

(Filed: March 19, 1999)

* * * * *

ALEXEY T. ZACHARIN ,	*	Patents; patent infringement;
Plaintiff,	*	on-sale bar; claim preclusion;
	*	issue preclusion; equitable
v.	*	estoppel.
	*	
	*	
THE UNITED STATES,	*	
	*	
Defendant.	*	
	*	

* * * * *

Robert H. Koehler, Patton Boggs, L.L.P., Washington, D.C., for plaintiff, with whom were *Michael J. Schaengold* and *Lynn T. Burleson*, of counsel.

Grace Karaffa, Commercial Litigation Branch, Civil Division, United States Department of Justice, Washington, D.C., for defendant, with whom on the brief were *Frank W. Hunger*, Assistant Attorney General, and *Victor J. DiPietro*, Director. *John Fargo*, Assistant Director, of counsel.

O P I N I O N

MARGOLIS, Judge.

This patent infringement case is before the court after a one-day trial regarding the on-sale bar of 35 U.S.C. § 102(b). The government argues that plaintiff's patent is invalid under section 102(b) because the invention it covers was on sale more than one year before plaintiff filed his application for patent. Plaintiff argues that his patent is not invalid under section 102(b), but that even if it is, the doctrines of claim preclusion, issue preclusion, and equitable estoppel each prevent the government from raising the defense contained in section 102(b). After carefully considering all materials admitted into evidence during trial, as well as post-trial papers filed by the parties, the court concludes that plaintiff's patent is invalid under section 102(b) and that the doctrines of claim preclusion, issue preclusion, and equitable estoppel do not prevent the government from asserting the section 102(b) defense. Plaintiff's amended complaint is, therefore, dismissed with prejudice, and judgment will be entered for the defendant.

FACTS

Plaintiff, Alexey T. Zacharin, brought this patent case under 28 U.S.C. § 1498(a), alleging that the United States Army ("Army") infringed claims one through seven of United States Patent No. 4,565,341 ("'341 patent"). The court held a trial to determine whether the on-sale bar of 35 U.S.C. § 102(b) applied to plaintiff's invention, thereby invalidating the '341 patent. The following facts are either stipulations made by the parties or findings made by the court based upon evidence adduced at trial.

The MPSM Program and Plaintiff's Invention

In the mid-1970s, the Army initiated a Multi-Purpose Sub-Munition ("MPSM") Program to develop a warhead that housed nine stacked submunitions (i.e., small bombs) and that could be launched from a helicopter. The MPSM warhead, which when launched in this manner experiences a high-velocity airflow of up to approximately 2600 feet per second, was designed to eject its load of submunitions into this high-velocity airflow. The ejected submunitions would then abruptly cease forward movement and descend vertically onto a ground target. This behavior was known as the "wall in space" concept.

By December 22, 1978, the Army had decided that a ram air decelerator ("RAD") was required in order to achieve the objectives of the MPSM program, including the wall in space. A RAD is a fabric, balloon-like device that has one or more air inlets and that is mechanically attached to a submunition. In a high-velocity environment, air is forced through the air inlets to inflate the decelerator. For purposes of the MPSM program, the Army determined that a suitable RAD would be attached to the submunition fuze in a manner that the force of inflation not only would stop the submunition's forward movement and achieve the wall in space, but also would initiate fuze arming. As finally developed, an MPSM rocket consists of a warhead and a standard rocket motor. The warhead contains nine separate 2½-inch caliber submunitions, each of which has three major components: (1) a submunition body; (2) a fuze; and (3) a RAD.

The Army Armament Research and Development Command ("ARRADCOM") had responsibility for the research and development of armaments for the Army. ARRADCOM, which was located at Picatinny Arsenal in Dover, New Jersey, was responsible for research, development, and testing for the MPSM program. Development of the MPSM Program's fuze ("XM230 Fuze") was the responsibility of the Munitions Fuze Branch of the Nuclear and Fuze Division of ARRADCOM's Large Caliber Weapon Systems Laboratory. Plaintiff was the Army engineer assigned to develop the fuze for the MPSM program. The Laboratory's Fluid Mechanics Branch of the Applied Science Division, also known as the Aeroballistic Group, was responsible for development of the RAD. Saul Wasserman was the Army engineer with primary responsibility for development of the MPSM Program's RAD. Plaintiff had no official role in the development of the RAD.

The Breed Corporation ("Breed"), located in nearby Fairfield, New Jersey, was awarded Contract No. DAAK10-79-C-0057 ("Contract 0057") on December 22, 1978. Contract 0057 involved the first two phases of a four-phase research and development program. Breed's role under Contract 0057 was to assist the Army's engineering development of a fuze and associated RAD for use in the MPSM Program.

In early December 1978, plaintiff stitched together on his wife's sewing machine a triangular-shaped RAD ("T-RAD") on his own time. Plaintiff tested the homemade T-RAD on December 10, 1978 by attaching it to a strut, fixing the strut to the window of a car so that the T-RAD extended outside the

window, and then driving at approximately 80 miles per hour on a local highway. The parties agree that this test was sufficient to reduce the invention to practice and that the T-RAD embodies each and every limitation of claims one through seven of the '341 patent.

Plaintiff disclosed the T-RAD to two government employees in the Munitions Fuze Branch, including his immediate supervisor, on January 2, 1979. Shortly thereafter, plaintiff disclosed the T-RAD to his branch director and to the engineer officially assigned to develop a RAD for the MPSM program. Plaintiff made these disclosures with the hope and expectation that the T-RAD would be considered for use in the MPSM program. Plaintiff also disclosed his invention to family, friends, and at least one Breed engineer in January 1979. Finally, prior to June 1979, plaintiff disclosed the T-RAD to Bob Brock of the Army's Office of the MPSM Program Manager. Plaintiff did not ask any of these people to keep his invention a secret.

By June 1979, the T-RAD was being considered by the Army for use in the MPSM Program. In that month, the T-RAD was one of four RAD designs used in MPSM Program test firings at Hawthorne Army Ammunition Plant Range in Hawthorne, Nevada ("Hawthorne"). By November 1979, only two RAD designs were under consideration for use in the MPSM Program: a paracone design developed by Saul Wasserman and the T-RAD developed by plaintiff. A "shoot-off" competition was held in November 1979 between these two designs, and in January 1980 the Army selected the T-RAD for the MPSM Program. The Army notified Breed that the T-RAD would be used in future performance under Contract 0057 and for any future MPSM-related research and development contracts awarded to Breed. All T-RADs fabricated and delivered under Contract 0057 were for testing and evaluation by either Breed or the Army; none were used as production units for operational deployment.

On April 15, 1980, ARRADCOM awarded Breed Contract No. DAAK10-80-C-0095 ("Contract 0095") for Phase III of the engineering development for the XM230 Fuze. The Army used the T-RAD as the baseline design for the RAD component. The Scope of Work for Contract 0095 required, among other things, that Breed fabricate 6000 XM230 Fuze Systems, including 6000 T-RADs, for flight testing by the Army. All T-RADs fabricated and delivered under Contract 0095 were for testing and evaluation by either Breed or the Army; none were used as production units for operational deployment.

Contract 0095 was a cost-plus-incentive fee contract under which Breed was to be paid its costs of performance plus a fee, which would represent profit. Under the fee arrangement, Breed negotiated a maximum and a minimum fee; the fee actually paid depended upon the relationship between actual and anticipated costs. In no case, however, would the fee earned fall below the minimum negotiated fee. By August 19, 1980, Breed had received from the Army a \$20,251.05 fee payment in addition to reimbursement of costs incurred as of that date. Ultimately, Breed was paid the minimum fee of \$24,804.65.

Breed fabricated and delivered 288 fuzes and T-RADs to the Army on or before July 21, 1980 for flight tests conducted by the Army at Hawthorne on that date. Breed fabricated and delivered an additional 10 rounds, each containing nine submunitions with their own fuzes and T-RADs, on or before August 25, 1980 for flight tests conducted by the Army at Hawthorne on that date. The first test was conducted to verify fuze arming, triggering, and firing reliability as well as to evaluate the use of prepackaged and conditioned T-RADs. The second test was to verify low velocity deployment of the T-RADs using two packaging techniques. Neither test involved claimed features of the T-RAD or resulted in changes to the design details or shape first suggested to the Army. The 6000 XM230 Fuze Systems (each with a T-RAD) called for under Contract 0095 were delivered by Breed to the Army between January 20, 1981 and April 15, 1981. Plaintiff personally inspected and accepted on behalf of the Army the 6000 units delivered under Contract 0095.

Breed was awarded Contract No. DAAK10-81-C-0144 ("Contract 0144") in April 1981. This follow-on contract called for Breed to refine and finalize the XM230 Fuze System, to provide engineering and fabrication support during demonstration testing, and to provide a Technical Data Package reflecting all final design aspects. Breed was required to continue using the T-RAD design under this contract. All T-RADs delivered under Contract 0144 were for testing and evaluation by either Breed or the Army; none were used as production units for operational deployment. In September 1982, ARRADCOM awarded Breed and another contractor the first contracts requiring production quantities of the MPSM Fuze Assembly. The T-RAD remained the RAD design required in these contracts. Plaintiff did not receive any compensation from the Army on account of the utilization of the T-RAD design in any part of the MPSM Program.

II. The Patent Prosecution

On September 22, 1980, plaintiff executed a Patent Disclosure Data Sheet ("Disclosure Sheet"), which detailed the T-RAD invention and included sketches of the invention. Plaintiff also executed a Record of Invention, which included the history of the invention. Plaintiff submitted both documents to the ARRADCOM Legal Office, Patent Law Division ("Patent Law Office"). The Patent Law Office forwarded these documents to plaintiff's superiors on November 14, 1980 and requested that they complete an Invention Evaluation by Technical Segment ("Invention Evaluation"). A completed Invention Evaluation was returned to the Patent Law Office on November 24, 1980. The Patent Law Office submitted the information it had accumulated regarding plaintiff's invention to the ARRADCOM Invention Evaluation Committee, which determined that patent coverage should be sought.

Harold H. Card, Jr., Chief Patent Counsel of the Patent Law Office, notified plaintiff on December 18, 1980 that the Invention Evaluation Committee had directed that patent coverage be sought. Card informed plaintiff that he would process plaintiff's patent application, but that because of an existing backlog, actual filing of the application with the United States Patent and Trademark Office ("PTO") might be delayed in excess of one year. In light of this delay, Card cautioned plaintiff not to make any public disclosure of the invention. In early May 1981, plaintiff submitted an Invention Rights Questionnaire, which was required before Card could file a patent application for plaintiff. Card submitted plaintiff's patent application to the PTO on September 24, 1981.

In April 1982, the Patent Law Office initiated a Request for Determination of Rights, recommending that title remain with the inventor without a grant of a royalty-free license to the government. The Patent Law Office forwarded the Request to superiors in the Army Material Development and Readiness Command ("DARCOM"), which ultimately forwarded it to the Chief of the Army's Patent Law Division in the Judge Advocate General's Office ("Patent Law Division"). On August 1, 1984, the Patent Law Division decided that plaintiff's patent would be subject to a nonexclusive, irrevocable, royalty-free license to the government.

Plaintiff appealed the Patent Law Division's decision to the Commissioner of Patents and Trademarks ("Commissioner"), who granted plaintiff's appeal on April 30, 1985, ruling that plaintiff did own the invention and that the government was not entitled to a royalty-free license. On May 23, 1985, plaintiff revoked Card's power of attorney and substituted private counsel to prosecute the application for the '341 patent. Although the Patent Law Division appealed the PTO's determination of rights, the PTO dismissed that appeal as untimely. The '341 patent was issued on January 21, 1986.

Plaintiff filed the instant suit against the United States on March 31, 1993, alleging that the government has infringed the '341 patent. On January 3, 1996, the court granted defendant's motion for summary judgment and dismissed plaintiff's complaint, holding that the government had a valid, express license to use plaintiff's invention. On appeal, the Federal Circuit held that the government's license was void,

vacated this court's opinion, and remanded to this court for further proceedings. Given the potentially determinative nature of an on-sale bar under 35 U.S.C. § 102(b), the parties agreed to submit that issue to the court in isolation for trial.

DISCUSSION

The case is before the court after a one-day trial regarding the on-sale bar of 35 U.S.C. § 102(b). The government contends that Contract 0095 constitutes a sale of the T-RAD more than one year before plaintiff filed his application for a patent and that claims one through seven of the '341 patent are therefore invalid. Plaintiff argues that Contract 0095 is not a sale within the meaning of section 102(b), but that even if it is, the doctrines of claim preclusion, issue preclusion, and equitable estoppel all prevent the government from raising the on-sale bar as a defense. After carefully considering the record, the court concludes that plaintiff's patent is invalid under section 102(b) and that the doctrines of claim preclusion, issue preclusion, and equitable estoppel do not prevent the government from raising the section 102(b) defense.

Section 102(b)

Governing Principles

Section 102(b) provides that "[a] person shall be entitled to a patent unless-- . . . (b) 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). Section 102(b) therefore establishes a so-called "critical date," falling one year prior to the date of patent application, before which the invention must not have been described in a printed publication, put into public use, or sold or offered for sale. See Continental Plastic Containers v. Owens Brockway Plastic Prods. Inc., 141 F.3d 1073, 1077 (Fed. Cir. 1998). Addressing the standards for application of the on-sale bar, the Supreme Court recently held as follows:

[T]he on-sale bar applies when two conditions are satisfied before the critical date.

First, the product must be the subject of a commercial offer for sale. . . .

Second, the invention must be ready for patenting. That condition may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

Pfaff v. Wells Elecs., Inc., 525 U.S. ___, ___, 119 S. Ct. 304, 311-12 (1998). A sale or offer to sell an invention by either the inventor or a third party is subject to section 102(b).⁽¹⁾ See In re Caveney, 761 F.2d at 675; General Elec. Co. v. United States, 654 F.2d 55, 61-62 (Ct. Cl. 1981). Proof of delivery is not necessary for a finding that the device was on sale; the existence of a sales contract or the signing of a purchase agreement is sufficient. See Buildex Inc. v. Kason Indus., 849 F.2d 1461, 1464 (Fed. Cir. 1988); J.A. LaPorte, Inc. v. Norfolk Dredging Co., 787 F.2d 1577, 1582-83 (Fed. Cir. 1986).

Whether a sale or public use has occurred is a question of law, although it is based on underlying facts. See Evans Cooling Sys., Inc. v. General Motors Corp., 125 F.3d 1448, 1450-51 (Fed. Cir. 1997), cert. denied, 118 S. Ct. 1050 (1998); Baxter Int'l, Inc. v. Lobe Lab., Inc., 88 F.3d 1054, 1058 (Fed. Cir. 1996). Whereas courts have, until recently, employed a multifactor "totality of the circumstances" test in determining whether an offer for sale had been made, see Evans Cooling Sys., 125 F.3d at 1451; UMC

Elecs. Co. v. United States, 816 F.2d 647, 656 (Fed. Cir. 1987), the Federal Circuit recently abandoned that test, citing it "as unnecessarily vague." See Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326, 1333 (Fed. Cir. 1998) (quoting Seal-Flex, Inc. v. Athletic Track & Court Constr., 98 F.3d 1318, 1323 n.2 (Fed. Cir. 1996)). As a result, the Federal Circuit, and consequently this court, now "follow[] the Supreme Court's two-part test without balancing various policies according to the totality of the circumstances as may have been done in the past." Weatherchem, 163 F.3d at 1333.

Nevertheless, an otherwise public use or sale does not violate section 102(b) if the activity at issue was "substantially for purposes of experiment." Baker Oil Tools, Inc. v. Geo Vann, Inc., 828 F.2d 1558, 1564 (Fed. Cir. 1987); see Petrolite Corp. v. Baker Hughes Inc., 96 F.3d 1423, 1426 (Fed. Cir. 1996). In reviewing a claim of experimental use, which is a question of law, a court should consider the objective evidence of experimentation, including the number of prototypes and duration of tests conducted, whether test records and progress reports were kept, the existence of a secrecy agreement, whether the inventor received compensation for use of the invention, and the extent to which the inventor controlled the testing. See Sinskey v. Pharmacia Ophthalmics, Inc., 982 F.2d 494, 498 (Fed. Cir. 1992); Lough v. Brunswick Corp., 86 F.3d 1113, 1120 (Fed. Cir. 1996). The final factor is crucial because an inventor must have controlled the alleged experiments in order for a court to conclude that he was experimenting. See Lough, 86 F.3d at 1120; Baxter Int'l, 88 F.3d at 1060.

"[E]xperimental use, which means perfecting or completing an invention to the point of determining that it will work for its intended purpose, ends with an actual reduction to practice." RCA Corp. v. Data General Corp., 887 F.2d 1056, 1061 (Fed. Cir. 1989); see Continental Plastic Containers, 141 F.3d at 1079; Atlantic Thermoplastics Co. v. Faytex Corp., 5 F.3d 1477, 1480 (Fed. Cir. 1993); cf. Baxter Int'l, 88 F.3d at 1060 ("Further refinement of an invention to test additional uses is not the type of experimental use that will negate a public use."). Consequently, once an invention has been reduced to practice, a sale, offer to sell, or public use of that invention cannot be considered experimental use. See RCA, 887 F.2d at 1061. Furthermore, an offer to sell an item that has been reduced to practice, in combination with another item, the combination not having been reduced to practice, cannot be deemed an experimental use of the first item. See id. Finally, the experimental use exception does not apply to experimentation conducted with respect to unclaimed features of the invention, see Western Marine Elecs., Inc. v. Furuno Elec. Co., 764 F.2d 840, 847 (Fed. Cir. 1985); In re Smith, 714 F.2d at 1136, nor does it apply to testing done to determine the invention's suitability to a customer's unclaimed needs. See LaBounty Mfg. v. United States Int'l Trade Comm'n, 958 F.2d 1066, 1074 (Fed. Cir. 1992).

Contract 0095

As to the first prong of the Supreme Court's two-prong test, the court concludes that plaintiff's T-RAD invention was the subject of a commercial offer for sale prior to the critical date. Plaintiff filed his application for the '341 patent on September 24, 1981. The critical date under section 102(b) is, therefore, September 24, 1980. Contract 0095 was awarded to Breed on April 15, 1980 and required Breed to fabricate and deliver to the Army 6000 MPSM submunitions, each containing its own T-RAD. Breed's acceptance of this contractual undertaking "makes it clear that such an offer [to sell] had been made." Weatherchem, 163 F.3d at 1333 (quoting Pfaff, 525 U.S. at ___, 119 S. Ct. at 312). Moreover, where there is "'an actual sale' . . . in which 'money changed hands,'" there can be little doubt that a commercial offer for sale took place. Id. The date of the contract, April 15, 1980, is the date on which the invention became part of the public domain and therefore is the effective date of the sale. See J.A. LaPorte, 787 F.2d at 1582-83. The fact that some delivery and payment may have occurred after the critical date is simply irrelevant. See Weatherchem, 163 F.3d at 1333; J.A. LaPorte, 787 F.2d at 1582-83. Likewise, that the sale in this case was made by Breed, a third-party, has little bearing on the court's

analysis. See J.A. LaPorte, 787 F.2d at 1581 (The on-sale "bar is not limited to sales by the inventor or one under his control, but may result from activities of a third party."); In re Caveney, 761 F.2d at 675-76. The parties have stipulated that the T-RADs required under Contract 0095 embodied each and every limitation of claims one through seven of the '341 patent. Because the T-RAD invention, as it is embodied in the '341 patent, was offered for sale prior to September 24, 1980, the first prong of the on-sale bar of section 102(b) has been satisfied.

The second prong of the Supreme Court's two-prong test is also satisfied in this case, as plaintiff's T-RAD was ready for patenting well prior to the critical date. That an invention is ready for patenting can be demonstrated either by proof of reduction to practice or by proof of drawings or other descriptions of the invention sufficiently specific to enable another person to reduce the invention to practice. See Pfaff, 525 U.S. at ___, 119 S. Ct. at 312. Here, the parties have stipulated that the T-RAD was reduced to practice no later than December 10, 1978, nearly two years prior to the September 1980 critical date. Because the facts in this case satisfy both prongs of the Pfaff test, the on-sale bar of section 102(b) applies to plaintiff's T-RAD patent.

The only issue that remains for the court to address is whether the Army's use of the T-RAD pursuant to Contract 0095 falls under the experimental use exception of the on-sale bar. The court concludes that testing conducted on units fabricated by Breed pursuant to Contract 0095 cannot be justified as experimental use of the T-RAD. The experimental use exception is not applicable here because plaintiff's invention was reduced to practice in December 1978, long before Breed was awarded Contract 0095 in April 1980. Once an invention has been reduced to practice, a sale of that invention can no longer be justified as experimental use. See RCA, 887 F.2d at 1061.⁽²⁾

Additionally, to the extent the T-RADs fabricated under Contract 0095 were in fact used in Army tests, such tests were (1) to determine whether the submunition, fuze, and T-RAD worked well together as a unit and (2) to perfect the T-RAD's utility for purposes of the MPSM Program. The sale of an item not yet reduced to practice (here, the combined submunition, fuze, and T-RAD) that includes a subpart that has been reduced to practice (here, the T-RAD) is not an experimental use of the subpart. See RCA, 887 F.2d at 1061. Furthermore, testing conducted to determine the invention's suitability to a customer's unclaimed needs, here, whether the T-RAD met the MPSM Program's needs, does not justify application of the experimental use exception.⁽³⁾ See LaBounty Mfg., 958 F.2d at 1074.

Finally, the court finds that the objective evidence is consistent with a conclusion that the sale was not for bona fide experimental purposes. First, the fact that there was no secrecy agreement forbidding Breed from disclosing the invention indicates that the purpose of Contract 0095 was not to experiment with respect to the T-RAD. See Sinskey, 982 F.2d at 499. More important, however, is the fact that plaintiff did not control the testing at issue. That these were Army tests over which plaintiff had no authority precludes a conclusion that plaintiff was experimenting on his invention. See Lough, 86 F.3d at 1120; Baxter Int'l, 88 F.3d at 1060.

In summary, the court concludes that the government has shown by clear and convincing evidence that plaintiff's invention was on sale, not for experimental purposes, more than one year prior to when plaintiff filed an application for the '341 patent. Consequently, plaintiff's patent is invalid unless the government is precluded from raising the section 102(b) bar.

II. Issue Preclusion

Plaintiff argues that the court should apply issue preclusion to prevent the government from raising the on-sale bar in this infringement action because the patentability of plaintiff's invention was an

underlying issue in the Determination of Rights proceedings before the PTO. According to plaintiff, because the on-sale bar "could have been, and should have been, raised during the appeal process [of the first action], the Government is collaterally estopped from doing so now." (Pl.'s Brief at p. 22) (emphasis in original). The court concludes, however, that issue preclusion does not prevent the government from raising the on-sale bar in the instant suit.

The doctrine of issue preclusion, also known as collateral estoppel, dictates that a judgment on the merits precludes relitigation in a subsequent suit of issues that were litigated and decided in the first suit. See In re Freeman, 30 F.3d 1459, 1465 (Fed. Cir. 1994). The rationale behind the doctrine is that a party should be bound by decisions made with respect to litigated issues and should not be permitted to obtain a second decision on such issues. See Foster v. Hallco Mfg. Co., 947 F.2d 469, 480 (Fed. Cir. 1991). There are four requirements, all of which must be met before a court may apply issue preclusion:

(1) the issue is identical to one decided in the first action; (2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party precluded] had a full and fair opportunity to litigate the issue in the first action.

In re Freeman, 30 F.3d at 1465. Unlike claim preclusion, there is no requirement that the claim or cause of action be the same in the first and second suits. See id.

The fatal flaw in plaintiff's issue preclusion argument is that the on-sale bar was never raised by either party during the rights determination. Executive Order 10096, pursuant to which the rights determination was conducted, does not authorize the Commissioner to consider the patentability of an invention. See Executive Order No. 10096, 15 Fed. Reg. 389 (1950). Consequently, the Commissioner could not have addressed the on-sale bar even if it had been raised by the government. Because the on-sale bar was not and could not have been raised before the Commissioner, the court cannot conclude that, during the rights determination, this issue was (1) decided, (2) actually litigated, (3) essential to the judgment, or (4) that the government had a fair opportunity to litigate the issue. In other words, not one of the four requirements of issue preclusion is satisfied with respect to the on-sale bar. The government cannot, therefore, be collaterally estopped from raising that issue in the instant case. Cf. Zacharin v. United States, No. 96-5076, 1997 WL 63177, at *5 n.4 (Fed. Cir. Feb. 14, 1997) (holding that the government could not be precluded from raising the express license in the instant infringement suit on the basis of the Commissioner's earlier decision because the Commissioner did not have authority under Executive Order 10096 to consider the express license).

Plaintiff argues that a decision regarding the patentability of the T-RAD underlies both the patent infringement case before this court and the administrative rights determination made by the Commissioner. This is so with respect to the rights determination, plaintiff contends, because the Commissioner was considering the parties' rights in an "invention," and the governing Executive Order defines invention as something that "is or may be patentable." An inherent assumption of all rights determinations, plaintiff concludes, is that the invention under consideration is in fact patentable.

Plaintiff's analysis fails for two related reasons. First, the plain meaning of the language "may be patentable" is that there is some likelihood that the invention is actually patentable. The Executive Order does not require that the invention be, in fact, patentable before it can be the subject of a rights determination. Second, as explained above, the Commissioner does not have authority to determine whether an invention is patentable. This lack of authority is precisely why the Executive Order does not require an invention to actually be patentable in order to be the subject of a rights determination. There is simply no rational way to conclude that the T-RAD's patentability was considered by the Commissioner in a manner that would justify application of issue preclusion regarding the on-sale bar.

The court concludes, therefore, that issue preclusion cannot prevent the government from raising section 102(b) in the instant patent infringement suit.⁽⁵⁾

III. Claim Preclusion

Plaintiff next maintains that the court should apply claim preclusion to prevent the government from challenging the T-RAD's patentability in the instant suit because the T-RAD's patentability "was the very underpinning" of the Commissioner's determination that the government had no rights in the invention. Although claim preclusion and issue preclusion are two distinct doctrines, each having different requirements, the court concludes that claim preclusion is inapplicable for reasons similar to those discussed regarding issue preclusion.

Claim preclusion, which is also referred to as *res judicata*, provides that a final judgment on the merits precludes a subsequent action involving the same claim, or any part thereof, including issues and defenses that were not, but could have been, raised in the first action. See Brown v. Felsen, 442 U.S. 127, 131 (1979); Foster, 947 F.2d at 476, 478. A "claim" is not simply a legal theory or argument, but rather includes all rights a claimant may have against a party as a result of a transaction, or series of connected transactions, out of which the action arose. See Foster, 947 F.2d at 478-79; Bayshore Resources Co. v. United States, 2 Cl. Ct. 625, 635 (1983). "In deciding what factual grouping constitutes a transaction, and what groupings make a series of connected transactions," a court should consider "whether the facts are related in time, space, motivation or the like . . ." Container Transp. Int'l, Inc. v. United States, 468 F.2d 926, 929 (Ct. Cl. 1972).

If the invention rights determination involved the same claim that is currently before the court, the government would be barred from raising in this suit any defense that it raised or could have raised in the earlier proceeding. Plaintiff contends that this doctrine should prevent the government from raising the on-sale bar as a defense in the infringement suit now before the court. In order to apply claim preclusion here, each of the following two propositions must be true: (1) the government could have raised the on-sale bar during the rights determination, and (2) the rights determination and the instant infringement suit involve the same claim. The court concludes that neither proposition is true. Claim preclusion is, therefore, inapplicable to this case.

First, for the reasons stated in the earlier discussion on issue preclusion, the government did not and could not have raised the on-sale bar during the rights determination proceedings because the Commissioner did not have authority to consider the patentability of the invention. Because the government could not have raised the on-sale bar during the rights determination, the court cannot invoke claim preclusion to prevent the government from raising that defense in the instant proceedings. See Brown, 442 U.S. at 131 (stating that *res judicata* prevents litigation regarding defenses "that were previously available to the parties").

Even if the government could have raised the on-sale bar during the rights determination, claim preclusion cannot prevent the government from raising that defense here because plaintiff's patent infringement action involves a different "claim" than the one that was before the Commissioner. A case of infringement exists if an item "is made, used or sold without authority under the claim(s) of a valid enforceable patent." Foster, 947 F.2d at 479. Consequently, the facts underlying plaintiff's claim for infringement include, for example, the scope of claims one through seven of the '341 patent and the composition of the allegedly infringing items utilized by the government. The facts that gave rise to the Commissioner's rights determination included the scope of plaintiff's official duties, the absence of government contribution to plaintiff's invention, and the time and place where plaintiff made the invention. These two groups of facts are not related in "time, space, motivation or the like." The

determination of rights and the suit for infringement did not, therefore, arise from the same transaction or a series of related transactions, and so cannot be part of the same claim. Accordingly, claim preclusion cannot prevent the government from raising any defense to the instant infringement action, including the on-sale bar.

IV. Equitable Estoppel

Plaintiff's final argument is that the government should be equitably estopped from raising the on-sale bar in the instant infringement action. Plaintiff contends that it was reasonable for him to rely on Army counsels' failure to bring the on-sale bar to his attention during the approximately four years that they were prosecuting his patent application. The court concludes that the facts of this case do not satisfy the requirements of equitable estoppel. Furthermore, the court concludes that even if these requirements were met, other reasons prevent the application of equitable estoppel against the government.

The courts have identified four necessary elements of equitable estoppel, each of which must be satisfied before the doctrine may be applied. The elements are:

"(1) [t]he party to be estopped must know the facts; (2) he must intend that his conduct shall be acted on or must so act that the party asserting the estoppel has a right to believe it is so intended; (3) the latter must be ignorant of the true facts; and (4) he must rely on the former's conduct to his injury."

Rel-Reeves, Inc. v. United States, 534 F.2d 274, 296-97 (Ct. Cl. 1976) (quoting United States v. Georgia-Pacific Co., 421 F.2d 92, 96 (9th Cir. 1970)); see Donahue v. United States, 33 Fed. Cl. 600, 607 (1995). It is not necessary that the party to be estopped have made any actual representation; conduct alone is sufficient. See Emeco Indus. v. United States, 485 F.2d 652, 657 (Ct. Cl. 1973).

"[T]he Government may not be estopped on the same terms as any other litigant." Heckler v. Community Health Servs. of Crawford County, Inc., 467 U.S. 51, 60 (1984). A party seeking estoppel against the government must demonstrate that the government agent at issue acted within the scope of his authority. See Emeco, 485 F.2d at 657. Furthermore, in cases against the government, "judicial use of the equitable doctrine of estoppel cannot grant [a party] a money remedy that Congress has not authorized." OPM v. Richmond, 496 U.S. 414, 426 (1990).

In deciding whether to apply equitable estoppel to preclude the government from raising the on-sale bar in this suit, the court must first determine whether the Army attorneys who handled plaintiff's patent application were aware of the relevant facts. If so, the court must then decide whether plaintiff knew of those facts. The relevant fact here is the existence of Contract 0095 and its requirement that Breed fabricate and deliver 6000 T-RADs to the Army. Because Contract 0095 was awarded on April 15, 1980, the inquiry is narrowed to determining whether the Army attorneys knew of the contract prior to April 15, 1981, which is the date when the on-sale bar went into effect. Knowledge after that date is essentially irrelevant, because at that point it was not possible to avoid the on-sale bar.

The only evidence presented at trial that the Army attorneys knew of Contract 0095 before April 15, 1981 is an illegible note written by a subordinate patent attorney in the Picatinny Arsenal legal office. Even assuming that this note is sufficient to demonstrate the requisite government knowledge, plaintiff's clear knowledge of the facts precludes application of equitable estoppel. It is beyond dispute that plaintiff knew about Contract 0095. In fact, plaintiff inspected and accepted for the government the 6000 T-RADs delivered under the contract prior to April 15, 1981. Plaintiff contends that he did not understand the legal consequence of the contract, that is, he did not realize that the T-RADs delivered under Contract 0095 could impact the patentability of his invention. Whether plaintiff knew that

Contract 0095 could result in an on-sale bar is immaterial, because "those who deal with the Government are expected to know the law and may not rely on the conduct of Government agents contrary to law." Heckler, 467 U.S. at 63. Consequently, plaintiff has failed to prove that all four elements of equitable estoppel have been met. The court cannot, therefore, preclude the government from raising the on-sale bar on the basis of this doctrine. See id. at 61 (stating that, "however heavy the burden might be when an estoppel is asserted against the Government, the private party surely cannot prevail without at least demonstrating that the traditional elements of an estoppel are present").

Even if each of the traditional elements of equitable estoppel had been satisfied, the court still would not apply the doctrine to preclude the government's on-sale defense. Plaintiff brought the instant suit under 28 U.S.C. § 1498(a), which allows a patent holder to recover compensation from the government for its infringement of the patent. See 28 U.S.C. § 1498(a). A condition of patentability is, however, that the invention not be on sale or in public use more than one year before the patent application is filed. See 35 U.S.C. § 102(b). Given that the court has concluded that plaintiff's patent is invalid, allowing plaintiff to receive compensation for the government's use of the T-RAD would provide plaintiff with a "money remedy that Congress has not authorized." Richmond, 496 U.S. at 426. The Supreme Court has clearly stated that courts are forbidden to apply equitable estoppel in such a situation. See id. The court, therefore, must reject plaintiff's request that the government be equitably estopped from raising the on-sale bar.⁽⁶⁾

CONCLUSION

For the reasons stated, the court concludes that plaintiff's patent is invalid under 35 U.S.C. § 102(b) and that the doctrines of claim preclusion, issue preclusion, and equitable estoppel are inapplicable to the facts of this case. The Clerk will dismiss the amended complaint with prejudice and enter judgment for the defendant. No costs.

LAWRENCE S. MARGOLIS

Judge, U.S. Court of Federal Claims

1. The parties have focused their arguments on the on-sale bar of section 102(b) rather than the public use provision of that section. The on-sale bar is intended to prevent the inventor from commercializing his invention for more than a year before filing for a patent. See In re Caveney, 761 F.2d 671, 675 n.5 (Fed. Cir. 1985). A sale or offer to sell made by someone other than the inventor implicates the public use provision of section 102(b). See id.; In re Smith, 714 F.2d 1127, 1134 (Fed. Cir. 1983) (defining public use as "any use of [an] invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor").

2. Plaintiff argues that the rule expressed in RCA is inapplicable here because RCA was decided after the '341 patent was issued. This was, of course, also true with respect to the patent at issue in RCA. In other words, the patent challenged in that case was also issued prior to the RCA decision. Because the

RCA court applied its holding regarding the experimental use exception to the plaintiff before it, plaintiff here is also bound by that holding. See James B. Beam Distilling Co. v. Georgia, 501 U.S. 529, 544 (1991); Newport News Shipbuilding & Dry Dock Co. v. Garrett, 6 F.3d 1547, 1554 (Fed. Cir. 1993).

Plaintiff also argues that earlier Court of Claims decisions are inconsistent with RCA and that Court of Claims precedent can only be overruled by the Federal Circuit sitting en banc. The court does not believe, however, that RCA is inconsistent with Court of Claims precedent. Therefore, rules expressed in RCA need not come from the Federal Circuit sitting en banc.

3. For instance, testing on the T-RAD determined the best fabric and inlet size for the MPSM Program. Neither fabric choice nor air inlet size is a limitation of claims one through seven of the '341 patent. Testing with regard to these features cannot, therefore, justify application of the experimental use exception. See Western Marine Elecs., 764 F.2d at 847.

4. Even if Executive Order 10096 did authorize the Commissioner to consider the patentability of plaintiff's invention, the fact that this issue was never raised, litigated, or decided precludes the application of collateral estoppel against the government.

5. Plaintiff also argues that the Army attorneys involved in the PTO proceedings had a duty to disclose the Breed contract if they believed it was material to the T-RAD's patentability. Assuming that this is true, it simply has no bearing on whether the four requirements of issue preclusion are satisfied with respect to the on-sale bar.

6. To apply equitable estoppel in this case and allow plaintiff to recover for infringement of an invalid patent would directly conflict with the "important public interest in permitting full and free competition in the use of ideas which are in reality a part of the public domain." Lear, Inc. v. Adkins, 395 U.S. 653, 670 (1969); see Foster, 947 F.2d at 474 (stating that "Lear expresses a policy in favor of precluding restrictions on attacks on patent validity").