

# In the United States Court of Federal Claims

No. 02-255 C

(Filed August 22, 2005)

(Reissued for Publication September 8, 2005)\*

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**TRITEK TECHNOLOGIES, INC.,**

Plaintiff,

v.

**THE UNITED STATES,**

Defendant,

and

**NORTHROP GRUMMAN CORP.,**

Third-Party Defendant,

and

**SIEMENS DEMATIC CORP.,**

Third-Party Defendant.

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Patent infringement; 28 U.S.C. § 1498;  
claim construction; doctrine of  
equivalents; demonstrative exhibit;  
means-plus-function; summary  
judgment; feeder system for high  
speed mail sorter.

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## OPINION

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*Frederick A. Tecce and Anthony J. DiMarino, III*, Philadelphia, PA, for the plaintiff.

*Scott Bolden*, U.S. Department of Justice, Commercial Litigation Branch, Civil Division, with whom were *Peter D. Keisler*, Assistant Attorney General, and *John J. Fargo*, Director, for the defendant.

*Gregg F. LoCascio*, Washington, DC, for Third-Party Defendant, Siemens Dematic Corporation. *Charanjit Brahma and Eugene F. Assaf*, Washington, DC, of counsel.

*Deneen J. Melander*, Washington, DC, for Third-Party Defendant, Northrop Grumman Corporation.

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\* Redacted material is indicated by brackets ([ \_\_\_\_ ]).

**DAMICH**, Chief Judge.

This matter is before the Court on three separate motions: (1) Defendants' Renewed Motion for Summary Judgment of Non-Infringement, originally filed on April 2, 2004; (2) Plaintiff's Motion to Withdraw an Element of Plaintiff's Demonstrative Exhibit Evidence, filed on April 28, 2005; and (3) Defendants' Cross-Motion to Strike and For Reimbursement, filed on May 16, 2005.

## **I. Background**

On April 2, 2002, Tritek Technologies, Inc. ("Plaintiff" or "Tritek") commenced this lawsuit against the United States ("Defendant" or "the government"), alleging the manufacture or use of the invention described in United States Patent No. 5,398,922 ("the '922 patent"), which covers a feeder system for a mail sorting device. The complaint alleges that the United States Postal Service's use of the AFSM-100 and the UFSM-1000 mail sorting devices constitutes an infringement of the '922 patent. Pursuant to Rule 14 of the Rules of the Court of Federal Claims ("RCFC"), Defendant served third party notices upon Northrop Grumman Corporation ("Northrup"), Siemens Dematic Corporation ("Siemens"), and Lockheed Martin Corporation ("Lockheed"). Northrup and Siemens entered the case as third party Defendants, while Lockheed did not respond to the notice.<sup>1</sup>

On January 31, 2003, Defendants filed a Motion for Summary Judgment of Non-Infringement ("Original MSJ") of the '922 patent. Although claim construction had not yet taken place in the case, Defendants averred that under any reasonable claim construction, the accused AFSM-100 did not infringe the claims of the '922 patent. Finding that claim construction would be necessary to decide the motion, the Court stayed the Original MSJ until the conclusion of claim construction proceedings. On December 5, 2003, the Court issued an Order and Opinion on Claim Construction ("Markman Order") which construed the meaning of various disputed terms in the claims of the '922 patent. On April 2, 2004, Defendants filed a Renewed Motion for Summary Judgment ("Renewed MSJ") in which they modified the arguments presented in the Original MSJ to comport with the Court's claim construction as set forth in the Markman Order.

Oral argument was scheduled on the Renewed MSJ for September 29, 2004. Just days before the hearing, Plaintiff informed the Court that it intended to bring a demonstrative exhibit to the hearing that was a working replica of the accused AFSM-100 device. The demonstrative exhibit had been built by James Malatesta, the named inventor on the '922 patent and the president of Tritek. Defendants objected to the late notice, and in a status conference held on September 27, 2004, the Court decided that it would not permit the introduction of the

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<sup>1</sup> For the sake of simplicity, the Court will hereinafter collectively refer to Siemens, Northrup, and the government as "Defendants."

demonstrative exhibit at the hearing, but that Plaintiff could revisit the issue at a later date. On September 29, 2004, oral argument was heard on the Renewed MSJ (“September Hearing”). The first issue discussed at the September Hearing was whether Plaintiff should be barred from offering theories of infringement under the doctrine of equivalents because it had failed to include them in its court-ordered claim chart. After hearing arguments on the issue, the Court ruled from the bench that Plaintiff was precluded from offering theories not previously disclosed in its claim chart as required by the Court’s Standard Special Procedures Order (“SSPO”). (September Hearing Tr. at 37-39.) The September bench ruling foreclosed all but one of Plaintiff’s doctrine of equivalents arguments with respect to claim limitations at issue in the Renewed MSJ.<sup>2</sup> With the doctrine of equivalents issues largely precluded, the parties proceeded to present their respective positions on literal infringement.

On October 15, 2005, Plaintiff filed a motion for reconsideration, asking that the Court reconsider the September bench ruling, or in the alternative, that it bar Defendants from setting forth non-infringement theories that were not previously made known to Plaintiff, because failing to do so was in violation of the rules of discovery. In an Opinion and Order issued on January 14, 2005 (“the January Order”), the Court granted the motion in part, allowing Plaintiff to amend its claim chart to allege infringement under the doctrine of equivalents for certain claim elements. However, the January Order did not allow Plaintiff to amend its claim chart to allege infringement of the “stack maintaining mechanism” claim element because the Original MSJ had placed Plaintiff on notice that the “stack maintaining mechanism” was at issue.<sup>3</sup> Because these doctrine of equivalents issues were not argued during the September Hearing, a supplemental oral argument was scheduled for the purpose of allowing Plaintiff to present those theories of infringement reinstated by the January Order. In addition, the Court ordered briefing on the issue of whether Plaintiff should be permitted to present the demonstrative exhibit that it had originally wished to present during the September Hearing. In its brief in support of offering the demonstrative exhibit, Plaintiff indicated that the exhibit would demonstrate that a mail sorting device that transferred mail pieces using intermittent vacuum pressure with a continuously perforated transfer belt (as found in the accused device) would operate no differently from one that used a continuous vacuum with a partially perforated transfer belt (as described in the ‘922 patent). After considering the parties’ demonstrative exhibit briefs, on March 16, 2005, the Court issued an order allowing Plaintiff to present the demonstrative exhibit in a limited fashion

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<sup>2</sup> Because Plaintiff had included an allegation of infringement under the doctrine of equivalents for the “switch” limitation in claim 13 in its claim chart, the Court permitted Plaintiff to present doctrine of equivalents arguments on this claim element during the September Hearing.

<sup>3</sup> The January Order was originally filed under seal, and reissued for publication without alteration after the parties agreed that no confidential information was disclosed therein. The reissued opinion is reported at *Tritek Technologies, Inc. v. United States*, 63 Fed. Cl. 740 (Feb. 7, 2005).

at the supplemental hearing, because it was relevant to doctrine of equivalents arguments that had been reinstated.<sup>4</sup>

On March 24, 2005, the Court heard supplemental oral argument on the Renewed MSJ (“the March Hearing”), wherein the parties presented their respective positions on infringement under the doctrine of equivalents, and Plaintiff presented its demonstrative exhibit. During the hearing, the Court queried the parties regarding whether the applicability of the Federal Circuit decision in *Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc.*, 206 F.3d 1408 (Fed. Cir. 2000) (“*Zodiac*”) should influence the Court’s consideration of the case. Because the parties had not discussed *Zodiac* in their briefs, the Court ordered supplemental briefing on the issue, and the parties submitted their supplemental briefs on *Zodiac* on April 1, 2005.

Also during the course of the March Hearing, it was brought to the Court’s attention that Plaintiff’s demonstrative exhibit did not operate exactly in the fashion that had been anticipated. Specifically, the demonstrative exhibit did not include the intermittent vacuum, but rather operated using a continuous vacuum. As a result, on April 28, 2005, Plaintiff filed a Motion to Withdraw the exhibit as it pertained to issues involving the intermittent vacuum. Defendants opposed the motion, and on May 16, 2005, filed a Cross-Motion to Strike and for Reimbursement, in which they asked the Court to strike both the demonstrative exhibit and all testimony from Mr. Malatesta, due to the inaccuracies in statements he made in support of admitting the demonstrative exhibit. The Motion to Withdraw and Cross-Motion to Strike were fully briefed on June 20, 2005. For the reasons stated in Part III of this opinion, the Court has decided to grant Plaintiff’s Motion to Withdraw and to deny Defendants’ Cross-Motion to Strike and for Reimbursement.

## **II. The ‘922 Patent**

The ‘922 patent teaches a feeder system for a high speed mail sorter. High speed mail sorters are generally used to deliver individual items of mail to selected bins based on some predetermined sorting criterion. Often, the sorting criterion is based on zip codes, and allows mail sorting devices to deliver each item of mail into a bin reserved for its destination zip code. In order to operate effectively, mail sorters must act on a single piece of mail at a time, so that each piece of mail can be individually scanned or read by the mail sorter and delivered to the appropriate downstream bin.

The feeder system described in the ‘922 patent allows a mail sorter to act on a single item of mail by receiving a stack of mail and separating the stack into individual pieces of mail through a process called “singulation” before sending each separated item of mail to the sorting section of a the mail sorting device. A vertical side-by-side stack of mail is placed on a horizontal conveyor belt. At the downstream end of the conveyor belt is a singulation station.

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<sup>4</sup> An opinion more fully addressing the issues followed on March 22, 2005.

The stack of mail is maintained in a vertical orientation by the placement of a paddle against the last item of mail so that the stack is sandwiched between the paddle on one end and a singulation station on the other.

The singulation station includes a vertically mounted belt and two vacuum chambers. The first vacuum chamber faces the horizontal conveyor belt and is unobstructed. When the first item of mail in the stack reaches the singulation station, two things happen: (1) the first vacuum chamber applies a suction pressure against the item of mail to pull it into contact with the vertically mounted belt, and (2) the item of mail is brought into contact with a microswitch, causing it to temporarily halt the downstream movement of the horizontal conveyor belt (which carries the vertical stack of mail). The vertically mounted belt has a plurality of holes in it and is positioned in front of a second vacuum chamber which also has holes in it. The vertically mounted belt moves continuously in the direction of the sorting section of the mail sorting device.

When the first item of mail on the horizontal feed belt is brought into contact with the vertically mounted belt by the first vacuum chamber, the belt moves so that the holes in the belt align with the holes of the second vacuum chamber, which allows additional suction to penetrate through the holes in the belt thereby securing the item of mail against the belt as it pulls it away from the first vacuum chamber and toward the sorting section. When the item of mail is removed from the stack by the vertical belt, the microswitch is deactivated so that the horizontal conveyor belt moves the next item of mail in the stack toward the singulation station. This process typically repeats until each of the items of mail have been removed from the vertical stack, at which point, the paddle is detected by the microswitch, causing the feed conveyor belt to stop.

### **III. The Motion to Withdraw Evidence and Cross Motion to Strike and for Reimbursement**

As noted above, pending concurrently with Defendants' Renewed Motion for Summary Judgment, are Plaintiff's Motion to Withdraw an Element of Plaintiff's Demonstrative Exhibit Evidence ("Motion to Withdraw") and Defendants' Cross-Motion to Strike and for Reimbursement ("Cross-Motion to Strike"). Because the resolution of these motions will effect the scope of evidence available to the Court in deciding the Renewed MSJ, the Court will address these motions first.

The Motion to Withdraw and Cross-Motion to Strike arise out of Plaintiff's failure to inform the Court prior to the March Hearing that the demonstrative exhibit was not configured to run its vacuum intermittently as had been indicated in its brief. After being questioned on this point at the March Hearing, Plaintiff admitted that the vacuum in the demonstrative exhibit "does not go on and off," despite its previous representation to the Court that it did. (March Hearing Tr. at 148-49.) Recognizing that the demonstrative exhibit did not perform as had been

previously alleged, Plaintiff asked the Court to allow it to withdraw the demonstrative exhibit as it related to its statutory equivalents arguments in connection with claim 13. In opposing the Motion to Withdraw and in support of the Cross-Motion to Strike, Defendants make several arguments. First, they argue that the Court should strike the demonstrative exhibit generally, because Plaintiff's limited withdrawal is insufficient and that the demonstrative exhibit should be withdrawn in its entirety. Second, they contend that all of Mr. Malatesta's testimony opposing summary judgment should be stricken from the record because his failure to truthfully and accurately describe the demonstrative exhibit undermines his credibility and ability to opine on matters regarding complex mail sorting technology.<sup>5</sup> Finally, Third-Party Defendants seek reimbursement for all fees spent opposing the admission of the demonstrative exhibit.

Although the Court does not condone Plaintiff's negligent conduct with respect to the demonstrative exhibit, it finds that its mistakes were made in good faith and without nefarious intent. Mr. Malatesta's declaration submitted in support of the demonstrative exhibit inaccurately stated that it would be configured to have an intermittent vacuum. However, as Plaintiff points out, the Court did not consider Mr. Malatesta's declaration in determining whether the demonstrative exhibit would be allowed at the hearing. Moreover, even considering the accuracy (or lack thereof) of Mr. Malatesta's declaration, his declaration stated only that the demonstrative exhibit *could* be configured with an intermittent vacuum. Although this statement certainly implied that the demonstrative exhibit would be configured with an intermittent vacuum at the March Hearing, it was not technically inaccurate. To characterize that statement as "perjury" is clearly not warranted. The fact that Plaintiff did not utilize an intermittent vacuum in its presentation does not render the demonstrative exhibit inadequate in all respects. The Court is capable of discerning the reliable aspects of the demonstrative exhibit from the unreliable.

The Court finds it somewhat perplexing that Plaintiff went through the trouble of getting the demonstrative exhibit admitted, when it did not fulfill its primary purpose, that is, to bolster its arguments with respect to the intermittent vacuum and statutory equivalents issue regarding claim 13. Yet, that is what appears to have happened in this case. The Court will allow Plaintiff to withdraw the demonstrative exhibit as requested, and in deciding the Renewed MSJ will consider the demonstrative exhibit only for the limited purpose of demonstrating that the angle of the paddle does not dictate the angle of the mail in the stack. Therefore, the Court hereby grants Plaintiff's Motion to Withdraw and denies Defendants' Cross-Motion to Strike and for Reimbursement. Having addressed the co-pending motions, the Court will now consider the Renewed MSJ on its merits.

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<sup>5</sup> Defendants allege that Mr. Malatesta committed perjury by submitting an inaccurate declaration in support of admitting the demonstrative exhibit.

## IV. Legal Standard

### A. Summary Judgment

Summary judgment is appropriate when there are no genuine issues of material fact, and thus the moving party is entitled to judgment as a matter of law. RCFC 56(c); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247 (1986); *Jay v. Secretary, DHHS*, 998 F.2d 979, 982 (Fed. Cir. 1993). The party moving for summary judgment bears the initial burden of demonstrating the absence of any genuine issue of material fact. *Jay*, 998 F.2d at 982. After adequate time for discovery and on motion, summary judgment is appropriate against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, where that party will bear the burden of proof at trial. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986). The Court must resolve any doubts about factual issues in favor of the non-moving party, *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1307 (Fed. Cir. 1998), and draw all reasonable inferences in its favor. *See Gasser Chair Co. v. Infanti Chair Mfg. Corp.*, 60 F.3d 770, 773 (Fed. Cir. 1995). Though whether an accused device infringes on any claim of an asserted patent is a question of fact, summary judgment of non-infringement is "appropriate where the patent owner's proof is deficient in meeting an essential part of the legal standard for infringement, because such failure will render all other facts immaterial." *Techsearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1369 (Fed. Cir. 2002). A summary judgment on the issue of literal infringement is proper "when no genuine issue of material fact exists, in particular, when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." *Bai v. L & L Wings*, 160 F.3d 1350, 1353 (Fed. Cir. 1998).

### B. Literal Infringement

#### 1. Generally

A patent infringement determination is a two-step inquiry. The first step is a proper construction of the meaning and scope of the claims. *Anchor Wall Sys. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1306 (Fed. Cir. 2003). In this case, this first step of the infringement analysis took place in claim construction proceedings which culminated in the Markman Order issued on December 5, 2003. The second step requires a comparison of the asserted claims, as properly construed, to the accused device. *Anchor Wall Sys.*, 340 F.3d at 1306. The claims as construed by the Court are compared limitation by limitation to the features of the accused device. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 988 (Fed. Cir. 1999). The Court's determination as to whether the claims read on the accused device is a question of fact. *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 976 (Fed. Cir. 1999).

## 2. Means-Plus-Function Claim Limitations

Some of the claim limitations alleged by Defendants not to be infringed are means-plus-function claim limitations that are subject to interpretation under 35 U.S.C. § 112, paragraph 6. Literal infringement of a means-plus-function claim limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and that the structure be identical or equivalent to the corresponding structure in the specification. *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999). Whether an accused device or method infringes a claim with a § 112, paragraph 6 limitation is a question of fact. *See IMS Technology, Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1429 (Fed. Cir. 2000). This factual determination includes the factual issue of whether the accused device is a statutory equivalent of the structure disclosed in the specification. *Odetics, Inc.*, 185 F.3d at 1268-69 (Fed. Cir. 1999).

### C. Infringement Under the Doctrine of Equivalents

In addition to denying literal infringement, the Renewed MSJ contends that none of the asserted claims are infringed under the doctrine of equivalents. An element in the accused product is equivalent to a claim limitation if the differences between the two are "insubstantial" to one of ordinary skill in the art. *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1371-72 (Fed. Cir. 2001). However, prosecution history estoppel prevents the application of the doctrine of equivalents as a tool to recapture subject matter surrendered during prosecution. *See Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1458 (Fed. Cir. 1998). The effect of prosecution history estoppel on patent infringement under doctrine of equivalents presents a question of law. *Toro Co. v. White Consolidated Industries, Inc.*, 383 F.3d 1326 (Fed. Cir. 2004). This question is decided based on the intrinsic record of the patent, by analyzing the claims, the specification and the prosecution history. Infringement under the doctrine of equivalents requires that the accused product contain each limitation of the claim or its equivalent. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997).

## V. Discussion

Defendants move for summary judgment of non-infringement on five specific grounds. Their first three arguments pertain to each asserted claim. First, they allege that the accused AFSM-100 lacks a "stack maintaining mechanism" which maintains a "vertical side by side stack" as required by each of the asserted claims. Second, they argue that the accused device lacks the locational requirement of a transfer means that extends "juxtaposed across" the remainder of the downstream discharge end as required by each of the asserted claims. Third, Defendants contend that none of the asserted claims can be infringed because the initial hold means and transfer means in AFSM-100 do not act on the "downstream-most item of mail" as required by each asserted claim.



Defendants fourth and fifth arguments pertain only to claim 13. The transfer means in claim 13 has been construed by the Court as a means-plus-function claim limitation subject to interpretation under 35 U.S.C. § 112, paragraph 6. Therefore, Defendants' fourth argument is that any transfer means in the accused AFSM-100 cannot be a statutory equivalent of the structure disclosed in the '922 patent specification because, unlike the vertically mounted belt and vacuum described in the '922 patent, the belt in the accused device is continuously perforated and the vacuum runs intermittently. Finally, Defendants argue that the accused AFSM-100 cannot infringe claim 13 because it does not have a "switch located in the path of movement of the paddle," and Plaintiff is barred by prosecution history estoppel from asserting the doctrine of equivalents with respect to the switch limitation. The Court will address each of these arguments in turn.

A. Does the Accused AFSM-100 Include a "Stack Maintaining Mechanism" which Maintains a "Vertical Side By Side Stack?" (All Claims)

Defendants argue that the accused AFSM-100 lacks a "stack maintaining mechanism" that maintains mail in a "vertical side by side stack" as required by each asserted claim in the '922 patent. As the Court in the January Order held that Plaintiff was barred from alleging infringement under the doctrine of equivalents with respect to this claim element, the sole issue with respect to the "stack maintaining mechanism" is whether this claim limitation is literally found in the accused device.

Before comparing the claims to the accused device, it is useful to recall the meaning of the relevant limitations determined in the Court's Markman Order. In the Markman Order, the Court held that the "stack maintaining mechanism" in each asserted claim is a means-plus-function claim subject to interpretation pursuant to 35 U.S.C. § 112, paragraph 6. (Markman Order at 9-13.) The Court further held that the "stack maintaining mechanism" performs the function of "[m]aintaining the items of mail as part of the vertical stack on the horizontal run until the items of mail are removed from the stack and the stack no longer exists." (Markman Order at 10, 12.) The structure of the "stack maintaining mechanism" disclosed in the specification of the '922 patent is "1) a paddle mounted so that it is perpendicular to the horizontal run of the feed conveyor belt, which has a corner or projection in contact with the horizontal run, and is configured to be in contact with the last item of mail in the stack so that the stack is sandwiched between the paddle and a singulation station; 2) an attachment arm with offset extensions; and 3) a guide rail." (Markman Order at 11, 13.)

1. Identical Function

As the "stack maintaining mechanism" alleged by Defendants not to be infringed is a means-plus-function claim limitation, the accused device must perform an identical function as that recited in the claim using the structure described in the specification, or an equivalent thereof, in order for there to be an infringement. *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211-12 (Fed. Cir. 1998). In the case at bar, in order for the accused AFSM-100 to

perform a function identical to that recited in the asserted claims, it must maintain the items of mail in a “vertical” stack. Defendants contend that the stack maintaining mechanism of the AFSM-100 does not perform a function identical to that recited in the asserted claims because the stack of the AFSM-100 is not vertical. (Memorandum in Support of Defendants Renewed Motion for Summary Judgment of Non-Infringement at 11-12 [hereinafter referred to as “D. Mem.”].) In support of their position, Defendants provide a photograph of the AFSM-100's paddle and stack that includes an engineer's triangle that clearly shows the stack tilted at an angle 110 degrees from the horizontal, not 90 degrees as required by the court's claim construction. (D. Mem. at 13, Fig. A.)

Plaintiff counters by arguing that Defendants' picture is misleading because the angle of the AFSM-100's “paddle does not dictate the actual angle of mail on the feed conveyor belt.” (Plaintiff's Response to Defendants' Renewed Motion for Summary Judgment at 14 [hereinafter referred to as “P. Mem.”].) In its brief, Plaintiff argues that, while operating, the AFSM-100's stack is indeed vertical. (P. Mem. at 12.) As support, Plaintiff provides photographs of the AFSM-100, the declarations of Mr. Malatesta<sup>6</sup> and Dr. Edward Cohen,<sup>7</sup> and training documents for the AFSM-100. (P. Mem. at 12-14.) In addition, Plaintiff presented its demonstrative exhibit at the March Hearing in order to show that the angle of the paddle does not dictate the actual angle of mail on the feed conveyor belt. (March Hearing Tr. at 93-104.)

Upon closer examination, much of the evidence presented by Plaintiff is of dubious value. Plaintiff's photographs are of poor quality, and it is difficult make out the details of the stack in the photos, including whether or not it is vertical. (Plaintiff's Appendix Submitted in Support of Its Response to Defendants' Renewed Motion for Summary Judgment at A343-45 [hereinafter “P. App.”].) The references to the AFSM-100 training materials also provide little support to Plaintiff's position. Although the training materials state that the stack is in an “upright position” and that it has “a vertical orientation,” they also state that the stack is “as close to the vertical as possible,” and that portions of the stack “are almost vertical.” (P. Mem. at 13-14.) The phrases “as close to vertical as possible” and “are almost vertical” cannot be reasonably considered to mean “vertical” in the Court's definition of the term because they specifically indicate that the stack is not vertical, but only close to vertical. At most, the AFSM-100 training materials are ambiguous, and they seem largely to undercut Plaintiff's position. Moreover, the demonstrative exhibit presented by Plaintiff at the March Hearing also showed that in most configurations, the mail was not at 90 degrees.

The record, however, is not completely devoid of evidence that favors Plaintiff's position. The Cohen and Malatesta declarations, which both state that the accused device maintains a vertical stack, cannot simply be ignored. Whether ultimately found credible at trial, each declaration provides some additional evidence that the AFSM-100 maintains mail in a vertical

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<sup>6</sup> Mr. Malatesta is the inventor of the invention described in the '922 patent.

<sup>7</sup> Dr. Cohen is an expert witness for the Plaintiff.

stack. It is true that attorney argument, entirely lacking in factual support is insufficient to survive a motion for summary judgment. *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1112 (Fed. Cir. 2000). Declarations of fact by a knowledgeable affiant, however, have been specifically mentioned as sufficing to overcome a motion for summary judgment of non-infringement. *TechSearch*, 286 F.3d at 1372 (“[T]he party opposing the motion for summary judgment of noninfringement must point to an evidentiary conflict created on the record, at least by a counter-statement of a fact set forth in detail in an affidavit by a knowledgeable affiant.”). Lastly, although the demonstrative exhibit generally seemed to indicate that the angle of the paddle largely determined the angle of the stack, the Court observed at least one configuration in which pieces of mail did “appear to be 90 degrees.” (March Hearing Tr. at 102.)

On summary judgment, the Court must view all evidence in the light most favorable to the non-movant. Thus, any reasonable ambiguity in the materials must be resolved in favor of Plaintiff. Although the evidence in its favor is quite limited, the Court nevertheless finds that Plaintiff has met its minimal burden to create a genuine issue of material fact on the issue of whether the accused device performs the recited function of “maintain[ing] items of mail as part of the vertical stack.”

## 2. Equivalent Structure

The next step in analyzing whether the AFSM-100 literally meets the “stack maintaining mechanism” limitation in the asserted claims is to “determine whether the accused device uses the same structure, materials, or acts found in the specification, or their equivalents.” *IMS Technology, Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1430 (Fed. Cir. 2000). One method for determining equivalent structures is to examine whether the accused device “performs the function in *substantially* the same way to achieve *substantially* the same result.” *IMS Technology*, 206 F.3d at 1435 (italics added).

As noted above, the structure disclosed in the specification for performing the recited function of “maintaining the items of mail on said horizontal run in a vertical side by side stack” consists of: (1) a paddle mounted so that it is perpendicular to the horizontal run of the feed conveyor belt, which has a corner or projection in contact with the horizontal run, and is configured to be in contact with the last item of mail in the stack so that the stack is sandwiched between the paddle and a singulation station; (2) an attachment arm with offset extensions; and (3) a guide rail.

Defendants argue that the AFSM-100 does not meet the structural requirements of the ‘922 patent for two reasons. First, the paddle in the AFSM-100 is placed at a [ \_\_\_\_\_ ] angle relative to the feed conveyor belt, rather than perpendicular to the horizontal run as described in the specification. Second, Defendants argue that because there is a [ \_\_\_\_\_ ] gap between the end of the horizontal feed conveyor and the singulation station, it is physically impossible for the stack to be “sandwiched between the paddle and the singulation station” as described in the ‘922 patent specification. (D. Mem. at 15.)

Plaintiff generally responds by arguing that Defendants have not established that no reasonable fact finder could find that the accused AFSM-100 has an identical or equivalent structure. Plaintiff further contends that Defendants' non-infringement argument improperly employs a "component-by-component analysis" that "finds no support in law." (P. Mem. at 15.) Defendants' reply brief argues that it was Plaintiff that applied the incorrect legal standard, noting that Plaintiff argued that "in order to [literally] infringe the means-plus-function element, the accused device must perform the claimed function utilizing the disclosed embodiment (as now defined by the Court) or its *functional equivalent*." (P. Mem. at 15 [emphasis in original].)

Each party's criticism of the other's approach is valid. On the one hand, Plaintiff is correct that the Federal Circuit rejected a component-by-component analysis for statutory equivalents in *Odetics Inc. v. Storage Tech. Corp.*, 185 F.3d 1259 (Fed. Cir. 1999). On the other hand, Defendants are correct that Plaintiff's statement regarding infringement by a "functional equivalent" is clearly incorrect. Statutory equivalence in the context of a mean-plus-function claim deals with equivalent structure, not equivalent function. However, as the Federal Circuit explained in *IMS Technology*, cited supra, the context of the invention should be considered when performing a statutory equivalence analysis under section 112, paragraph 6. 206 F.3d at 1436. When the disclosed physical structure is of little importance to the claimed invention, the range of equivalent structures may be more extensive than if the physical characteristics are vital to executing the recited function in the context of the invention. *Id.* at 1437.

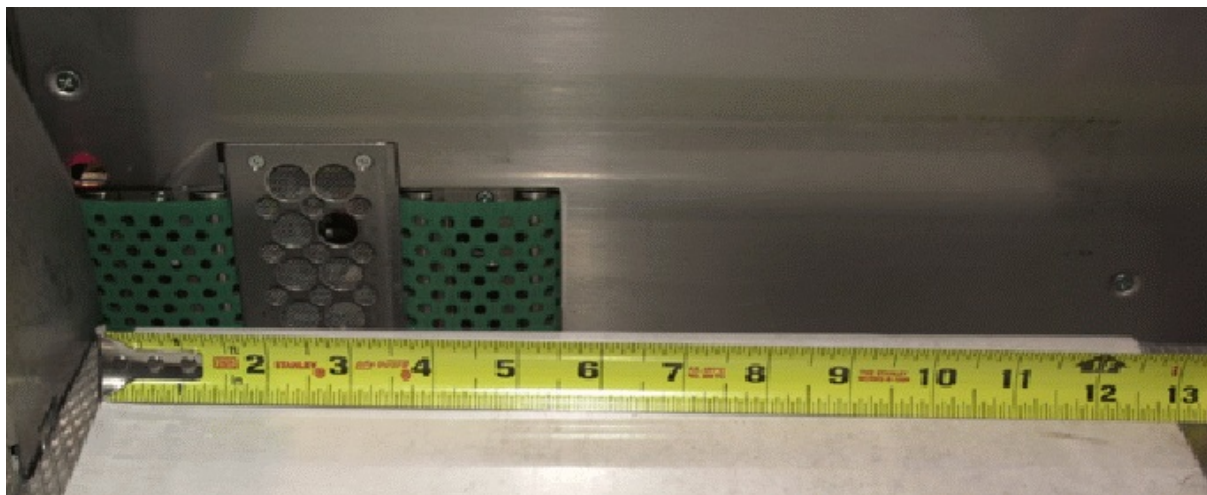
The problem with Defendants' position is that it does not account for the factual nature of the inquiry. Defendants argue that the structure of the accused device is different from the structure disclosed in the '922 patent specification. It is not enough, however, for Defendants to show that the structures are different. A statutory equivalent under section 112, paragraph 6, includes both identical structures and those structures that are insubstantially different. *Ishida Co. v. Taylor*, 221 F.3d 1310, 1318 (Fed. Cir. 2000) ("[An accused device] literally infringes a [a means-plus-function] claim element ... only if it is insubstantially different from the corresponding structure in the patent specification"). Although the structure in the accused AFSM-100 is clearly not identical to the structure disclosed in the '922 patent, in order to prevail on summary judgment, Defendants carry the significant burden of showing that no reasonable finder of fact could conclude that the differences are insubstantial.

Devices covered by the '922 patent perform the recited function of maintaining a vertical stack by sandwiching pieces of mail between a vertical paddle and a singulation station resulting in the stack of mail being moved down the horizontal run by the paddle to the destacker where it is destacked by the initial hold means and transfer means. The accused AFSM-100 maintains a stack (to the extent that it does so) without sandwiching the stack of mail, but rather by supporting it with a paddle which is angled anywhere from [ \_\_\_\_\_ ] off of vertical. Items from the stack of mail fall off of the horizontal run into a trough where a vacuum pulls the item of mail nearest to the destacker to the initial hold means.

Recognizing that the analysis requires only substantial similarity in the way the recited function is performed and its result, the Court concludes that, viewing all factual inferences in Plaintiff's favor, a reasonable fact finder could find structural equivalence between the accused AFSM-100 and the structure disclosed in the '922 patent specification. More specifically, a finder of fact could reasonably conclude that the accused system and the structure disclosed in the patent accomplish basically the same thing utilizing similar techniques: they each move items of mail down the belt so that the destacker can grab each individual item and send it down the line.

B. Does the Transfer Means Extend Juxtaposed Across a Remainder of the Discharge End? (All Claims)

Independent claims 1, 4, and 13 and dependent claims 5 and 9 include a claim element of "transfer means extending juxtaposed across a remainder of said discharge end . . . ." (Markman Order at 19.) In their second argument, Defendants assert that the AFSM-100 does not infringe these claims because "the combination of the initial hold means and the transfer means [in the AFSM-100] extends only five and one-half inches, less than halfway, across the discharge end." (D. Mem. at 20.) To illustrate their argument, Defendants include the following figure in their memorandum:



*Fig. B: (AFSM-100 transport belt extending less than half-way across the horizontal feed belt)*

Implicit in this statement of Defendant's argument is the assumption that the transfer means of the accused device includes only those parts of the perforated belt that are exposed on either side of the hold means. (Part of the perforated belt may be seen in Fig. B at approximately 0-1.75 inches and at 3.75-5.5 inches.) But Plaintiff argues that Defendants improperly limit their description of the transfer means to the portion of the vertically mounted transport belt which actually engages items of mail. According to Plaintiff, "[t]here is no dispute that the transfer means of the accused device includes the belt, vacuum chambers and drive motors" and that

Defendants' own documents confirm this fact. Because the transfer means in the accused device includes the belt, vacuum chambers and drive motors, the "transfer means is juxtaposed to the initial hold means and extends across the rest or the part that is left of the downstream discharge end." (P. Mem. at 17.)

At oral argument, Plaintiff amplified its position, arguing for the first time that the entire destacking assembly, which includes the destacker assembly plate (the metal plate that surrounds the transfer means and the hold means in Fig. B), is also part of the transfer means:

THE COURT: So you're maintaining that transfer means means the entire destacking assembly, is that what you're saying?

MR. TECCE: Yes. Yes, Your Honor. It is a means for effectuating the transfer.

(September Hearing Tr. at 153.) Thus, according to the theory of infringement set forth by Plaintiff during the September Hearing, the destacker assembly plate in the AFSM-100 is part of the transfer means in each of the asserted claims. (See P. App. at A582.) Because the destacker assembly plate along with the exposed portions of the transport belt extends across the remainder of the downstream discharge end (as can be seen in Figure B), Plaintiff asserts that the AFSM-100 infringes each of the asserted claims.

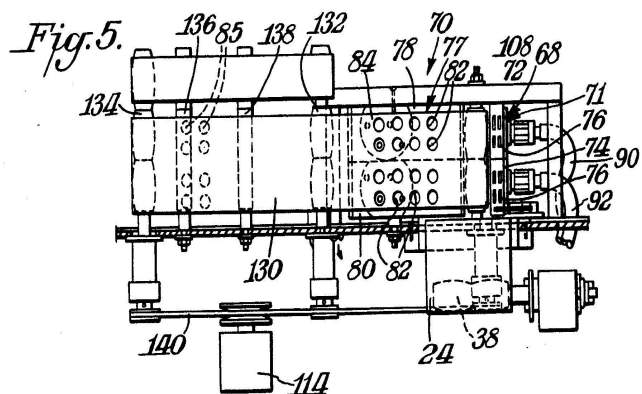
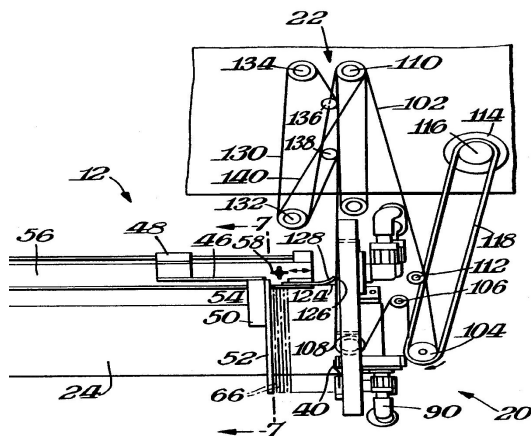
#### 1. Literal Infringement of Claims 1, 4, 5, and 9

The Court will discuss literal infringement of the transfer means in two parts, first with regard to claims 1, 4, 5, and 9, and then with regard to claim 13. The transfer means in claim 13 is a means-plus-function claim limitation, subject to interpretation under 35 U.S.C. § 112, paragraph 6. The "transfer means" as recited in claims 1, 4, 5, and 9 includes structure sufficient to perform its recited function and is thus not a means-plus-function limitation.

In independent claims 1 and 4 (and their dependent claims 5 and 9), the "transfer means" performs its function utilizing the following structure (which is recited in the language of the claims):

said transfer means *including* a second vacuum chamber having a plurality of holes disposed toward said discharge end[,] a vertically mounted belt mounted for movement around said second vacuum chamber . . . .

'922 patent, claims 1 and 4, col. 8, ll. 36-40; col. 9, lines 23-26 (emphasis added). The second vacuum chamber 77 and the vertically mounted belt 102 may be seen in the following illustrations from the '922 patent:



The language of the claims makes clear that the transfer means in claims 1, 4, 5, and 9 includes the “vertically mounted belt.” The Court has held that “the ‘vertically mounted transport belt’ is an endless flexible band mounted . . . [with] its face . . . at an orientation perpendicular to the horizon.” (Markman Order at 25.) Thus, Plaintiff is correct in concluding that the vertically mounted belt as a whole (not just the part exposed from time to time through the destacker assembly plate) is part of the transfer means.

Regarding the destacker assembly plate, the key to Plaintiff’s argument that the assembly plate is part of the transfer means is that, by the language of the claims themselves, the “transfer means” must *include* at least a second vacuum chamber and a vertically mounted belt. Because each of independent claims 1 and 4 uses the open-ended term “including,” the “transfer means” is not limited to only the second vacuum chamber and the vertically mounted belt. It can include additional structure because “comprising” and “including” are open-ended transition terms which cover the structural elements recited plus additional elements. *See Mars, Inc. v. H.J. Heinz Co., L.P.*, 377 F.3d 1369, 1375-76 (Fed. Cir. 2004); *see also* 2 D.Chisum, Patents § 8.06[1] (1992); *but see Spectrum Int’l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1379-80 (Fed. Cir. 1998) (open-ended transition term cannot restore subject matter otherwise excluded from the claim).

So far, the Court has concluded that the transfer means can include the vertically mounted belt as a whole and the destacker assembly plate, but before arriving at a final conclusion, the Court must examine two other limitations on the transfer means: First, does the transfer means extend *across* a remainder of the downstream discharge end? Second, if the transfer means extends across the remainder of the downstream discharge end, does it do so while juxtaposed the remainder of the downstream discharge end?

- a. Does the Transfer Means Extend “Juxtaposed Across” a “Remainder” of the Downstream Discharge End?

Defendants allege that the “transfer means” claim limitation is not literally found in the accused device because the combination of the initial hold means and transfer means extends for only five inches along the downstream discharge end as shown in Figure B above. Implicit in this argument is Defendants’ apparent belief that the transfer means includes only those portions of the vertically disposed belt that specifically act on an item of mail. However, the Court has concluded that the transfer means is not as limited as Defendants allege. As a result, Defendants’ argument that the transfer means extends [ \_\_\_\_\_ ] across the downstream discharge end is clearly incorrect because the transfer means includes the entire transport belt.

However, Defendants’ overly limiting interpretation of the Markman Order does not vindicate Plaintiff’s position. Plaintiff admits that the portions of the vertically mounted belt located behind the destacker assembly plate in the AFSM-100 extend only [ \_\_\_\_\_ ] across the downstream discharge end. (P. App. at A582, A587.) Plaintiff further admits that the downstream discharge end in the accused AFSM-100 is at least 12 inches across. (P. App. at A581.) Thus, even accepting that the transfer means includes the entire vertically mounted transport belt, it only extends across [ \_\_\_\_ ] of the 12 inches of the remainder of the discharge end.

But the destacker assembly plate clearly extends over the entire remainder of the discharge end. Nevertheless, Plaintiff’s argument that the destacker assembly plate can be considered part of the transfer means in the accused AFSM-100 ultimately fails for at least two reasons. First, this argument was not disclosed in Plaintiff’s claim chart, nor was it disclosed in its briefs prior to oral argument. Therefore, it is deemed waived. *Cubic Defense Sys., Inc. v. United States*, 45 Fed. Cl. 450 (1999) (precluding arguments raised for the first time at oral argument).

Second, even if properly before the Court, the argument is substantively unpersuasive. The function performed by the transfer means is to “remov[e] the downstream-most item of mail away from said initial hold means and conveying the downstream-most item of mail to said delivery station.” ‘922 Patent, col 8, ll. 28-30; col. 9, ll. 17-19; col. 11, ll. 4-7. At oral argument, Plaintiff alleged that the destacker assembly plate helps perform the recited function because “this plate does assist the mail in making sure that it’s vertical and properly aligned with these units . . . .” (September Hearing Tr. at 152.) As evidence that the destacker assembly plate performs the recited function, Plaintiff pointed to various documents produced by Defendants, the most pertinent of which was a portion of the Student Training Manual for the AFSM-100:

As the mail slides into the trough, three vacuum chambers pull the first mailpiece up against a vertical mail guide plate. This action, with the feeder belt, aligns the mailpiece with the pinch wheels.



The pinch wheels operate intermittently to advance the mailpiece into the tilter.

(P. App. at A661.) Plaintiff also pointed to a “Theory of Operation” document for the AFSM-100 which states that “[t]he first mailpiece of the stack is flattened against the destacker plate by a low vacuum (the air intake for M2). Two individually switched vacuum zones, on either side of the suction area, capture the mailpiece and hold it against the perforated belt, which drives it to the pincher.” (P. App. at A641.) Plaintiff argued that these documents demonstrate that the destacker assembly plate is used to align items of mail with the pinch wheels so that they may be transferred to the delivery station, and as such raise a genuine issue of fact sufficient to defeat summary judgment.

The Court disagrees that these statements are sufficient to raise a genuine issue of material fact. The transfer means performs the recited function of “removing the downstream-most item of mail away from said initial hold means and conveying the downstream-most item of mail to said delivery station.” The destacker assembly plate in the AFSM-100 does not remove anything. The act of removing the item of mail in the AFSM-100 is clearly performed by the vacuum chambers and the movement of the transport belt. These two components extend across only approximately 10 out of the 12 inches of the downstream discharge end. Thus, even if the Court were to consider Plaintiff’s untimely argument, the argument would fail because the destacker assembly plate is not part of the transfer means in the AFSM-100, and the remaining components fall at least two inches short of extending across the remainder of the downstream discharge end of the horizontal run. Therefore, as a matter of law, claims 1, 4, 5, and 9 cannot be literally infringed by the accused AFSM-100.

## 2. Literal Infringement of Claim 13

As the “transfer means” in claim 13 is a means-plus-function claim limitation, the above analysis regarding claims 1, 4, 5, and 9 does not apply to claim 13. Because a means-plus-function limitation does not recite sufficient structure to perform the function in the claim itself, the infringement analysis requires a comparison of the accused device to the corresponding structure described in the specification. The “transfer means” in claim 13 has been construed by the Court as a means-plus-function claim limitation which performs its recited function utilizing the following structures and acts from the specification:

(1) a vacuum chamber having a plurality of holes in its face; (2) a vertically mounted transport belt having a plurality of holes along a portion (less than the entirety) of its length and configured to rotate around the vacuum chamber; and (3) the holes in the transport belt and the holes in the vacuum chamber configured to cyclically register so that vacuum pressure is periodically applied to the downstream-most item of mail.

(Markman Order at 31.) The question that the Court must answer with respect to this claim is whether the AFSM-100 includes the structure described above (or an equivalent thereof), 35 U.S.C. § 112, paragraph 6, and whether that structure meets the locational requirement that it both extend across a remainder of discharge end, and that it do so while juxtaposed the discharge end. As has been stated above, the Court agrees with Plaintiff that “the transfer means of the accused device includes the belt, vacuum chambers and drive motors.” (P. Mem. at 17.) However, Defendants contend that even if the Court accepts Plaintiff’s argument regarding the corresponding structure of the transfer means, literal infringement of claim 13 is not possible because the only portion of the transfer means that is juxtaposed across the discharge end is the exposed portion of the transport belt. All remaining portions of the alleged transfer means are set back away from the downstream discharge end.

Defendants’ argument is the more persuasive in this instance. As discussed above, the destacker assembly plate in the AFSM-100 cannot be considered part of the transfer means because it does not perform the function of removing the downstream-most item of mail away from the initial hold means and conveying it to the delivery station. Plaintiff’s own photographs demonstrate that the only portion of the transport belt that is juxtaposed (i.e., close together and side by side) the downstream discharge end is the portion that is positioned closest to the downstream end of the horizontal feed belt. (See P. App. at A582 and A583.) The photos clearly show that as the vertical belt in the AFSM-100 moves across the remainder of the downstream discharge end, it runs away from the downstream discharge end and is eventually positioned several inches away from it. Even if the Court considers the motor, pulleys, and other items alleged by Plaintiff to be part of the transport means, as Defendants correctly point out, each of these items is separated from the downstream discharge end by the destacker assembly plate, which as noted above, does not perform the function of *removing* mail from the initial hold means. The considerable distance and physical separation between the portions of the belt behind the destacker assembly plate makes it impossible for the transfer means to be “side by side” and “close together” with the downstream discharge end, as required by the Court’s construction of the term “juxtaposed.” Because the transfer means in claim 13 cannot be juxtaposed the *entire* downstream discharge end, the Court holds that no reasonable finder of fact could conclude that the accused AFSM-100 literally infringes claim 13.

### 3. Doctrine of Equivalents

Defendants also contend that as a matter of law, the accused AFSM-100 cannot infringe the ‘922 patent under the doctrine of equivalents. Defendants set forth two legal arguments in support of their position. First, they argue that under the doctrine of argument-based prosecution history estoppel, Plaintiff is barred from asserting the doctrine of equivalents as to the limitation of a transfer means extending juxtaposed across a remainder of the discharge end because it relied on this limitation to distinguish prior art during prosecution of the ‘922 patent. Second, relying on the doctrine of vitiation, Defendants argue that even if prosecution history estoppel does not apply, the doctrine of equivalents cannot be asserted as to the ‘remainder’ limitation because doing so would effectively erase the limitation from the claim.

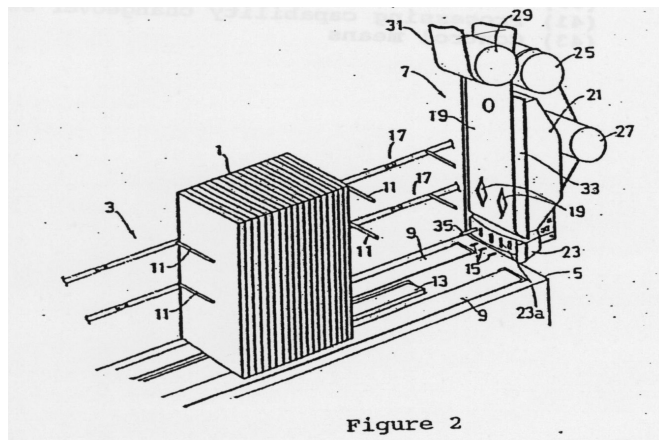
a. Argument-based Prosecution History Estoppel

Under argument-based prosecution history estoppel, the Court must examine all statements, amendments, and arguments made to the examiner together to determine whether subject matter has been surrendered. *See Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999). Application of argument-based prosecution history estoppel requires a “clear and unmistakable” surrender of the equivalent asserted by the patentee. *See Litton Sys. v. Honeywell, Inc.*, 140 F.3d 1449, 1458 (Fed. Cir. 1998) (requiring a “clear and unmistakable surrender” in order for argument-based estoppel to apply).

Defendants argue that summary judgment should be granted because Plaintiff relied on the “remainder” language to distinguish its claims from a prior art reference, thereby precluding it from reclaiming surrendered subject matter under argument-based prosecution history estoppel. During prosecution of the ‘922 patent, an office action was issued on February 12, 1993, rejecting application claims 1-6 and 10-18. (P. App. at A431.) As originally filed, all of the claims in the patent application were dependent on claim 1, which included the “remainder” limitation at issue. (See P. App. at A410.) The rejection of claim 1 was based on Japanese Kokai Patent Application No. Sho 63[1988]-71037, referred to during prosecution as the “Takeda reference” (because the named inventor was Kazuo Takeda). In its May 10, 1993 response to the February 12, 1993 office action, Plaintiff distinguished the Takeda reference (of which Figure 2 is shown below):

If the main chamber and subchamber of Takeda are interpreted by the Examiner as corresponding to the initial hold means and transfer means of Claim 1, herein, then the main chamber and subchamber do not structurally correspond nor function in the same manner as the initial hold means and transfer means of Claim 1. For example, the subchamber 23 is disposed substantially across the entire horizontal run of the belts . . . and the main chamber 21 is disposed above and not juxtaposed the horizontal run of the conveyor. In contrast, claim 1 defines the initial hold means as extending only partially across the discharge end of the conveyor and the transfer means extends across the remainder of the discharge end.

Moreover, the chambers 21 and 23 of Takeda are not vertically disposed in a side by side relationship as defined in claim 1, but rather in a top and bottom relationship.



(P. App. at A445, A559.) In view of the above statement made before the U.S. Patent and Trademark Office to secure the '922 patent, the relevant question is whether Plaintiff "clearly and unmistakably" surrendered coverage of a system like the AFSM-100 in which the combination of the initial hold means and transfer means extend only partially juxtaposed across the remainder of the discharge end.

If a statement made during prosecution is amenable for "multiple reasonable interpretations," it cannot be considered a "clear and unmistakable surrender" of subject matter. *Cordis Corp. v. Medtronic AVE*, 339 F.3d 1352, 1359 (Fed. Cir. 2003). It is indisputable that Tritex clearly and unmistakably surrendered devices containing an initial hold means extending across the entire length of the horizontal run with a transfer means positioned immediately above the initial hold means. However, that particular surrender of subject matter does not cover the equivalent that Plaintiff wishes to recapture (transfer means plus initial hold means extending less than the entire length of the horizontal run).

Viewing the statements in the prosecution history as a whole, at least two reasonable interpretations are discernable therein. One interpretation suggests that Plaintiff's statement that "[i]n contrast, Claim 1 defines the initial hold means as extending only partially across the discharge end of the conveyor and the transfer means extends across the remainder of the discharge end" confines the scope of claim 1 to devices in which the initial hold means and transfer means extend across the entire horizontal belt. This interpretation clearly supports Defendants' argument for a broad disclaimer. However, these statements can also be reasonably interpreted as simply stating that Takeda did not render the claim unpatentable because the component alleged to be the initial hold means extended across the entire horizontal run, while the component alleged to be the transfer means was not juxtaposed the discharge end because it was situated above the end of the horizontal run. Thus, it is reasonable to conclude that Plaintiff's statements collectively amount to a disclaimer of only two specific configurations: (1) a system with the transfer means and initial hold means in a top and bottom relationship, or (2) a

system with either the initial hold means or the transfer means extending the entire length of the downstream discharge end of the horizontal run.<sup>8</sup> Neither of these configurations are the specific configuration found in the accused AFSM-100. Thus, the Court cannot conclude that argument-based prosecution history estoppel should apply in this instance.

b. Vitiation of Limitation

Under the “all-limitations” rule, a patentee cannot assert a theory of equivalents that would entirely vitiate a particular claim element. *Sage v. Devon Indus., Inc.*, 126 F.3d 1420, 1429 (Fed. Cir. 1997). Defendants argue that Plaintiff’s theory of equivalents as to the “remainder” limitation violates the “all-limitations” rule because it would effectively erase that limitation from the claim. (D. Mem. at 22.) In that vein, Defendants point to *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091 (Fed. Cir. 2000), where the court held that a claim limitation cannot be equivalent to its diametric opposite. Defendants contend that to construe “less than a remainder” to be the equivalent of “a remainder” would effectively read that limitation out of the claims.

The Federal Circuit has taken a strict approach to similar issues regarding the vitiation of claim elements. For example, it has held that an applicant’s use of the term “majority” was “not entitled to a scope of equivalents covering a minority” even where the “minority” at issue was 47.8%. *See Moore U.S.A., Inc.*, 229 F.3d at 1106; *see also Searfoss v. Pioneer Consol. Corp.*, 374 F.3d 1142, 1151 (Fed. Cir. 2004) (rejecting argument that ‘indirect connection’ constitutes an equivalent of ‘connection’ because it would completely vitiate the claim element).

Plaintiff did not specifically address vitiation of claim elements in its responding brief. The Court feels that *Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc.*, 206 F.3d 1408 (Fed. Cir. 2000) (“*Zodiac*”) is very helpful in understanding the vitiation of claim elements concept. The Court came across *Zodiac* in the course of its own research, and, at oral argument, the Court asked the parties to account for this decision.<sup>9</sup> *Zodiac* involved a patent for a vacuum cleaning system for swimming pools. The claims at issue included a limitation that a “stop for preventing upward flexing of [a] peripheral edge” be located “substantially inward of the peripheral edge.”

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<sup>8</sup> Neither of the excluded configurations is one that Plaintiff is attempting to recapture through the doctrine of equivalents. Although there is language in the Markman Order indicating that arguments made in support of patentability during prosecution were clear and unmistakable, that discussion in the Markman Order dealt with the literal scope of the term “a remainder.” (Markman Order at 21-22.) There, Plaintiff alleged that “a remainder” was not synonymous with “the remainder.” However, the Court found that the prosecution history was clear and unmistakable that the actual meaning of “a remainder” was “something that is left over after other parts have been taken away; the rest.” Thus, the Markman Order did not deal with the specific issue of whether an equivalent in which the transfer means extends across less than a remainder of the discharge end had in fact been surrendered during prosecution.

<sup>9</sup> The parties did not cite this case in their initial briefs.

*Id.* at 1411. The accused device was similar to this claimed feature except that its stop extended to the peripheral edge of the device. The patentee alleged that the accused device infringed this claim limitation under the doctrine of equivalents. The court disagreed, holding that “it defies common usage to suggest that a stop which is ‘substantially inward’ of an edge could at the same time extend at least to that same edge.” *Id.* at 1414. In specifically addressing the doctrine of equivalents issue, the court held that “no reasonable jury could find that a stop which extends to the peripheral edge of a disk is equivalent to one that is ‘substantially inward’ of the very same disk.” *Id.* Because the parties had not previously addressed *Zodiac*, the Court offered the parties an opportunity to address this issue in supplemental briefs filed on April 1, 2005.

In its supplemental brief, Plaintiff argues that *Zodiac* is not applicable to the facts of this case. Specifically, Plaintiff contends that the court limited the scope of the asserted claims based upon disclaimers made by the patentee in the prosecution history; that is, the Federal Circuit did not base its holding on the “all-limitations” rule. *Zodiac*, 206 F.3d at 1414. This Court disagrees. The Federal Circuit’s treatment of the prosecution history in *Zodiac* was merely to confirm that which it had already determined earlier in the opinion—that it “defies common usage to suggest that a stop which is ‘substantially inward’ of an edge could at the same time extend at least to that same edge.” *Id.* at 1414. Tellingly, the court wrote that “the prosecution history confirms this interpretation,” a clear indication that the disclaimers found in the prosecution history served only to buttress the court’s conclusion regarding the claim language.

As was discussed above, the transfer means in the accused device includes the entire transport belt because it performs the function of removing mail items from the initial hold means. However, the combination of the transport belt and the vacuum chamber extends only ten out of twelve inches across the discharge end—clearly not across “a remainder” of the discharge end. As was the case in *Zodiac*, *Sage Products*, and *Moore*, allowing the application of the doctrine of equivalents to this claim limitation would serve to “effectively eliminate that element in its entirety.” See *Warner-Jenkinson Co. V. Hilton-Davis Chem. Co.*, 520 U.S. 17, 29 (1997). Just as “substantially inward” could not be an equivalent of “edge” in *Zodiac*, and 47% could not be an equivalent of “majority” in *Moore*, “less than the remainder” cannot be equivalent to “a remainder” in this instance.

Because the accused AFSM-100 lacks a “transfer means . . . extending juxtaposed across a remainder of said discharge end,” the Court finds that as a matter of law, no reasonable fact finder could conclude that any of the asserted claims could be found infringed literally or under the doctrine of equivalents. However, for sake of completeness, the Court will address each of the remaining arguments in turn.

### C. Downstream-Most Item of Mail (All Claims)

Defendants’ third non-infringement argument focuses on the requirement, in each of the asserted claims, that an initial hold means and transfer means act on the “downstream-most item of mail.” (Markman Order at 17.) The Court has defined the downstream-most item of mail as

“a piece of mail in the stack *on the horizontal run* of the feed conveyor belt that is closest to the initial hold means and discharge end of the run.” (Markman Order at 18-19 [emphasis added].)

# 1. Literal Infringement

Defendants make the relatively simple argument that the initial hold and transfer means can not satisfy the limitations of the ‘922 patent because they collectively act on the last item of mail in the trough, not the last item of mail on the stack as required by the claims. (D. Mem. at 23.) Plaintiff responds by arguing that Defendants’ position misconstrues the Markman Order “to require that the actual piece of mail be on the horizontal run of the feed conveyor belt.” (P. Mem. at 18.) Plaintiff argues that the claims only require “that the stack be on the horizontal upper run. This does not require that the stack be ‘completely’ on, ‘fully’ on, or ‘totally’ on the horizontal upper run . . . .” (P. Mem. at 18.)

The Markman Order defined the downstream-most item of mail as “a piece of mail in the stack *on* the horizontal run of the feed conveyor belt that is closest to the initial hold means and discharge end of the run [emphasis added].” (Markman Order at 18-19.) The essence of the parties’ disagreement is whether a mail item must be on the horizontal run in order to be considered part of the vertical stack. Plaintiff seems to argue that the phrase “on the horizontal run” refers to the stack, i.e., that the definition, properly interpreted, means “a piece of mail in the stack, the stack being partially on the horizontal run of the feed conveyor belt.” Defendants’ position seems to regard the phrase “on the horizontal run” as referring to the item of mail itself, i.e., that the Court’s definition means “a piece of mail both in the stack and on the horizontal run of the feed conveyor belt.”

Contrary to Plaintiff’s assertions, Defendants have not misconstrued the Markman Order. The Court defined the phrase “side by side stack” as “an orderly pile of items of mail arranged next to each other.” (Markman Order at 13, n. 7.) Although the parties disputed the meaning of the word “on” in their joint claim construction statement, they did not brief this issue during claim construction proceedings. As a result, the Court did not define the word in the Markman Order. However, adopting either proposed definition, it becomes clear that Defendants’ interpretation of the Markman Order should clearly prevail. In the Joint Claim Construction Statement filed by the parties on May 1, 2003, Plaintiff took the position that “on” should be defined as “[i]n contact with *or* supported by the surface of.” (Joint Cl. Const. Stat. at 3.) Defendants took the position that “on” meant “[i]n contact with *and* supported by the surface of.” *Id.* Either proposed definition requires at a minimum that there be contact between the stack and the horizontal run. Thus, items in the accused device that have fallen into the trough, cannot satisfy the definition of “a piece of mail in the stack *on the horizontal run*” because they are not touching the horizontal run. The language of the asserted claims confirms this interpretation. Each of claims 1, 4, and 13 recite that the feeder system includes “a stack maintaining mechanism . . . for maintaining the items of mail on said horizontal run in a vertical side by side stack . . . .” Col. 8, ll. 21-23; Col. 9, ll. 10-12; Col. 10, ll. 63-65. Clearly, the vertical side by side stack consists of items that are on the horizontal run.

Because the alleged initial hold means in the accused AFSM-100 acts only on mail that has fallen off of the horizontal feed belt and into the trough, and because the downstream-most item of mail must be on the horizontal feed belt, no reasonable finder of fact could conclude that the AFSM-100 literally includes an “initial hold means” and “transfer means” that act on a “downstream-most item of mail” as required by each of the asserted claims.

## 2. Doctrine of Equivalents

Defendants also seek summary judgment that argument-based prosecution history estoppel bars Plaintiff from claiming that the accused device contains an equivalent to an “initial hold means” that acts on a “downstream-most item of mail.” (D. Mem. at 24-25.) During prosecution, the claims were rejected over the Takeda reference, which disclosed a system that separated mail from the stack by using vibration. Plaintiff distinguished the Takeda reference by stating that “in Takeda, however, there is no vertically disposed initial hold means for separating the downstream most item of mail from the remainder of the stack.” (P. App. at A444.) Defendants assert that with this language, Titek “deliberately disclaimed coverage of any machine that used a device other than the initial hold means to separate the item of mail being acted upon by the initial hold means [from the vertical stack].” (D. Mem. at 24.)

The scope of disclaimer created by Plaintiff’s statements during prosecution is not as broad as Defendants suggest. As discussed above, the application of prosecution history estoppel requires a “clear and unmistakable” surrender of the equivalent asserted by the patentee. *See Litton Sys.*, 140 F.3d at 1458. The statement that “[Takeda lacks a] vertically disposed initial hold means for separating the downstream most item of mail” is simply another way of saying that the invention as claimed does not cover the device disclosed in Takeda. The Takeda reference taught a system in which mail was separated from the stack using a vibrating lever. Thus, the “clear and unmistakable” surrender of coverage that was created by Plaintiff’s statements is limited to those machines which use vibration to separate mail from the vertical stack. The accused device does not operate in that manner, as it uses both a two-inch trough and vacuum pressure to achieve separation. Because Defendants cannot show a clear and unmistakable surrender of subject matter that encompasses this structure in the accused device, summary judgment is inappropriate as to the “downstream-most item of mail” claim element.

### D. Transfer Means in Claim 13—Statutory Equivalents

As noted previously, the “transfer means” in claim 13 is a means-plus-function claim limitation. (Markman Order at 30.) Literal infringement of a means-plus-function claim limitation requires that the accused device perform the exact function recited in the claim using an identical or equivalent structure. *Odetics, Inc.*, 185 F.3d at 1267. Because the proper interpretation of a means-plus-function claim limitation is defined by a statute (35 U.S.C. § 112, paragraph 6), an equivalent structure in this sense is often referred to as a “statutory equivalent.” Defendants’ fourth non-infringement argument relates to the structure of the transfer means in claim 13. The transfer means performs the recited function of “removing the downstream-most item of mail to said delivery station.” (Markman Order at 30.) In construing the term “transfer



means” as a means-plus-function claim limitation, the Court found that the transfer means must include:

(1) a vacuum chamber having a plurality of holes in its face; (2) a vertically mounted transport belt having a plurality of holes along a portion (less than the entirety) of its length and configured to rotate around the vacuum chamber; and (3) the holes in the transport belt and the holes in the vacuum chamber configured to cyclically register so that vacuum pressure is periodically applied to the downstream-most item of mail.

(Markman Order at 31 [footnote omitted].)

#### 1. Literal Infringement

Defendants argue that the AFSM-100 does not infringe this claim limitation because it does not perform the recited function of “removing the downstream-most item of mail” due to the presence of the trough in the accused AFSM-100 device.<sup>10</sup> Although Defendants further argue that this limitation is not found literally in the accused device because the AFSM-100 lacks a structure identical or equivalent to that described in the specification and required by the Markman Order, the Court need not address this issue. The Court finds that the accused device cannot literally infringe the transfer means of claim 13 because it does not perform the recited function of “removing the downstream-most item of mail to said delivery station” for the same reasons as discussed in section V.C.1, *supra*. Because identity of function is a prerequisite to infringement of a means-plus-function claim limitation, claim 13 cannot be literally infringed by the accused AFSM-100.

#### 2. Doctrine of Equivalents

Infringement of a means-plus-function claim may also be found under the doctrine of equivalents. Whereas literal infringement of a means-plus-function claim limitation requires that the accused device perform an identical function as recited in the claim limitation, the doctrine of equivalents permits infringement to be found where the accused device performs only substantially the same function. *See Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1320-21 (Fed. Cir. 1999). The remaining factors for infringement of a means-plus-function limitation do not change. The substantially similar function in the accused device must be performed by an identical or equivalent structure described in the specification. To determine whether the structure in the accused device is the structural equivalent to the structure described in the patent specification, the Court may apply the “way/result” test. That is, the structural equivalence analysis calls for a determination of whether the “way” the allegedly equivalent structure performs the claimed function, and the “result” of that performance are substantially different

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<sup>10</sup> This argument was addressed by the Court in section V.C *supra*.

from the “way” the function is performed by the “corresponding structure, acts, or materials described in the specification” or its “result.” *Odetics, Inc.*, 185 F.3d at 1267.

As an initial matter, the Court must address an issue that it raised *sua sponte* during oral argument on March 24, 2005. During the hearing, the Court noted that it was unclear whether Defendants had actually argued the doctrine of equivalents as to this particular claim limitation. The Court noted that Section VI of Defendants’ brief seemed only to include arguments challenging the structural equivalence of the accused device and that it only asserted that “the AFSM-100 does not literally infringe the claim because it does not include the disclosed structure . . . .” (D. Mot. at 26.) Although Plaintiff was willing to do its best to argue the issue of infringement of the transfer means of claim 13 under the doctrine of equivalents, it objected to the Court permitting Defendants’ to present that particular doctrine of equivalents argument. (March Hearing Tr. at 14.)

After reviewing the briefs and in view of the statements made by counsel during oral argument, the Court finds that the issue of the doctrine of equivalents as to the transfer means of claim 13 was sufficiently raised as to the functional identity aspect of the analysis, but not as to the structural equivalents aspect of the analysis. As a result, Defendants cannot rely on a lack of equivalent structure as a basis for non-infringement under the doctrine of equivalents because Plaintiff was not adequately placed on notice that this was at issue. Before the Court can grant summary judgment, it must be absolutely certain that Plaintiff was given adequate notice and a full opportunity to respond to the arguments set forth in the movant’s brief. In this case, there was ambiguity in their brief, and the ambiguity must be resolved against Defendants.

In any event, the issue is mostly moot, because Defendants’ arguments regarding a lack of equivalent structure would not prevail. As noted above, the Court will apply a “way/result” test to determine equivalent structures in a means-plus-function claim. Plaintiff concedes that the structures are not identical because in the AFSM-100, “the operation of a valve(s), and not the placement of intermittent holes in the transport belt, determines whether vacuum pressure is applied to a flat through the transport belt.” (P. Resp. to D. Prop. Statement of Uncontroverted Fact, Fact No. 20.) Lacking identical structure, the question then becomes, do these two structures operate in a substantially similar way to achieve a substantially similar result?

Both the AFSM-100 and the structure disclosed in the ‘922 patent achieve the result of vacuum pressure being applied to an item of mail from behind the transfer belt so that the belt can move the item of mail downstream. Thus, it seems clear that a reasonable finder of fact could conclude that the two structures achieve substantially similar results. Similarly, a rational finder of fact could conclude that this result is achieved in a substantially similar way. Both the AFSM-100 and the structure described in the ‘922 patent utilize the application of intermittent vacuum pressure to a mail item to help it adhere to the transfer belt while it is moved away from the initial hold means. Although the intermittent pressure in the AFSM-100 is caused by a valve, while the intermittent pressure in the ‘922 patent is achieved using intermittent holes in the belt, the essence is the same – vacuum suction pressure is applied to an item of mail to move it downstream by holding it against the transfer belt.

Plaintiff carries a minimal burden to defeat summary judgment on this issue. Plaintiff need only demonstrate that a reasonable finder of fact could conclude that the structural components in the AFSM-100 which perform an identical or equivalent function of the transfer means in claim 13 are equivalent to the structure described in the '922 patent specification. The Court finds that Plaintiff has met its minimal burden, and as a result, summary judgment is denied with respect to the transfer means limitation in claim 13.

E. "Switches" Limitation in Claim 13

Defendants' final non-infringement argument is that the AFSM-100 lacks switches "located . . . in the path of movement of said paddle" that sense both an item of mail and the paddle as required by claim 13. Because Plaintiff concedes that this limitation is not literally infringed, the Court must only determine whether it is infringed under the doctrine of equivalents.

Defendants argue that the doctrine of equivalents is not available to Plaintiff based on amendment-based prosecution history estoppel. They argue that in distinguishing the Kosner and Svyatsky references during prosecution, Plaintiff limited the claim to covering systems that literally included switches located in the path of movement of the paddle. Defendants also argue that applying the doctrine of equivalents to this element would vitiate the claim language by entirely reading the limitation out of the claim.

1. Prosecution History Estoppel—Legal Standard

In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003) (*en banc*), the Federal Circuit held on remand from the Supreme Court that "[q]uestions relating to the application and scope of prosecution history estoppel . . . fall within the exclusive province of the court. Accordingly, the determinations concerning whether the presumption of surrender has arisen and whether it has been rebutted are questions of law for the court, not a jury, to decide." *Festo Corp.*, 344 F.3d at 1368. The court also outlined how trial courts should address issues of amendment-based estoppel in view of the Supreme Court's opinion.

First, the Court must determine whether the amendment at issue was a "narrowing amendment." If the amendment did not narrow the scope of the claim, then prosecution history estoppel does not apply. *Festo*, 344 F.3d at 1366. If the amendment was a narrowing amendment, then the Court must then determine whether the reason for that amendment was a substantial one relating to patentability. *Id.* If the prosecution history reveals no reason for the narrowing amendment, the Court, under *Warner-Jenkinson*, will presume that the amendment was substantially related to patentability. Although this presumption is a rebuttable one, only evidence in the prosecution history may be used to rebut it. *Id.* at 1367. (This presumption is known as the "Warner-Jenkinson presumption.")

Next, if the patentee is unable to rebut the *Warner-Jenkinson* presumption, then the inquiry turns to the question of the scope of subject matter surrendered by the narrowing

amendment. This was the issue addressed by the Supreme Court in *Festo v. Shoketsu Kinzoku Kogyo Kabushiki*, 535 U.S. 722 (2002) (“*Festo VIII*”). There the Court held that a narrowing amendment related to patentability (e.g., one that fails to overcome the *Warner-Jenkinson* presumption) imposes a presumption that the patentee surrendered *all territory* between the original claim limitation and the amended claim limitation. *Festo VIII*, 535 U.S. at 740. This presumption is commonly referred to as a “*Festo* presumption.” The *Festo* presumption can be overcome by the patentee with a demonstration that (1) “the alleged equivalent would have been unforeseeable at the time ... the narrowing amendment” was made; (2) “the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent” at issue; or (3) “there was ‘some other reason’ suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent.” *Id.* at 738-741. On remand from the Supreme Court, the Federal Circuit held that although the first factor is an objective inquiry that may require expert testimony, the second and third factors should generally be decided based solely on the intrinsic record.

## 2. *Warner-Jenkinson* Presumption: Was There a Narrowing Amendment?

Defendants argue that Plaintiff cannot assert the doctrine of equivalents because it amended claim 13 during prosecution in order to overcome rejections based on the prior art Kosner and Svyatsky references. The Kosner reference disclosed a mail sorting device with an optical sensor which controlled the operation of the feed conveyor belt by sensing items of mail. The Svyatsky reference disclosed a mail sorting device in which a microswitch was contacted by a pivoting plate, causing the transport belt to stop, in order to relieve excessive pressure build up in the system.

In its original form, claim 13 required only that “a microswitch [be] contacted by an item of mail” and that “said paddle contacts said microswitch.” (P. App. at A410.) In an amendment responding to an office action dated July 1, 1993, Plaintiff amended the claim to require that the “switch senses an item of mail” and that “said paddle is sensed by said switch.” (P. App. at A523-24.) The amendment also added language requiring that the switch be “located for sensing said paddle in said path of movement of said paddle.” (P. App. at A523.)

Although Defendants seem to assume that this amendment narrowed the scope of the claim, it is not clear that this is the case.<sup>11</sup> The Court first notes that replacing “microswitch” with “switch” actually appears to broaden the scope of the limitation. This broadening effect is confirmed by examining claim 14, which covers the “system of claim 13, wherein said switch is a microswitch . . . .” See ‘922 patent, Col. 11, ll. 20-21. The dependency of this claim provides a clear indication that a microswitch is a type of switch. Thus, by amending the claim to cover a switch rather than a microswitch, Plaintiff actually broadened the scope of the claim.

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<sup>11</sup> Defendants’ brief does not address the question of whether the amendments made to claim 13 were in fact narrowing amendments.

Similarly, the addition of language requiring that the switch be in the path of movement of the paddle did not narrow the claim scope. As originally filed, the claim required that both items of mail and the paddle contact the switch. (See P. App. at A482 [“said microswitch is contacted by an item of mail . . . [and] said paddle contacts said microswitch”]). In a device covered by claim 13 of the ‘922 patent, the paddle pushes the stack of mail down the horizontal feed belt so that the first item in the stack contacts the switch when it reaches the downstream discharge end. When the item of mail contacts the switch, it causes the movement of the feed belt to halt temporarily so that items of mail are not pushed into the singulation station too quickly. As the paddle moves closer to the downstream discharge end, the stack becomes smaller, because more and more items have been removed from the stack. When the last item in the stack has been removed from the stack, the paddle continues moving forward into the microswitch, causing the horizontal feed belt to come to a complete stop. Obviously, in order for the paddle to move forward into the microswitch, the microswitch must be in the path of movement of the paddle. Although the original claim did not expressly require that the microswitch be located in the path of movement of the paddle, this limitation was implicit in the original claim language because the paddle could not move into the microswitch unless the microswitch was in its path of movement of the paddle. Thus, the addition of explicit language requiring that the switch be in the path of movement of the paddle did not narrow the scope of the claim, but rather made explicit what was already implicit in the previous version.

Ordinarily, concluding that these amendments did not narrow the scope of the claims would end the Court’s inquiry because the presence of a narrowing amendment is prerequisite to a finding of prosecution history estoppel. However, shortly after Defendants filed their reply brief, the Federal Circuit held that rewriting a dependent claim into independent form along with cancelling the original independent claim is a narrowing amendment that gives rise to a presumption of estoppel as to those limitations added in the dependent claim. *Honeywell Intern. Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1142 (Fed. Cir. 2004) (*en banc*). Specifically, the court wrote:

Thus, the fact that the scope of the rewritten claim has remained unchanged will not preclude the application of prosecution history estoppel if, by canceling the original independent claim and rewriting the dependent claims into independent form, the scope of subject matter claimed in the independent claim has been narrowed to secure the patent.

*Id.* Although the above-cited language deals specifically with dependent claims, claim 13 was not originally filed as a dependent claim, but rather was added in an amendment, and as a result was allowed without a narrowing amendment. (See P. App. at A481.) Even so, the claim is still subject to a presumption of prosecution history estoppel because the Federal Circuit has also held that prosecution history estoppel applies to a claim containing a limitation that was allowed as originally filed, based on the addition of the same limitation in a separate claim. *Deering Precision Instruments, LLC v. Vector Dist. Sys., Inc.*, 347 F.3d 1314, 1326 (Fed. Cir. 2003)

(citing *Builders Concrete, Inc. v. Bremerton Concrete Products Co.*, 757 F.2d 255, 260 (Fed. Cir. 1985)).

During prosecution of the '922 patent, Plaintiff originally filed the application with 23 claims. The broadest independent claim was application claim 1. (P. App. at A410.) Application claim 1 was rejected in a first office action. (P. App. at A432.) Responding to the first office action, Plaintiff amended the claim to add limitations pertaining to the verticality of the transfer means and initial hold means. (P. App. at A440.) These amendments were not sufficient to achieve patentability, however, and the claim was again rejected in a second office action. (P. App. at A461.) In a subsequent amendment, Plaintiff canceled application claim 1, and added application claim 26 (which eventually issued as claim 13). (P. App. at 486.) Plaintiff stated that “[application] claim 26 is based upon canceled [application] Claim 1.” (P. App. at A488.) A comparison of the two claims shows that claim 13 [application claim 26] included each limitation present in amended application claim 1, but also added the switch limitation. (P. App. at A482.)

Because the original base claim was canceled, the presumption of prosecution history estoppel attaches to those limitations in the allowed claim that were not in the claim as originally filed. The switch limitation that Plaintiff asserts against the AFSM-100 is part of this presumptive surrender of equivalents because it was added to secure allowance. Plaintiff can overcome this presumption if the record shows that the alleged equivalent would have been unforeseeable at the time the base claim was canceled, the rationale underlying the cancellation of the base claim bore no more than a tangential relation to the “switch” limitation that is at issue, or there was ‘some other reason’ suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent in the claim. *See Honeywell Intern. Inc.*, 370 F.3d at 1140.

Plaintiff does not allege that placement of the switch outside the path of movement of the paddle was unforeseeable at the time the base claim was canceled. Moreover, Plaintiff cannot show that the rationale of cancelling the base claim and adding the “switch” limitation was only tangentially related to the equivalent at issue. In fact, the addition of the “switch” limitation was the very basis for overcoming the rejection of application claim 1. Plaintiff points to no “other reason” that the patentee could not reasonably have been expected to have described a switch located outside the path of movement of the paddle.

Thus, Plaintiff is unable to overcome the presumptive surrender of all equivalents brought about by the cancellation of application claim 1. Because Plaintiff concedes that claim 13 is not literally infringed by the accused AFSM-100, and because no range of equivalence is available on the “switch” limitation in claim 13, the Court finds as a matter of law that claim 13 is not infringed by the accused AFSM-100, either literally or under the doctrine of equivalents. Because prosecution history estoppel bars Plaintiff from asserting the doctrine of equivalents on claim 13, the Court need not address Defendants’ arguments regarding vitiation of this claim element.

## **VI. Conclusion**

In view of the foregoing, the Court hereby ORDERS that:

- (1) Plaintiff's Motion to Withdraw an Element of Plaintiff's Demonstrative Exhibit Evidence is hereby GRANTED.
- (2) Defendants' Motion to Strike and for Reimbursement is hereby DENIED.
- (3) Defendants' Renewed Motion for Summary Judgment of Non-Infringement is hereby GRANTED.

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Edward J. Damich  
Chief Judge