

In the United States Court of Federal Claims

No. 98-449C
(Filed: February 24, 2003)
TO BE PUBLISHED

WILLIAM C. ROSE,
Plaintiff,

v.

THE UNITED STATES OF AMERICA,
Defendant.

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Summary Judgment; Literal
Infringement; Means-plus-
function; Commercial Product
Contentions.

Joseph J. Zito, Zito & Grandinetti, Damascus, Maryland, attorney of record and argued for Plaintiff. With him on the briefs were **Kendal M. Sheets** and **Paul Grandinetti**, Zito & Grandinetti, of counsel.

Robert G. Hilton, Attorney, Commercial Litigation Branch, Department of Justice, Washington, D.C., attorney of record and argued for Defendant. With him on the briefs were **Vito J. DiPietro**, Director, and **Stuart E. Schiffer**, Deputy Assistant Attorney General. **Thomas J. Byrnes**, Department of Justice, of counsel.

OPINION

BASKIR, Judge.

The Plaintiff, William C. Rose, contends that the United States used his patent, U.S. Patent Number 5,626,746 (“the ‘746 patent”), without his permission and without just compensation. Because we hold that the United States Navy’s installation of a liquid filtration device on a class of Naval destroyers literally infringed Mr. Rose’s patent for a “Filtering Device Containing Chemical Encapsulation Filter and Size Discriminating Filter,” **the Plaintiff’s Motion for Summary Judgment is GRANTED, and the Defendant’s Cross-Motion is DENIED.**

I. Introduction

At the outset, the Court notes that the Plaintiff and the Defendant had a prior contractual relationship. The Navy purchased a device developed by Mr. Rose before he had obtained the patent. In this Opinion, we are constrained to analyze the actual patent and compare it to the allegedly infringing device. Thus, we cannot and do not look to Mr. Rose's commercial application of his idea. See *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1585 (Fed. Cir. 1996). However, a brief recitation of the parties' prior history will provide context to this patent case.

A. The Inventor

In 1967, while Mr. Rose was a surface warfare engineering officer serving aboard a U.S. Naval vessel, his ship suffered a minor mechanical problem which resulted in thousands of gallons of untreated bilge water being discharged into San Diego Harbor. Whether, as with Sir Isaac Newton and his apple, Mr. Rose's idea was borne of that mishap, we do not know. However, in the years following his discharge from the Navy, Mr. Rose's interest in liquid filtration and treatment devices grew.

In time, Mr. Rose invented and developed a device he calls the "Rose Liquid Polisher." According to him, the Rose Liquid Polisher "removes free, emulsified, and dissolved petroleum hydrocarbons from water, still or flowing." Obviously, this polishing device has many potential commercial applications, especially for ships.

B. The U.S. Navy

In 1991, the U.S. Navy commissioned the U.S.S. DDG-51, the first in a class of guided-missile destroyers to be known as the "Arleigh Burke" class. This class of destroyers was named after U.S. Navy legend Admiral Arleigh Burke, the famous World War II destroyer squadron commander and longest-serving Chief of Naval Operations in history.

The defensive systems of the Arleigh Burke destroyers are centered around the Aegis Combat System, and are complete with advanced anti-submarine, anti-aircraft and Tomahawk sea-to-ground missiles. Typically, destroyers in this class operate in support of aircraft carrier battle groups. One well-known destroyer in the Arleigh Burke class is the DDG-67, also known as the U.S.S. Cole, the ship that was attacked by Al Qaeda operatives off the coast of Yemen in 2001.

In any event, around the same time that Mr. Rose developed his Liquid Polisher, the Navy was experimenting with its own systems to cleanse bilge water before discharge. The Navy had traditionally used something called an “oil-water separator” (OWS) to remove contaminants from its discharge. However, by the mid-1990s, increasingly stringent domestic and international environmental regulations (including the Act to Prevent Pollution From Ships, Pub. L. 96-478, 94 Stat. 2275) meant that some Naval vessels could not access certain ports because their discharge was too polluted. As a result, the Navy began investigating new devices that could be combined with an OWS to further decontaminate and “clean” the bilge water discharge.

Eventually, by the time the DDG-59 (a later Arleigh Burke destroyer) was ready to put to sea, its water discharge did not meet the standards for entering its assigned home port at Pearl Harbor, Hawaii. Other of the Arleigh Burke destroyers encountered similar discharge problems. In the words of Lt. Commander John S. Day, “[o]perational testing revealed the OWS could not produce an effluent meeting required inport discharge standards.” Def. Report on “Naval Applications of Elastomer Polymers” at 14. As a result, the Navy tasked the Ingalls Shipbuilding company, located in Mississippi, to improve OWS system performance.

C. Ingalls Shipbuilding Buys the Rose Liquid Polisher

Sometime in 1994, Mr. Rose contacted engineers in the U.S. Navy’s Naval Ship System Engineering Station in Philadelphia, Pennsylvania, to demonstrate to them his Rose Liquid Polisher, and its possible application in Naval vessels. At approximately this same time, concerned that the DDG-59 would not be able to sail, Navy officials in Mississippi contacted their counterparts in Philadelphia to discuss the problem. This is when the Mississippi officials first learned about Mr. Rose’s new polisher.

Discussions ensued between these officials and Mr. Rose, and eventually the Navy directed Ingalls Shipbuilding to purchase two Rose Liquid Polishers to be installed on the DDG-59 and another new destroyer, the DDG-61. Consequently, in March, 1995, Mr. Rose and Ingalls signed a contract for the purchase and delivery of the two devices, at approximately \$15,000 each.

Despite their best efforts, the Ingalls staff were unable to make the Rose Liquid Polisher work in the DDG-59, and even when combined with the OWS, the discharge water did not meet acceptable environmental standards. As a result, Ingalls contacted Mr. Rose and requested that he travel to Mississippi and assist them in installing the second Rose Liquid Polisher.

Mr. Rose did so, and on June 30, 1995, installation was complete. Later, independent tests revealed an acceptable level of contamination in the effluent, and the polisher installation aboard the DDG-59 was corrected. Nine months later, in March, 1996, the Navy purchased a refill set of filtering media from the Plaintiff for the DDG-59. Neither the Navy nor its contractors purchased another device from Mr. Rose after that.

II. Background of the Dispute

A. Patent History

On July 25, 1995, approximately one month after the successful field test and installation of his invention, Mr. Rose filed an application with the U.S. Patent and Trademark Office (PTO) for the Rose Liquid Polisher. The patent application described a device for filtering contaminants from liquid. A liquid – in this particular case, water – is pumped into a canister. While in the canister, the liquid passes through a bonding agent and a particle filter, which remove hydrocarbons and small solid contaminants from the liquid. The liquid eventually flows out of the canister through a pipe, where it is discharged.

The Patent Examiner, Mr. Joseph Drodge, initially rejected the application because a prior patent described a similar invention. The prior art, disclosed in the “Wilcox Patent,” number 5,391,295, had the water simply draining out of the bottom of a filtering device through a “gravity drain.” Thus, the Examiner required more specificity to the Rose application. The revised application specified an added limitation – the liquid did not simply drain, but rather flowed out of the filtering unit through a mechanism that controlled its time in the cleaning chamber. The time the liquid remains in the filtering unit is directly related to its rate of discharge through the outlet pipe. Thus, the pipe controls the time the liquid remains in the canister.

This added claim was apparently novel enough for the PTO. Thus, on May 6, 1997, the PTO granted the Plaintiff’s patent application and Mr. Rose’s invention would now be known as the ‘746 patent.

The ‘746 patent consists of 8 claims. Independent Claim 1 is made up of 5 limitations. Claims 2-8 are dependent claims. We recite the language from the relevant claims:

(Independent) Claim 1: A liquid treatment device, comprising –

- [a] means for removing contaminants from a liquid and chemically bonding said liquid;
- [b] means for size discriminating contaminants from said liquid;
- [c] means for supporting said means for size discriminating;
- [d] means for housing said removing and chemically bonding means, said size discriminating means and said supporting means, said means for housing defining a chamber;
- [e] means for controlling the level of said liquid in said chamber so as to control the time of treatment of said liquid in said housing means.

(Dependent) Claim 4: A liquid treatment device, as recited in claim 1, wherein said means for size discriminating is a porous

bag filter.

(Dependent) Claim 7: A liquid treatment device, as recited in claim 1, wherein said means for housing is a canister with a removable lid allowing entry into said canister.

A copy of the patent's full specification and drawing is attached in Appendix A for the reader's convenience.

Because this device contains multiple pieces, throughout this Opinion, we use common names to describe and compare the various parts of the patented and accused devices. This common terminology was adopted during the oral argument on the summary judgment motions, when it became clear that the lack of uniformity was confusing to the parties and the Court. Unfortunately, therefore, the briefs and the earlier Court Opinion do not adhere to this terminology.

The outside of the patented device, contained as one stand-alone unit, is a "canister." The next layer – the rigid forming screen – is a "cartridge." A cartridge holds a size discriminating filter – disclosed in the patent as the "porous bag" in Claim 4. This layer in turn holds the most basic level of the system, the "filtering media." In other words, it goes: media → size discriminator (porous bag) → cartridge (rigid forming screen) → and canister. Finally, if several canisters are placed in sequence in one system, we will call it a "tank." We will describe the constituent parts of the challenged device shortly.

B. Procedural History

Upon learning that Navy contractors had obtained equipment very similar to his from other sources, on May 18, 1998, Mr. Rose filed this complaint alleging that the Defendant infringed his patent. The Government filed an answer and the Plaintiff then filed a "motion for a claims determination hearing." Reading the Plaintiff's paper as both a motion for a claims construction hearing and a motion for summary judgment, the Defendant responded to the proposed claims constructions and cross-moved for summary judgment in the same memorandum.

In response to the Government's cross-motion, the Plaintiff also cross-moved for summary "determination." Thus, despite the absence of an actual initial motion, it is clear that the parties both believed these issues were ripe for summary judgment. In addition, the parties jointly filed a Consolidated Statement of Uncontroverted Facts in support of the dispositive motions.

However, before the Court could analyze the underlying liability question raised in the summary judgment motions – whether the patent was infringed – it first had to

determine the scope and meaning of the patent claim as a matter of law. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388 (1996). Thus, the parties filed substantial briefs and other supporting materials proposing various language construing the patent. In 2001, we held a claims construction hearing – also known as a “Markman Hearing” – and subsequently issued a Slip Opinion on May 24, 2001, construing the Plaintiff’s patent.

During the claims construction phase, the parties contested only two limitations of Claim 1 (limitations “c” and “e”) and one dependent claim, Claim 7. The first two claims were expressed in “means-plus-function” language, in which the element claimed was a means for performing a function. In construing those two claims, we were required to identify both the claimed function and the corresponding structure for performing that function.

The Court construed Claim 1, limitation “c” (a means for supporting said means for size discriminating) to be a “rigid forming screen and all equivalent structures.” Further, we construed Claim 1, limitation “e” (a means for controlling the level of said liquid in said chamber ...) to be a “level control pipe and all equivalent structures.” Slip Op., May 24, 2001. Finally, we held that the language in Claim 7 (a canister with a removable lid) meant a “lid that is capable of being moved in such a way that it provides access to the inside of the canister.” *Id.*

The Government did not, however, seek a construction of Claim 4, the “porous bag filter.” Thus, the Court’s Markman Opinion did not address this aspect. As we shall see, the Government did not raise an issue involving Claim 4 until after the claims construction process was completed. This procedural irregularity is disturbing for a number of reasons – the late argument operates as an unfair surprise to the Court and the Plaintiff, and it frustrates the very purpose of having a separate, earlier Markman proceeding.

After the Court issued its Opinion construing the Claim, the parties then submitted supplemental briefs solely on the question of infringement, and the Court heard oral argument on the parties’ cross-motions. The Defendant conceded that the accused device contained five of the eight claims in the patent, including the “removable lid” in Claim 7 that it had originally contested. However, in both its supplemental brief and at oral argument, the Government put the construction and infringement of Claim 4 at issue. Thus, in this Opinion, we will analyze whether the Defendant’s device infringes upon the device by comparing it to the contested claims – Claim 1, limitations “c” and “e”, and, despite our misgivings, late-contested Claim 4.

III. Discussion

A. Patent Infringement and Summary Judgment Standards

The statutory standard for patent cases against the United States is easily stated: the Government, and its contractors and agents, are prohibited from using or manufacturing patented inventions without the patent owner's permission. See 28 U.S.C. § 1498(a).

Determining infringement, however, is a complicated, two-step process. First, the Court must construe the patent claims. See *Markman*, 517 U.S. at 388. As noted, we issued our *Markman* Opinion previously. Consequently, in our second step, we must now compare the properly construed Claim to the allegedly infringing device. See *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998).

Summary judgment is as “appropriate ‘in patent cases as in any other case. . . .’” *Davies v. United States*, 31 Fed. Cl. 769, 773 (1994) (quoting *Howes v. Medical Components, Inc.*, 814 F.2d 638, 643 (Fed. Cir. 1987)). Infringement is a factual question, and we may not grant summary judgment if there are any disputed issues of material fact. See *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1116 (Fed. Cir. 1985). In our case, the parties cite no factual disputes, and we perceive none.

To demonstrate literal infringement, Mr. Rose must prove that each and every limitation in his patent is actually present in the accused Navy device. See *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 397 (Fed. Cir. 1994) and *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1054 (Fed. Cir. 1988); see also *Mas-Hamilton*, 156 F.3d at 1210. On the other hand, for the Defendant to prevail on its cross-motion, it need only show that one of the patent limitations is not present in its device. See *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 935 (Fed. Cir. 1987) (*en banc*).

It is undisputed that five of the eight limitations “read on,” or literally infringe, the accused device. We therefore need only compare three disputed claims to the Navy's device. See *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1347 (Fed. Cir. 1999).

B. The Contested Limitations

i. How The Patented Device Works

The patented device cleans polluted liquid in two ways. First, the liquid passes through a filtering media. The media is “a hydrocarbon encapsulation [and bonding] agent used to separate and bond emulsified and dissolved oils.” Abstract, '746 patent. Thus, the water-borne contaminants bond with the media.

At the second stage, the liquid flows through a size discriminating filter, which is

designed to screen particles and separate the now-bonded contaminants from the resulting “polished” water.

In layman’s terms, the media is a granular substance with no shape or form that can be made up of charcoal bits, plasticizers, and other small cleansing agents. Like sand, the media needs to be supported or contained in some sort of holder. Because this is a fluid treatment system, the liquid must also be contained and mixed with the media before it is allowed to flow out of the filtration device.

The patent discloses that the first “layer” of containment – in other words, the first “thing” to hold or touch the media – is the structure in Claim 4, the “porous bag filter.” This structure does more than hold the media. It also acts as a size discriminating filter for larger, granulated contaminants. Because the filtering media will need replacement from time-to-time, the structure in Claim 4 must be able to be lifted out of the device along with the media, and replaced. The second layer of containment is what we have informally called the “cartridge,” or as the patent teaches, a “rigid forming screen.”

ii. Claim 1(c) “Means for Supporting” – rigid forming screen

Turning next to the two limitations in Claim 1, we see that they both utilize means-plus-function language. As discussed in our Markman Opinion, Congress specifically allows the use of such language in patents, but requires that the patent specification describe some structure that performs the specified function. See 35 U.S.C. § 112, ¶ 6 (2000). Consequently, when we construed the Claim, we identified not only the function, but its corresponding structure.

Because these two contested Claim 1 limitations are expressed in means-plus-function format, Mr. Rose’s petition will fail unless he can demonstrate that a structure on the accused device performs a function identical to that claimed by his patent. See *Davies*, 31 Fed. Cl. at 773. As the Court of Appeals for the Federal Circuit has stated:

For a means-plus-function limitation to read [literally] on an accused device, the accused device must employ means identical to or the equivalent of the structures, material, or acts described in the patent specification. The accused device must also perform the identical function as specified in the claims.

Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1042 (Fed. Cir. 1993).

In other words, the Court “must compare the accused structure *with the disclosed structure*,” and find not only the same or equivalent structure, but also “*identity* of

claimed *function* for that structure.” *Pennwalt*, 833 F.2d at 934 (emphasis in the original).

For Claim 1, limitation “c,” we look first to the Claims construction before examining the accused device. The patent formally describes this limitation as a “means for supporting said means for size discriminating.” ‘746 patent, col. 4, l. 21. Its professed function is to support and give shape to the porous bag filter which is holding the media. The patent also specifies that this structure will maintain the filtering media in a uniform layer across the entire canister, so that all fluid flowing through will be properly treated.

The patent specification included drawings depicting the rigid forming screen as having holes. Initially, the parties’ dispute focused on the significance of these holes. While we stated that the “screen holes do not perform the supporting function,” we refused to construe the claim to mean something much broader – that is, that anything inside the canister that was rigid could perform the supporting function. Slip Op., May 24, 2001. This was, in part, because counsel for the Plaintiff admitted at the Markman Hearing that fluid flows through the holes in the screen. We believe, and so held, that the “means for supporting” the size discriminator and the bonding agent is a “rigid forming screen and all equivalent structures.” *Id.*

The Government’s device consists of what the parties called an “aluminum canister” inside the outer, patent-specified canister. For ease of reference, and to maintain uniform terminology, we will refer to the Defendant’s “aluminum canister” as an “aluminum casing.” This casing holds the size discriminating filter, which in the accused device is “blue material,” which in turn contains the bonding agent or filtering media. The photos and diagrams of the Government’s aluminum casing disclose a plastic tube with holes (also covered with the blue material) centered in its bottom. The Defendant’s blue material filter will be discussed in more detail below.

The water flows through the media, past the blue material, into the holes in the tube, and then out of the casing and out of the bottom of the device (which is the equivalent of the Rose “canister”). The Plaintiff contends that the aluminum casing is the structure in the accused device which performs the “means for supporting “ function of claim 1(c) in the patented device.

Before comparing the structures, we must identify the claimed function, and analyze the similarities between the functions of that structure. *See Davies*, 31 Fed. Cl. at 778. In the accused device, the purpose of the casing is to hold and support the blue material and its media in place. After the fluid is cleansed, it flows out through the holes in the tube. This function is identical to that performed by the rigid forming screen in the patented device.

Having found that the functions are identical, we must now determine if the

structures are the same or equivalent. A cursory examination of the two structures – a rigid cylindrical screen with holes and an aluminum casing with a perforated plastic pipe – reveals that these two structures are not the same. The question, therefore, is whether they are equivalent. Or, more precisely, whether there is “equivalency.”

To any but the trained patent student, the issue of whether two structures possess equivalency would seem to implicate the “function-way-result” test under the judicially-created Doctrine of Equivalents. But this would be incorrect thinking. The Federal Circuit has explained:

Equivalency under section 112 [35 U.S.C. § 112, ¶ 6] . . . differs from the doctrine of equivalents. . . . The doctrine of equivalents has a different purpose and application than section 112. . . . [It] prevents a copyist from evading patent claims with insubstantial claims.

In the context of section 112, however, an equivalent results from an insubstantial change which adds nothing of significance to the structure, material, or acts disclosed in the patent specification. A determination of section 112 equivalence does not involve the equitable tripartite test of the doctrine of equivalents.

Valmont, 983 F2d. at 1043.

In other words, in this analysis we are not moving away from the tests for literal infringement to the seemingly broader equitable remedy found in the Doctrine of Equivalents. Rather, “section 112, paragraph 6 [equivalency] restricts the scope of a functional claim limitation as part of a literal infringement analysis.” *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999). This use of terms which can only be described as “equivalent” to denote different analytical approaches whose differences are themselves not easily discerned is, admittedly, confusing. It is, however, the delivered law.

In this connection we note that the parties seemed in agreement that the three-part doctrinal test was equally useful for a section 112, paragraph 6 analysis, and that the statutory and doctrinal tests were actually the same. They predicted that the Federal Circuit would someday make explicit this “equivalency.” Since that has not yet happened, we decline to pave the way in this discussion.

The physical dissimilarities between the two structures are so minor that they are distinctions without a difference. The aluminum casing with a center plastic tube with holes that supports the filtering media and its container is not distinguishable from the patented rigid forming screen with holes that supports the filtering media and its container. In one the liquid leaves the cleansing area through holes on the periphery of the container or perhaps through the screen's bottom; in the other, the liquid leaves the cleansing area through holes in the center tube. The Government did not suggest that this locational difference for passage of the "polished" water had any consequence, and we see none either.

Accordingly, having found that the two structures perform the identical function, and that the structures are equivalent under Section 112, the Court finds that the Defendant's device literally infringes upon Claim 1, limitation "c" of the Plaintiff's patent.

iii. Claim 1(e) "Means for Controlling" – level control pipe

The next contested claim limitation, Claim 1, limitation "e," is also expressed in means-plus-function limitation. Therefore, we will again review the claim construction before examining the function and equivalency of the two structures.

The patent formally states this limitation as follows: "means for controlling the level of said liquid in said chamber so as to control the time of treatment of said liquid in said housing means." '746 patent, col. 4, ll. 26-28. We construed this as a "level control pipe and all equivalent structures." Slip Op., May 24, 2001.

It is easy to understand the level control pipe. Once the fluid has completed the cleansing and decontamination process, it exits the canister at the bottom through an exit pipe. What is different about Mr. Rose's invention – and indeed, the Patent Examiner required Mr. Rose to clarify his patent so as to go beyond the "prior art" or previous patents – is that the time that the fluid is exposed to the filtering media is controlled by the exit pipe. The prior invention, disclosed in the Wilcox Patent, had the water simply draining out the bottom of a filtering device by means of gravity. Thus, the liquid was free-flowing as it proceeded through the cleaning chamber.

But Mr. Rose's patent specified a level control pipe, which was the "means for controlling" the time of contact with the bonding agent. The level control pipe is really three pipes, fitted together. In order for the level control pipe to work, the patent requires that the effluent come out of the bottom of the canister, into a "U-shaped" pipe, and then straight upwards through a vertical pipe, eventually exiting through another "faucet-shaped" outlet. Further, to "eliminate syphoning of the liquid in the [canister], the liquid is discharged through a vacuum break" or faucet. '746 Patent, col. 3, ll. 24-25. In this way, the water does not just pass freely through the filter, but rather its residence time in the filtering media is controlled or disciplined.

The Defendant admits that the Navy's filtering devices have this same set-up: water exits the canister through a "U-shaped" pipe, then goes up a "vertical outlet pipe," then to another "U-shaped" or right angle pipe where the water is discharged. Therefore, the structure on the accused device has an identical function as the structure on the patented device – to discharge the cleansed fluid in a controlled manner.

The only apparent physical difference between the two structures is the length of the vertical pipe, if that. The patent is silent as to the length of the exit pipe. The accompanying drawing, however, shows a pipe rising about three-fourths the way up the side of the canister. Navy specifications require that bilge water be discharged at or above sea-level. Thus, in the Arleigh Burke class of destroyers, the canister or tank is located below deck near the bilge water container and the OWS. After passing through the OWS, the liquid proceeds through the accused device, and eventually through the Navy's vertical exit pipe, which carries the water up two ship decks to its final discharge location. The Navy's level control pipe, therefore, is much longer than the one drawn in the '746 patent.

The Defendant argues – without factual support – that the difference in the length of the vertical pipe is important because with the Navy device, it is no longer possible to control the time the fluid is in the filtering media.

This argument completely misses the point on a number of grounds. First, we note that the Government has raised a new issue of claims construction – what is the length of the level control pipe – in the summary judgment proceeding, that it did not put forward in the Markman Hearing.

Further, the length of the pipe need not be permanent. As the Plaintiff indicated, because the device stays full while in use, neither the level control pipe nor any component can be changed while the filter is being operated. But the user can change the pipe when the device is not in use, and any length the user wishes to use for the level control pipe still accomplishes the exact same function – it controls the length of time the contaminated fluid is in contact with the filtering media. The only caveat is that the pipe must rise at least to the level of the cartridge that contains the cleansing materials.

In fact, the Patent specifies that "the level in the canister and the consequential time of contact can be *adjusted* by the level control pipe." '746 patent, col. 3, ll. 21-23. The *adjustment* that is contemplated by the patent is not a "minute-by-minute" adjustment of the water level (and thus the residence time in the media), but rather, the possibility of a "per use" adjustment. The Navy's device properly exploits that possibility.

The Defendant also argues – again without providing any statutory or precedential support – that the Plaintiff is constrained on this “size argument” by the drawings contained in the patent, and thus that its 2-deck long pipe does not infringe on Mr. Rose’s level control pipe. In essence, the Defendant is urging that this Court do what it did not do during the claims construction process – namely, read a new “size” limitation into Claim 1(e) based on the drawing.

The Federal Circuit, however, has repeatedly stated that a –

patent’s claims are not limited to the specification’s best mode, preferred embodiment, specific objects, or illustrative examples, and it is error to read limitations from the specifications into the claims.

DONALD S. CHISUM & MICHAEL A. JACOBS, UNDERSTANDING INTELLECTUAL PROPERTY LAW § 2F (1992) (citing *Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 865 (Fed. Cir. 1988)).

Moreover, the length of the exit pipe is determined by the choice of where the cleansing device is located in the overall plumbing between the storage containing the contaminated water and the discharge point. If the supply of the water is in the bilge, for example, and the device is located close by, the supply pipe to the cleaning device will be short, and the exit pipe will be much longer – say two decks worth. But if the bilge water is pumped up to the device located higher up the ship, then the supply pipe will increase in length and the exit pipe will be correspondingly shorter. The relative lengths of the supply and discharge pipes are simply a function of where it is convenient to locate the filtration device, and are not an aspect of the patent.

But what is not variable is the fact that the level control pipe design was patented by Mr. Rose. The exit pipe on the accused device performs the identical function as that disclosed in Claim 1, limitation “e,” and its structure is equivalent (under Section 112) to the “level control pipe” disclosed in the ‘746 patent.

(Parenthetically, we cannot resist observing that the Rose Polisher was successfully used in the DDG-59, no doubt in a configuration that saw the cleansed water being discharged two decks above the water line.)

iv. Claim 4 – Porous Bag Filter

As we noted earlier, the Government only contested three claims, one of which, Claim 7, the removable lid, it abandoned after the Markman Hearing. It did not cite Claim 4, the porous bag, during this proceeding and so the Plaintiff had no opportunity to respond and the Court never construed this Claim. Indeed, this argument was only raised in the Government's supplemental brief. In a terse three sentence passage in its "Statement of the Case," repeated almost verbatim during its discussion of the "means for supporting," the Defendant offered a construction for Claim 4. Def. Supl. Br. at 4, 17-18. Counsel's discussion during oral argument addressed the nature of the "porous bag" – again attempting to construe the claim, but counsel never explicitly compared it to the Navy device. Tr., Dec. 4, 2001, at 70-78.

This late, unexplained, and unexcused raising of a new issue of claims construction was entirely improper. Although we believe the Government waived its right to contest a new claim construction, we discuss it in an excess of caution. We find the argument unpersuasive.

The Government's device, photos of which the parties submitted, contains a "blue material" which appears to be thatched or otherwise joined together. The parties referred to this blue material as "hogs-hair." It is clear that in the Government's device, the filtering media is contained directly inside the blue material, which is in turn contained by the second layer of the structure, the aluminum casing.

The Defendant contends that what holds the filtering media in place and allows it to be lifted out, must be a bag, which it states, "[is] usually flexible and collapsible." Def. Supl. Brief at 4, 17-18. What the Defendant seems to be arguing is that the "porous bag" must be like a Glad kitchen garbage bag – totally without form, or shape, or volume until filled. But the key qualifying word in the Government's argument is "usually" – while that may define some bags, it is not the crucial element of all bags.

While the Government acknowledges that the blue material holds the media, it states that the blue material is not a "bag." Yet, it states that the blue material is porous and it filters the fluid both before and after the water flows through the media. And though the Court did not have an opportunity to handle the blue material, the parties agreed that while it is "rigid" – capable of standing by itself and maintaining its shape – it appears to the Court to be made of a flexible, pliable material. Furthermore, the photos reveal that the blue material has a bottom. Thus the blue material can be lifted out of the cartridge and replaced when necessary. As it does so, it carries with it the now-exhausted filtering media.

One dictionary defines a bag as a “container . . . for holding, storing, or carrying something.” WEBSTER’S COLLEGIATE DICTIONARY 86 (10th ed. 1998). A second dictionary defines a bag as “a container of flexible material, such as paper, plastic or leather, that is used for carrying or storing items.” AMERICAN HERITAGE DICTIONARY 133 (4th ed. 2000). The Court believes that both definitions are applicable here. The Plaintiff argues, quite persuasively, that the blue material in the accused device is exactly what the patent specified – a porous bag filter.

In sum, the blue material is, in fact, a “means for size discriminating [that] is a porous bag filter.” Accordingly, the Court finds that this element of the accused device is the exact same thing as the structure described in Claim 4.

C. Final Government Arguments

In addition to its claims issues, the Government offered concluding arguments to escape an infringement conclusion. First, the Defendant argued for a finding of non-infringement on the basis that it groups three canisters together in what we call a “tank.” This proved confusing at first, because the diagrams submitted by the parties made the Navy’s device appear different from the Plaintiff’s patent. But this configuration does not change the conclusion that each individual canister infringes the patent. Simply because the accused device has an additional component, or groups together several patented devices, does not allow the Defendant to evade a finding of infringement.

Second, the Government argued that because it connects its device to the ship’s overall bilge water filtration system, which uses a Progressing Cavity (PC) pump to “push” the water through the plumbing, the accused device does not infringe upon the patent. The Defendant’s argument is nonsensical, and for two reasons. This is exactly the usage and placement contemplated by the patent, which states:

this invention relates to a water filtering device for marine, commercial and industrial uses *as an addition to already existing filtration processes, or as a stand alone water filtering device where none exists.*

‘746 patent, col. 1, ll. 53-56 (emphasis added).

Furthermore, the Government’s own plumbing schematics of the ship’s OWS system (of which the accused device is a component) reveal that the PC pumps are located not inside the canister, but rather are attached to the piping at points both before and after the filter. Thus, the PC pump is not a part of the accused device or our infringement analysis, and we therefore reject this argument.

Third, because the Court today finds that the Defendant literally infringed the Plaintiff's patent, we need not reach the Defendant's "prosecution history estoppel" argument, which might be relevant only if the Court invoked the Doctrine of Equivalents to find infringement. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. ____ (2002).

Finally, a dependent claim incorporates by reference all of the limitations of the claims to which it refers. See 35 U.S.C. § 112, ¶ 6; *Wolverine World Wide, Inc. v. Nike, Inc.*, 38 F.3d 1192, 1199 (Fed. Cir. 1994). The only independent claim in the '746 patent is Claim 1. The Defendant argued that if the Court found no infringement of that claim, then the remaining limitations, Claims 2-8, could not have been infringed. However, having dropped its Claim 7 argument at the summary judgment phase, the Defendant only contested one of the dependent claims (Claim 4), and we have rejected that defense. Accordingly, as the accused device infringes on both the independent claim and the dependent claims, this final defense is also rejected.

IV. Conclusion

An infringement requires, *inter alia*, a Court to find that a defendant has made, used, or sold a patented invention within the United States during the term of the patent, without a license from the patent holder. The record is clear and undisputed that this is precisely what the Government did in this case.

With complete knowledge of the patent Mr. Rose received for his invention, the Defendant created and installed an unknown number of the accused devices on U.S. Naval vessels which literally infringe upon the Plaintiff's patent. **Thus, the Court GRANTS the Plaintiff's Motion for Summary Judgment and DENIES the Defendant's Cross-Motion.**

The parties are hereby ORDERED to submit a Joint Status Report, proposing a schedule for further proceedings, no later than March 24, 2003.

IT IS SO ORDERED.

LAWRENCE M. BASKIR
Judge