis during the time its (i.e., the same container’s) bar code is being read by the bar code reader.” (D.I. 296.) Thus, the parties’ disagreement centers around what it means to automatically rotate a container “while it is being scanned.” Bayer’s proposed construction is relatively broad, and literally encompasses devices that automatically rotate the containers at some time during the overall scanning process. In contrast, Abbott’s construction is relatively narrow, and literally encompasses only those devices that continuously (and automatically) rotate the containers while the bar code reader is active.

A text search of the entire patent reveals that the word “scan” is used only in the claims, and not in the specification. Even so, “the context in which a term is used in the asserted claim can be highly instructive.” *Phillips*, 415 F.3d at 1314. Although it is the last limitation of claim 15 that is at issue here, it is the second-to-last limitation that provides the instructive context:

scanning the bar code on one of the reagent containers of one of the first and second sets *by passing a scanning light beam* between two of the containers of the other of the first and second sets to determine the identity of the reagent contained therein[.]

'037 patent, col. 58, ll. 13-17 (emphasis added). This claim language clearly and unambiguously defines “scanning” as “passing a scanning light beam.” Therefore, the phrase “while it is being

scanned” is properly construed as “while it is being passed by a scanning light beam.” It does not refer to the overall process of reading bar codes, as Bayer suggests. Thus, the court will construe the last limitation of claim 15 as “automatically rotating each reagent container of the first set about its respective axis while it is being passed by a scanning light beam.”

2. Summary Judgment

In its brief, Bayer asserts that “[s]ummary judgment of no literal infringement [can] be entered only if the Court not only adopts Abbott’s construction as proposed, but also adopts the further narrowed construction . . . that the ‘scanning’ time period encompasses only those fractions of a second when the bar code reader laser impinges on the container.” (D.I. 306 at 30.) Whether or not the court’s construction is co-extensive with the “further narrowed construction” described by Bayer, it is clear that Bayer admits summary judgment of no literal infringement is proper if the court’s construction requires the reader’s scanning light beam to be activated while the containers are being continuously and automatically rotated about their respective axes. Since that is precisely what the court’s construction requires (“automatically rotating . . . *while* it is being passed by a scanning light beam”), Abbott’s motion will be granted as to literal infringement of claims 16, 18, and 21 (which depend from claim 15) by the intermittent-rotation scheme of the redesigned Architect.

As to infringement under the doctrine of equivalents, Abbott argues that Bayer relinquished territory beyond the literal scope of its claims, i.e., the territory beyond continuous and automatic rotation while the reader is active. For support, Abbott points to several statements Bayer made in distinguishing the prior art:

Copeland, however, fails to disclose or suggest the automatic rotation of each *individual* reagent container about its axis as it is being scanned to facilitate scanning of a bar code

(D.I. 301 at A401 (emphasis in original).)

None of the references cited by the Examiner teach or suggest, alone or in combination, the automatic rotation of each reagent container about its axis as it is being scanned to facilitate scanning of a bar code

(Id. at A402.) Abbott also directs the court's attention to several similarly-worded statements Bayer made in a related application to the Japanese Patent Office. (See *id.* at A478-83.) Thus, it is Abbott's contention that Bayer's repeated use of the phrase "as it is being scanned" in distinguishing the prior art creates an argument-based estoppel that prevents Bayer from claiming infringement under the doctrine of equivalents.

Bayer responds by arguing that it was merely distinguishing prior art in which the individual containers do not automatically rotate about their own axes *at all*, without regard to whether the rotation is continuous or intermittent. Bayer directs the court to the following argument it made to the examiner subsequent to the prosecution statements pointed to by Abbott:

The scanning of bar code or other optically scanned labels requires proper positioning of the label with respect to the scanner for accurate and complete data retrieval. If stationary containers are not properly positioned on the tray, the labels may be obscured so as to not be properly read by the scanner. Avoiding this situation requires meticulous placement of the bottles on the tray and even requires that the associated machinery be shut down in order to allow the repositioning of bottles not properly placed on the tray. Alternatively, special physical features, such as keying or tabs, must be provided on both the bottles and the tray to ensure proper positioning of the labeled containers on the tray to facilitate accurate label scanning.

Rotation of each of the individual reagent containers about each container's respective axis of rotation, apart from the rotation of the supporting tray, obviates the need for meticulous installation of individual containers. As previously submitted, the rotation of each container about its respective axis of rotation is not taught or suggested by any of the cited references.

(*Id.* at A417-18.) Abbott replies by arguing that Bayer should be held to its previous “over-argument.” (D.I. 313 at 17.) Thus, even if continuous rotation was not necessary to distinguish the prior art, Abbott contends that Bayer should be estopped from recapturing the allegedly surrendered territory.

“When a court applies the doctrine of [argument-based] estoppel to limit the scope of equivalents, a close examination must be made as to, not only what was surrendered, but also the reason for such a surrender.” *Southwall Technologies, Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1580 (Fed. Cir. 1995) (citation omitted). “Thus, [the court] must examine the character of assertions made in the prosecution history in addition to the result of those assertions, i.e., whether they result in allowance, when determining whether they create an estoppel.” *Id.* at 1583. In *Southwall*, for example, the plaintiff owned U.S. Patent No. 4,799,745 (“the ‘745 patent”), which describes an improved method of coating glass with a metal-oxide layer. *Id.* at 1573. The ‘745 patent explains that the prior art methods require a two-step process, in which the glass is first coated with the metal, and then converted to an oxide through exposure to oxygen. *Id.* at 1574. The invention of the ‘745 patent, on the other hand, permits the glass to be coated with a metal-oxide layer with just one step. *Id.* at 1580. In distinguishing prior art during prosecution, the plaintiff “chose not to rely on the exact method by which” the prior art formed its coating. *Id.* Rather, the plaintiff “specifically relied on the fact that [the prior art] showed a multistep process for doing so, whereas [the plaintiff] claimed a dielectric layer formed by a one-step process.” *Id.* In the most telling passages from the prosecution history, the plaintiff explained the differences between its invention and the prior art:

As pointed out in the specification such layers can be laid down directly by reactive sputtering processes in which the metal is sputtered off of a metal target *and directly converted to the oxide*, compound or salt by the presence of a suitable gaseous reactant [i.e., the conversion takes place in one step].

Id. at 1576 (emphasis added).

To further emphasize the distinctions between the present invention and the [prior art], it should be noted that [the prior art] obtains [its] metal oxide layers by depositing a metal layer *and then chemically converting it to the desired oxide* [i.e., the conversion takes place in two steps].

Id. at 1581 (emphasis added). Although the plaintiff may have gone too far in distinguishing the prior art, the Federal Circuit held that “the limits imposed by prosecution history estoppel on the permissible range of equivalents can be broader than those imposed by the prior art.” *Id.* Thus, because “the surrender was quite deliberate and express,” the plaintiff was estopped from arguing that the accused device, which converted in two steps instead of one, was equivalent to the patent claim at issue. *Id.* at 1580-81.

The Federal Circuit arrived at the opposite conclusion in *Eagle Comtronics, Inc. v. Arrow Commc’ns Labs., Inc.*, 305 F.3d 1303 (Fed. Cir. 2002). In that case, the plaintiff owned U.S. Patent No. 5,662,494 (“the ‘494 patent”), which relates to a “sealed collet assembly” that prevents moisture from entering an electrical signal filter. ‘494 patent, col. 1, ll. 15-18. The filter is surrounded by a housing that is substantially cylindrical in shape. *Id.*, fig. 9. Located at one end of the filter is a female receptacle for receiving an external cable or wire, over which the housing extends as well. *Id.* The “collet” is the supporting structure surrounding the receptacle, and is disposed inside the housing. *Id.* The prior art collet depicted in the ‘494 patent consists of two pieces, a front cap and a rear insert body. *Id.*, fig. 6. The front cap fits over the rear insert body in the same way the cap of an ink pen fits over the tip of the pen. During the manufacturing process, the prior art collet is inserted into the end of the housing, and an epoxy sealant is used to form a barrier between the collet and the filter. *Id.*, col. 3, ll. 22-27.

The ‘494 patent improves on the prior art collet by providing a non-epoxy seal, such as an

O-ring, between the front cap and the rear insert body. *Id.*, col. 4, ll. 1-5. In the ink pen analogy, an O-ring would be slid over the tip of the pen (i.e., the collet's rear insert body) until it reaches what would otherwise be the stopping point for the cap (i.e., the collet's front cap). The cap would then be slid over the tip until it reaches the O-ring. The O-ring provided in the '494 patent is slightly larger in diameter than the collet assembly itself. *Id.*, col. 3, ll. 38-53. Thus, when the collet is inserted into the end of the housing, the rubber seal presses tightly against the housing, thereby eliminating the need for an epoxy sealant. *Id.*

During prosecution and on appeal, the plaintiff in *Eagle* distinguished the prior art as follows:

[T]he presently claimed invention is directed to an improved collet assembly, and a filter structure including such a collet assembly. The collet assembly includes a front cap, a rear insert body, a collet contact extension passing through the rear insert body, and a seal located between the front cap and the insert body. By providing the seal between the rear insert body and the front cap (see Figs. 7 and 8, for example), the claimed invention prevents moisture and other contaminants from entering the collet assembly and filter structure by sealing an interface between the collet assembly and the filter housing.

305 F.3d at 1310.

The presently claimed invention has been developed to improve upon the prior art collet assembly and filter structure shown in Figs. 6 and 10, respectively. . . . According to the prior art collet assembly, a rear insert body is pressfitted with a front cap. No seal is provided between the front cap and the rear insert body. To seal the collet assembly inside housing 30, epoxy material 100 is loaded into an interior of the housing after assembly.

Id.

[T]he art does not suggest the particular position of the O-ring as presently claimed. Replacement of the admitted prior art epoxy with an O-ring does not provide a structure as claimed, wherein the O-ring is provided between the front cap and rear insert body.

Id.

The accused devices in *Eagle* were essentially the same as the invention described in the '494 patent, with the exception that the collet was made of one solid piece, rather than a front cap and a rear insert body. 305 F.3d at 1310-11. Recycling the ink pen analogy one more time, the accused devices had the same as the pen-ring-cap configuration described above, with the exception that the cap was not removable from the pen. The defendant argued that the plaintiff, in distinguishing the prior art, relinquished any equivalents not consisting of two parts, i.e., a front cap and rear insert body. *Id.* at 1315-16. The Federal Circuit disagreed:

After reviewing the entire prosecution history here, we do not find the required clear and unmistakable surrender of subject matter to invoke prosecution history estoppel. While [the plaintiff] repeatedly distinguished the prior art by noting that the claimed seal was located between the front cap and the rear insert body, its arguments were not based on the fact that the claimed collet assembly was made of two pieces or were separable. Rather, those arguments were based on the prior art not teaching or suggesting the use of a seal at the interface between the collet assembly and the filter housing. The '494 patent acknowledges that the prior filter and collet assemblies applied sealant to the rear portion of the collet assembly. The improvement of the '494 patent provides a collet that self-seals at the interface between the collet assembly and the filter housing, as opposed to the rear of the collet assembly. [The plaintiff's] repeated references to the location of its seal were attempts to distinguish the claimed seal location from the location found in the prior art. [The plaintiff's] use of the specific claim language to define further the location of the claimed sealant does not amount to a surrender of seals located elsewhere along the interface between the collet assembly and the filter housing.

Id. at 1316. Therefore, because the alleged surrender was not "clear and unmistakable," the plaintiff was not estopped from accusing the defendant's one-piece collet of infringement under the doctrine of equivalents. *Id.*

The difference between the plaintiffs' arguments to the examiners in *Southwall* and *Eagle*, although perhaps subtle, is sufficiently clear to be dispositive in this case. In *Southwall*, the plaintiff essentially drew a line in the sand between the two-step processes of the prior art, and the one-step process of its invention. In contrast, the plaintiff's description in *Eagle* of the two-piece collet during prosecution was merely incidental to its description of sealing the filter with an O-ring around the collet instead of an epoxy sealant behind the collet. In the present case, there is no doubt that Bayer distinguished the prior art by pointing to the "automatic rotation of each reagent container about its axis *as it is being scanned*." However, Bayer later clarified that the automatic nature of the rotation "obviates the need for meticulous installation of individual containers." Bayer never came close to arguing that intermittent, automatic rotation would not yield the same benefits as continuous, automatic rotation. Therefore, the court holds that Bayer did not make a clear and unmistakable surrender of subject matter in the way Abbott suggests.

Abbott also argues that Bayer is precluded from asserting the doctrine of equivalents by the doctrine of specific exclusion. While it is true that the doctrine of equivalents may not be used to capture subject matter "clearly excluded from the claims whether the exclusion is express or implied," *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1345 (Fed. Cir. 2001), the doctrine of specific exclusion must be applied with care, lest it be allowed to swallow the doctrine of equivalents in its entirety. Indeed, Abbott's argument does that very thing by summarily asserting that because Bayer did not write claims broad enough to literally encompass intermittent rotation, it specifically excluded that territory from the reach of the doctrine of equivalents. (D.I. 313 at 18.) If the court were to accept Abbott's argument, no plaintiff could ever invoke the doctrine of equivalents to expand the claim scope beyond what is literally claimed. For

that reason, the doctrine of specific exclusion is properly invoked only in special cases, such as where the plaintiff attempts to expand the patent's claims in a way that defies logic, or in a way that encompasses the exact opposite of what is claimed. *See SciMed*, 242 F.3d at 1345-46 (e.g., non-metallic vs. metallic, major vs. minor, at least three lines vs. two lines, etc.). In this case, it most definitely does not defy logic to expand claim 15 to encompass intermittent, automatic rotation. As Bayer explained to the examiner, the very purpose of the invention of the '037 patent is that it "obviates the need for meticulous installation of individual containers." Automatic rotation, whether continuous or intermittent, accomplishes that goal. Thus, Abbott's specific exclusion argument is not persuasive.

Finally, Abbott argues that summary judgment should be granted because "the bar code scanning method of the redesigned Architect does not perform substantially the same function, in substantially the same way, to achieve substantially the same result as the claimed method." (D.I. 300 at 36.) More specifically, Abbott claims that the redesigned Architect performs the scanning function in a very different way than the claimed method because the redesign orients the bar code labels "through a series of small, intermittent movements, which limit[s] the overall efficiency, and flexibility of the system." (Id.) Abbott also points out that "the redesigned system required additional modifications (such as [an] additional bracket), and takes twice as long as the claimed method." (Id.) Generally speaking, efficiency considerations do not enter into the infringement analysis. *Insituform Techs., Inc. v. Cat Contracting, Inc.*, 161 F.3d 688, 693 (Fed. Cir. 1998). But even if they did, Abbott's argument would be unavailing because it compares the efficiency of the redesigned Architect to the efficiency of the original Architect, not the efficiency of the asserted claims. Indeed, Abbott fails to point out *any* intrinsic evidence relating to efficiency or timing. As

to Abbott's claim that the redesigned Architect required an additional bracket and other such modifications, the court is unable to comprehend how that is relevant because none of the claim limitations relate to brackets, or any other mundane implementation details. Therefore, because Abbott's arguments are not persuasive, and because Bayer raises disputed issues of material fact as to "function, way, result" through the report of its expert, Dr. Slocum (D.I. 306 at B1075-77), Abbott's motion for summary judgment on infringement under the doctrine of equivalents will be denied.

V. CONCLUSION

For the reasons discussed above, Abbott's motion for summary judgment is granted in part, and denied in part.

Dated: September 26, 2005

/s/ Gregory M. Sleet
UNITED STATES DISTRICT JUDGE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BAYER HEALTHCARE LLC,)
)
 Plaintiff,)
)
 v.) C.A. No. 03-189-GMS
)
 ABBOTT LABORATORIES,)
)
 Defendant.)

ORDER

IT IS HEREBY ORDERED THAT:

1. The term “gear,” as used in claim 9 of U.S. Patent No. 6,436,349 (“the ‘349 patent”), be construed as “a toothed machine part, such as a wheel or cylinder, that meshes with another toothed part, to transmit motion or to change speed or direction, and which excludes a chain;”
2. The phrase “automatically rotating each reagent container of the first set about its respective axis while it is being scanned,” as used in claim 15 of U.S. Patent No. 6,498,037 (“the ‘037 patent”), be construed as “automatically rotating each reagent container of the first set about its respective axis while it is being passed by a scanning light beam;” and
3. Abbott Laboratories’ motion for summary judgment (D.I. 299) be GRANTED as to both literal infringement and infringement under the doctrine of equivalents of the ‘349 patent, GRANTED as to literal infringement of the ‘037 patent, and DENIED as to infringement under the doctrine of equivalents of the ‘037 patent.

Dated: September 26, 2005

/s/ Gregory M. Sleet
UNITED STATES DISTRICT JUDGE