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EQUAL TREATMENT UNDER PATENT LAW: A PROPOSED EXCEPTION TO THE ON-SALE BAR

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*210 Introduction

Imagine two bicycle companies. Each company is on the cutting edge of bicycle technology, and each has recently developed a revolutionary shock absorber. Each shock absorber is sufficiently distinct from the other that both companies could patent their inventions. The first company has its own manufacturing capacity and produces its own shock absorbers. The second company, however, does not. It gives the specifications of its invention to an independent manufacturer, and then purchases the shock absorbers from this manufacturer for later resale to its own customers.

The difference in manufacturing methods between these two companies is entirely irrelevant to the originality and value of the inventions, but the patent requirements for these two inventions are very different. The first company must file a patent application within one year of the date it sells the shock absorber to its customers, but the date on which this company first manufactures the shock absorber is irrelevant. The second company, however, must file its patent application within one year after it contracts with the independent company to manufacture its shock absorbers--a potentially much shorter period. There is no good reason for this disparity.

Yet in a recent case, Special Devices, Inc. v. OEA, Inc., the Federal Circuit created exactly this disparity.[1] The court concluded that the "on-sale bar" in patent law, which allows a one-year grace period between the first offer to sell an invention and a patent application for that invention, applies differently depending on whether a company employs a third party to manufacture its invention.[2] If an outside manufacturer is used, the one-year grace period is triggered when the inventing company agrees to pay the outside manufacturer rather than when the inventor first offers to sell the invention to its customers.[3]

This paper argues that this interpretation of the on-sale bar is wrong, and that there should be an exception to the on-sale bar for purchases by inventors from outside manufacturers. Section I provides background. Section II argues that legal precedent and statutory text would have allowed the Federal Circuit to find an exception for a sale by an outside manufacturer to the inventor. Section III argues that policy and economic considerations strongly favor creating the proposed exception. Such an exception would put small inventors without manufacturing capacity and large inventors with such capacity on the same footing. Further, such an exception would eliminate the penalty now imposed on inventors of any size who use outside manufacturers to produce their inventions in the most efficient way. In the interests of equal treatment of all inventors and economic efficiency, either the ***211** Federal Circuit should overrule its decision in Special Devices, or Congress should create an explicit exception for inventors who use outside manufacturers to produce their inventions.

I. Background

The on-sale bar prevents an inventor from obtaining a patent if the invention was "on sale in this country, more than one year prior to the date of the application for patent in the United States."[4] It is part of the United States' "first-to-invent" patent system. In this system, a patent is given not to the person who first files a patent application, but to the person who first invents the patentable invention.[5] Under this system, if an inventor fails to file within one year of the time an invention is offered for commercial sale, no one may patent the invention, and it is given over to the public.[6]

The one-year grace period of the on-sale bar is typically triggered when an inventor first offers to sell the invention to another party.[7] The grace period allows inventors time to determine whether an invention has sufficient commercial value to justify seeking a patent. The grace period also creates a temporary safe harbor for an inventor who is not aware of the on-sale bar and who might otherwise inadvertently lose her ability to obtain a patent. The one-year grace period is measured with reference to a "critical date."[8] The critical date is the date exactly one year prior to the filing of the application. Any sale or offer to sell made between the critical date and the filing of the application does not invalidate the patent. A sale or offer to sell made prior to the critical date, however, is fatal.

In Special Devices, OEA owned a patent on a "header" used to set off the initial explosion in airbags.[9] In 1997, responding to Special Device's development of a similar header, OEA sent a warning letter to Special Devices.[10] In 1999, after a ***212** year and a half of communication between Special Devices and OEA regarding the possible infringement, Special Devices filed a complaint alleging patent invalidity and non-infringement, and OEA filed a counterclaim alleging willful infringement.[11] The

Federal Circuit eventually held that OEA's patent was invalid.[12]

The Federal Circuit's holding rests on the complicated history of the relationship between OEA and its outside supplier, Coors Ceramics Company. In the late 1980s, OEA developed its "header," but lacked the capacity to manufacture the product itself.[13] In 1991, Coors developed manufacturing specifications based on a request and drawing from OEA.[14] Coors initially manufactured and sold back to OEA 100 units for testing by OEA, a sale that the district court ignored for purposes of the on-sale bar.[15] Based on these units, OEA sent a proposal to Coors in April 1991 for the manufacture of at least fifty percent of OEA's commercial requirements.[16] In May, Coors agreed by letter, and in June OEA ordered two lots--20,000 units--for delivery in July.[17] In July, OEA and Coors agreed to an on-going requirements contract for "millions of units per year."[18] Two years later, in July 1993, OEA stopped purchasing headers from Coors.[19]

Both OEA and Coors filed patent applications in August 1992, more than one year after the 20,000 unit sale and the requirements contract agreement.[20] OEA's patent was for the product and aspects of its manufacture, while Coors's patent was for the specific manufacturing method.[21] In 1995, during the prosecution of a reissue application by Coors, Coors revealed to the Patent and Trademark Office (PTO) that sales from Coors to OEA occurred prior to the critical date.[22] The PTO commenced a review of the two patents.[23] In 1999, after OEA had filed a protest to ***213** Coors's reissue application and the PTO had rejected all of Coors's claims, Coors abandoned the application.[24]

Therefore, by the time Special Devices filed suit in 1999, alleging that the OEA patent was invalid, the PTO had already developed a record relating to the sales from Coors to OEA. The district court granted summary judgment to Special Devices, finding that "the letters from OEA to Coors on April 19, 1991, and June 4, 1991, as well as Coors's proposal of an ongoing requirements contract on July 10, 1991, constitute three separate commercial offers for sale, all of which occurred prior to the critical date."[25]

OEA argued on appeal to the Federal Circuit that the on-sale bar should not apply to purchases by an inventor of its patented invention from an outside manufacturer.[26] The Federal Circuit rejected the argument, refusing to create an exception to the bar that, in its words, "would allow inventors to stockpile commercial embodiments of their patented invention via commercial contracts with suppliers more than a year before they file their patent application."[27] The Federal Circuit believed that "neither the statutory text, nor precedent nor the primary purpose of the on-sale bar" allowed the court to create an exception to the on-sale bar for suppliers.[28]

Special Devices is one of a number of loosely related decisions by the Federal Circuit subsequent to the Supreme Court's 1998 decision in Pfaff v. Wells Electronics, Inc.[29] In Pfaff, the Supreme Court replaced a "totality of the circumstances" test for determining when a sale triggers the on-sale bar, which had been widely criticized as too vague, with a two-part test.[30] The first part of the test under Pfaff was that "the product must be the subject of a commercial offer for sale."[31] A "commercial offer for sale" has subsequently been interpreted to be "an offer which rises to the level of a commercial offer for sale, one which the other party could make into a binding contract by simple acceptance (assuming consideration)."[32] ***214** The second part is that "the invention must be ready for patenting."[33] An invention may be ready for patenting if there is "proof of reduction to practice before the critical date" or "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."[34]

The Federal Circuit's holding in Special Devices was not an inevitable consequence of Pfaff's bright line two-part test. Finding an exception for sales from suppliers to inventors may have been made more easily under the previous "totality of the circumstances" test, but such an exception can also exist easily within the Pfaff framework. We are very unlikely to find out from the Supreme Court whether this is so, however, for the Court has rarely been willing to grant certiorari in patent law cases. With no chance of a circuit split because the Federal Circuit has exclusive jurisdiction over patent appeals, and the unlikelihood of Supreme Court review, the on-sale bar decisions made by the Federal Circuit will most likely remain unreviewed for years to come.

It also unlikely that Congress will respond to Special Devices. Noting Congress's reluctance to pay attention to difficult patenting issues brought up in the courts, Professor John Thomas has written: "The Supreme Court called for assistance on patenting biotechnology and software decades ago, for example, and more recently suggested an appropriate response to the doctrine of equivalents. Congress has so far failed to respond."[35] In Special Devices, the Federal Circuit nevertheless suggested that change must come from Congress: "[N]o 'supplier' exception exists for the on-sale bar. If such an exception is to be created, Congress, not this court, must create it."[36] In the meantime, the inventors and companies are left to deal with the consequences of Special Devices.

Professor Thomas Landry has noted that because of the infrequent review of Federal Circuit patent decisions, "[p]atent law consequently places acute demands on court-watchers to guard the guardians."[37] This paper is an attempt "to guard the guardians."

*215 II. Legal Analysis in Special Devices

The Federal Circuit used two lines of legal analysis to arrive at its conclusion that there should be no exception to the on-sale bar for purchases by inventors from their suppliers. First, the court rejected OEA's four arguments based on Federal Circuit and district court precedent.[38] Second, the court concluded that because the statutory text does not explicitly include a "'supplier' exception," it should not create such an exception.[39]

A. Precedent

When Special Devices was decided, there was no controlling precedent on whether a purchase by an inventor of its invention from an outside manufacturer would trigger the on-sale bar. The Federal Circuit was thus in a position to treat the case as one of first impression. Instead, it purported to rely on precedent, writing that the precedent did not "allow" it to make an exception for sales to inventors.[40] It later explained, somewhat more accurately, that the precedent "does not support, much less compel" it to hold in favor of OEA.[41] An even more accurate representation of the then-existing precedent would have been to say that no controlling precedent existed.

The Federal Circuit in Special Devices discussed only three cases as possible precedent. The first case deals with a different point; the second case supports rather than precludes the exception; and the third case is clearly distinguishable.

The first two cases can be dismissed easily. The first of these is Zacharin v. United States.[42] Zacharin does not address a possible exception for sales between supplier and inventor, and is briefly discussed only for its analysis of what constitutes "commercial."[43] The Federal Circuit does not assert that this case requires the Special Devices holding, stating only that "nothing in Zacharin, in either its analysis or its dicta, reasonably supports a judicially created 'supplier' exception."[44]

***216** The second is M & R Marking Sys., Inc. v. Top Stamp, Inc.,[45] in which a district court addressed this specific issue, but came to the opposite conclusion. A New Jersey district court, using the "totality of the circumstances" test, decided that the on-sale bar did not apply to "a sale from a manufacturer to the inventor."[46] The M & R Marking court concluded: "The purposes of the on-sale bar are not served by applying it to a sale from a manufacturer to the inventor. To apply the bar in this manner would penalize inventors who are unable to manufacture their own products."[47] The Federal Circuit noted that the district court's decision had relied on the "totality of the circumstances" test later renounced in Pfaff, and then added the obvious point that it was not bound to follow the decision of a district court.[48] While there was nothing compelling the Federal Circuit to follow this precedent, there was likewise nothing compelling the court not to follow the district court's lead.

Only one of the three cases, Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.,[49] offers any support for the Federal Circuit's statement that precedent precluded an exception for purchases by inventors. The language used by the Federal Circuit when analyzing this case, however, is much weaker than its initial broad contention that the precedent does not "allow" the court to create the exception for sales to inventors. In the end, the court merely claims: "we think Brasseler plainly disfavors the exception now sought."[50] This is all that the court was able to claim--and more than perhaps it ought to have claimed--because the Brasseler facts are clearly distinguishable from those in Special Devices.

Brasseler was the inventor of a surgical saw blade manufactured by a separate company.[51] Of the four named inventors, two were employed by Brasseler, one was the owner of the manufacturer, and one was employed by the manufacturer.[52] Brasseler's main argument was that the on-sale bar should not apply to joint developers.[53] Brasseler attempted to rely on the district court decision in M & R Marking holding that the on-sale bar should not be applied to a sale by a manufacturer to the inventor.[54] In Brasseler, however, the purchasing company and the manufacturer ***217** both employed co-inventors of the invention, whereas in "M & R Marking, there was only one inventor and that inventor was employed by the buyer."[55] In deciding in Brasseler that a triggering sale had occurred, the Federal Circuit distinguished M & R Marking on this basis, but it failed to recognize precisely this distinction when it later relied on Brasseler in Special Devices.[56]

B. Statutory Text

The Federal Circuit reasoned in Special Devices that because the statute does not specifically include an exception for purchases from suppliers, none should exist.[57] However, the Federal Circuit's interpretation of the text is no more compelled than its interpretation of precedent.

1. Sales to the Inventor

The language of 35 U.S.C. § 102(b) does not specify who must put the invention on sale for the statutory bar to be triggered.[58] The Patent Act of 1836 included a requirement for the on-sale bar that the invention be on sale with the "consent or allowance" of the inventor.[59] That requirement was eliminated, however, in 1870 when the statutory language became: "not in public use or on sale for more than two years."[60] This statutory change laid the foundation for the Special Devices court, more than a century later, to conclude that purchases from suppliers can trigger the on-sale bar. The court explained: "By phrasing the statutory bar in the passive voice, Congress indicated that it does not matter who places the invention 'on sale'; it only matters that someone--inventor, supplier or other third party-- placed it on sale."[61]

The Special Devices court correctly concluded that the history of the on-sale bar and relevant precedent had clearly established that at least some sales by third parties trigger the bar. The court failed, however, to consider the important question: What about sales by third parties to the inventor? There is an important difference between third-party sales to outsiders and to inventors. In the first situation, where third parties sell unpatented inventions to parties other than the inventor, there is a strong likelihood that innocent parties (including the purchaser) ***218** will rely on the patented invention being in the public domain. But in the second, where the invention is sold to the inventor, there is no possibility that either party to the transaction, or any outside party, will innocently rely on the invention being in the public domain, for both the seller (the manufacturer contracted by the inventor) and the buyer (the inventor) know the identity of the inventor.

The Special Devices court claimed that its decision was consistent with the previously established rule that there is no exception for a sale "even if a thief 'stole' the claimed invention and passed it on to an innocent buyer."[62] In Evans Cooling Systems, John Evans invented "an aqueous reverse flow cooling system for internal combustion engines" and alleged that General Motors stole the invention for use in its 1992 Corvettes.[63] General Motors sold the cars through dealers, who were unaware of the alleged theft from Evans, prior to the critical date for Evans's patent.[64] The end-customers who purchased the cars were similarly unaware of any patent dispute.[65] When Evans filed suit alleging that GM infringed his patent, GM counterclaimed for a declaration that the sales by GM and GM dealers prior to the critical date rendered Evans's patent invalid.[66] The Federal Circuit agreed with GM, holding that the sales by GM dealers to end-users invalidated the patent.[67] The court in Evans Cooling Systems emphasized the fact that there was reliance by innocent third parties: "the independent dealers are innocent users who put the invention on sale by placing orders for innocent retail customers."[68] But of course Special Devices is distinguishable, for it involved no innocent third party purchasers.

The Federal Circuit indicated in Evans Cooling Systems that the "result may not seem fair," but tempered the harsh conclusion with the reminder that "Evans is not without recourse."[69] The first recourse that the court suggested--bringing suit for misappropriation of a trade secret--would have likely generated a remedy.[70] The second recourse suggested by the court--prompt action--was undoubtedly much less desirable to Evans. It was, in effect, an admonishment that Evans should have known better. This admonishment, though, was justified--"Evans knew GM ***219** stole the invention at the very time it was allegedly stolen."[71] If Evans had researched the existing on-sale bar law, he would have found that the only precedent on point led to the conclusion that the sale of a stolen invention constitutes a sale for the purposes of the on-sale bar.[72] The Federal Circuit implied in Special Devices that the recourse available to Evans was also available to OEA.[73] It was reasonable, therefore, that the Federal Circuit would expect Evans to have been on notice that sales of his stolen invention might invalidate a patent if he waited too long before filing his patent application.

The recourse available to OEA was significantly less than that available to Evans. The first avenue of recourse--bringing suit on a non-patent theory--was not available to OEA because there had been no misappropriation of a trade secret. This was, of course, obvious to the Federal Circuit, and this recourse was not suggested in Special Devices. The court did, however, indicate that both Evans and OEA "could still protect themselves" in the same manner: "by taking 'prompt action' and filing a patent application within the one-year deadline."[74] It is true that OEA could have filed a patent application earlier and, as the court pointed out, there was "no obstacle to a timely patent application filing."[75] But, unlike Evans, OEA had no reason to believe that prompt action was necessary, for at the relevant time, OEA's understanding of "sale" very likely would not have included a purchase from the manufacturer.

2. Judge-Made Exceptions

The court in Special Devices relied on the absence of an exception in the text of the statute to justify its refusal to find an exception for sales to inventors by third parties.[76] Yet the same court has found other exceptions to the on-sale bar that are not spelled out in the statute. Because the Federal Circuit and other courts have been willing to find policy-based exceptions to the on-sale bar in the past, there is no obvious text-based reason why the Special Devices court should not have been similarly unconstrained.

***220** The most obvious example of a judge-made exception is the "experimental use" doctrine.[77] Experimental use is not technically considered an "exception" to the on-sale bar; rather, it is simply understood that proof of experimental use negates the application of the on-sale bar.[78] This difference in semantics is not important for our current purpose, as the end result--that a non-statutory doctrine is used to avoid application of the on-sale bar--is the same for a "negation" as it is for an "exception."

The experimental use negation of the on-sale bar was invoked in the late eighteenth and early nineteenth centuries under the Patent Acts of 1793 and 1836.[79] Neither of these statutes included the two-year grace period that was added by the Patent Act of 1839.[80] But the early courts understood that because an inventor needs to experiment on an invention in order to perfect both the invention and the patent application, the on-sale bar should not apply to sales with an experimental purpose.[81] When Congress explicitly introduced a two-year grace period for filing a patent into the statute in 1839,[82] the purpose of which was, at least in part, to allow for experimentation, there was some question as to whether the experimental use negation still applied.[83]

The Supreme Court resolved this question in 1877 in City of Elizabeth v. American Nicholson Pavement Co.[84] The case involved the invention of a method of paving roads, more durable than other methods used at the time, that had been tested for six years on a seventy-five foot stretch of road in Boston.[85] The Court recognized the economic and business necessity of the experimental use negation, explaining that it is in "the interest of the public, as well as [the inventor], that the invention should be perfect and properly tested, before a patent is granted for it."[86]

A second judicially created exception to the on-sale bar is the exception for selling the patent rights for an invention. The text of the statute refers only to an ***221** "invention," without further specification.[87] The courts have defined the word "invention" to mean a physical embodiment of an invention, not the patent rights to the invention.[88] The Federal Circuit has held that:

> [A]n assignment or sale of the rights in the invention and potential patent rights is not a sale of 'the invention' within the meaning of section 102(b). . . . The few cases we have found on this issue have uniformly held that such a sale of patent rights does not come within the section 102(b) bar. Such a result comports with the policies underlying the on-sale bar, and with the business realities ordinarily surrounding a corporation's prosecution of patent applications for inventors.[89]

In creating both of these exceptions to the on-sale bar, the courts were motivated by policy considerations. They did not look exclusively at the language of the statute and determine that, absent an explicit exception, no experimental use or patent rights exception could exist. Instead, the courts looked to the policy reasons underlying the statute and interpreted the text to give the most effective meaning to the statute in light of those reasons. The text of the statute should have been no more limiting in Special Devices.

3. Limited Supplier Exception

If the Federal Circuit is genuinely convinced that the absence of an explicit textual exception for purchases from suppliers prevents the court from creating such an exception, it would be inconsistent for the court to create even a limited exception for these purchases. The Federal Circuit's text-based refusal to make an exception for suppliers should indicate that any sale from a supplier to an inventor will be treated exactly like a sale to a customer. Yet the court indicated in Special Devices that--depending on the number of units ordered from the supplier--not every sale to an inventor will trigger the on-sale bar.[90] It suggested that an exception might exist in cases "'in which an individual inventor takes a design to a fabricator and pays the fabricator for its services in fabricating a few sample products.”'[91] The facts of Pfaff v. Wells can be modified to illustrate how this exception might work.

In Pfaff, the Supreme Court held that the two prongs of the newly-created on-sale bar test had been satisfied.[92] First, the Court found that the acceptance of a purchase order for patented computer chip sockets from Texas Instruments, an outside ***222** purchaser, was a “commercial offer for sale.”[93] Second, the Court determined that Pfaff’s invention was “ready for patenting” because Pfaff had sent “detailed engineering drawings that described the design, the dimensions, and the materials to be used in making the socket” to the manufacturer before receiving a purchase order from Texas Instruments.[94] This was “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.”[95]

The Supreme Court did not discuss an alternative way in which the on-sale bar could have been triggered in Pfaff. The Court did not provide specific details about the transaction between Pfaff and the manufacturer, saying only that the drawings were sent in February or March and that the manufacturer “took several months to develop the customized tooling necessary to produce the device, and Pfaff did not fill the [Texas Instruments] order until July 1981.”[96] One interpretation of the absence of detail about this transaction is that the Court did not think that sales from the manufacturer to the inventor would trigger the on-sale bar, supporting the argument that this type of sale should be excepted from the on-sale bar. However, no conclusion can be drawn from the absence of this analysis, for the purchase order from Texas Instruments was sufficient to trigger the on-sale bar, and there was no need for the Court to evaluate the transactions between Pfaff and its manufacturer.

A slight modification of the facts of Pfaff shows how an exception for “a few sample products”[97] might work in practice. First, assume that the initial sale to Texas Instruments, the outside purchaser, occurred after the critical date and is therefore irrelevant for on-sale bar purposes. Strictly following Special Devices, without yet considering a possible exception, any commercial offer for sale from the manufacturer to Pfaff, the inventor, would have been enough to trigger the on-sale bar. The two prongs of Pfaff would have been met--Pfaff’s detailed drawings were sufficient to prove that the invention was “ready for patenting,” and a contract with the manufacturer to produce the invention would have established that an invention was “subject to a commercial offer for sale.” Analytically, the answer would be the same whether one product or a thousand products were sold to the inventor. When selling to an end-customer, the fact that an inventor may have only sold one product does not prevent the application of the on-sale bar. Under the suggestion of Special Devices, however, it appears that another analytical step may be necessary when evaluating purchases from manufacturers --how many units ***223** were sold? If this suggestion is followed, sales to inventors are treated differently from sales to any other party. A sale of one or a few products will trigger the bar when sold to a party other than the inventor, but probably will not when sold to the inventor.

This limited supplier exception, for a “few sample products,” is not part of the experimental use doctrine.[98] It is instead a new exception that turns not on where in the development process the invention is, but rather on the number of units purchased. For a sale to an end-customer, the number of units sold is irrelevant (unless used to demonstrate that the sale was in fact experimental). The sale, or offer to sell, of even just one unit can trigger the on-sale bar when the sale is made to someone other than the inventor.[99] But in the case of a purchase from a supplier, the number of units appears to be critical. The Special Devices analysis turned on the number of units purchased.[100] “The language [indicating a possible exception for purchases from a fabricator for a few sample products] does not salvage OEA’s theory; as noted earlier, OEA ordered 20,000 units from Coors in June 1991 and thereafter agreed to a requirements contract for millions of units each year, far more than the ‘few sample products’ mentioned in the Brasseler hypothetical.”[101]

Though the exception for a “few sample products” currently appears only in dicta in Special Devices, there is good reason to believe that the Federal Circuit would in fact allow it. The court repeatedly emphasized the high volume of products ordered by OEA, indicating that this was an important factor in the court’s decision.[102] The court twice--in the first and second-to-last paragraphs of the decision--wrote that it would not create an exception for “stockpiling” commercial embodiments of inventions.[103] Significantly, the court concluded that “the invention was commercially exploited before the critical date” because of an admission that the OEA purchased the products for commercial purposes and because of the “sheer number of units purchased.”[104]

Thus, in the view of the Special Devices court, it is not prevented by the text of the statute, or by the Supreme Court’s holding in Pfaff, from creating a limited exception for sales of sample products to the inventor. If this is so, there is similarly no statutory or Supreme Court bar to creating a comparable exception for larger sales. The Special Devices court has already ventured into the realm of policy in ***224** endorsing the exception for sales of sample products. But, having ventured into this realm, it failed in important ways to address the policy arguments relevant to a broader exception.

III. Policy and Economics Arguments

Based on policy considerations, the Federal Circuit should have come to a different conclusion in Special Devices. The first of the following subsections describes the legislative history of the on-sale bar and the current incentives for inventors to use the one-year grace period. This section includes a discussion of the reasons why inventors and companies currently value the one-year grace period.

The next two subsections lay out the essential policy and economic arguments favoring an exception for sales to the inventor. First, the proposed exception would protect the rights of small companies and individual inventors. These inventors, already at a disadvantage compared to large companies, are both more likely to hire manufacturers and less likely to be aware that their manufacturing contracts could trigger the on-sale bar. Second, regardless of the size of the company, patent law should not penalize inventors for making economically efficient decisions. Companies generally make economically efficient choices when deciding whether to use a supplier to manufacturer inventions, and they should not be penalized for these decisions.

The next subsection demonstrates the inadequacies of the policy justification offered by the Federal Circuit in Special Devices. Although the policy underlying the on-sale bar encourages prompt filing, it should not require more prompt action by some inventors than by others. The Federal Circuit was wrong to suggest that stockpiling of inventions is a concern, based both on the specific facts of Special Devices and on the positive economic effects of stockpiling patented inventions.

The last subsection suggests three additional justifications for creating an exception for sales to inventors. The first explains that the only exception explicitly included in the statute--the exception for sales made "out of this country"[105]--may allow exceptions only for inventors who use foreign manufacturers. The next demonstrates why a possible criticism of the proposed exception--that the public would rely on the invention--is insufficient. The third argues that instead of making the on-sale bar more predictable, Special Devices may have in fact made it less so.

A. Purpose and Legislative History of the On-Sale Bar

The United States Congress has made clear policy decision to allow inventors a one-year grace period within which to file a patent application. Congress could just as easily have decided that prompt entrance into the patent system was so important that inventors should have no grace period. Indeed, most other countries ***225** have a "first to file" patent system, where the first inventor to file a patent application receives the patent, regardless of who the actual inventor is.[106] In such a system, allowing a grace period would not be as useful to inventors as it is it under the "first to invent" system used in the United States. If an inventor risks losing the patent to her invention by allowing another inventor to file an application before hers, she will have very little incentive to wait a year before filing a patent application. In our "first to invent" system, where the inventor does not face this risk, however, an inventor may benefit from delaying the patent application until after the invention has been offered for sale.

The first on-sale bar, codified in the 1836 Patent Act, did not offer a grace period for inventors between date of sale and required date of filing a patent application. An inventor was required to file a patent application prior to putting an invention on sale.[107]

Congress added a two-year grace period in 1839, allowing an inventor to file a patent application within two years after an invention was first put on sale.[108] There are no legislative records from this period that explain the introduction of this grace period. Almost fifty years later, without citing any legislative history, the Supreme Court offered an explanation of the rationale behind the two year grace period: "The evident purpose of the section was to fix a period of limitation which should be certain, and require only a calculation of time, and should not depend upon the uncertain question of whether the applicant had consented to or allowed the sale or use."[109]

In 1939, Congress revisited the issue of the on-sale bar and reduced the grace period from two years to one.[110] Reports from the congressional hearings offer justification for reducing the grace period. The Commissioner of Patents testified that two years might have been necessary in the early 1800s to allow "an inventor to make up his mind whether or not to file an application for patent," but that by the early 1900s this delay was "a handicap to industry."[111] The reduction of the grace period was intended to expedite patent applications.[112] During the hearing in the ***226** House, one Representative noted that reducing the grace period would unequally harm poorer inventors, who may require additional time to raise the funds to apply for a patent.[113] It is apparent from this Representative's comments that protection of small inventors has been one of Congress's concerns, and that the length of the grace period balances the needs of inventors--particularly small inventors--against the needs of the public. When Congress enacted the Patent Act of 1952, the one-year on-sale bar was retained in an almost identical form.[114]

Even though the purposes behind the on-sale bar and the year grace period are not explicit in the scant legislative history, the courts have frequently cited four main purposes of the on-sale bar. These purposes provided the underlying framework of the "totality of the circumstances" test that was used prior to Pfaff. The Federal Circuit identified these purposes as:

> [D]iscouraging removal of inventions from the public domain that the public reasonably has come to believe are freely available; favoring the prompt and widespread disclosure of inventions; allowing the inventor a reasonable amount of time following sales activity to determine the potential economic value of a patent; and prohibiting the inventor from commercially exploiting his invention beyond the statutorily prescribed time.[115]

The source of these four purposes is a student Note published in the Stanford Law Review in 1972,[116] which were adopted by the Court of Claims nine years later.[117] Although the student author of the Note relied on legislative history and case law to infer the four purposes, Congress itself has never expressly articulated them.[118]

A more recent historical analysis of the 1839 statute suggests that the creation of the two-year grace period was an attempt to balance the interests of inventors and employers.[119] Congressional records indicate that individual inventors who were employed by larger businesses and who often had trouble manufacturing and patenting their inventions independently, would sometimes lose their patent rights ***227** because of sales of the inventions by their employers.[120] Section 7 of the Patent Act of 1839 gave individuals and corporations who had purchased or constructed the invention before the inventor filed a patent application the right to use and sell the invention and allowed inventors two years after the first sale to apply for a patent. This "seems to have been written to assist inventors who had allowed their employer use of an invention before the patent was granted."[121]

The one-year grace period continues to be an important element of the American patent system. A report issued by the Advisory Commission on Patent Law Reform in 1992 emphasizes that the grace period is critical to the American patent law system.[122] The Advisory Commission, in evaluating the prospect of harmonizing American patent law with foreign patent laws, considered "a grace period to be an essential element of any first-to-file system, and its current absence in other systems to be a significant detriment to U.S. inventors."[123] One of the reasons cited for the importance of the grace period is that it "is essential to protect entities which have limited financial resources for speculative patent application filing and prosecution."[124] Small companies and inventors with limited financial resources need the grace period "to ensure equal access . . . to the benefits of U.S. patent protection" and to protect "against inadvertent loss of U.S. patent rights during the initial period of testing or promotional activities."[125]

Patent attorneys and in-house legal counsel for large medical device and industrial technology companies give several reasons why companies currently value the one-year grace period. These reasons include: (1) some small companies, or inventors within larger companies, are not aware of the on-sale bar and inadvertently trigger the grace period; (2) in a large company, where a legal department may receive several thousand invention disclosures each year, it may take several months for a company to evaluate whether to file any individual patent application; (3) inventors and product developers may be too busy getting a product to market, particularly in markets that significantly reward a fast time-to-market, to focus on patent applications; (4) there are occasional circumstances--during layoffs, for example--when even large companies, which may not usually confront on-sale bar difficulties, have trouble filing an application within the year; and (5) the financial cost of filing a patent may encourage small companies or individual inventors, particularly ***228** those without a great deal of cash on hand, to delay filing.[126] Another reason that has been suggested, though not mentioned by this group of respondents, is that inventors seek to extend the life of a patent by delaying application.[127]

These reasons fit into two general categories: intentional use and inadvertent use of the grace period. Both are equally important. First, intentional use of the grace period provides companies additional time to draft a patent application and determine whether an application is worthwhile. This time will likely result in patent applications that are clearer and more accurate. Encouraging companies to evaluate the merits of a particular patent may have the added benefit of eliminating some unnecessary patents. Second, inadvertent use of the grace period protects individual inventors and smaller companies, as well as larger companies that may be experiencing turmoil or employ uninformed inventors.

Without substantive comments in the legislative history of the on-sale bar, it is impossible to know whether Congress intended inventors to enjoy these particular benefits of the year grace period. It is clear, though, that many companies do use, and value, the grace period.[128] An independent patent prosecutor explained that smaller companies, usually unsophisticated about patent applications, frequently use most or all of the grace period. Larger companies also use the grace ***229** period. For example, a patent litigator in the San Francisco Bay Area indicated that his clients use the grace period very often because the companies with which he works (a majority of which are in the semiconductor industry) are often focused on getting products to market quickly. One in-house counsel at a prominent industrial technology company also commented that the company very frequently uses a significant portion of the grace period.[129]

By focusing on only one of the many purposes underlying the on-sale bar, the Federal Circuit ignored the important policy factors that weigh in favor of the inventor. To ignore the interests of inventors altogether and to focus only on the promptness of application--as the court did in Special Devices--is to undervalue the allowance Congress gave inventors when it created the two-year, and later one-year, grace period.

B. Protecting Individual Inventors and Small Companies

Our patent system is in part designed to protect individual inventors and small companies. Comments in a 1956 legislative report emphasize this purpose of the patent system:

> [T]he individual inventor . . . performs a vital and important function. The patent system is designed to encourage this type of inventor, and the patent statutes, Patent Office administration, and the patent system as a whole must be considered, and improved where necessary, in the light of this purpose.[130] It has also been suggested that because smaller companies can be, depending on the industry, more likely to innovate than larger companies, analysis of the patent system should focus on small companies and inventors.[131] And as noted above, Congress has paid particular attention to the effects of the on-sale bar to the poorer--likely, smaller-- inventor.[132]

Not surprisingly, large companies acquire the majority of patents.[133] In a recent sample of 1,000 patents, 707 were assigned to "large entities" and 293 to "small entities."[134] Of the small entities, 11 were non-profit organizations, 107 were small businesses, and 175 were individuals.[135] Much of the disparity between ***230** large and small inventors can surely be attributed directly to the different sizes of the companies--a large company will have more researchers and more money to spend on research. Individuals and small companies, however, frequently face additional disadvantages when competing with larger--sometimes much larger-- companies.

Individuals and small companies will have more difficulty prosecuting and protecting their patents because the costs of patent prosecution and litigation can be exorbitant. In 2001, the average cost to prosecute a patent was estimated to be between approximately $10,000 and $30,000.[136] Data from the American Intellectual Property Law Association indicates that these costs have escalated quickly.[137] The costs of prosecution are minor compared to the exorbitant costs of patent litigation. The average total cost of patent infringement litigation is $1.5 million when $1 to $25 million is at risk, and $3 million when more than $25 million is at risk.[138] These are only the direct, quantifiable costs. The additional cost of the lost work time of management and technical employees who must dedicate significant amounts of time to the patent litigation is not quantifiable--but nevertheless may be quite high.[139]

There is no conclusive evidence supporting the notion that smaller companies and individual inventors should receive greater protection from the patent system than larger companies. However, there is also no evidence suggesting that larger companies should receive greater protections. But the Federal Circuit's refusal to create an exception for sales to inventors gives larger companies such greater protections and further disadvantages small inventors.[140]

For a large company, whether to use a supplier to manufacture an invention or to manufacture the invention in-house is in fact a real choice. For individual inventors ***231** and small companies, it is highly unlikely that the decision to use an outside supplier to manufacture an invention involves real choice. That is, these small inventors frequently have no real alternative because the cost of creating a manufacturing division for a new product with an uncertain profit potential will frequently be prohibitively high. Furthermore, the public benefits from encouraging inventors to use suppliers to manufacturer inventions. Outsourced manufacturing allows small inventors, who otherwise do not have manufacturing capacity, to compete with larger companies. It also permits individuals and small companies to provide products for certain niche markets that may not be commercially rewarding for larger companies.

Small companies and individual inventors, especially first-time inventors, are also likely to be less sophisticated about the patent system than large companies.[141] Without sufficient time, money, or legal resources, a small inventor is more likely to be unaware of the on-sale bar. Even an inventor who is familiar with how the on-sale bar generally operates may not know how the bar has been affected by Special Devices. Knowledge of how the Special Devices decision affects the operation of the on-sale bar is particularly important in the early stages of patent application. An inventor needs to know, ideally in advance of the first commercial sale, when she must ultimately file with the Patent and Trademark Office. The inventor does not want this date to come as a surprise. Therefore, it is necessary that an inventor understand early in the process that the purchase of manufactured embodiments of an invention from a supplier can trigger the one-year grace period.

Many first-time inventors, even those that do consult readily available publications, may not be adequately informed about the on-sale bar. For example, the detailed Patent It Yourself book--which even suggests that patent lawyers are not always necessary[142]--does not explicitly explain that sales to inventors from outside manufacturers can trigger the beginning of the grace period. Instead, it merely explains that if "you (or anyone else) offer to sell, actually sell, or commercially use your invention," the one-year grace period will be triggered.[143] The book further defines the type of sale that triggers the grace period as:

> [A] commercial offer to sell or a sale of actual hardware or a process embodying the invention. Such an offer or sale will start the one-year period running, even if the invention has not yet been built, so long as it has been drawn or described in reasonable detail. On the other hand, an offer to license, or sell, or an actual sale of the inventive concept (not hardware) to a manufacturer will not start the one-year period running.[144] ***232** This abbreviated explanation could very well mislead inventors. Though the description is technically accurate, it does not make clear the implications of the Special Devices decision. Because the Federal Circuit's holding is not intuitive--many inventors may differentiate between an offer to sell and an offer to purchase from a manufacturer, believing that a purchase from a manufacturer is not a "commercial sale"[145]--this description will not sufficiently warn inventors that they risk being barred from obtaining a patent if they wait more than a year after first purchasing an embodiment of the invention from a manufacturer.

C. Penalty for Economically Efficient Decisions

Many large companies use suppliers to manufacturer their inventions not because they have no alternative, but because they choose to do so. An exception for sales to inventors would benefit these large companies--who through their manufacturing choice are subject to the Special Devices holding-- as well as the small companies and individual inventors who do not have an opportunity to manufacturer their own inventions. The patent laws should not penalize the choice that these companies make to use suppliers, as these are decisions that tend to increase efficiency. The following discussion lays out, in broad strokes, the basic argument that companies make economically efficient decisions when they choose to use a supplier.

As the Federal Circuit has interpreted the on-sale bar, preference is given to a company that is vertically integrated. This would perhaps be justified on policy grounds if an economic reason for this preference exists. Is there a reason why Congress should prefer to grant patents to companies that are vertically integrated over companies that are not? The decision whether to integrate vertically--that is, to manufacture in-house through the creation or purchase of a manufacturing division--or to use the market to procure manufacturing services by others is made by evaluating the alternatives. When the costs associated with obtaining manufacturing on the open market outweigh the costs of vertical integration, a producer will choose to integrate vertically.[146] This basic principle, advanced by Professor Ronald Coase in 1937, has been expanded significantly in the past several decades through economic studies of the effect of transaction costs on the creation of firms.[147] Much of this analysis has focused on why and when it is preferable to organize ***233** production in a firm rather than through multiple individual market relationships.[148]

Professor Oliver Williamson has also addressed the inverse question: when and why does a producer prefer market relationships to the vertical integration of a firm?[149] This is the question that is most interesting for our purposes. The companies and individual inventors that are harmed by the Special Devices decision are those that have chosen to obtain manufacturing services through market relationships rather than through vertical integration. Williamson concludes that integration into a single firm, rather than continued use of individual market transactions, impairs economic incentives, particularly in industries where innovation is important.[150] He also suggests that the increased costs of the bureaucracy associated with larger firms may decrease the economic value of vertical integration.[151] While Williamson also indicates that more research must be done in order fully to understand the particular limitations of the firm,[152] Coase's initial conception is adequate for our present analysis: a producer will obtain manufacturing through the market when these costs are less than the costs of vertical integration.[153] In the interest of efficient markets and a healthy economy, producers (in this case, inventors) should not be penalized by patent laws because of how they choose to manufacture their inventions.

The importance of allowing companies and individual inventors to choose for themselves the most economically efficient mode of production was not obvious to the Federal Circuit when it decided Special Devices. The Federal Circuit seems to have been distracted by differences in manufacturing systems--which are of course quite relevant in some economic and legal contexts. In the context of the on-sale bar, however, there is very little relevance to the difference between a company that manufactures an invention itself and one that employs a third party.[154]

***234** The importance of testing a product, however, was obvious to the Supreme Court in the late nineteenth century.[155] Just as an inventor may want to test or experiment on an invention before it is ready to be sold, an inventor may prefer to pay a supplier to manufacture an invention before it can be sold. The public benefits in both cases. Just as the public benefits from permitting an inventor to experiment on her invention without penalty, the public also benefits from encouraging inventors to make an economically efficient choice whether to vertically integrate or to obtain manufacturing through market relationships.

The comparison between the economic utility of the experimental use exception and the economic utility of an exception for sales to inventors from manufacturers is admittedly imperfect. By not allowing an exception for experimental use, the courts would effectively require some inventors to patent their inventions before the inventions are ready for patenting. Not allowing an exception for sales to inventors, however, does not force inventors to file patent applications before they are ready. Once an inventor is purchasing embodiments of an invention from a manufacturer, and it is determined that the purchase is not for experimental use, an invention is sufficiently perfected that it is ready for patenting. The disallowance of the exception for sales to inventors, therefore, does not provide an incentive to file a patent application prematurely, as the lack of the experimental use negation would. Rather, the cost is the less visible, but no less real, cost of economic inefficiency, as an inventor is discouraged from using what may be, for her, the more efficient means of producing her invention.

D. Policy Arguments in Special Devices

The Federal Circuit advanced two primary policy arguments against creating what it refers to as a "supplier exception" in Special Devices, both of which are unconvincing. First, the court focused on only one of the four policies that underlie the on-sale bar: encouraging inventors to file patent applications promptly.[156] Second, the court justified its decision on the ground that allowing the "supplier exception" would allow inventors to stockpile commercial embodiments of the invention.[157]

The court's first policy argument ignores the fact that it treats companies differently based on manufacturing capacity, unfairly requiring more prompt filing ***235** from companies that outsource manufacturing (most likely smaller companies). To decline to create an exception for sales to inventors does of course encourage prompt patent application, but it does so at the expense of a manifest inequality in its treatment of inventors. The holding of Special Devices does not have the effect of requiring inventors who use outside manufacturers to file their patent applications as quickly as is required of other inventors. Rather, these inventors are required to file more quickly than other inventors. That is, the on-sale bar, as interpreted by the Federal Circuit, encourages prompt action from all inventors--but for inventors who choose to use outside manufacturers, it encourages more prompt action.

The court's second policy argument is outside the scope of what the on-sale bar is intended to control. The Special Devices court was particularly concerned that if it created an exception for sales to inventors, an inventor could stockpile products purchased from a manufacture prior to selling the invention to the public. The court described the exception as "one that would allow inventors to stockpile commercial embodiments of their patented invention via commercial contracts with suppliers more than a year before they file their patent application."[158] The court's concern, however, is neither justified by the facts of the case before it, nor is it a reasonable policy basis for rejecting the proposed exception.

On the facts of Special Devices itself, OEA was not, contrary to the court's suggestion, "stockpiling" commercial embodiments of the invention. The company "ordered 20,000 units of the claimed invention for delivery beginning in July 1991," which was one month prior to the critical date of August 27, 1992.[159] Standing alone, this fact could indicate that OEA was stockpiling the invention--20,000 units sounds like a large quantity. When taken in context, however, this quantity is very small. In addition to ordering 20,000 units, OEA agreed to a "requirements contract that would annually supply OEA with millions of units."[160] When compared to millions each year, 20,000 is very few units. Even interpreting "millions" to be only two million, 20,000 is a mere one percent of this annual quantity. For a company that is planning to sell millions of units each year, this "stockpile" would last less than four days.

One could argue that although stockpiling is not a real concern in this particular case, stockpiling remains a valid concern for other cases. It is of course true that the proposed exception would allow an inventor that uses an outside manufacturer to stockpile commercial embodiments prior to the critical date. But this would only allow that company to do what the statute already allows a company that manufactures its own inventions in-house to do. The unchallenged ability of the in-house ***236** manufacturer to stockpile strongly suggests that, in fact, the on-sale bar is not really intended to deter stockpiling. If Congress wanted to prohibit stockpiling of inventions prior to the first sale, it could enact a law that had the effect of limiting the extent to which a company --any company, regardless of whether it manufactures its inventions in-house or not--can stockpile an invention.

The on-sale statute is not such a law, and for good reason. The economic incentives inherent in the patent system are such that the public likely benefits from stockpiling of an invention. When an inventor obtains a patent for a particular invention, she gains monopoly rights for the life of the patent. The inventor, or the company owning the invention, is "able to limit the supply, and raise the price, of some product, without inducing entry or expansion of supply by other suppliers."[161] In a monopoly situation, a producer will create fewer units than the market demands in order to increase the amount that she can charge per unit. The Federal Circuit in Special Devices was thus concerned about precisely the wrong thing. An inventor that manufactures too few of its inventions is the cause for concern. But an inventor who stockpiles creates a large inventory that must be sold (or carried at some expense). This inventory--particularly a large inventory--will likely lower prices for consumers. Stockpiling thus may encourage a manufacturer to produce the economically optimal quantity, and may also reduce the economic inefficiencies inherent in granting temporary monopoly rights through patents. Stockpiling prior to sale therefore should be encouraged by the Federal Circuit, not discouraged.

E. Additional Policy Considerations

1. Sales Made "Out of this Country"

One exception to the on-sale bar is explicitly included in the statute. In order to trigger the bar, a sale must be "in this country."[162] This exception allows for the possibility that companies that manufacture products overseas will be treated more favorably than companies that use American manufacturers.

There is no clear rule for determining whether a sale is made "in this country." A court will evaluate all of the sales-related activities to determine "if substantial activity prefatory to a sale occurs in the United States."[163] When the offer for sale has been made in the United States or was directed to a company in the ***237** United States, courts have considered the sale to have been "in this country."[164] In a case where sales activities occurred at a conference in the United States and were directed to companies in Europe from offices in the United States, the sale was similarly treated as occurring "in this country."[165]

Courts have generally found sales not to have been "in this country" for the purposes of the on-sale bar in cases where the actual offer did not take place in the United States. One district court has emphasized that the "'substantial activity' test of Robbins refers to sales activity, rather than to product development."[166] In a case where the offer was made abroad, though other activities including production of prototype, financial planning, telephone communication, and fielding customer questions were all done in the United States, the court found that the offer was not made "in this country."[167] Where the bid proposal was presented and finalized abroad, all negotiations took place abroad, and the contract was signed abroad, the sale was likewise deemed to have taken place outside of the United States.[168]

It may not be worth the expense for a company that currently uses an outside manufacturer to convert to using internal production simply to avoid the premature application of the on-sale bar. A company that currently uses a foreign manufacturer, however, may be encouraged by the Special Devices ruling to ensure that all activity prefatory to the sale occurs in the foreign country. If the difference can be made simply by locating the offer for sale, negotiations, and contract signing in the foreign country, the additional expenses incurred by relocating these activities may be justified by the benefit of delaying the triggering of the on-sale bar. This would be particularly true for companies that already manufacture a large number of their products abroad.

Structuring the sales transaction so that it does not take place "in the country" may not be the only way for some companies to avoid the application of the on-sale bar. It is possible that in some rare circumstances, an inventor may choose a foreign manufacturer over a domestic manufacturer in order to avoid the on-sale bar. There is nothing in United States's patent law that indicates Congressional preference for offshore manufacturing, and there is much in the current political discussion ***238** that indicates that such a preference is an anathema to many members of Congress.

Furthermore, the companies that would be most able to take advantage of an exception for purchases from manufacturers made outside of this country would be the more sophisticated companies. Without independent sophisticated knowledge of the patent system or adequate legal counsel, a small inventor would be unlikely to be able to exploit the exception for sales made outside of this country. Even if the inventor by chance did use a foreign manufacturer, the inventor would not likely ensure that all "substantial activity prefatory" to the sale occurs outside the United States. Thus, not only would the preferential treatment of sales outside the United States encourage use of foreign manufacturers, it would also benefit the large rather than the small inventor--precisely the inventor who is already advantaged.

2. Reliance

One of the policies underlying the on-sale bar is "discouraging removal of inventions from the public domain that the public reasonably has come to believe are freely available."[169] This policy provides no reasonable grounds for arguing against the creation of the proposed exception.[170]

Two types of people will gain physical access to the invention when the inventor hires an outside manufacturer: the manufacturer itself and its employees. But the manufacturer and its employees cannot rely on free use of the invention. It would be an implicit, if not explicit, term of the contract that the product was not available for the manufacturer's use and would surely be a violation of company policy for an employee to make any such use. The possibility of use of the invention by individuals in this group should not trigger the on-sale bar.

The manufacturer or its employees may also reveal the invention to another party. A third party who obtains information about the invention from the manufacturer may conceivably reasonably rely on the free use of the invention. This third party may buy the invention directly from the manufacturer, thinking that the manufacturer was the inventor. Or the third party may surreptitiously learn of the invention from the manufacturer, and then make and sell the invention itself. In either of these situations and in other related situations in which one might imagine a third party would gain access to and rely on the invention, the action would trigger the start of the grace period. But the same result would occur had the manufacturing been in-house with the inventor. Thus, to except a sale from a manufacturer to ***239** an inventor from the application of the on-sale bar in no way frustrates the stated purpose of the statute.

3. Predictable Law

Congress created the Federal Circuit with the intention that it would provide consistent direction for the development of patent laws.[171] The Federal Circuit has embraced this Congressional mandate:

> The broad theme of the FCIA increasing nationwide uniformity in certain fields of national law is epitomized here in the field of patent law. The availability of a clear, stable, uniform basis for evaluating matters of patent validity/invalidity and infringement/noninfringement renders more predictable the outcome of contemplated litigation, facilitates effective business planning, and adds confidence to investment in innovative new products and technology.[172] Patent lawyers themselves have also pressed for clear rules and guidelines.[173] The on-sale bar was itself created with the intent to set a clear deadline setting the time by which it is necessary to file a patent application.[174] The law regarding the on-sale bar as it had developed by the 1990s, however, was decidedly unclear. When the Supreme Court heard Pfaff v. Wells, it was pressed by both sides to create greater predictability in the law.[175] The Federal Circuit's

> Special Devices decision, in keeping with the bright-line rule established by Pfaff, can also be understood as an attempt to offer greater predictability to the on-sale bar. But Special Devices may not have, in fact, created predictable law.

First, it is not clear how many units the inventor must purchase, or offer to purchase, from the outside manufacturer to trigger the on-sale bar. When an inventor sells or offers to sell an invention, even one unit will trigger the on-sale bar.[176] Brasseler and Special Devices have indicated that in the case of a sale by a supplier to an inventor, however, that there may be an exception for sales of small quantities.[177] Because no court has addressed this question, inventors are left without guidance as to what quantity will trigger the bar. This directly contravenes one of the policy justifications for creating a specialized court for patent law. Congress ***240** expected that "business planning will become easier as more stable and predictable law is introduced."[178]

Second, it may be difficult to apply the experimental use doctrine to purchases by inventors from outside manufacturers. The existing standards for measuring whether experimental use negates the application of the on-sale bar are established in cases dealing with sales to parties other than the inventor. When the inventor herself purchases the product, will the same standards govern? Finally, are companies that manufacture their own products at risk of triggering the on-sale bar when they account for the transfer of a product from one corporate division to another, or between two subsidiaries of a corporate parent?

At least for the time being--before additional cases are litigated--inventors cannot be certain of what supplier purchases will in fact trigger the on-sale bar. This period of uncertainty is not likely to be short. The costs of the uncertainty in the law will be borne by the inventors and, ultimately, by those who purchase their inventions.

Conclusion

Either the Federal Circuit should overrule its decision in Special Devices or Congress should create an explicit exception for sales to inventors by manufacturers of the invention. In addition to providing a bright-line rule that could be easily followed by inventors, attorneys, and courts, this exception would apply the on-sale bar fairly and encourage economically efficient actions by inventors. As the law currently stands, larger companies that have internal manufacturing capabilities are substantially and unnecessarily advantaged over individual inventors and small companies without similar capabilities. In a patent system that already provides significant advantages to larger companies, there is no reason to further disadvantage small companies and individual inventors by allowing sales to inventors of their own inventions to trigger the on-sale bar.

Footnotes

a1 Yale Law School class of 2005. I received a great deal of helpful advice as I prepared this paper. I particularly wish to thank my faculty advisor, Professor Richard Brooks; other members of the Yale faculty, Professors Henry Smith, Alan Schwartz, and Alvin Klevorick; attorney Michael Mauriel; and my father and grandfather. I also thank those who completed my survey concerning the on-sale bar.

1 270 F.3d 1353 (Fed. Cir. 2001).

2 Id.

3 Id. at 1355.

4 35 U.S.C. § 102(b) (2000).

5 35 U.S.C. § 101 (2000).

6 35 U.S.C. § 102(b).

7 See, e.g., In re Caveney, 761 F.2d 671, 676 (Fed. Cir. 1985). A sale is a contract between parties to give and to pass rights of property for consideration which the buyer pays or promises to pay the seller for the thing bought or sold. Id. The grace period can also be triggered by other events, such as a theft of the invention by a third party who then puts it on sale. See Evans Cooling Sys., Inc. v. General Motors Corp., 125 F.3d 1448 (Fed. Cir. 1997).

8 In re Epstein, 32 F.3d 1559, 1564 n.5 (Fed. Cir. 1994).

9 Statement of Uncontroverted Facts and Conclusions of Law in Support of Motion for Partial Summary Judgment of Invalidity Under 35 U.S.C. § 102(b) Based on Sales and Offers by Coors Ceramics Co. PP 1-4, Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353 (Fed. Cir. 2001) (Nos. 01-1053, - 1078) [hereinafter Statement of Uncontroverted Facts].

10 Special Devices, Inc. v. OEA, Inc., 117 F. Supp. 2d 989, 992 (C.D. Cal 2000).

11 Id. at 992-93.

12 Special Devices, 270 F.3d 1353 (Fed. Cir. 2001).

13 Special Devices, 117 F. Supp. 2d at 990-91.

14 Statement of Uncontroverted Facts, supra note 9, PP 1-5.

15 Id. P 7; Special Devices, 117 F. Supp. 2d at 994-95 ("It is not clear ... whether or not Coors provided these 100 test units in exchange for consideration. Therefore, this Court cannot conclude as a matter of law that Coors' provision of the 100 test units did in fact constitute a sale as defined by the Zacharin Court.").

16 Statement of Uncontroverted Facts, supra note 9, P 7.

17 Id. PP 8-9.

18 Id. PP 10-11.

19 Id. P 12.

20 Id. P 14.

21 Brief for Defendant-Appellant OEA, Inc. at 3, Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353 (Fed. Cir. 2001) (No. 01-1053, -1078).

22 Statement of Uncontroverted Facts, supra note 9, PP 18-20.

23 Id. PP 20-26.

[24] Id. PP 27-28.

[25] Special Devices, Inc. v. OEA, Inc., 117 F. Supp. 2d 989, 995 (C.D. Cal 2000).

[26] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1355 (Fed. Cir. 2001).

[27] Id. at 1353.

[28] Id. at 1355.

[29] 525 U.S. 55 (1998).

[30] Id. at 67.

[31] Id.

[32] Group One, Ltd. v. Hallmark Cards, Inc., 254 F.3d 1041, 1048 (Fed. Cir. 2001). At the time Special Devices was decided, however, the controlling interpretation was that a "commercial offer for sale" occurs "when the parties offer or agree to reach 'a contract ... to give and pass rights of property for consideration which the buyer pays or promises to pay the seller for the thing bought or sold."' Special Devices, 270 F.3d at 1355 (quoting Zacharin v. United States, 213 F.3d 1366, 1370 (Fed. Cir. 2000)).

[33] Pfaff, 525 U.S. at 67.

[34] Id. at 67-68.

[35] John R. Thomas, Formalism at the Federal Circuit, 52 Am. U. L. Rev. 771, 793-94 (2003).

[36] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1357 (Fed. Cir. 2001).

[37] Thomas K. Landry, Certainty and Discretion in Patent Law: The On-Sale Bar, the Doctrine of Equivalents, and Judicial Power in the Federal Circuit, 67 S. Cal. L. Rev. 1151, 1153 (1994).

[38] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1356-57 (Fed. Cir. 2001).

[39] Id.

[40] Id. at 1355.

[41] Id. at 1356.

[42] 213 F.3d 1366 (Fed. Cir. 2000). The court could not determine that the 100 units were part of a sale as a matter of law. Because the court found that subsequent sales were independently sufficient to trigger the on-sale bar, these units were not considered in the court's on-sale bar analysis.

[43] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1356-57 (Fed. Cir. 2001).

[44] Id. at 1357.

[45] 926 F. Supp. 466 (D.N.J. 1996).

[46] Id. at 470.

[47] Id.

[48] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1357 (Fed. Cir. 2001).

[49] 182 F.3d 888, 889 (Fed. Cir. 1999).

[50] Special Devices, 270 F.3d at 1356 (emphasis added).

[51] Brasseler, 182 F.3d at 889.

[52] Id.

[53] Id. at 890-91.

[54] Id. at 891.

[55] Id.

[56] The Federal Circuit acknowledged that M & R Marking is "factually on point" with Special Devices. Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1357 (Fed. Cir. 2001).

[57] Id. at 1355.

[58] 35 U.S.C. § 102(b) (2000).

[59] Act of July 4, 1836, ch. 357, § 6, 5 Stat. 119.

[60] Act of July 8, 1870, ch. 230, § 24, 16 Stat. 201.

61 Special Devices, 270 F.3d at 1355 (citing Zacharin v. United States, 213 F.3d 1366, 1371 (Fed. Cir. 2000) ("Under this court's precedents, it is of no consequence that the sale was made by a third party, not by the inventor.")).

62 Id. at 1355 (citing Evans Cooling Sys., Inc. v. General Motors Corp., 125 F.3d 1448, 1453-54 (Fed. Cir. 1997) ("We decline to create the suggested new exception to the 102(b) bar which has no basis in the language of the statute.")).

63 Evans Cooling Sys., Inc., 125 F.3d at 1449-50.

64 Id. at 1450.

65 Id. at 1454.

66 Id. at 1450.

67 Id. at 1454.

68 Evans Cooling Sys., Inc. v. General Motors Corp., 125 F.3d 1448, 1454 (Fed. Cir. 1997).

69 Id.

70 Id.

71 Id. (emphasis added).

72 Id. at 1453 ("We note as well that the one other court that has addressed this precise issue has rejected arguments similar to Evans' arguments.") (citing Lorenz v. Colgate-Palmolive-Peet Co., 167 F.2d 423 (3d Cir. 1948)).

73 Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1355 (Fed. Cir. 2001).

74 Id.

75 Id.

76 Id.

77 See generally William C. Rooklidge & Stephen C. Jensen, Common Sense, Simplicity and Experimental Use Negation of the Public Use and On Sale Bars to Patentability, 29 J. Marshall L. Rev. 1, 8 (1995) (detailing the history of the experimental use doctrine).

78 EZ Dock v. Shafer Sys., Inc., 276 F.3d 1347, 1353 (Fed. Cir. 2002).

79 See Rooklidge & Jensen, supra note 77, at 8-9.

[80] Rooklidge & Jensen, supra note 77, at 14.

[81] Id. at 9 ("Because an inventor may need to test the invention before filing a patent application, the courts reasoned, the tests must not be the kind of use that constitutes a public use under the patent statute.").

[82] Patent Act, ch. 88, § 7, 5 Stat. 353-355 (1839) (current version at 35 U.S.C. § 102 (2000)).

[83] Rooklidge & Jensen, supra note 77, at 14-15.

[84] 97 U.S. 126 (1877).

[85] Id. at 127-33.

[86] Id. at 137.

[87] 35 U.S.C. § 100(a) (defining "invention" as an invention or discovery).

[88] See, e.g., Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 60 (1998).

[89] Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1267 (Fed. Cir. 1986) (citations omitted).

[90] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1356 (Fed. Cir. 2001).

[91] Id. (quoting Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 182 F.3d 888, 891 (Fed. Cir. 1999)).

[92] Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 67 (1998).

[93] Id. at 67.

[94] Id. at 58.

[95] Id. at 67-68.

[96] Id. at 58.

[97] Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1356 (Fed. Cir. 2001).

[98] Id.

[99] Paragon Podiatry Lab., Inc. v. KLM Lab., Inc., 984 F.2d 1182, 1188 (Fed. Cir. 1993) ("Even a single sale outside the grace period may be sufficient to invoke section 102(b).").

[100] Special Devices, 270 F.3d at 1356.

[101] Id.

[102] Id. at 1353, 1356.

[103] Id. at 1354, 1357.

[104] Id. at 1356 (emphasis added).

[105] See 35 U.S.C. § 102(b) (2000) (barring patentability for inventions on sale in this, but not a foreign, country).

[106] Frank X. Curci, Protecting Your Intellectual Property Rights Overseas, 15 Transnat'l Law. 15, 25 (2002). Included among these nations are Japan and Germany. Id. at n.57 (citing Jennifer Chung, Does Simultaneous Research Make an Invention Obvious? The Simultaneous Research Problem, 11 Alb. L.J. Sci. & Tech. 337, 342 (2001)).

[107] William C. Rooklidge & W. Gerard von Hoffman, Reduction to Practice, Experimental Use, and the "On Sale" and "Public Use" Bars to Patentability, 63 St. John's L. Rev. 1, 5 (1988).

[108] Id.

[109] Andrew v. Hovey, 123 U.S. 267, 274 (1887).

[110] See Act of Aug. 5, 1939, ch. 450, § 1, 53 Stat. 1212, 1212.

[111] Hearings on H.R. 6872 Before the House Comm. on Patents, 76th Cong. 16 (1939) (statement of Hon. Conway P. Coe, Commissioner of Patents).

[112] Id.

[113] Id. at 53 (statement of Nelson J. Jewett, patent attorney and former patent office examiner).

[114] 35 U.S.C. § 102 (1952) ("No change is made in these paragraphs other than that due to division into lettered paragraphs.").

[115] Envirotech Corp. v. Westech Eng'g Inc., 904 F.2d 1571, 1574 (Fed. Cir. 1990).

[116] Patrick J. Barrett, Note, New Guidelines for Applying the On Sale Bar to Patentability, 24 Stan. L. Rev. 730, 732-35 (1972).

[117] General Elec. Co. v. U.S., 654 F.2d 55, 61 (Ct. Cl. 1981) (en banc).

[118] For a description and analysis of the patent courts' reliance on this student Note for policy explanations of the on-sale bar, see Thomas K. Landry, Certainty and Discretion in Patent Law: The On Sale Bar, the Doctrine of Equivalents, and Judicial Power in the Federal Circuit, 67 S. Cal. L. Rev. 1151, 1164-65 (1994).

[119] Steven Lubar, The Transformation of Antebellum Patent Law, 32 Tech. & Culture 932, 948-49 (1991).

[120] See id.

[121] Id. at 949.

[122] The Advisory Commission on Patent Law Reform, A Report to the Secretary of Commerce 47-48 (1992).

[123] Id. at 47.

[124] Id.

[125] Id.

[126] Sixteen patent attorneys, five in-house counsels (at four medical devices companies and one large industrial technology company), and a former in-house counsel for a large computer company responded to an open-ended questionnaire [hereinafter Questionnaire], distributed by the author, relating to the on-sale bar generally and the impact of the Special Devices decision. Respondents commented on the condition that their names and company names would not be revealed.
Attorneys were asked:

> "How frequently do companies take advantage of most or all of the year grace period?

a. What types of companies most frequently use, or exceed, the entire year grace period?
b. Do you find that companies that use or exceed the entire year are doing so intentionally or because they were not aware of the statutory requirements?
c. If companies are using the entire year, what are their reasons for taking this much time to file a patent application?"
General counsels were asked:

> "How frequently does your company take advantage of most or all of the year grace period?

a. When your company uses most of or the entire year, what are the reasons for taking this much time to file a patent application?"

[127] John W. Schlicher suggests, however, that the concern that an inventor could extend the length of a patent through delayed filing is unfounded. "An inventor has no patent rights against those who use the invention during [the additional years prior to filing the patent application]." John W. Schlicher, Patent Law: Legal and Economic Principles § 6:14 (2d ed. 2003).

[128] Many companies, however, do not use the grace period. An in-house counsel at a medical devices company indicated that that company rarely takes advantage of the year grace period. Counsel at a second medical devices company also commented that the company does not use the grace period, explaining that because they seek European patents for almost all of their inventions they must file patent applications immediately. Questionnaire, supra note 126.

[129] Id.

[130] Review of the American Patent System, S. Rep. No. 84-1464, at 2 (1956).

[131] Mark A. Lemley, Reconceiving Patents in the Age of Venture Capital, 4 J. Small & Emerging Bus. L. 137, 144 (2000) ("We ought to be focusing on how small and innovative companies perceive patents, if we really believe it's true that small and innovative companies are significant movers in actually coming up with new ideas.").

[132] See supra text accompanying note 124.

[133] John R. Allison & Mark A. Lemley, Who's Patenting What? An Empirical Exploration of Patent Prosecution, 53 Vand. L. Rev. 2099, 2117 (2000).

[134] Id.

[135] Id.

[136] Mark A. Lemley, Rational Ignorance at the Patent Office,95 Nw. U. L. Rev. 1495, 1498 (2001) ("There is some disagreement on precisely how expensive it is, but the general range of costs for prosecuting a patent from start to finish (including application and various filing fees paid to the PTO, and attorney's fees not only to prepare and file the application, but to respond to office actions and continue prosecution through to issuance or abandonment) appears to be $10,000 to $30,000 per patent.").

[137] American Intellectual Property Law Association, Report of Economic Survey 15 (2001) (indicating that between 1998 and 2000 the costs of prosecuting utility patents in the United States increased between about 20 and 30 percent).

[138] Id. at 84-85.

[139] Laurence Coit, Patent Litigation Management, 766 PLI/Pat 937, 948 (2003) ("[W]hen significant amounts are at stake, increased business management attention is warranted. Although the cost of diversion is difficult to quantify, it has been suggested that these costs, combined with lost opportunity costs, can easily exceed the direct costs of the litigation.").

[140] Christopher G. Darrow, Recent Developments in Patent Law, 10 Tex. Intell. Prop. L.J. 379, 388 (2002) ("[The Special Devices decision] disproportionately affects small inventors, as opposed to large corporations, because small inventors infrequently have the manufacturing capacity or resources to commercially develop their inventions for sale without contracting with an outside manufacturer.").

[141] See, e.g., Kate L. Birenbaum & Joby A. Hughes, Insuring Intellectual Property Risks: Creative Solutions on the Cutting Edge, 568 PLI/Pat 203, 219 (1999).

[142] David Pressman, Patent It Yourself 1/2 (9th ed. 2002). This book advertises on its front cover that it is "The World's Bestselling Patent Guide."

[143] Id. at 5/12.

[144] Id. at 5/12-13.

[145] In fact, one patent lawyer described a conversation with a client who tried to explain to the lawyer that the sale that the lawyer was concerned about was not in fact a sale. Convinced that the lawyer was confused, the client insisted that it was simply a purchase from a manufacturer. Questionnaire, supra note 126.

[146] See R. H. Coase, The Nature of the Firm, in The Firm the Market and the Law 44 (Univ. of Chicago Press 1988) (concluding that

firms will be created when the cost of transacting within the firm is less than the cost of transacting within the market).

147 Id.

148 Oliver E. Williamson & Scott E. Masten, Introduction to The Economics of Transaction Costs, at ix (Oliver E. Williamson & Scott E. Masten eds., Edward Elgar Publ'g 1999).

149 Id. at xiii-xiv.

150 Oliver E. Williamson, The Limits of Firms: Incentive and Bureaucratic Features, in The Economics of Transaction Costs, supra note 149, at 180, 210.

151 Id. at 197-202.

152 Id. at 202.

153 See Coase, supra note 146.

154 Winslow B. Taub, Comment, Blunt Instrument: The Inevitable Inaccuracy of an All-or-Nothing On-Sale Bar, 92 Cal. L. Rev. 1479, 1490 (2004) ("[T]he rules announced in Special Devices ... produce very different outcomes for parties with arguably very similar conduct."). Taub argues that the current on-sale bar doctrine has many limitations, one of which is the problem created by Special Devices. He proposes that the current on-sale bar grace period of one year should be replaced with a sliding scale, such that "placing an invention on sale more than one year before the filing date [would] result in the patent term being shortened by the length of time between the placing on sale and the filing date." Id. at 1505. This interesting proposal, while perhaps ultimately a good on-sale bar policy, is unlikely to be put into effect in the near future. Taub recognizes that an exception such as the one I propose may be a necessary first step for the particular problem created by Special Devices. Id. at 1512. But because of the breadth of his analysis, he does not engage in depth with the complicated and immediate problems created by Special Devices.

155 City of Elizabeth v. Am. Nicholson Pavement Co., 97 U.S. 126, 137 (1877). See supra text accompanying note 86.

156 Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1357 (Fed. Cir. 2001).

157 Id. at 1354.

158 Id.

159 Id.

160 Id.

161 Schlicher, supra note 127, §2-60.

162 35 U.S.C. § 102(b) (2000). The "in this country" limitation was first included in the Patent Act of 1897, codifying Gandy v. Main Belting Co., 143 U.S. 587, 592 (1891). Act of March 3, 1897, ch. 391, § 1, 29 Stat. 692.

[163] Robbins Co. v. Lawrence Mfg. Co., 482 F.2d 426, 434 (9th Cir. 1973) (finding that the offer was made "in this country" where the offer was made in the United States).

[164] See, e.g., id.; In re Caveney, 761 F.2d 671 (Fed. Cir. 1985) (finding that the offer was made "in this country" where the offer was made from abroad and was directed to a company at its place of business in the United States).

[165] Linear Tech. Corp. v. Micrel, Inc., 63 F. Supp. 2d 1103 (N.D. Cal. 1999).

[166] Synair Corp. v. Am. Indus. Tire, Inc., 223 U.S.P.Q. (BNA) 1021, 1022 (S.D. Tex. 1983) (finding that the sale was not "in this country" because the discussions took place in Canada).

[167] B. F. Goodrich Co. v. Aircraft Braking Systems Corp., 825 F. Supp. 65, 72 (D. Del. 1993) ("To find that this activity constitutes 'substantial prefatory activity' ... would render the relevant 'in this country' language superfluous.").

[168] Rotec Indus., Inc. v. Mitsubishi Corp., 36 F. Supp. 2d 810, 817 (C.D. Ill. 1998).

[169] Envirotech Corp. v. Westech Eng'g Inc., 904 F.2d 1571, 1574 (Fed. Cir. 1990).

[170] R. Carl Moy, Moy's Walker on Patents § 8:232 (4th ed. 2004) ("If the bar is also justified in part by the policy against removing material from the public domain, patentability should be extinguished where the third-party offer has informed the art. But in no case should the activities of a third party impact patentability where ... the art has not been informed.").

[171] S. Rep. No. 97-275, at 7 (1981), reprinted in 1982 U.S.C.C.A.N. 11, 12.

[172] Aerojet-General Corp. v. Machine Tool Works, Oerlikon-Buehrle Ltd., 895 F.2d 736, 744 (Fed. Cir. 1990).

[173] See Thomas, supra note 35, at 794.

[174] See supra note 109 and accompanying text.

[175] Charles H. Sanders & John F. Sweeney, The On-Sale Bar to Patentability: Understanding the Doctrine's Past, Present, and Future, 532 PLI/Pat. 157, 160 n.5 (1998).

[176] See supra note 99.

[177] See supra Section III.B.

[178] S. Rep. No. 97-275, at 6 (1981), reprinted in 1982 U.S.C.C.A.N. 11, 16.