

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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COMBINED TACTICAL SYSTEMS INC.,

Plaintiff,

OPINION

-against-

04 Civ. 08924 (MGC)

DEFENSE TECHNOLOGY CORPORATION OF
AMERICA, and FEDERAL LABORATORIES,
INC.,

Defendants.

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Cedarbaum, J.

Combined Tactical Systems, Inc. ("Combined Tactical"), brought this action for patent infringement against Defense Technology Corporation of America, Inc., and Federal Laboratories, Inc. ("Defense Technology").¹ Defense Technology counterclaimed, seeking a declaratory judgment that two of Combined Tactical's patents are invalid. Defense Technology now moves for summary judgment under Fed. R. Civ. P. 56, on two grounds. First, that because disclosure is not continuous from the earliest filed patent to the two patents in suit, the patents in suit are not entitled to the priority date of the earliest filed application, and because these patents are not entitled to the earliest date, their claims are invalid under 35 U.S.C. § 102(b) as anticipated by the first-filed patent. Second, that the patents in suit are invalid for lack of enablement under 35 U.S.C. § 112. For the reasons that follow,

¹ Federal Laboratories merged into Defense Technology Corporation in 2001 and no longer has a separate legal existence.

Defense Technology's motion for summary judgment is granted with respect to one of the patents in suit and denied as to the other.

BACKGROUND

The following facts are undisputed.

Combined Tactical and Defense Technology are both in the business of low-lethality munitions, which are used by law enforcement, corrections, and military personnel to incapacitate individuals while minimizing the risk of serious injury or death.

In November of 1999, Combined Tactical applied for a patent for a low-lethality projectile. The application claimed a sock-like fabric tube, filled with lead shot, and tied in the middle to create a compartment for the lead shot on one side and an open-ended tail on the other. The tail was then folded in a certain way and the sock was stuffed into an empty 12-gauge shotgun shell.

In April of 2000, Defense Technology began selling a similar product, which it called a Drag Stabilized Bean Bag Round. This projectile was also constructed from a tube filled with lead shot, tied in the middle, and stuffed into an empty 12-gauge shell.

Combined Tactical's patent was issued in March of 2001 as U.S. Patent No. 6,202,562 ("the '562 patent"). In August of 2001, Combined Tactical sued Defense Technology and Federal Laboratories, Inc., for infringement of the '562 patent.

Combined Tactical filed an additional application for a low-lethality projectile, in August of 2000: another sock-like fabric tube, this time filled with rubber pellets, tied in the middle, folded, and placed into an empty 37-mm weapon shell or an empty 40-mm weapon shell. In its application, Combined Tactical did not claim the benefit of the '562 patent's filing date. The patent examiner rejected the claims in this new patent application, based in part on the prior art of Defense Technology's low-lethality projectile. To overcome that rejection, Combined Tactical amended its application in November of 2001, such that the application became a continuation-in-part seeking the benefit of the '562 patent. On April 23, 2002, U.S. Patent No. 6,374,742 ("the '742 patent") was issued to Combined Tactical for a rubber-pellet-filled low-lethality projectile for 37-mm and 40-mm shells.

On April 2, 2002, just before the '742 patent was issued, Combined Tactical applied for a third patent for a sock-like fabric tube to be filled with lead shot and used as a low-lethality projectile. This third application was filed as a

continuation-in-part of the '742 patent. The application eventually matured into the two patents in suit.

On April 19, 2002, in an unpublished opinion after a Markman hearing, Judge Cote found that Combined Tactical's '562 patent required "'the deliberate and systemic creation of folds'" in the tail of the sock-like projectile, whereas the Defense Technology projectile did not have a folded tail and was instead "composed of four separate pieces." Combined Sys., Inc. v. Defense Tech. Corp. of Am., 230 F. Supp. 2d 544, 546 (S.D.N.Y. 2002) (quoting the unpublished Markman opinion). On November 18, 2002, Judge Cote held that Defense Technology's projectile did not infringe the '562 patent because it was not created by means of systemic and deliberate folds to the tail of the projectile. Id. at 547-49. The Federal Circuit affirmed. 350 F.3d 1207, 1216 (Fed. Cir. 2003).

Throughout the litigation, Combined Tactical continued to prosecute its third patent application. The examiner stated that Combined Tactical's application contained two separate inventions: the first set of claims involved the flight shape of the low-lethality projectile, and the second set of claims involved the method for preparing the projectile. On November 21, 2002, Combined Tactical filed a divisional application, and in June of 2004, the two patents in suit were issued: U.S. Patent No. 6,755,133 ("the '133 patent"), protecting the flight

shape of the projectile, and U.S. Patent No. 6,752,086 ("the '086 patent"), protecting the projectile's method of preparation.

The grandparent patent, '562, claimed a projectile filled with lead shot and placed in a 12-gauge shotgun shell. The parent patent, '742, claimed a projectile filled with rubber pellets and placed in a 37-mm or 40-mm shell. The patents in suit claimed, in '133, a projectile filled with lead shot and placed in "a weapon shell" of any size, and, in '086, a projectile filled with lead shot and placed in a 12-gauge shell.

Nothing in the claim language of the '133 or '086 patents states that the tail must first be folded in an organized fashion prior to insertion in the shell. Combined Tactical Sys., Inc. v. Defense Tech. Corp. of Am., 426 F. Supp. 2d 140, 146, 148 (S.D.N.Y. 2006) (Markman opinion). This new claim language, with the tail-folding procedure removed, gave Combined Tactical another chance to seek to invalidate Defense Technology's 12-Gauge Drag Stabilized Bean Bag Round. Accordingly, Combined Tactical sued Defense Technology for infringement of the '133 and '086 patents.

DISCUSSION

To determine whether the patents in suit are invalid under 35 U.S.C. § 102(b), two issues must be addressed. The first

question is whether there is continuity of disclosure from the grandparent application to the parent application to the patents in suit. If there is not continuity of disclosure, then the second question is reached: whether the grandparent '562 patent anticipates the '086 patent and the '133 patent, invalidating them under § 102(b).

I. Continuity of disclosure

At issue in this action is a series of continuation-in-part patent applications. A continuation application is an application filed after, but during the pendency of, a prior application for the same invention. The continuation application's specification describes the same invention as its parent application, but makes new claims regarding what is original about the invention. If certain requirements are met, the continuation application assumes the filing date of the parent application. When a continuation application is successful, prior art appearing after the filing date of the first application and before the filing date of the continuation application cannot be used to defeat the claims of the continuation application. Transco Prods. Inc. v. Performance Contracting, Inc., 38 F.3d 551, 555-56 (Fed. Cir. 1994); Donald S. Chisum, 4A Chisum on Patents § 13.03 (2008); Mark A. Lemley &

Kimberly A. Moore, "Ending Abuse of Patent Continuations," 84 B.U. L. Rev. 63, 64-68 (2004).

A continuation-in-part application is a continuation application that partly discloses new matter and partly discloses matter from a previous application. The new matter takes the filing date of the continuation-in-part application and the previously disclosed matter takes the filing date of the previously filed application. Univ. of W. Va. Bd. of Trustees v. VanVoorhies, 278 F.3d 1288, 1297 (Fed. Cir. 2002).

A. The requirements of 35 U.S.C. § 120

The practice of filing continuation applications was approved by the Supreme Court long ago, see Godfrey v. Eames, 68 U.S. (1 Wall.) 317, 325-26 (1863), and was subsequently developed through common law. In § 120 of the Patent Act of 1952, Congress codified the requirements for a continuation application's entitlement to the filing date of a previously filed application. Pub. L. No. 82-593, 66 Stat. 792, 800. That section now reads in relevant part:

[a]n application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States ... which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the

first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

35 U.S.C. § 120.

B. The written description requirement

Patents are presumed to be valid. 35 U.S.C. § 282.

Defense Technology seeks to overcome this presumption, arguing that the continuation-in-part applications of Combined Tactical fail to meet the first requirement of § 120. This requirement, that the invention be "disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States," is also known as the "written description requirement." Tronzo v. Biomet, Inc., 156 F.3d 1154, 1158 (Fed. Cir. 1998).

The first paragraph of § 112 requires that the specification of the application

shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112.

As the Federal Circuit has explained, "[t]he purpose of the written description requirement is to prevent an applicant from later asserting that he invented that which he did not; the applicant for a patent is therefore required to recount his invention in such detail that his future claims can be determined to be encompassed within his original creation." Moba, B.V. v. Diamond Automation, Inc., 325 F.3d 1306, 1319 (Fed. Cir. 2003) (internal quotation marks omitted; emphases in Moba).

In a chain of continuation applications, in order for a latter-filed application to gain the benefit of the filing date of an earlier application, "each application in the chain leading back to the earlier application must comply with the written description requirement." Lockwood v. Am. Airlines, Inc., 107 F.3d 1565, 1571 (Fed. Cir. 1997). The claimed subject matter must be described in each application in the chain. Id. at 1572.

The written description must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the applicant was in possession of the invention. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). "One shows that one is 'in possession' of the invention by describing the invention, with all its claimed limitations," as opposed to simply describing enough material to make one's possession of

the invention obvious. Lockwood, 107 F.3d at 1572 (emphases in original). "Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed." Id. at 1571-72.

Whether the written description requirement has been met is a question of fact. Tronzo, 156 F.3d at 1158; but see Zenon Env'tl., Inc. v. U.S. Filter Corp., 506 F.3d 1370, 1379 (Fed. Cir. 2007) (where continuity of disclosure is achieved through incorporation by reference, a question of law is presented). "Compliance with the written description requirement is a question of fact but is amenable to summary judgment in cases where no reasonable fact finder could return a verdict for the non-moving party." PowerOasis, Inc. v. T-Mobile USA, Inc., 522 F.3d 1299, 1307 (Fed. Cir. 2008).

For example, in Tronzo, the patent at issue related to an artificial hip socket. 156 F.3d at 1156. The parent application specified a conical cup implant to be inserted into the bone. The continuation-in-part application claimed cups of generic shape. Because the parent application "disclose[d] only conical shaped cups" in its written description, the Federal Circuit found no support for the continuation application's broader claim for cups of any shape. Id. at 1159 (emphasis in original). The Federal Circuit reversed the jury's

determination of infringement and found that the patent was invalidated by intervening prior art. Id. at 1160.

In PowerOasis, the Federal Circuit affirmed the district court's grant of summary judgment in favor of defendants, concluding that two continuation-in-part applications were not entitled to the benefit of the filing date of the original application. 522 F.3d at 1311. The patents at issue involved vending machines that sell access to telecommunications channels. The written description of the parent application disclosed a "customer interface" on the vending machine. The continuation-in-part applications claimed a customer interface located remotely from the vending machine, such as on a customer's laptop. The Federal Circuit stated that even if it were "obvious to substitute a customer laptop for the user interface disclosed on the vending machine," such "[o]bviousness simply is not enough." Id. at 1310. The subject matter disclosed in a continuation application must also be disclosed in the parent application in order for the continuation to obtain the parent's filing date. If there was such a disclosure in the parent application, then the jury may decide whether, at the time of the original application, the inventor possessed the invention as later claimed. If there was not such disclosure, there cannot be a genuine issue of material fact for the jury to

decide and the patent may be invalidated as anticipated by the prior art. Id. at 1310-11.

As in Tronzo and PowerOasis, Combined Tactical's '086 and '133 patents are not entitled to the filing date of the grandparent '562 patent. To explain why this is so, it is first necessary to examine Combined Tactical's argument that there has been continuity of disclosure. According to Combined Tactical, its disclosure of certain species terms in the grandparent '562 patent supports its use of genus terms in the continuation-in-part applications, such that the disclosure is continuous throughout.

C. Disclosure of species term may support claim for genus term

With regard to the weapon shell being used, Combined Tactical's applications began with 12-gauge shotgun shells in the grandparent '562 patent, moved to 37-mm and 40-mm shells in the parent '742 patent, and returned to a 12-gauge shell in the '086 patent and "a weapon shell" in the '133 patent. With regard to the ballast being used, the applications began with lead shot in the grandparent, moved to rubber pellets in the parent, and returned to lead shot in the patents in suit.

Combined Tactical argues that, despite the fact that the '742 patent discloses different weapon shells and different ballast from the grandparent '562 patent, there is still

continuity of disclosure. Combined Tactical argues that continuity of disclosure may be maintained where the first-filed application discloses a species term and a later-filed application discloses a genus term. So, according to Combined Tactical, the grandparent '562 patent disclosed the species term "lead shot," the parent '742 patent disclosed the genus term "ballast," and the patents in suit subsequently re-disclosed the species term "lead shot." In addition, the grandparent '562 patent disclosed the species term "12 gauge shotgun shell," the parent '742 patent disclosed the genus term "weapon shell," and the '086 patent in suit re-disclosed the species term "12 gauge shotgun shell" while the '133 patent in suit maintained the genus term "weapon shell."

Combined Tactical relies on Bilstad v. Wakalopoulos for the "general rule that disclosure of a species provides sufficient written description support for a later filed claim directed to the genus." 386 F.3d 1116, 1125 (Fed. Cir. 2004).² In Bilstad, the patent related to a sterilization apparatus in which a movable member inside the sterilization area could manipulate

² Bilstad involved a single application which disclosed a species term in the specification and contained a genus term in the claim. The principles discussed in the case, however, apply equally when an original application discloses a species and a continuation application claims a genus. See, e.g., Noelle v. Lederman, 355 F.3d 1343, 1346 (Fed. Cir. 2004).

the objects to be cleaned. The application claimed that the member could manipulate objects in a large number of directions, but the specification only described manipulation in a small number of directions. The Board concluded that the application lacked adequate written description to support the claim for manipulation in a large number of directions. Id. at 1118-20. The Federal Circuit vacated that determination and remanded. The Federal Circuit held that it was a question of fact whether one skilled in the art could readily discern that the inventor, by disclosing an ability to manipulate the member in a small number of directions, had possession at the time of filing of the ability to manipulate the member in a large number of directions. Id. at 1126.

In order to support a later claim for the genus, the disclosure of the species must "clearly convey[] to one of skill in the art characteristics common to all species that explain how and why they make the invention operable." In re Curtis, 354 F.3d 1347, 1355 (Fed. Cir. 2004). For such an explanation to be clearly conveyed, there must be

sufficient description of a representative number of species ... by disclosure of relevant, identifying characteristics, i.e., structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus.... Satisfactory disclosure of a

"representative number" depends on whether one of skill in the art would recognize that the applicant was in possession of the necessary common attributes or features of the elements possessed by the members of the genus in view of the species disclosed.

Carnegie Mellon Univ. v. Hoffmann-La Roche Inc., 541 F.3d 1115, 1124 (Fed. Cir. 2008) (quoting the Guidelines for Examination of Patent Applications under the 35 U.S.C. § 112, ¶ 1 "Written Description" Requirement, 66 Fed. Reg. 1099, 1106 (Jan. 5, 2001)).

The disclosure of a single species is rarely enough to support a later claim for an entire genus. More typically, a number of species are disclosed as support for a later genus claim. In LizardTech, Inc. v. Earth Resource Mapping, Inc., the Federal Circuit stated that "a patentee cannot always satisfy the requirements of section 112, in supporting expansive claim language, merely by clearly describing one embodiment of the thing claimed." 424 F.3d 1336, 1346 (Fed. Cir. 2005) (emphasis added). The patent at issue related to a computer algorithm for compressing digital images. The specification disclosed a species term, which was a particular way to reduce defects in compressed images. The claim, however, was for a genus; the application broadly claimed every algorithm for compressing images seamlessly without defects, not just the single algorithm described in the specification. Affirming the district court's grant of summary judgment, the Federal Circuit held that, as a

matter of law, "[t]here is no evidence that the specification contemplate[d] a more generic way of creating a seamless" image. Id. at 1344. The specification lacked support for such a broad claim because the specification "provide[d] only a single way of creating a seamless" image. Id. (emphasis added).

1. Continuity of disclosure with regard to ballast

According to Combined Tactical, the '562 patent disclosed the species term "lead shot," and it is a question of material fact whether the species term "lead shot" supports the disclosure in the '742 patent of the genus term "ballast pellets of materials other than rubber ... [which] provide similar projectile weight and volume." '742 patent, col. 4, ll. 21-23.

The problem with Combined Tactical's argument is that, in order for a species term to support a later-claimed genus term, the disclosure of the species must clearly convey the characteristics common to all species in the genus, explaining how those characteristics make the invention operable. In re Curtis, 354 F.3d at 1355. The grandparent '562 patent did not disclose any such characteristics regarding the structure or function of lead shot. In the specification of the '562 application, the only statement regarding the use of lead shot is as follows:

In a work-in-process condition, as illustrated in

FIG. 1, a selected amount of lead shot, individually and collectively designated 42, is inserted through the opening 38 to partially fill the compartment 40, particularly in the area of the closed end 34.

'562 patent, col. 2, ll. 52-57. The specification of the '562 patent did not provide the preferred size or weight of the lead shot. Nor did the specification explain the specific function of the lead shot.

One skilled in the art, reading the species term "lead shot" in the grandparent '562 patent, would not recognize that Combined Tactical was in possession of the genus term "ballast pellets of materials other than rubber [which] provide similar projectile weight and volume." It may be obvious that lead shot could be replaced with rubber pellets or other ballast, but that is not enough. Lockwood, 107 F.3d at 1572. Therefore, there is not continuity from the grandparent '562 patent's disclosure of "lead shot" to the parent '742 patent's disclosure of ballast pellets. The '742 patent cannot gain the benefit of the filing date of the '562 patent.

2. Continuity of disclosure with regard to weapon shell

The disclosure of the weapon shell also lacks continuity of disclosure between the grandparent and parent.

It is clear from the written description of the parent '742 application that the word "weapon shell" was not used as a genus

term meaning all weapon shells. Rather, "weapon shell" was specifically defined in the '742 patent to mean only a 37-mm shell or a 40-mm shell:

To launch or propel the constructed projectile of FIG. 2, use is made of an empty weapon shell, which in FIG. 3 is selected for illustration to be a 37 mm weapon shell but which also could be a 40 mm weapon shell as illustrated in FIG. 5. The weapon used for the 37 mm shell is in the parlance of munitions a so-called riot or gas gun used by and for law enforcement, and the weapon used for the 40 mm shell, again in the parlance of munitions, is a so-called grenade launcher used by the military, and both these weapons and associated shells are intended to be referred to by the designation weapon shell(s).

'742 patent, col. 3, ll. 1-11. The written description also notes the precise measurements of the 37-mm weapon shell and the 40-mm weapon shell, "[f]or completeness' sake," id. at col. 3, l. 24, further emphasizing the point that only these two particular sizes of weapon shell were being disclosed.

The move from the grandparent '562 patent's disclosure of a 12-gauge shotgun shell to the parent '742 patent's disclosure of a 37-mm and a 40-mm shell is not a species-to-genus change. It is a change from one species to another species. Bilstad, therefore, does not apply. The situation here is instead analogous to the one in PowerOasis, where the original application disclosed a species term, a vending machine with an interface on the machine, and the continuation application disclosed a different species term, a vending machine with an

interface on a laptop. As the Federal Circuit held in *PowerOasis*, the specification in the original application does not support the disclosure of a similar but different term.

It does not matter that the change in the continuation application is one that "would be [an] obvious ... substitute." *PowerOasis*, 522 F.3d at 1310. While it may be obvious that a 37-mm or 40-mm shell could be used in the place of a 12-gauge shotgun shell, that is not enough. "Entitlement to a filing date does not extend to subject matter which is not disclosed, but would be obvious over what is expressly disclosed. It extends only to that which is disclosed." *Lockwood*, 107 F.3d at 1571-72.

Thus, there is no continuity of disclosure from the '562 patent to the '742 patent, with respect to ballast or weapon shells. As a result, the '742 patent is not entitled to the filing date of the '562 patent, and the patents in suit are not entitled to the filing date of the '562 patent. It is therefore necessary to decide whether the patents in suit are invalid as anticipated by the '562 patent.

II. Does the '562 patent anticipate the '086 and '133 patents?

As discussed above, the patents in suit are not entitled to the filing date of the grandparent '562 patent. The '562 patent is therefore prior art for the patents in suit, and the '562

patent may invalidate the patents in suit as anticipated under 35 U.S.C. § 102(b). See Zenon Env'tl., 506 F.3d at 1382 (continuity of disclosure broken and grandparent invalidated patent in suit).

A patent is invalid by anticipation when "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b). If a single prior art reference expressly or inherently discloses each limitation of a patent claim, the claim is invalid by anticipation. Perricone v. Medicis Pharm. Corp., 432 F.3d 1368, 1375-76 (Fed. Cir. 2005).

While anticipation is a question of fact, "it may be decided on summary judgment if the record reveals no genuine dispute of material fact." Golden Bridge Tech., Inc. v. Nokia, Inc., 527 F.3d 1318, 1321 (Fed. Cir. 2008).

As discussed below, the '086 patent is invalid as anticipated by the '562 patent, but there is a genuine dispute of material fact with regard to the '133 patent.

A. The '086 patent

The only independent claims of the '086 patent are claims 1 and 9, and the '562 patent discloses every limitation of these

two claims. In addition, the '562 patent was issued more than one year before Combined Tactical applied for the '086 patent. Therefore, the '086 patent is invalid under 35 U.S.C. § 102(b) as anticipated by the '562 patent.

The '562 patent has a single claim, which reads:

A method of shaping a projectile so as to have a specified low lethality consequence upon impact against an individual, said shaping method comprising the steps of using an empty 12 gauge shotgun shell having a cylindrical wall bounding a projectile compartment and a front edge and rear edge at opposite ends of said cylindrical wall respectively bounding a front and a rear opening into said projectile compartment, closing said rear opening of said 12 gauge cartridge shell with projectile-propelling explosive means, using preliminarily an unfilled tubular sock-like projectile body of fabric construction material having a closed front end and a rear edge bounding a rear opening thereinto, filling through said rear opening of said tubular sock-like projectile body a selected amount of lead shot **to assume a position therein against said closed end, forming folds in said tubular sock-like projectile body immediately forward of said rear opening thereof,** inserting said formed folds of said tubular sock-like projectile body immediately forward of said rear opening thereof, inserting said formed folds of said tubular sock-like projectile body into said projectile compartment front opening, urging in movement said lead shot-filled closed front end of said tubular sock-like projectile body fully into said projectile compartment to an extent causing said formed folds thereof into firm contact against a said closed 12 gauge shotgun shell end and said lead shot-filled closed front end to expand radially into contact with said 12 gauge shotgun shell cylindrical wall so as to assume said cylindrical shape thereof characterized by a blunt front end, and igniting said projectile-propelling means, whereby said tubular sock-like projectile body exits from said 12 gauge shotgun shell projectile compartment in said blunt-ended cylindrical shape against a force of air resistance to flight

exerted against a front thereof and pushed by a force urging said shape in flight exerted against a rear thereof such that said blunt-ended cylindrical shape is maintained during flight and at impact to thereby contribute to a low lethality consequence.

'562 patent, col. 4, ll. 10-44 (emphasis added).

A prior art reference anticipates a later claim when every claim limitation is expressly found in the prior art, or is inherently found in it. Leggett & Platt, Inc. v. VUTEk, Inc., 537 F.3d 1349, 1354 (Fed. Cir. 2008). Claims 1 and 9 of the '086 patent are nearly identical to claim 1 of the '562 patent, with only one material difference.³ In the above quotation from

³ There are some differences that are not material to the question of anticipation. In the '086 patent, every reference to the folding of the tail has been replaced by a reference to, simply, a tail, with no mention of folds. For instance, "said formed folds thereof" in the '562 patent, col. 4, l. 31, has been changed to "said tail thereof" in the '086 patent, col. 5, l. 16. Therefore, the '562 patent has an additional limitation -- the folded tail -- that the '086 patent does not share. The Federal Circuit has already found that the '562 patent "affirmatively recites 'forming folds...' as a distinct step in the claimed method." Combined Sys., 350 F.3d at 1214 (ellipses in original). The '086 patent has removed this distinct step, but has not replaced it with any new matter; in other words, the '086 patent has one fewer limitation than the '562 patent. In addition, the '086 patent describes the projectile as being "sock-like" fewer times than the '562 patent. For instance, "an unfilled tubular sock-like projectile body" in the '562 patent, col. 4, ll. 19-20, has been changed to "an unfilled tubular projectile body" in the '086 patent, col. 5, l. 5. However, claims 1 and 9 of the '086 patent still make clear that the invention being claimed consists of a "tubular sock-like projectile body." See, e.g., '086 patent, col. 5, ll. 9 & 12. This change, therefore, is also not material.

the '562 claim, the lines emphasized with a bold typeface have been replaced, in claim 1 of the '086 patent, with the following words:

constricting said tubular sock-like projectile body forward of said rear opening to close said rear opening thereby forming a tail,

'086 patent, col. 5, ll. 9-11. In claim 9 of the '086 patent, an identical change has been made, except that the word "constricting" has been replaced with the word "delineating." Id. at col. 5, ll. 20-22.

The Federal Circuit has already construed the claim terms of the '562 patent, noting that the tail end of the projectile is formed "'by a tie or the like ... which delineates the lead shot-filled body from a length portion or tail.'" Combined Sys., 350 F.3d at 1212 (quoting written description of '562 patent) (emphasis added). The only matter unique to claim 9 of the '086 patent, i.e., that a tail is formed by "delineating said tubular sock-like projectile body forward of said rear opening to close said rear opening," has been expressly anticipated by the '562 patent, which discloses "a tie or the like ... which delineates" the projectile into a body and a tail. Compare '086 patent, col. 6, ll. 20-21, with '562 patent, col. 2, ll. 58-59.

The only matter unique to claim 1 of the '086 patent, i.e., that a tail is formed by "constricting said tubular sock-like

projectile body forward of said rear opening to close said rear opening," has been inherently anticipated by the same disclosure of the '562 patent, that "a tie or the like" can be used to form the projectile's body and a tail. As a matter of law, a person of ordinary skill in the art would understand that tying the fabric projectile to create a body at the front end and a tail at the rear end would necessarily require a constriction of the fabric of the projectile.

Because every limitation in claims 1 and 9 of the '086 patent have been anticipated by the '562 patent, those claims are invalid under 35 U.S.C. § 102(b). Claims 2-8 of the '086 patent are dependent upon "the method in claim 1," and claim 10 is dependent upon "the method in claim 9." Therefore, all of the claims of the '086 patent are invalid.

B. The '133 patent

The '133 patent relates to a low lethality projectile flight shape. Unlike the claims in the '086 patent, the claims in the '133 patent do not substantially overlap with the '562 claim. From the evidence submitted by the parties, it remains unclear whether a person of ordinary skill in the art would find that the low-lethality projectile flight shape claimed in the '133 patent was anticipated by the '562 patent. Therefore the

motion for summary judgment is denied as to the invalidity of the '133 patent under 35 U.S.C. § 102(b).

III. The enablement requirement of 35 U.S.C. § 112

Defense Technology also moves for summary judgment on the issue of invalidity under the enablement requirement of 35 U.S.C. § 112. The enablement requirement is satisfied if one skilled in the art, after reading the specification, could create the claimed invention without undue experimentation. Sitrick v. Dreamworks, LLC, 516 F.3d 993, 999 (Fed. Cir. 2008). Defense Technology must show facts supporting a conclusion of invalidity by clear and convincing evidence, because a patent is presumed valid. Id.

Claim 1 of the '133 patent recites a "low-lethality flight shape comprising ... a blunt projectile front end portion" and "a tail portion that is ... substantially cylindrically shaped." '133 patent, col. 4, ll. 61-67. According to Defense Technology, this claim requires the projectile to maintain a cylindrical shape throughout flight. Defense Technology argues that the patent fails the enablement requirement because it is physically impossible for a fabric, lead-filled projectile to maintain its cylindrical shape when launched into flight.

In his deposition, the inventor of the '133 patent testified that the projectile, after being shot from the gun

barrel, quickly assumes a mushroom-like shape and maintains that shape until it hits the target. Defense Technology relies on this admission as proof that the projectile changes its shape in flight.

However, the inventor's statement is consistent with the construction of the claim language. The term "flight shape" in the '133 patent has been construed to mean "the shape of the projectile after it is propelled out of the weapon shell and during the course of its flight." Combined Tactical Sys. V. Defense Tech. Corp. of Am., 426 F. Supp. 2d 140, 148 (S.D.N.Y. 2006) (emphasis added). The term "blunt projectile front end" has been construed to mean "a cylindrical shape with a front end that is not sharp." Id. at 148-49. The inventor's statement that the projectile assumes a mushroom-like shape after being fired is not inconsistent with the claim requirements that the projectile in flight have "a cylindrical shape with a front end that is not sharp" and that this shape be assumed "after it is propelled out of the weapon shell and during the course of its flight."

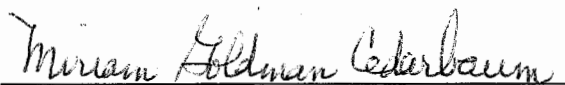
Defense Technology has not shown, by clear and convincing evidence, a failure to meet the enablement requirement. Therefore its motion for summary judgment under 35 U.S.C. § 112 is denied.

CONCLUSION

For the foregoing reasons, Defense Technology's motion for summary judgment invalidating the '086 patent is granted under 35 U.S.C. § 102(b). Summary judgment is denied with respect to the validity of the '133 patent because there are genuine issues of disputed fact under both 35 U.S.C. § 102(b) and 35 U.S.C. § 112.

SO ORDERED.

Date: New York, New York
November 17, 2008


MIRIAM GOLDMAN CEDARBAUM
United States District Judge