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THE PROPER ROLE OF THE EXPERIMENTAL USE DOCTRINE IN THE PFAFF ANALYSIS:
HOW AND WHY THE FEDERAL CIRCUIT'S HOLDING IN HAMILTON BEACH BRANDS, INC. V. SUNBEAM PRODUCTS, INC. SHOULD BE CORRECTED

INTRODUCTION

The court in Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc. held that an order form for manufacture of an invention by a supplier constituted a commercial offer for sale, thereby triggering an on-sale bar to patentability under 35 U.S.C. §102(b).1 The holding deals a significant blow to the experimental use exception to the statutory bar established by the Supreme Court.2 Small businesses and independent inventors, who often lack in-house manufacturing and must therefore contract with third parties to produce prototypes, will need to be especially wary of triggering the on-sale bar before their patent applications are filed.

The decision in Hamilton Beach conflicts with existing case law, and will have significant economic and legal implications on many companies. Accordingly, the Federal Circuit's decision in Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc. should be reconsidered, and Congress should address the inconsistencies present in Pfaff analyses.3 More specifically, Congress should reformulate the term "commercial" in the context of the on-sale bar to explicitly require consideration of whether the commercial aspects of the sale were incidental to a primary purpose of experimentation. Additionally, the term "experimental" should be formally defined to provide a clear articulation of the test for determining whether an activity is experimental. Accordingly, this note will provide a proposed five factor test for determining whether an activity is experimental in nature.

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3 Id. at 68-69.
This note will explore the §102(b) on-sale bar of the Patent Act.¹ The Patent Act, grants inventors limited periods of time during which they are granted exclusive rights to make and use their inventions.² These periods are statutorily determined based on the filing date of the patent application and the type of patent granted.³ To prevent inventors from reaping the benefits of their inventions for indeterminate periods of time prior to filing a patent, §102(b) presents a bar to patentability that forces inventors to either file a patent application or waive their rights to a patent within one year of certain qualifying public activities.⁴ One such activity is placing the invention “on-sale” in the United States.⁵

This note will also discuss the policy concerns underlying the on-sale statutory bar. The Constitution promotes advancement of sciences and the arts by securing limited rights to inventors.⁶ That provision was included in the Constitution because its drafters believed that the providing inventors and artists a personal stake in developing new inventions and art best serves the public interest.⁷ Courts and Congress have struggled to strike a balance between the benefit to the public through competition and the individual rights of particular inventors.⁸ To this end, courts have articulated several considerations that must be weighed against each other when formulating rulings on unclear areas of patent law.⁹ These considerations have, among other things, justified the use of an exception to the on-sale statutory bar when an inventor seeks to

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⁵ Id.
⁶ U.S. Const. Art. 1, § 8, cl. 8.
⁸ See, e.g., Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146 (1989) (“From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy.”) (citations omitted).
perfect his invention, since the public ultimately derives more benefit from completed inventions than from inventions that do not function properly.\textsuperscript{13}

This note will argue that the Federal Circuit should reconsider \textit{Hamilton Beach} and clarify current case law in a manner that brings it in line with procedural and substantive aspects of the experimental use doctrine as previously applied by the Circuit. Procedurally, prior case law suggests that the experimental use doctrine is not an affirmative defense.\textsuperscript{14} Rather, courts should consider whether or not the primary purpose of a sale is to yield a commercial gain or to conduct experimental testing, regardless of the explicit arguments raised by the parties. The \textit{Hamilton Beach} court, by contrast, specifically ignored the on-sale doctrine because \textit{Hamilton Beach} had not explicitly raised this argument.\textsuperscript{15} Substantively, the facts presented in the case suggested that \textit{Hamilton Beach} had not made the invention patentable or commercially exploitable at the time of sale, yet the court held that the offer for sale was nonetheless invalidating.\textsuperscript{16}

The holding in \textit{Hamilton Beach} has implications on future decisions regarding the on-sale bar that impede the policy goals embodied in §102.\textsuperscript{17} It discourages inventors from interacting with suppliers when attempting to obtain prototypes or pre-mass production samples.\textsuperscript{18} This will impede progress by stalling the process used to perfect inventions, as inventors withhold the results of their experimentation until further into the development process.\textsuperscript{19} Further, the decision

\textsuperscript{14} Madey v. Duke University, 307 F.3d 1351, 1361 (Fed. Cir. 2002). \textit{See also} Allen Engineering Corp. v. Bartell Industries, Inc., 299 F.3d 1356, 1352 (Fed. Cir. 2002).
\textsuperscript{15} \textit{Hamilton Beach}, 2013 WL 4081872 at *7 (Reyna, dissenting).
\textsuperscript{16} \textit{Id}.
\textsuperscript{17} \textit{See generally} \textit{Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc.}, The Cislo & Thomas LLP Blog (Nov. 12, 2013), http://cisloandthomas.com/hamilton-beach-brands-inc-v-sunbeam-products-inc/.
\textsuperscript{18} \textit{Id}.
\textsuperscript{19} \textit{See generally} Pennock v. Dialogue, 27 U.S. 1, 2 (1829) (suggesting that, when inventors withhold their inventions, the policy goals underlying §102 are obstructed).
may have immediate practical implications, particularly on smaller companies and independent inventors. Such entities often lack the resources for mass-producing samples and prototypes in-house. As a result, these entities often need to contract with third parties to obtain prototypes of their inventions for testing. Due to the holding in Hamilton Beach, an undetermined number of existing patents may face invalidation based on such prototyping activity. Such invalidation may have drastic consequences on smaller firms, which have proven instrumental in developing inventions in emerging fields of technology.

In Part I, this note will provide an overview of the existing law related to §102(b), particularly with respect to the on-sale bar to patentability that triggers based on activities occurring more than one year prior to filing. To this end, this note will discuss the policy goals justifying for the on-sale bar, as well as the facts and holding of Hamilton Beach. In Part II, this note will argue that Hamilton Beach was decided incorrectly by examining the holding’s inconsistency with established legal principles and policy goals, as well as the adverse practical effects on inventors. In Part III, this note will analyze the potential solutions to the problems presented by the holding in Hamilton Beach and the consequences of those solutions, as well as propose a course of action that Congress could take in clarifying existing case law.

PART I. BACKGROUND/OVERVIEW

The on-sale bar to patentability is codified in §102(b) of the United States Code. This note will first provide a brief introduction to the pertinent statutory language of §102.

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21 See, e.g., id.
22 See Hamilton Beach, 726 F.3d at 1381 (Reyna, dissenting).
23 See id.
A. Statutory Background

Under 35 U.S.C. §102, an inventor must present a novel invention to obtain a patent.25 Additionally, §102(b) presents a statutory bar to applicants seeking to file a patent on an invention that had been disclosed to the public more than one year prior to that patent’s filing date.26 Means of making an invention available to the public include using the invention in public, publishing information about the invention, patenting the invention, and offering a completed version of the invention for sale in this country.27

Courts had previously interpreted the on-sale provision of the bar by applying a “totality of the circumstances” test, suggesting that factors such as “the level of skill and state of the art,” as well as “the nature of the invention” must be considered in tandem to determine whether the on-sale statutory bar applies to any given scenario.28 Accordingly, the Federal Circuit previously noted that, in determining whether a sale was sufficiently complete as to induce application of the on-sale bar, “[a]ll of the circumstances surrounding the sale or offer to sell, including the stage of development of the invention and the nature of the invention, must be considered and weighed.”29 In an effort to maintain flexibility so that the §102(b) bar could be applied appropriately to a wide variety of factual situations, the Federal Circuit specifically elected to avoid formulating rigid standards for applying such factors to factual scenarios.30 This lack of rigidity led to unpredictability, as courts would apply different factors to different cases.31

27 Id.
31 Id. at 844-845.
The Supreme Court ultimately rejected the “totality of the circumstances test” in order to adopt a more definite test for the on-sale bar in *Pfaff v. Wells Electronics, Inc.* \(^{32}\) In *Pfaff*, the Supreme Court clarified that, in the context of the Patent Act, the word “invention” generally refers to the inventor’s conception of the idea behind the invention rather than the creation of a physical embodiment of that idea. \(^{33}\) Accordingly, the new test focused on two conditions for application of the on-sale bar: the purported sale must be commercial in nature, and the invention must be ready for patenting at the time of sale. \(^{34}\)

Notably, the Supreme Court did not simply adopt conception as the standard for determining whether the invention was “ready for patenting” at the time of the offer. \(^{35}\) Instead, an invention is “ready for patenting” when it has been reduced to practice or sufficiently described in a written document such that a person of reasonable skill in the art could practice the invention without undue experimentation. \(^{36}\) The Court stated that an inventor has reduced the invention to practice when that inventor possesses an embodiment that meets all of the claim limitations and works for its intended purpose. \(^{37}\) The Court also noted that an invention works for its intended purpose when “there is a demonstration of the workability or utility of the claimed invention.” \(^{38}\) Since *Pfaff*, other courts have also clarified that an actual sale need not occur to trigger §102(b) if an offer to sell alone meets the two prongs of the *Pfaff* test. \(^{39}\)

\(^{32}\) *Pfaff*, 525 U.S. at 68-69.
\(^{33}\) Id. at 55.
\(^{34}\) Id. at 56 (noting that the “totality of the circumstances” test has been criticized for being unnecessarily vague).
\(^{35}\) See also Brasseler, U.S.A. I., L.P. v. Stryker Sales Corp., 182 F.3d 888, 890 (Fed. Cir. 1999).
\(^{36}\) See Lindholm, *infra* note 174, at 256.
\(^{37}\) *Pfaff*, 525 U.S. at 67-68.
\(^{38}\) Eaton v. Evans, 204 F.3d 1094, 1097 (Fed. Cir. 2000).
\(^{39}\) Fujikawa v. Wattanasin, 93 F.3d 1559, 1563 (Fed. Cir. 1996).
\(^{40}\) Atlanta Attachment Co. v. Leggett & Platt, Inc., 516 F.3d 1361, 1365 (Fed. Cir. 2008) (“Neither profit, revenue, nor even an actual sale is required for the use to be a commercial offer under [35 U.S.C.] section 102(b).”).
Courts have noted that the parties to a sale or offer for sale must be separate entities for a sale or offer between those parties to qualify as a statutory bar to patentability.\(^{40}\) Even if commercial sales occur in secret and the information is not publicly accessible, the activity may still constitute a sale under §102(b).\(^{41}\) Particularly, courts have suggested that activities may qualify for the on-sale bar when the inventor commercially exploits his invention prior to filing a patent, regardless of whether the public actually becomes aware of the invention.\(^{42}\)

Significantly, courts have noted that there is no “supplier exception” to the “on-sale” statutory bar.\(^{43}\) Thus, a court may properly find a patent invalid due to a commercial contract wherein a supplier offered to make and sell an invention to the inventor.\(^{44}\) However, commercial contracts made by suppliers do not necessarily constitute commercial offers for sale pursuant to Pfaff.\(^{45}\) Specifically, the on-sale bar is not triggered when an inventor “takes a design to a fabricator and pays the fabricator for its services in fabricating a few sample products.”\(^{46}\)

Potentially invalidating activity does not always present a bar to patentability.\(^{47}\) Activity that would otherwise trigger the on-sale bar is exempt if it is experimental in nature.\(^{48}\) In assessing experimentation, courts have considered various factors, including documentation of testing (or lack thereof), nature of the invention, and whether the inventor retained control over

\(^{40}\) In re Caveney, 761 F.2d 671, 676 (Fed. Cir. 1985). See also Ferag AG v. Quipp, Inc., 45 F.3d 1562, 1567 (Fed. Cir. 1995) (“Where the parties to the alleged sale are related, whether there is a statutory bar depends on whether the seller so controls the purchaser that the invention remains out of the public’s hands.”) (alteration to original).

\(^{41}\) Woodland Trust v. Flowertree Nursery, Inc., 148 F.3d 1368, 1370 (Fed. Cir. 1998).

\(^{42}\) Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co., 153 F.2d 516, 520 (2d Cir. 1946).

\(^{43}\) Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1355 (Fed. Cir. 2001).

\(^{44}\) See id. at 1357 (holding that an offer by a supplier to manufacture an invention and provide it to the seller for the express purpose of commercial stockpiling raised a §102(b) bar to patentability).

\(^{45}\) Brasseler, 182 F.3d at 891.

\(^{46}\) Id. (emphasis added).

\(^{47}\) Id.

the invention after relinquishing physical possession. The Federal Circuit has stated that “this list is not exhaustive, and all of the experimentation factors may not apply in a particular case.”

Procedurally, courts have clarified that the experimental use doctrine is a “negation,” noting that the burden of persuasion with respect to experimental use never shifts to the patentee.

Even activity that generates public awareness of the invention may qualify for the experimental use exception depending on the circumstances surrounding that activity. However, testing that relates solely to unclaimed features does not qualify as experimental use. Further, for a patentee to succeed in claiming that a sale was primarily experimental in nature, courts have held that an inventor must retain some degree of control over the invention.

Case law suggests that experimental use “includes ‘tests needed to convince [the inventor] that the invention is capable of performing its intended use in its intended environment.’”

For example, in Kolmes v. World Fibers Corp., World Fibers Corporation attacked the validity of Kolmes’ patent on durable gloves because samples of the gloves were distributed and sold prior to one year before Kolmes applied for a patent. The Federal Circuit found that the gloves were not suitable for their intended use at the time of distribution and that Kolmes had no basis for determining the durability of the gloves without testing. As a result, the Federal

49 EZ Dock v. Schafer Sys., Inc., 276 F.3d 1347, 1357 (Fed. Cir. 2002).
51 See TP Labs, 724 F. 2d at 971.
52 Baxter Intern., 88 F.3d 1054 at 1059 (“Experimental use negates public use; when proved, it may show that particular acts, even if apparently public in a colloquial sense, do not constitute a public use within the meaning of section 102.”) (citing TP Labs, Inc. v. Professional Positioners, Inc., 724 F.2d 965, 971 (Fed. Cir. 1984).
53 In re Brigance, 792 F.2d 1103, 1109 (Fed. Cir. 1986).
54 See In re Smith, 714 F.2d 1127, 1137 (Fed. Cir. 1983); TP Labs,724 F.2d at 972; Baker Oil Tools, Inc. v. Geo Vann, Inc., 828 F.2d 1558, 1564 (Fed. Cir. 1987).
55 EZ Dock, 276 F.3d at 1352 (alteration in original) (quoting Gould Inc. v. United States, 579 F.2d 571, 583 (Ct. of Cl. 1978)).
57 Id. at 1540.
Circuit held that the experimental use negation applied, thereby nullifying the invalidation of the patent based on the sale of sample gloves.58

On September 16, 2011, Congress passed the Leahy-Smith America Invents Act ("AIA").59 The most significant change introduced by this act is the conversion from a “first-to-invent” system to a “first-to-file” system, which affects all patent applications filed after March 13, 2013.60 Under the previous “first-to-file” system, an inventor applying for a patent can bypass a patent examiner’s rejection based on prior art by claiming that he or she made the invention before the reference cited in that rejection.61 Under the new “first to file” system, the ability to assert prior invention is only available to patent applicants in limited circumstances.62 As a result, the American patent system now generally rewards those inventors who avail themselves of the patent office first regardless of date of invention.63

In addition to the general system change present in the AIA, the revised version of §102 also modifies the context of the on-sale statutory bar.64 At first blush, this new wording may not appear to have a significant impact on the on-sale bar. However, as advised by the United States Patent and Trademark Office (USPTO), the revised version of the section places a much greater emphasis on determining whether the allegedly invalidating disclosure was available to the

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58 Id.
60 Id.
61 See 37 C.F.R. § 1.131 (for pre-America Invents Act applications, an applicant may “swear behind” prior art by providing an affidavit stating that he or she had conceived of the invention and reduced it to practice prior to the date the prior art became public).
62 Such circumstances include situations where an inventor made and disclosed the invention up to one year before the prior art asserted by the USPTO became available to the public. LEAHY–SMITH AMERICA INVENTS ACT, PL 112-29, September 16, 2011, 125 Stat 284.
63 Id.
64 35 U.S.C. §102 (2011) (noting that any “disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed invention under subsection (a)(1) if the disclosure was made by the inventor . . . or the subject matter disclosed had, before such disclosure, been publicly disclosed by the inventor . . . ”).
Assuming courts interpret the revised provision consistently with the USPTO’s recommendations, such courts will construe the on-sale bar to only include offers for sale that were available to the general public at the time of offer. Consequently, the ruling in *Hamilton Beach* may prove moot with respect to patents filed after the first-to-file provision of the AIA went into effect.66

Regardless of whether courts adopt the USPTO’s recommendations with respect to post-AIA patents, patent applications subject to pre-AIA law will be restricted by judicial interpretations of that law, rather than those interpretations of the post-AIA law.67 Patent applications filed prior to March 16, 2013, are all subject to pre-AIA law until their terms expire.68 As a result, any decision that interprets pre-AIA law will affect issued patents for over two decades into the future.69

This note will next examine the policy justifications for § 102(b).

**B. Policy Rationale Behind §102(b)**

American patent law is rooted in the Constitution’s “Patent and Copyright” clause, which grants Congress the power “to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”70 In explaining this clause, courts have suggested that providing a personal incentive for individuals is “the best way to advance public welfare through the talents of authors

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65 78 Fed. Reg. 11059, 11075 (Feb. 14, 2013) ("The phrase ‘on sale’ in AIA 35 U.S.C. 102(a)(1) is treated as having the same meaning as ‘on sale’ in pre-AIA 35 U.S.C. §102(b), except that the sale must make the invention available to the public.") (emphasis added).
66 LEAHY–SMITH AMERICA INVENTS ACT, PL 112-29, September 16, 2011, 125 Stat 284 § 3(n) (Noting that the first-to-file provision, among others, will be effective 18 months after Congress passes the legislation, and that any patents including claims or references dated before then would be subject to the new provisions.).
67 *Id.*
68 *Id.*
69 35 U.S.C. § 154 (noting that a patent “grant shall be for a term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed . . .”).
and inventors in “Science and useful Arts.”

The goals of patent law expressed in the Constitution have been embodied in the Patent Act of 1952 and in the creation of the United States Patent and Trademark Office (“USPTO”). Now, the USPTO exercises its authority to review and grant patents to inventors. Further, the Patent Act endows patents granted by the USPTO with a presumption of validity.

Courts have expressly considered four primary policy goals in the context of the on-sale bar. First, the on-sale bar serves as a means of encouraging widespread disclosure of new inventions to the public as soon as possible. Second, the on-sale bar prevents inventors from commercially exploiting their inventions for periods that are substantially longer than the statutorily-authorized terms. Third, the on-sale bar discourages removal of inventions from the public domain after “the public justifiably comes to believe [the inventions] are freely available.” Finally, the on-sale bar affords the inventor a reasonable period of time after sales activity to determine whether a patent is worth pursuing.

Pursuant to these goals, courts have expressed a need for reasonable certainty in the context of §102(b), arguing that uncertainty effectively deprives inventors of valuable rights. Additionally, courts have clarified that the purpose of encouraging widespread public disclosure is severely hampered by forcing inventors to file incomplete inventions and to sacrifice valuable

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73 Id.
76 W. Marine Electronics, 764 F.2d at 845.
77 Id.
79 W. Marine Electronics, 764 F.2d at 845.
80 Andrews v. Hovey, 123 U.S. 267, 274 (1887).
time developing changes that would improve those inventions. Moreover, rather than serving the public by providing greater access to useful knowledge, inadequate filings simply add to the growing number of papers processed by the USPTO and by courts.

As far back as 1813, courts began to recognize that there should be an allowance for inventors to make *bona fide* efforts to perfect their inventions without being subjected to shortened patent terms. Indeed, in *City of Elizabeth v. American Nicholson Pavement Co.*, the court discussed the value that a properly functioning invention presents for the public. As a result, the Supreme Court formulated an experimental use negation of the on-sale bar. Courts have since suggested that such a negation protects an “interest in providing inventors with a definite standard for determining when a patent application must be filed,” and that “a rule that makes the timeliness of an application depend on the date when the invention is ‘substantially complete’ seriously undermines the interest in certainty.”

This note will now provide the factual and procedural history of its principal case, *Hamilton Beach Brands Inc. v. Sunbeam Products, Inc.*, as well as the judicial reasoning from the *Hamilton Beach* court’s majority and dissenting opinions.

C. Case Summary

The decision in *Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc.* involved cross motions for summary judgment based on allegations that claims of a patent were invalid due to being anticipated by prior art. The Plaintiff, Hamilton Beach Brands, Inc. (“Hamilton Beach”)

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81 *UMC Elecs. Co.*, 816 F.2d at 660 (Smith, J., dissenting) (citations omitted).
82 *Id.* at 665 (Smith, J., dissenting).
83 *Whittemore v. Cutter*, 29 F. Cas. 1120, 1121 (1813).
84 *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 137 (1877) (“[I]t is 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.”).
85 *Id.* at 136.
86 *Pfaff*, 525 U.S. at 65-66.
claimed that Sunbeam Products, Inc.’s (“Sunbeam”) slow cooker device infringed one of Hamilton Beach’s patents.88 Sunbeam also argued that Hamilton Beach’s patent was invalid under several grounds, including the on-sale bar to patentability pursuant to §102(b).89

Ultimately, the trial court found for Sunbeam, holding that Sunbeam’s product did not infringe Hamilton Beach’s patent.90 The court also found that Hamilton Beach’s patent was invalid under the on-sale bar, holding that a commercial offer to sell the slow cooker had occurred more than one year before Hamilton Beach filed its patent application.91 Emphasizing the significance of the binding nature of a contract when determining whether presentation of the contract constitutes an offer for sale, the court held that the contract formed with Hamilton Beach’s manufacturer was sufficient to trigger the on-sale bar.92 Notably, the court cited precedent to deny the argument that a so-called “supplier exception” to the on-sale bar exists.93 Although the offer for sale came from a foreign entity, the court specified that the invention was “on-sale” in this country, since the offer was directed to a company in the U.S.94

With respect to patentability of the invention at the time of the alleged offer, the Hamilton Beach court held that the slow cooker was “ready for patenting” prior to presentation of the contract.95 Specifically, the court suggested that the computer automated drawings and specifications that Hamilton Beach had presented to potential investors before submitting the purchase order to its supplier were sufficiently detailed to demonstrate that a suitable invention

88 Id.
89 Id.
90 Id. at *5.
91 Id. at *18.
92 Id. at *17.
93 Hamilton Beach, 2012 WL 6562220 at *4 (citing Special Devices, Inc. v. OEA, Inc., 270 F.3d 1353, 1355 (Fed. Cir. 2001)).
94 Id.
95 Id. at *18.
could have been manufactured prior to the date of the alleged offer.\textsuperscript{96} As a result, the subsequent sale was deemed sufficient grounds for invalidation of the Hamilton Beach patent pursuant to the on-sale bar to patentability.\textsuperscript{97}

The United States Court of Appeals affirmed the lower court’s holding in a split decision.\textsuperscript{98} The Federal Circuit’s reasoning differed slightly from that of the District Court.\textsuperscript{99} While the District Court said that an on-sale bar only triggered because a binding contract had been formed with Hamilton Beach’s manufacturer, the Federal Circuit noted that an offer that \textit{could} lead to a binding contract with simple acceptance would suffice, and that the binding contract itself need not exist at the time the purported offer was made.\textsuperscript{100} The Federal Circuit further confirmed that the invention was ready for patenting as of the date of the offer despite Hamilton Beach’s claim that the cooker had not yet been perfected.\textsuperscript{101} Specifically, the court asserted that the existence of a functional yet imperfect prototype indicated that the cooker was sufficiently ready for patenting at the time of sale.\textsuperscript{102}

In his dissent, Judge Reyna argued that applying the “no-supplier-exception” rule in such an overly broad manner would “all but abolish this distinction [between experimental use and public or commercial use] and render the experimental-use exception useless for a significant class of innovators.”\textsuperscript{103} Judge Reyna suggested that the majority’s decision ignored the possibility that the use was experimental in nature, particularly pointing out a flaw in the slow

\textsuperscript{96} Id.
\textsuperscript{97} Id. at *19-20.
\textsuperscript{99} Id. at *6.
\textsuperscript{100} \textit{Hamilton Beach}, 2012 WL 6562220 at *17; \textit{Hamilton Beach}, 2013 WL 4081872 at *6.
\textsuperscript{101} \textit{Hamilton Beach}, 2013 WL 4081872 at *7.
\textsuperscript{102} Id. (citing Weatherchem Corp. v. J.L. Clark, Inc., 163 F.3d 1326, 1332–34 (Fed. Cir. 1998)).
\textsuperscript{103} Id. at *9 (Reyna, dissenting) (alteration to original).
cooker that resulted in leaking as a fact suggesting a need for further refinement.\textsuperscript{104} Judge Reyna also stated that his primary concern regarding the outcome of the case was the potential impact the result could have on smaller entities and individual inventors, who often cannot produce early versions of their products without using an external supplier.\textsuperscript{105}

Next, this further argues that the decision in \emph{Hamilton Beach} was incorrectly decided, both with respect to the relevant case law and to the outcome's stifling effect on invention.

\textbf{PART II. THE DECISION IN HAMILTON BEACH WAS INCORRECTLY DECIDED}

The holding in \emph{Hamilton Beach} presents significant problems that may have far reaching implications on American patents and inventors. The case demonstrates inconsistencies when compared to established law and guidance regarding the on-sale bar. In addition, the holding may have severe implications on patent law and inventors, since the holding tends to discourage inventors from fully developing their inventions, in stark contrast to the policy goals justifying the patent system.\textsuperscript{106} Finally, the holding sets a legal precedent that may have adverse economic and legal implications, particularly on smaller companies and individual inventors.\textsuperscript{107}

\textbf{A. Inconsistency with Established Legal Principles}

Although the \emph{Hamilton Beach} court determined that the sale was commercial in nature and that the offer raised a §102(b) issue, that court nevertheless could have found the patent valid by concluding that the sale was part of an experimental effort to perfect the invention under

\textsuperscript{104} \textit{Id.} at *10 (Reyna, dissenting) ("At the very least, the majority should have identified how the purchase order was commercial in nature when the manufacturing resulted in slow cookers that were incapable of "inhibit[ing] leakage of the food stuffs from the interior of the container.""") (alteration in original).

\textsuperscript{105} \textit{Hamilton Beach}, 2013 WL 4081872 at *10 (Reyna, dissenting).


\textsuperscript{107} \textit{Hamilton Beach}, 2013 WL 4081872 at *10 (Reyna, dissenting).
either prong of the Pfaff test. Under the first prong, a sale that is conducted primarily for experimental purposes does not trigger the on-sale bar. Under the second prong, patentable subject matter that is not yet capable of performing its intended function at the time of the initial offer for sale does not constitute the invention for purposes of the on-sale bar.

Courts have suggested that, in some circumstances, limited commercial exploitation of an invention will not raise the statutory bar so long as the commercial profits from that sale are incidental to the primary goal of perfecting the invention. For example, in Speedrack, Inc. v. Interlake, Inc., Interlake asserted that Speedrack’s patent on an adjustable storage rack was invalid due to a commercial sale of an end frame of a rack that occurred more than a year before the application for patent. The Speedrack court held that a jury could have found that the commercial nature of the sale was merely incidental to the purpose of experimentation. The court noted that Speedrack had offered the end frame at a “special reduced price.” Additionally, the court held that informal feedback from the storeowner who received the frame was sufficient to gauge performance for this relatively simple invention.

In Hamilton Beach, the sale was specifically conducted in a manner that allowed the inventor to remain in possession and control of the slow cookers in question after completion of the transaction. None of the facts alleged by Sunbeam suggested that Hamilton Beach had

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108 Invitrogen Corp. v. Biocrest Mfg., L.P., 424 F.3d 1374, 1379-80 (Fed. Cir. 2005) (citing EZ Dock, 276 F.3d at 1352) (“This court notes that in applying the Pfaff two-part test in the context of a public use bar, evidence of experimental use may negate either the ‘ready for patenting’ or ‘public use’ prong.”).
109 Pfaff, 525 U.S. at 68-69.
110 Id.
112 Speedrack, Inc. v. Interlake, Inc., 1987 WL 9301 at *3 (N.D. Ill. Apr. 7, 1987). Contra In re Smith, 714 F.2d at 1135 (holding that a consumer test of the product was not necessary for purposes of scientific experiments and, therefore, that the test had the primary purpose of determining commercial marketability of the invention).
113 Id.
114 Id. at *4.
115 Id.
116 Hamilton Beach, 2013 WL 4081872 at *5.
plans to proceed to resell the cookers it had ordered.\textsuperscript{117} Rather, the fact that Hamilton Beach was facing issues with leaking cookers demonstrates that Hamilton Beach would need to further refine the cookers before those devices would be suitable for their intended use.\textsuperscript{118} Further, the majority implies that the number of cookers ordered is relevant to the determination of experimental use.\textsuperscript{119} As the dissent notes, however, the number of units ordered is no longer a relevant consideration for determining whether use is experimental in nature.\textsuperscript{120}

In contrast to the majority’s consideration of order size in assessing the nature of the sale, courts have articulated several other factors for facilitating analysis of the first prong of the \textit{Pfaff} test based on principles of contract law.\textsuperscript{121} Such factors include the amount of control retained by the inventor after the sale, whether records of experimentation were kept, and what degree of commercial exploitation was performed during testing.\textsuperscript{122} Notably, those factors do not include the number of units purportedly sold. Further, as noted by Hamilton Beach, regardless of the size of its order, the order itself “was not the result of customer demand or projections.”\textsuperscript{123}

The \textit{Hamilton Beach} majority asserted that the experimental use negation was not argued by Hamilton Beach’s counsel and, therefore, that the exception was not at issue in that case.\textsuperscript{124}

\textsuperscript{117} \textit{Id}. at n.3 (Reyna, dissenting).
\textsuperscript{118} \textit{Id}. at *10 (Reyna, dissenting) (“[A]t the time the order was placed, Hamilton Beach was repeatedly changing the product specification due to a series of design failures, most notably, foodstuffs leaking through the lid. The design remained unstable for nearly three months after the purchase order was placed.”).
\textsuperscript{119} \textit{Id}. at n.2 (“The dissent does not dispute that a firm offer for sale occurred in this case or that the offer for sale was for almost 2000 units of the Stay or Go \textregistered slow cooker.”).
\textsuperscript{120} \textit{Id}. at n.3 (Reyna, dissenting) (“This sort of quantitative analysis [number of cookers ordered] was previously accepted under the ‘totality of the circumstances’ test—a test rejected by the Supreme Court in \textit{Pfaff’}”) (alteration to original).
\textsuperscript{121} \textit{EZ Dock}, 276 F.3d at 1357 (stating 13 factors relevant to the first part of the \textit{Pfaff} test). See also \textit{In re Smith}, 714 F.2d at 1136 (necessity for public testing); \textit{City of Elizabeth}, 97 U.S. at 135 (extent of public testing in relation to the nature of the invention); Hycor Corp. v. Schlueter Co., 740 F.2d 1529, 1535 (Fed. Cir. 1984) (length of the test period, whether payment was made, whether there was a secrecy obligation, whether progress records were kept, and who conducted the experiments); and D.L. Auld Co. v. Chroma Graphics Corp., 714 F.2d 1144, 1151 (Fed. Cir. 1983) (degree of commercial exploitation during testing).
\textsuperscript{122} \textit{Id}.
\textsuperscript{123} \textit{Hamilton Beach}, 2013 WL 4081872 at n.3 (Reyna, dissenting).
\textsuperscript{124} \textit{Id}. at n.2.
Thus, the majority claimed, the doctrine would not be affected by the outcome of *Hamilton Beach*. However, as the dissent correctly noted, even though *Hamilton Beach* had not explicitly argued that the experimental use exception applied, *Hamilton Beach* had alleged that its product was not complete or prepared for commercial sale at the time of the offer and, therefore, that the sale was not commercial in nature.

Like Judge Reyna in *Hamilton Beach*, the court in *Madey v. Duke University* noted that the “experimental use doctrine” does not need to be affirmatively asserted by a patent owner to be applied. The *Madey* court noted that a court should apply the doctrine regardless of whether it was asserted by the parties so long as the facts on record indicate an experimental purpose.

Accordingly, the experimental use doctrine should have been considered in this case regardless of whether *Hamilton Beach* specifically raised it. More importantly, the court did not apply a key legal principle that had been applied in prior analogous cases. This type of error could be repeated by future courts looking to the *Hamilton Beach* holding for guidance on factually similar situations. Therefore, the result of this case may impact future applications of the experimental use negation.

The following section discusses the effects of the case on the policy issues that Congress sought to address via §102.

**B. Inconsistency with Policy Goals**

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125 *Id.*

126 *Id.* at *10 (Reyna, dissenting) (noting that *Hamilton Beach* raised the issue of leaking cookers to the court).

127 *Madey v. Duke University*, 307 F.3d 1351, 1361 (Fed. Cir. 2002) (“*Madey* argues that the experimental use defense is an affirmative defense that Duke must plead or lose. We disagree. *Madey* points to no source of authority for its assertion that experimental use is an affirmative defense.”). *See also* Allen Engineering Corp. v. Bartell Industries, Inc., 299 F.3d 1336, 1352 (Fed. Cir. 2002) (stating that, to invalidate a claim under 35 U.S.C. §102(b), the party must show that the invention was “the subject of a commercial offer for sale not primarily for purposes of experimentation”).

128 *Id.*

129 *See, e.g., Madey*, 307 F.2d at 1361.
Notably, in *Hamilton Beach*, the Federal Circuit reaffirmed the principle that “a commercial offer for sale under §102(b) is ‘one which the other party could make into a binding contract by simple acceptance.’” In *Hamilton Beach*, an offer made by a third party activated the on-sale bar. Although Hamilton Beach had initiated contact with its supplier, it had not sent the message constituting the invalidating offer for sale. As a consequence of the *Hamilton Beach* holding, future inventors may be deterred from attempting to contact suppliers at any point before they file patents for fear of those third parties taking actions that trigger the §102(b) “clock” prematurely.

Such results may discourage inventors from interacting with third parties while in the experimental phase of developing an invention. For smaller entities and individual inventors, this will significantly impede the process of testing potential products and, as a result, could delay the ultimate disclosure of inventions via patent applications. Going forward, this result will indeed have adversely affect the policy goal behind §102(b) of accelerating the public’s access to new inventions.

Some attorneys have suggested that the consequences of improperly relying on a grace period to preserve the right to subsequently pursue a patent can present significant problems for

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130 *Hamilton Beach*, 2013 WL 4081872 at *6 (emphasis added) (quoting Grp. One, Ltd. V. Hallmark Cards, Inc., 254 F.3d 1041, 1048 (Fed. Cir. 2001)).
131 *Id.* ("Hamilton Beach’s supplier responded prior to the critical date that it was ready to fulfill the order. In other words, the supplier made an offer to sell the slow cookers to Hamilton Beach.") (emphasis in original).
132 *Id.*
133 See generally *Hamilton Beach*, 2013 WL 4081872 at *10 (Reyna, dissenting).
135 See generally *Pennock* v. *Dialogue*, 27 U.S. 1, 2 (1829) (suggesting that, when inventors withhold their inventions, the policy goals underlying §102 are obstructed).
inventors if not addressed by an appropriately timed patent filing. These risks illustrate the danger of uncertainty in patent rights protection. To alleviate these risks, the Supreme Court in *Pfaff* sought to clarify the definition of experimental use to provide inventors with a more definite standard for determining when they need to file patents. Another reason that the Supreme Court decided to implement the two-prong test was to provide the inventor greater control over the initial act that would trigger the statutory bar. As a result, the *Pfaff* Court rejected the “totality of the circumstances” test, which presented a myriad of factors subject to interpretation, in favor of a more straightforward two-pronged test.

The Federal Circuit in *Hamilton Beach* ultimately applied the “no-supplier-exception” rule it had previously articulated without analyzing whether the purpose of the offer was experimental. The *Hamilton Beach* majority may have felt that broad application of the “no-supplier-exception” rule would advance Congress’s goals by simplifying the inquiry into whether an offer for sale had occurred. However, this approach will likely prompt future courts to improperly concentrate entirely on whether any offer for sale occurred rather than considering why such an offer was made. Moreover, as noted above, this case illustrated that a supplier can trigger the on-sale bar suddenly and without the inventor’s express permission.

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138 *Pfaff*, 525 U.S. at 65 ("Petitioner correctly argues that these provisions identify an interest in providing inventors with a definite standard for determining when a patent application must be filed.").
139 Id. at 67 ("An inventor can both understand and control the timing of the first commercial marketing of his invention.").
140 Id. at 66-67 (rejecting the “totality of the circumstances” test for, among other reasons, being “vague”).
141 *Hamilton Beach*, 2013 WL 4081872 at *6.
143 See *Hamilton Beach*, supra note 80 at *6.
future, inventors may face decreased certainty regarding the validity of their patents when they undergo prototyping efforts involving external entities during the developmental process.\textsuperscript{144}

The proceeding section outlines the practical effects of the Hamilton Beach decision, particularly with regard to future infringement suits.

C. Adverse Practical Implications

In the Hamilton Beach dissent, Judge Reyna expressed his concern regarding the effect of this case on the future applicability of the experimental use negation.\textsuperscript{145} Judge Reyna noted that “small enterprises and individual inventors who lack in-house prototyping and fabricating capabilities” may face tremendous difficulties in defending their patents as the typical product development cycle, since such entities almost invariably require third-party suppliers to create prototypes and samples for experimental use.\textsuperscript{146}

Both large firms and small firms threatened by the possibility that their patents could be held invalid as a result of a manufacturer’s offer for sale might take actions that ultimately weigh against the stated policy goals underlying the bar.\textsuperscript{147} One such action would be to keep the invention as a trade secret rather than applying for a patent, thereby depriving the public of knowledge that could in turn spark further innovation.\textsuperscript{148} Alternatively, an inventor may file a patent application before the product is fully perfected to avoid any potential questions of...

\textsuperscript{144} See, e.g., Irha H. Donner, Federal Circuit: No “Supplier Exception” to On-Sale Bar, Strock Special Bulletin 1, 6-7 (2013) (“The majority opinion [of Hamilton Beach] creates significant uncertainty going forward regarding whether prototyping agreements will trigger the one-year period under the on-sale bar.”) (alteration to original).

\textsuperscript{145} Hamilton Beach Brands, Inc. v. Sunbeam Products, Inc., 2013 WL 4081872 at *10 (Fed. Cir. Aug. 14, 2013) (Reyna, dissenting) (“Under the majority’s holding in this case, a single offer to buy for purely experimental purposes may trigger the on-sale bar, and the experimental-use exception will offer them no salvation.”).

\textsuperscript{146} Id. (Reyna, dissenting)

\textsuperscript{147} The U.S. Department of Commerce has classified “small” businesses as businesses employing less than five hundred employees. 157 Cong. Rec. H4427 (2011).

\textsuperscript{148} See Isabelle R. McAndrews, The On-Sale Bar After Pfaff v. Wells Electronics: Toward a Bright-Line Rule, 81 J. Pat. & Trademark Off. Soc’y 155, 164 (1999) (stating that some inventors “will choose to maintain their inventions as trade secrets given the uncertainty as to whether patents issuing on the inventions will withstand attack”).
invalidation. However, premature filings merely waste the resources of both inventors and the patent office while contributing relatively little public benefit.

As of 2008, the U.S. Small Business Administration estimated that “small” firms represented roughly forty percent of companies with fifteen or more patents in the United States. Significantly, the authors of that report suggested that small firms represented roughly twenty-four percent of U.S. patents in emerging technological fields. Combined, these findings illustrate the significant impact of small entities in the United States technology-based economy and, moreover, the importance of smaller companies for developing products in the most advanced fields of modern technology.

Recently, the number of infringement suits brought by firms that own patents but do not practice the inventions covered by those patents has increased significantly. Such firms, also known as patent assertion entities (“PAEs” or “patent trolls”), have stifled innovation and economic growth. Although PAEs extract settlements from large entities, PAEs typically target smaller companies in the majority of their suits. The United States President’s Council of Economic Advisors, the National Economic Council, and the Office of Science & Technology Policy have recognized the substantial negative effects of PAE practices on innovation in the United States.

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149 See UMC Electronics, 816 F.2d at 660 (Smith, J., dissenting) (criticizing a holding that an invention was sufficiently complete at the time of sale as encouraging premature filing of patent applications).
150 Id.
152 Id. at 23 (“Small firms account for 24.5 percent of the 868 patents in this select set of the top 100 emerging clusters. In other words, small firms have more than three times as many patents in the emerging clusters as they would be expected to have . . . .”).
153 The President’s Council of Economic Advisers, the National Economic Council, and the Office of Science & Technology Policy, Patent Assertion and U.S. Innovation 1, 2 (June 2013) (stating that some of these firms, commonly known as patent assertion entities (PAEs) or “patent trolls,” concentrate their business model around aggressively pursuing infringement claims).
154 Id.
155 Id. at 10.
United States. These organizations have noted that changes in law resulting in uncertainty about patent infringement play a significant role in infringement claims by PAEs. These groups have also stated that providing clearer patent rules would heavily mitigate PAE claims. The result in Hamilton Beach, by contrast, has increased ambiguity surrounding offers for sale. Rather than discouraging PAEs, the Hamilton Beach holding has provided more opportunities to invalidate existing patents.

As the USPTO has indicated, the percentage of utility patents issued to small entities decreased by a substantial margin between 1995 and 2011. This trend may actually understate the decline in the share of patents held by smaller companies, since the USPTO considers non-profit entities such as universities to be small entities. As mentioned above, smaller entities contribute substantially to developing fields of technology. Thus, this decline may represent a hindrance to ongoing developments in emerging fields.

The Hamilton Beach holding has already prompted courts to find that an offer for sale pursuant to §102(b) had been made when a supplier submitted a proposal to manufacture an invention for the inventor. For example, in Orbis Corp. v. Rehrig Pacific Co., the court applied Hamilton Beach to conclude that a commercial offer for sale had occurred based on a supplier’s offer to produce several units of the invention. The Orbis Corp. court had correctly considered the need to address both prongs of the Pfaff test. However, like the analysis in Hamilton

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156 Id. at 12.
157 Id. at 13.
158 Id.
159 Donner, supra note 144, at 6-7.
161 Id.
162 See An Analysis of Small Business Patents by Industry and Firm Size, supra note 151.
163 Orbis Corp., 2013 BL 240714 at *7.
164 Id. at *4.
Beach, that court’s analysis did not explicitly contemplate whether the order was experimental in nature.165

In addition to arguing that the decision in Hamilton Beach was incorrectly decided, this note outlines a potential course of action that Congress could take to correct the holding. In particular, this note proposes a five-factor test for determining whether activity is experimental for purposes of §102(b).

PART III: ANALYSIS

Some lawyers have suggested that the issues raised by this ruling can be avoided entirely by simply filing for patent upon sending any production order.166 However, companies filing patents earlier in the development process may face additional challenges. Filing a non-provisional patent application typically costs between $10,000 and $20,000.167 Small firms are less likely than their larger counterparts to be able to afford these expenses for every potential patent.168 Moreover, larger companies are capable of delegating fabrication and experimentation tasks without initiating the on-sale bar, even if such delegation requires reallocation of funds.169 A small inventor who delegates the same fabrication task to a third party will face invalidation due to that delegation unless he or she files for a patent swiftly thereafter.170 This situation inequitably favors larger corporations.

165 Id. at *7 (citing Hamilton Beach Brand, Inc. v. Sunbeam Products, Inc., 2013 WL 4081872 at n.2 (Fed. Cir. Aug. 14, 2013)).
170 See Lindholm, infra note 174, at 239.
The issues presented by *Hamilton Beach* could be addressed by Congress. Even if Congress does not address pre-AIA law, it could still submit a “Technical Corrections” bill including provisions aimed at clarifying the on-sale statutory bar in the context of the Leahy-Smith America Invents Act.\(^\text{171}\) The issue with this solution, however, would be in deciding how to appropriately address the issue. Congress could simply note that the no-supplier exception is not solely dispositive in contrast to the holding of *Hamilton Beach*.\(^\text{172}\) However, courts may still have difficulty determining applying the *Pfaff* test in ambiguous situations.

Alternatively, Congress could alter the *Pfaff* test such that courts apply the test to the time at which the product is delivered rather than when the offer is made.\(^\text{173}\) This solution would prevent third parties from unilaterally initiating the on-sale bar, but would not clarify whether the sale itself was experimental on the date of delivery. A better solution would both address the need for the experimental use doctrine as well as further define the term “experimental” in the context of the on-sale bar. To implement such a solution, Congress should clarify that, although there is no exception for offers for sale made by suppliers, every offer is subject to the experimental use doctrine analysis regardless of whether the patent owner explicitly raises experimental use in court.\(^\text{174}\)

Next, Congress should clarify the definition of “commercial” in the context of §102(b).

When establishing the first prong of the *Pfaff* test regarding “commercial” offers for sale, the

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\(^{171}\) Congress previously approved a similar bill that focused on other provisions of the AIA in January 2013. See TECHNICAL CORRECTIONS—LEAHY SMITH AMERICA INVENTS ACT, PL 112-274, January 14, 2013, 126 Stat 2456.

\(^{172}\) *Hamilton Beach*, 726 F.3d at 1375.

\(^{173}\) See Stephen Bruce Lindholm, *Revisiting Pfaff and the on-Sale Bar*, 15 Alb. L.J. Sci. & Tech. 213, 216 (2004) (“Perhaps inventors and the public would be better served by amending the statute of the on-sale bar to address only the most egregious abuses of the patent monopoly, where an inventor files for a patent after the invention has been built and delivered.”).

\(^{174}\) The Federal Circuit expressly noted situations where simple orders to suppliers could constitute direct preparation for commercial exploitation, such as where a company proceeds to “stockpile” its invention in anticipation of patent filing, in support of the “no-supplier exception” rule. *Special Devices*, 270 F.3d at 1356.
Supreme Court may have, in part, decided to utilize contractual principles in the context of patent cases to allow courts to draw upon the wealth of case law associated with the field of contracts law. However, the contracts analogy does not provide sufficient explanation of all concepts in existing patent law. Particularly, the concept of experimental use is a unique feature of patent law that is not addressed in the Uniform Commercial Code or in the Restatement of Contracts.

In *Pfaff*, the Supreme Court suggested that a determination of whether activity is experimental is not accompanied by significant uncertainty. However, courts have applied a variety of factors in determining whether activity is experimental in nature. As an example, the court in *Hamilton Beach* applied a new factor, order size, to establish that the experimental use doctrine would not have redeemed Hamilton Beach Brands' patent. This same kind of inconsistency in application originally led the Supreme Court to reject the “totality of the circumstances” test with respect to the on-sale bar. Similarly, application of these factors has been sufficiently inconsistent to warrant a more firm definition of the term “experimental.”

A suitable definition of “experimental” would need to provide a more rigid standard that retains enough flexibility to accommodate the variety of situations that may accompany invalidating activity. Thus, a factor-based test would likely be the most appropriate solution. To minimize difficulty balancing the factors, the new test should attempt to reduce the number of factors to a more manageable number than those mentioned in *EZ Dock v. Schafer Systems*.

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176 *Pfaff*, 525 U.S. at 67 (“The experimental use doctrine, for example, has not generated concerns about indefiniteness . . .”).
177 See *EZ Dock*, 276 F.3d at 1357.
178 See *Hamilton Beach*, 2013 WL 4081872 at n.2.
179 See *Pfaff*, 525 U.S. at 68-69.
180 The court in *EZ Dock* explicitly mentions thirteen factors that have previously been considered in determining whether activity is experimental in nature. See *EZ Dock*, 276 F.3d at 1357.
This note’s proposed five-factor test would include the following factors for determining whether an activity is experimental in nature: (1) whether analyzing suitability of the invention reasonably requires evaluation under actual conditions of use; (2) the degree of control over the invention retained by the inventor during and after the activity; (3) whether there was a secrecy obligation; (4) whether records of the experiment were kept; and (5) the amount of profit or degree of competitive advantage derived by the inventor unrelated to inventive improvements. Notably, factors such as “whether payment was made” are excluded from this proposed test. In particular, that factor was not chosen because consideration of whether someone effectively bought either the product itself or testing results may inadvertently connote that a sale cannot qualify for the experimental use negation.

The final proposed factor is designed to maintain two arguably conflicting goals. First, the phrase “profit . . . derived by the inventor” is used rather than “commercial exploitation” to clarify the difference between gross income and profit. This distinction specifically permits inventors to sell their inventions during experimentation to cover costs of development. Second, the phrase “degree of competitive advantage derived by the inventor unrelated to inventive improvements” addresses the potential issue of inventors stockpiling physical embodiments of the invention by expressly contemplating whether the inventor has gained some substantial commercial benefit that will not ultimately provide a better invention to the public.

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181 The first four factors were included, either as presented here or as separate factors included here as an amalgamation, in *EZ Dock*. See *EZ Dock*, 276 F.3d at 1357.
182 In other words, the other factors from *EZ Dock* were excluded for inapplicability or to maintain feasibility of the analysis. See *EZ Dock*, 276 F.3d at 1357.
183 This connotation starkly contrasts with existing case law. See, e.g., *Smith & Griggs*, 123 U.S. at 256.
184 “The degree of commercial exploitation during testing” is one of the factors mentioned in *EZ Dock*. See *EZ Dock*, 276 F.3d at 1357.
185 As the court in *Special Devices* noted, there is a concern that inventors could unjustly exploit the patent system if allowed to amass a large number of products before the §102(b) “clock” begins running. See *Special Devices*, 270 F.3d at 1357.
CONCLUSION

The holding in *Hamilton Beach* has laid a foundation for invalidating patents based on activities that may well have been reasonably necessary to perfect inventions. In contrast to prior case law, this case does not involve analysis of the experimental use doctrine. Ideally, the solution for inventors concerned about having their patents invalidated as a result of interactions with suppliers would be simple: inventors, particularly those incapable of producing prototypes in-house, should file provisional patents before beginning negotiations to have products developed by third parties. However, that solution presents significant practical issues, as those inventors lose precious time from the exclusive use period guaranteed by their patents while their inventions are still undergoing development, and the public benefit that arises from filing of inadequate patent applications is severely diminished.

The outcome in *Hamilton Beach* may inadvertently conflict with the Supreme Court’s stated interest in providing inventors with a definite time to file a patent by introducing uncertainties regarding the commercial nature of prototyping and other experimental efforts. Consequently, this case presents an excellent opportunity to resolve disparities in application of the experimental use doctrine. The Federal Circuit should address the commerciality portion of the first prong of the *Pfaff* test. Congress should define the term “commercial” within the context of §102(b) in a manner that specifically notes that the experimental use doctrine is not an affirmative defense. Additionally, Congress should articulate this note’s proposed five factor standard for determining whether activity is experimental in nature.

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186 See generally *Orbis Corp.*, 2013 BL 240714 at *7.
187 *Hamilton Beach*, 2013 WL 4081872 at n.3 (Reyna, dissenting).
188 See Sprow, supra note 166.
189 *UMC Electronics*, 816 F.2d at 660 (Smith, J., dissenting).
190 See *Pfaff*, 525 U.S. at 68-69.