# In the Supreme Court of the United States

MINERVA SURGICAL, INC., PETITIONER

v.

HOLOGIC, INC., ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

#### BRIEF FOR LEADING TECHNOLOGY COMPOSITES, INC. AND CLARKWESTERN DIETRICH BUILDING SYSTEMS LLC AS AMICI CURIAE IN SUPPORT OF RESPONDENTS

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# TABLE OF CONTENTS

# Page

Ta	ble o	f Au	athoritiesI	Π				
Int	Interest of Amici Curiae1							
Summary of Argument4								
Argument								
I.	Minerva Misunderstands Estoppel By Deed And Its Relationship To Estoppel Generally							
	A. Minerva Misdescribes Estoppel By Deed							
		1.	Estoppel By Deed Is Not Limited To After-Acquired Title	.8				
		2.	Estoppel By Deed Does Not Require Reliance	.9				
	В.		signor Estoppel Aligns Patent Law th Law Generally1	10				
II.	Ass	signo	or Estoppel Fosters Innovation1	1				
	A.	By Preventing Assignor Opportunism, Assignor Estoppel Promotes The Disclosure Of Information						
		1.	Left Unaddressed, Information Asymmetries Lead To Assignor Opportunism1	1				
		2.	Assignor Estoppel Prevents Assignor Opportunism1	12				

Ι

# Π

	<ol> <li>Minerva's Proposed Solution Fails To Adequately Address Assignor Opportunism</li></ol>				
B.	Preventing Assignor Opportunism Increases The Value Of Good Patents To Both Assignors And Assignees Ex Ante				
C.	By Discouraging Assignor Opportunism, Assignor Estoppel Improves Patent Quality, Which Benefits The Patent System As A Whole				
D.	By Improving Patent Reliability, Assignor Estoppel Aids American Innovation And Competitiveness24				
III. Assignor Estoppel Is Not Analogous To Noncompete Agreements					
Conclus	sion				

Cases: Page(s)
California Expanded Metal Prods. Co. v. Klein, No. C18-0659, 2018 WL 6249793 (W.D. Wash. Nov. 29, 2018)3
California Expanded Metal Prods. Co. v. Klein, No. CV 16-05968, 2017 WL 870734 (C.D. Cal. March 3, 2017)
Diamond Sci. Co. v. Ambico, Inc., 848 F.2d 1220 (Fed. Cir. 1988)12, 13, 14
Dominex, Inc. v. Key, 456 So. 2d 1047 (Ala. 1984)
Harlow v. Fitzgerald, 457 U.S. 800 (1982)16
Leading Tech. Composites, Inc. v. MV2, LLC, No. CCB-19-1256, 2020 WL 790601 (D. Md. Feb. 18, 2020)1
Lear, Inc. v. Adkins, 395 U.S. 653 (1969)12
Mentor Graphics Corp. v. Quickturn Design Sys., Inc., 150 F.3d 1374 (Fed. Cir. 1998)17
Scott Paper Co. v. Marcalus Mfg. Co., 326 U.S. 249 (1945)
Seal4Safti, Inc. v. California Expanded Metal Prods. Co., No. 2:20-cv-10409 (C.D. Cal.)
Shedden v. Anadarko E. & P. Co., 136 A.3d 485 (Pa. 2016)9
Westinghouse Elec. & Mfg. Co. v. Formica Insulation Co., 266 U.S. 342 (1924)7, 26

Page(s)				
Constitutional Provisions, Statutes, and				
Regulations:				
U.S. Const. art. I, § 8, cl. 8				
35 U.S.C. § 115(b)(2)15-16				
37 C.F.R. § 1.5616				
<u>Miscellaneous</u> :				
George A. Akerlof, <i>The Market for "Lemons":</i> <i>Quality Uncertainty and the Market</i> <i>Mechanism</i> , 84 Q.J. Econ. 488 (1970)23, 24				
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Melville M. Bigelow, A Treatise on the Law of Estoppel and Its Application in Practice (1872)10				
Colleen Chien, <i>Startups and Patent Trolls</i> , 17 Stan. Tech. L. Rev. 461 (2014)20				
31 C.J.S. Estoppel and Waiver § 9 (2008)7, 8				
Edward Coke, <i>The First Part of the Institutes of</i> <i>the Law of England</i> § 667 (Francis Hargrave & Charles Butler eds., 19th ed. 1832) (1628)9				
Rochelle Cooper Dreyfuss, <i>Dethroning</i> Lear: <i>Licensee Estoppel and the Incentive to</i> <i>Innovate</i> , 72 Va. L. Rev. 677 (1986)14, 24, 25				
Wendy Netter Epstein, Contract Theory and the Failures of Public-Private Contracting, 34 Cardozo L. Rev. 2211 (2013)18				

IV

Page(s)
---------

Barbara H. Fried, <i>Ex Ante/Ex Post</i> , 13 J. Contemp. Legal Issues 123 (2003)18
<ul> <li>Amber L. Hatfield, Note, Life After Death for Assignor Estoppel: Per Se Application to Protect Incentives to Innovate, 68 Tex. L. Rev. 251 (1989)</li></ul>
Timothy R. Holbrook, <i>Patents, Presumptions,</i> and <i>Public Notice</i> , 86 Ind. L.J. 779 (2011)12
William Hubbard, Competitive Patent Law, 65 Fla. L. Rev. 341 (2013)24
Mark A. Lemley, <i>Ex Ante versus Ex Post</i> <i>Justifications for Intellectual Property</i> , 71 U. Chi. L. Rev. 129 (2004)18
John Raidt, <i>To Compete Globally, America Must</i> <i>Up Its Game</i> , U.S. Chamber of Com. Found. (Mar. 7, 2017), https://tinyurl.com/nu2wjvde24
Restatement (Third) of Agency § 2.05 (2006)10
Restatement (Second) of Conts. § 90 (1981)10
Restatement (Second) of Torts § 872 (1979)10
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The Report of the President's Commission on Industrial Competitiveness, <i>Global</i> <i>Competition: The New Reality</i> (1985)24
Royal Swedish Acad. Scis., <i>Popular Information</i> , Nobel Prize (2001),
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Davis L. Rev. 963 (2016)	12
Sean C. Sparrow, Comment, Buried Alive: The	
Existence of Assignee Estoppel in Patent Law,	
69 DePaul L. Rev. 195 (2019)	23
9 Thompson on Real Property § 82.11 (David A.	
Thomas ed., 3d ed. 2021)	8

#### Interest of Amici Curiae<sup>1</sup>

Leading Technology Composites, Inc. (LTC) was founded in 1993 in Wichita, Kansas with only three employees. Today, it has grown to over 400. One of its primary goals is to create products that protect people in harm's way, such as bullet-resistant composite materials. In 2011, three employees developed an improved armoring panel, for which LTC was awarded a patent in 2013. Afterwards, one of the employees (a named inventor) left LTC and ultimately started consulting for a competitor to help them make a competing product. That competitor, having benefited from LTC's employee's knowledge, then attempted to challenge the validity of LTC's patent in litigation. The United States District Court for the District of Maryland found in favor of LTC on summary judgment, preventing the defendant from challenging LTC's patent based on the assignor estoppel doctrine. See Leading Tech. Composites, Inc. v. MV2, LLC, No. CCB-19-1256, 2020 WL 790601 (D. Md. Feb. 18, 2020). Absent this doctrine, the former employee could have enjoyed the notoriety of being a named inventor, benefited from the patent filing, and received compensation from LTC—all while with LTC, when it benefited him; but then, after leaving, he (or his privy) could have attacked the validity of LTC's patent in the litigation to his and his client's benefit. This would not be equitable. LTC's patent helps establish LTC as an

<sup>&</sup>lt;sup>1</sup> Minerva has filed a blanket consent for the filing of this brief and respondent's email consent has been filed with the Clerk. No person other than the amicus and its counsel have authored any part of this brief or made any monetary contribution intended to fund its preparation or submission.

innovator and helps LTC provide for its employees. Competitors are free to improve on LTC's technology and even pursue patents of their own, even in the same technological field. But LTC should not have to defend against invalidity assertions from its own inventors or those in privity with them. Thus, LTC is interested in the outcome of this case, and in preserving the assignor estoppel doctrine. As of the filing of this brief, LTC's case is still pending in the District Court.

Clarkwestern Dietrich Building Systems LLC d/b/a Building Systems LLC ClarkDietrich ("ClarkDietrich") offers a comprehensive lineup of products and services for both cold-formed steel framing and drywall/plastering finishing systems to the construction industry. As the demands for higher performance in all aspects of today's buildings rise, ClarkDietrich partners with teams of architects, engineers. building developers and owners. contractors, and more on projects of all sizes, scope, and complexity. ClarkDietrich has long been a leader in developing and promoting innovative products that provide improved product performance and building safety, many of which are protected by patents. One such line of products prevent smoke and fire from spreading from one side of a building wall to the other. ClarkDietrich originally licensed several patents ("Patents") covering this product line from an inventor, who later assigned the Patents to another company ("Licensor"). ClarkDietrich now licenses the Patents from Licensor. There has been litigation among the inventor and his various companies ("Inventor"), Licensor, and ClarkDietrich since 2015. Twice, since assigning all his rights in the Patents, Inventor has tried to sell similar products that are covered by the Patents, and twice Inventor has been precluded from attacking the validity of those Patents by the doctrine of assignor estoppel. California Expanded Metal Prods. Co. v. Klein, No. CV 16-05968, 2017 WL 870734 (C.D. Cal. March 3, 2017); California Expanded Metal Prods. Co. v. Klein, No. C18-0659, 2018 WL 6249793 (W.D. Wash. Nov. 29, 2018). Presently, Licensor, ClarkDietrich, Inventor, and third parties with whom the inventor is now working ("Third Parties") are involved in contempt proceedings in the Western District of Washington arising out of allegations that Inventor and Third Parties are violating the Washington court's permanent injunction. California Expanded Metal Prods. Co. v. Klein, No. CV 18-0659 (W.D. Wash.). As a defensive ploy, Third Parties have also filed suit in the Central District of California seeking among other things the invalidation of the Patents. Seal4Safti, Inc. v. California Expanded Metal Prods. Co., No. 2:20-cv-10409 (C.D. Cal.). Whether Third Parties are in privity with Inventor, and as a result are estopped from attacking the validity of the Patents under the doctrine of assignor estoppel, will again be at issue in at least the pending California matter. Thus, ClarkDietrich is interested in the outcome of this present case and in preserving the availability of the assignor estoppel doctrine. As of the filing of this brief, both the Washington and the California matters are still pending in their respective district courts.

#### **Summary of Argument**

Minerva's argument to abolish or restrict assignor estoppel rests on three key errors: it misunderstands (1) estoppel by deed—the property-law forebear of assignor estoppel; (2) how information asymmetries between assignors and assignees can lead to assignor opportunism; and (3) the reach of assignor estoppel.

I. Minerva confuses estoppel by deed with two separate doctrines. First, it mistakenly equates by estoppel deed with one of its particular instantiations: the doctrine of after-acquired title. Estoppel by deed bars anyone who conveys an interest in property from later impeaching that grant's validity, on any ground. The doctrine of after-acquired title, by contrast, bars someone who purported to convey an interest he did not own, but later acquired, from impeaching the original conveyance. Second, Minerva confuses estoppel by deed with equitable estoppel and argues that estoppel by deed requires Traditionally, reliance. it has not. Minerva's misunderstandings, in turn, lead it to claim that assignor estoppel is a foreign intrusion to patent law. In fact, the opposite is the case. Rejecting assignor estoppel, not preserving it, would make patent law anomalous.

II. Although Minerva asserts that assignor estoppel serves no patent-policy interests, it actually serves three central ones: it (1) reduces assignor opportunism, (2) makes both assignors and assignees better off ex ante, and (3) increases the overall reliability of the patent system.

estoppel First. assignor reduces assignor opportunism by minimizing incentives for assignors to withhold information on patent validity from assignees and the Patent and Trademark Office (PTO). Patent prosecution within the United States is rife with information asymmetries due to the special knowledge and skill of inventors and the PTO's insufficient funding and staffing. Such asymmetries contribute to bad patents slipping through the cracks. In a world without assignor estoppel, assignors would be incentivized to engage in opportunistic behavior. They could, for example, assign their rights in bad patents, benefit from those patents while employed by their employer, then later seek to invalidate those patents by using the undisclosed information they had special access to. Assignor estoppel counteracts this opportunism. By barring assignors from contesting the validity of their assigned and granted patents, assignor estoppel ensures that they will have less incentive to conceal information material to the patentability of the invention from the PTO or assignees. Assignor estoppel thus gives teeth to the inventor's oath and the duty of candor, increasing the integrity of the U.S. patent system.

Second, assignor estoppel makes both assignors and assignees better off ex ante by bolstering confidence in patent assignments. In a world with assignor estoppel, assignees value patents more highly because they can trust that the assignors have been forthright in disclosing relevant prior art. And assignors can bargain over some of that extra value. Assignor estoppel is especially important for start-ups and small firms, which, unlike large firms, cannot reduce invalidity risks by diversifying across broad patent portfolios.

Third, assignor estoppel improves overall patent reliability. By reducing the payout for assignor opportunism and encouraging assignors to disclose more information to the PTO and assignees, assignor estoppel results in fewer poor-quality patent applications and granted patents. Patents become more reliable and valuable, which in turn provides greater incentive to invest in patents and in commercializing assigned inventions. These benefits ultimately bolster the United States' global economic competitiveness.

III. Assignor estoppel does not, as Minerva argues, create an implied noncompete agreement. Inventors may continue to invent, innovate, and practice any trade or profession. They can make a proverbial better mousetrap, consistent with the Patent Clause's purpose of promoting the progress of science and useful arts. U.S. Const. art. I, § 8, cl. 8. Assignor estoppel here has not have stopped Truckai, the inventor in this case, from receiving any of his 160+U.S. patents.

#### Argument

#### I. Minerva Misunderstands Estoppel By Deed And Its Relationship To Estoppel Generally

As the parties agree, assignor estoppel arose from the property-law doctrine of estoppel by deed. See Pet. Br. 32; Resp. Br. 3; see also U.S. Br. 14. "The analogy between estoppel in conveyances of land and estoppel in assignments of a patent right," this Court noted nearly a century ago, "is clear." Westinghouse Elec. & Mfg. Co. v. Formica Insulation Co., 266 U.S. 342, 350 (1924). Just as estoppel by deed enjoys "universal recognition" in American jurisdictions, 31 C.J.S. Estoppel and Waiver § 9 (2021), assignor estoppel remains important to patent law.

Minerva's argument to the contrary rests on two key errors. First, Minerva confuses estoppel by deed with one of its particular forms: the doctrine of afteracquired title. See Pet. Br. 32-33 (citing fragments of American Jurisprudence and a comment to the Restatement (Third) of Property discussing afteracquired title). Estoppel by deed covers much else and its broader form justifies assignor estoppel. Second, estoppel by deed may apply even when the purchaser has not "reasonably relied" on anv seller "representations." Pet. Br. 34.

Minerva's misunderstanding leads it to get the big picture exactly backwards. Assignor estoppel was not "grafted \*\*\* onto the Patent Act" as if it were a foreign concept. Pet. Br. 32. Both assignor estoppel and estoppel by deed instantiate a deeper principle estoppel generally—that pervades the law in a variety of contexts. Abolishing assignor estoppel would not align patent law with other areas of law. In fact, quite the opposite: it would make patent law anomalous. Minerva offers no good reason why patent law alone should reject a principle that most other areas of law, particularly other areas of property law, embrace.

#### A. Minerva Misdescribes Estoppel By Deed

#### 1. Estoppel By Deed Is Not Limited To After-Acquired Title

Minerva believes estoppel by deed applies only when "a seller who lacks valid title executes a deed purporting to transfer the property, then later acquires valid title from the true owner." Pet. Br. 32. That is mistaken. Estoppel by deed is a broad "bar precluding one party to a deed, and those in privity with that party, from asserting against the other party, and those in privity with that party, any right or title in derogation of the deed." 9 Thompson on Real *Property* § 82.11 (David A. Thomas ed., 3d ed. 2021). What Minerva describes is not estopped by deed but "more precisely, the doctrine of after-acquired title, one form of estoppel by deed." Ibid.; see also Dominex, Inc. v. Kev, 456 So. 2d 1047, 1058 (Ala. 1984). Under that more limited doctrine, "[i]f a seller who lacks valid title executes a deed purporting to transfer the property, then later acquires valid title from the true owner, the seller cannot assert that later-acquired interest against the purchaser." Pet. Br. 32.

Estoppel by deed, however, operates more broadly and serves more interests than after-acquired title does, including "making certain formal documents final and conclusive evidence of their contents [and] compel[ling] parties to fulfill their contracts." See 31 C.J.S. *Estoppel and Waiver* § 9 (2008). Similarly, assignor estoppel in patent law promotes finality, honesty and fair dealing in commercial transactions, and mitigates opportunism by eliminating a perverse incentive to withhold disclosure of relevant prior art. See pp. 11-15, *infra*.

#### 2. Estoppel By Deed Does Not Require Reliance

Minerva errs in asserting that estopped by deed requires reliance. See, e.g., Pet. Br. 34. In doing so, it conflates estoppel by deed with equitable estoppel. But the former, unlike the latter, was traditionally a legal, not equitable, doctrine. See Edward Coke, The First Part of the Institutes of the Law of England § 667, at 352a (Francis Hargrave & Charles Butler eds., 19th ed. 1832) (1628) (distinguishing "estoppel in pails," which gave rise to equitable estoppel, from "estoppel by matter in writing," which included estoppel by deed). State courts attuned to that history maintain the distinction: "unlike the doctrine of equitable estoppel[,] the doctrine of estoppel by deed does not require detrimental reliance." Shedden v. Anadarko E. & P. Co., 136 A.3d 485, 492 (Pa. 2016). "Estoppel by deed (and, by analogy, assignor estoppel) differs from equitable estoppel in that it emphasizes a formal written instrument rather than a party's conduct, and thus does not require 'showing a change in position of the party asserting the estoppel." U.S. Br. 14 n.2 (quoting 3 American Law of Property: A Treatise on the Law of Property in the United States § 15.18, at 841 (A. James Casner ed., 1952)).

But even if estoppel by deed required reliance, it would make no difference here. Hologic did, after all, rely on the patent rights as part of its purchase of NovaCept for \$140 million. Br. in Opp. 4.

#### B. Assignor Estoppel Aligns Patent Law With Law Generally

Given Minerva's misunderstanding of estoppel by deed, it is no surprise that it misunderstands that doctrine's relationship to estoppel generally. Assignor estoppel is not a judicial creation "grafted \* \* \* onto the Patent Act in the late 1880s." Pet. Br. 32. Both it and estoppel by deed are merely two instantiations of estoppel generally, which has played a central role in Anglo-American law for centuries. As early as the 1800s, the doctrine of estoppel was recognized as "one of the most important, useful, and just agencies of the law." Melville M. Bigelow, A Treatise on the Law of Estoppel and Its Application in Practice xl-xli (1872).

Contract, tort, and agency law, for example, all recognize the central importance of estoppel. See (Second) of Conts. **§**90 Restatement (1981): Restatement (Second) of Torts §§ 872, 894 (1979); Restatement (Third) of Agency § 2.05 (2006). And each recognizes the relationship between its own form and other forms of estoppel. See Restatement (Second) of Conts. § 90 cmt. a (1981); Restatement (Second) of Torts § 894 cmt. a (1979); Restatement (Third) of Agency § 2.05 rep.'s note c (2006). Indeed, even nineteenth-century commentators saw that the various types of estoppel "are merely detached parts of one and the same general rule." Bigelow 35. Estoppel operates broadly throughout contract, tort, and agency law to "preclude parties, and those in privity with them, from unsettling a matter which they have, in solemn form, admitted and adopted." Id. at xli.

Given the prominent role of estoppel across law, abolishing assignor estoppel would make patent law an unjustified anomaly.

#### **II. Assignor Estoppel Fosters Innovation**

Minerva errs in claiming that "assignor estoppel \*\*\* never serve[s] the policies of patent law" and "offers no patent policy benefits." Pet. Br. 15 (emphasis added). On the contrary, assignor estoppel serves important patent interests in three key ways. First, it reduces assignor opportunism by minimizing the incentives assignors have to withhold from assignees and the PTO harmful information bearing on patent validity. Second, it makes both assignors and assignees better off ex ante. When assignors know that they will be unable to challenge patents they assign, the patents themselves become more reliable protections of investment and thus more valuable. Third, by reducing assignor opportunism, assignor estoppel leads to fewer poor patent applications and issued patents, thus increasing the reliability of the patent system overall.

A. By Preventing Assignor Opportunism, Assignor Estoppel Promotes The Disclosure Of Information

#### 1. Left Unaddressed, Information Asymmetries Lead To Assignor Opportunism

Sometimes, inventors might know about material information, such as prior art, that would be hard for the PTO to find. Absent assignor estoppel, assignors would be incentivized to opportunistically exploit these information asymmetries. Full disclosure of harmful information can only reduce the chances of getting a patent, Timothy R. Holbrook, *Patents*, *Presumptions, and Public Notice*, 86 Ind. L.J. 779, 804 (2011), and lower the invention's value in the eyes of a potential assignee. By contrast, with assignor estoppel, inventors and assignors with superior information bearing on validity will be inclined to disclose all information that would be material to the patentability of an invention, rather than keep secret an "ace in the hole" to later exploit if they want to challenge the validity of the patent.

These information asymmetries "inevitably allow[some] bad patents to slip through the cracks," Seymore, 49 U.C. Davis L. Rev. 963, 991-992 (2016). Further, without assignor estoppel, they would permit assignors to "receive[] the bargained-for consideration for the assignment" but then "seek[] to impeach the invention (by challenging the validity of the patent) in order to use the subject matter for [their] own gain." *Diamond Sci. Co.* v. *Ambico, Inc.*, 848 F.2d 1220, 1227 (Fed. Cir. 1988) (Newman, J., concurring).

#### 2. Assignor Estoppel Prevents Assignor Opportunism

Assignor estoppel prevents assignor opportunism by eliminating its payoff, thus leading assignors to disclose information that they—but not potential assignees—possess.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> This critical feature of assignor estoppel distinguishes it from licensee estoppel, which this Court abolished in *Lear*, *Inc.* v. *Adkins*, 395 U.S. 653 (1969). Unlike assignors, licensees typically do not possess private information that would undercut a patent's

Consider the common case of inventors who are contractually bound to assign patents in inventions to their employer. The employer has provided these inventors with resources to create the invention and has begun "develop[ing] and commercializ[ing]" the invention, the costs of which "can dwarf the cost of making the invention itself." Diamond Sci., 848 F.2d at 1227 (Newman, J., concurring). The employer has also patented the invention, paid the employees their salary, and perhaps even additionally rewarded them through a bonus or raise in salary. Now suppose that the inventors have reason to believe that the patent would be held invalid if later challenged. They decide to leave their employer, start their own company, or are hired by a new employer to whom they disclose the information bearing on validity. Later, when their new employer is threatened with an infringement action on a product covered by the original patent, they help the new employer challenge the patent's validity.

Assignor estoppel prevents this opportunism. Allowing employee-inventors "to 'bite the hand that feeds them' by challenging the patent" later is certainly "inefficient." Amber L. Hatfield, Note, *Life After Death for Assignor Estoppel: Per Se Application* to Protect Incentives to Innovate, 68 Tex. L. Rev. 251, 273 (1989). Without assignor estoppel, employeeassignors could take advantage of "their [employers'] research and development investments, enter into

validity. If they did, they would not seek the license or would pay less for it. And they have no incentive to behave opportunistically. Hiding any such information from the patent's owner (or the public) would only increase licensees' exposure to claims of infringement or raise the price of a license.

competition with them, and drive their discoveries' selling prices below the level at which the [ir employers] can recapture their investments." Rochelle Cooper Dreyfuss, Dethroning Lear: Licensee Estoppel and the Incentive to Innovate, 72 Va. L. Rev. 677, 680 (1986). This discourages the initial employer from investing in research and development and, overall, decreases innovation. Assignor estoppel, however, short-circuits this opportunism by preventing validity challenges from the original employee-assignor. It thus encourages employees who nonetheless might want to leave their employer to disclose potentially invalidating information early. Assignor estoppel, in effect. encourages them to disclose relevant information early and have the patentability of the claims more fully evaluated by the PTO before issuance, rather than in a later validity challenge.

Assignor estoppel is even more appropriate with respect to independent inventors, like Csaba Truckai. Absent assignor estoppel, See Pet. Br. 3-12. independent inventors can "receive[] the bargainedfor consideration for the assignment" but still "impeach the invention (by challenging the validity of the patent) [and] use the subject matter for [their] own gain." Diamond Sci., 848 F.2d at 1227 (Newman, J., concurring). Permitting such challenges would encourage inventors to undermine the investments of the assignee and commercially exploit inventions whose patent rights they had previously assigned. See Drevfuss, 72 Va. L. Rev. at 679-680; Hatfield, 68 Tex. L. Rev. at 273. And this is *exactly* what happened in this case: Truckai prosecuted a claim that he believed was not limited to moisture-permeable applicator heads, J.A. 451, for which the PTO granted a patent. Pet. App. 5a. But, after Hologic received a continuation patent for a similar claim, J.A. 802, 833, Truckai changed his tune completely, claiming at trial that he doubted the original patent's validity, J.A. 451. This was after Truckai had been paid \$8 million for the original assignment. J.A. 391-392.

Assignor estoppel prevents exactly this type of opportunism. It also prevents other types, like when inventors develop a separate invention that their employer would reasonably believe a patent it is considering prosecuting on an earlier invention of theirs would block. Without assignor estoppel, these inventors might shop around that second invention, promising to reveal information to the assignee's competitors that would invalidate any earlier patent. But, with assignor estoppel, the inventors cannot do so. Instead, they have no reason to conceal from their initial employer information that bears against the validity of the first patent or would support a patent on the second invention. As a result, that employer can avoid the wasted expense of prosecuting and commercializing an invalid patent and focus instead on developing the separate invention that the opportunistic inventors might, in the absence of assignor estoppel, have taken elsewhere.

#### 3. Minerva's Proposed Solution Fails To Adequately Address Assignor Opportunism

Assignor estoppel adds teeth to and complements two current mechanisms that help prevent assignor opportunism: (1) the inventor's oath, see 35 U.S.C.

§ 115(b)(2) (requiring an oath that the inventor "believes himself or herself to be the original inventor"), and (2) the inventor's duty of disclosure, see 37 C.F.R. § 1.56 (requiring "[e]ach individual associated with the filing" of a patent to disclose all "material" information known to that individual). Assignor estoppel bars an inventor who violates his oath and duty of disclosure from commercially exploiting those who were entitled to rely on both. And it similarly removes a powerful incentive for patent assignors to withhold "material information" from the PTO. Recognizing that existing mechanisms, absent assignor estoppel, would be compromised, Minerva proposes a solution: an "assignor can certainly expressly warrant that it presently knows of no reason why the patent would be invalid." Pet. Br. 35. If the assignor then breaches this warranty by later asserting invalidity "based on what [it] knew at the time of the assignment," it could be held liable "for fraud or breach of warranty," and the assignee "could seek damages." Pet. Br. 40.

This "remedy" is flawed in several respects. First, how is an assignee or a court to determine what the assignor knew when it assigned the patent? A speculative inquiry into past mental specifics presents a high bar to meaningful enforcement. Cf. *Harlow* v. *Fitzgerald*, 457 U.S. 800, 816 (1982) ("There are special costs to 'subjective' inquiries."). And the facts of this case back that up. Novacept, on whose board Truckai served, J.A. 611, specifically warranted that it "ha[d] no present knowledge from which it could reasonably conclude that [its patent rights] \* \* \* are invalid or unenforceable," J.A. 638. Despite this warranty, as well as Truckai's sworn statement to the PTO, he would later "change [his] mind" about the scope of his invention and assert the invalidity of Hologic's patent. J.A. 451. This illustrates both the risk of assignor opportunism absent assignor estoppel and the difficulties in determining exactly what assignors knew and when, as Minerva's subjective "remedy" would require.

Second, Minerva's proposal is simply a weaker version of two existing mechanisms that assignor estoppel helps enforce. Minerva does not explain how its warranty would provide any protection beyond the current inventor's oath and the duty of candor, see pp. 15-16, *supra*, both of which without assignor estoppel would not adequately incentivize disclosure of harmful information by the inventor.

Even if Minerva's warranty did operate to provide assignees adequate protection against assignor opportunism, it would do so at too great a cost. By abolishing assignor estoppel, Minerva is proposing a mandatory rule around which the parties cannot contract. See Cert. Reply Br. 9. Assignor estoppel, by contrast, represents a default rule around which parties may easily contract if they choose. See *Mentor* Graphics Corp. v. Quickturn Design Sys., Inc., 150 F.3d 1374, 1378 (Fed. Cir. 1998) (noting that parties can contract around assignor estoppel through either "an express reservation by the assignor of the right to challenge the validity of the patent or an express waiver by the assignee of the right to assert assignor estoppel"). As such, assignor estoppel provides the parties more flexibility. They can bargain for a noassignor-estoppel regime, maintain the default assignor-estoppel regime, or bargain for an alternative in between, like assignor estoppel under certain conditions.<sup>3</sup> Such bargaining can, moreover, promote the exchange of information. A would-be assignor who presses hard to contract around the default assignor estoppel rule discloses critical information about the assignor's intentions and the patent right's value that would otherwise be hidden from the assignee.

#### B. Preventing Assignor Opportunism Increases The Value Of Good Patents To Both Assignors And Assignees Ex Ante

Assignor estoppel increases the value of patents to both assignors and assignees ex ante. While the consequences associated with the assignment of bad patents are realized ex post (e.g., patent challenge and invalidation), this is not the perspective from which patent assignment should be viewed, as "the ex post costs ([or] benefits) of legal transitions" are simply "the payoff of an ex ante rational bet." Barbara H. Fried, Ex Ante/Ex Post, 13 J. Contemp. Legal Issues 123, 126 (2003); see also Mark A. Lemley, Ex Ante versus Ex Post Justifications for Intellectual Property, 71 U. Chi. 149 (2004) (describing ex post L. Rev. 129,justifications for intellectual property as "exactly backwards"). Without assignor estoppel, an assignee who worries that the assignor is withholding harmful information in order to later impeach the patent

<sup>&</sup>lt;sup>3</sup> "Efficiency theory, in general, supports the use of default rules, not mandatory rules." Wendy Netter Epstein, *Contract Theory and the Failures of Public-Private Contracting*, 34 Cardozo L. Rev. 2211, 2232 (2013). Indeed, "[i]f the parties are prevented from certain outcomes due to the existence of mandatory rules, the result generally will be less efficient." *Ibid*.

(thereby making any investments worthless) will pay less—possibly much less—for the patent ex ante. See U.S. Br. 25-26 (making a similar argument). Unless assignees undertake expensive and time-consuming investigations, information asymmetries will prevent them from distinguishing between assignors who have properly disclosed validity information and those who have not. Thus, absent assignor estoppel, the valuation of *all* patents is undermined. But, when an assignor cannot challenge the validity of an assigned patent, the assignee will fear less that any potential assignor is hiding information essential to judging the patent's value and reliability. This increased certainty in the invention's value will make investment in development and commercialization of the invention more secure, and thus the patent itself more valuable.

What works for the assignee, of course, works just as well for the assignor. By increasing the value of the patent to the assignee, assignor estoppel allows the assignor to benefit (e.g., by continued employment, or in some cases, by increased payment for an invention). There is simply more value in the exchange from which both parties benefit. Ex ante, then, assignor estoppel makes both assignors and assignees better off. Assignors receive just compensation for their patent rights and assignees receive stronger patents (should they issue).

This increased security is particularly important to startups and smaller firms. If they wish to assign the rights to their inventions to others who are better able to develop and commercialize them, startups will receive a higher price and can continue to pursue innovation, work for which they are perhaps better positioned. If they are thinking of investing in others' patents, on the other hand, they will similarly face less risk. Unlike larger firms, which can diversify validity risks across a broad portfolio of patents, small firms cannot. Since each assignment they purchase represents a larger percentage of their overall value, they cannot "self-insure" well against invalidity. Accordingly, the risk of invalidity will weigh more heavily on them and disproportionately discourage their investment. Since startups "are a vital source of innovation and new jobs," the way "patent demands impact [them] is critical." Colleen Chien, *Startups and Patent Trolls*, 17 Stan. Tech. L. Rev. 461, 464 (2014).

#### C. By Discouraging Assignor Opportunism, Assignor Estoppel Improves Patent Quality, Which Benefits The Patent System As A Whole

Minerva expresses concern that assignor estoppel "frustrate[s] innovative competition" and causes the "public [to] suffer the anticompetitive weight of \* \* \* invalid patent[s]." Pet. Br. 39-40. Assignor estoppel, however, operates to make patents *better* on average, not worse. By barring assignors of actual or potential patent rights from exploiting assignees, it reduces the value of bad patents to assignors and leads to fewer bad applications to the PTO.

Consider two types of inventors: an unscrupulous and an honest inventor. The unscrupulous inventor, aware of harmful information, believes he has little to lose other than the cost of prosecuting the patent (given the negligible risk of being prosecuted for violating the inventor's oath or getting caught breaching the duty of candor) and everything to gain from applying for a patent and withholding information that would undercut his application. If he gains a patent, he can sell the rights. Without assignor estoppel, he could then seek to invalidate the patent and market the invention, thereby reaping double benefits. The honest inventor, by contrast, would have disclosed all information bearing on validity, leading to a stronger patent, if one were granted. Abolishing assignor estoppel thus places the honest inventor counterintuitively—in a *worse* position than the unscrupulous inventor with a bad patent.

With assignor estoppel, however, the inventor with a bad patent is placed in the same position. He will know that he cannot later try to market the invention himself by impeaching the patent's validity. The only gain he can achieve, then, will be from the initial sale. Abolishing assignor estoppel would only increase the temptation for inventors to apply for a patent and withhold relevant information.

The employee-inventor faces similar incentives. Under a regime of assignor estoppel, the employeeinventor has little incentive to withhold harmful information from her employer. For example, if an employee-inventor withholds relevant information and causes her employer to lose money prosecuting and commercializing a patent later held invalid, she will have harmed the employer and perhaps placed her own position at risk if she stays there. Since, under assignor estoppel, the inventor cannot hope to gain personally by leaving for a new employer and impeaching the patent, she will be more likely to disclose information bearing on the invention's patentability to her employer up front. The employee and the employer, thus, have the same aims. Moreover, if she does hope to leave for another employer, she will disclose invalidating information early on to help ensure that only a proper patent issues, if one at all, thereby minimizing the likelihood of post-issuance invalidation. With assignor estoppel available, the employer and its patent attorneys should have access to all the relevant information possessed by the employee and can make better iudgments about а prospective invention's patentability when deciding whether to seek a patent. Having full access to the employee-inventor's harmful information will lead the employer to apply for fewer bad patents than it would otherwise.

Without assignor estoppel, by contrast, the (perhaps employee-inventor tempted is even incentivized) to withhold harmful information from the employer. By doing so, she could reap short-term rewards, like goodwill, professional publicity, or even a bonus or raise in salary. Then, later, she could leave for another employer and use the harmful information to challenge the patent. The initial employer, though, when deciding to apply for the patent, would not have known of this harmful information. It might therefore apply for a patent (which it otherwise would not), receive the patent, and invest in development and commercialization of the product, only to have its expectations unsettled when the inventor and the new employer challenge the validity of the patent.

The lack of assignor estoppel leads to more bad patent applications, which logically leads to more bad patents. When bad patents proliferate, extensive validity challenges can cause "[e]conomic uncertainty" that "deter[s] potential investors or patentees from entering into long-term research and development commitments." Sean C. Sparrow, Comment, Buried Alive: The Existence of Assignee Estoppel in Patent Law, 69 DePaul L. Rev. 195, 200 (2019). The end result is a "slippery slope" yielding "decreased investments in technology" as well as "spiraling economic decline." Ibid.

This represents a classic "Lemons Problem." See George A. Akerlof, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 84 Q.J. Econ. 488 (1970) (describing how, in markets where information asymmetries between buyers and sellers make buyer quality judgments uncertain, low-quality "lemons" will drive out good-quality products). But markets for "lemons," like those for low-quality patents, lead to disastrous results, especially when sellers have much room to operate opportunistically. In an article that won him the Nobel prize, see Royal Swedish Acad. Scis., *Popular Information*, Nobel Prize (2001), https://tinyurl.com/pex3x7ny (describing basis of Nobel Prize award), Akerlof describes how such markets unravel:

Consider a market in which goods are sold honestly or dishonestly; quality may be represented, or it may be misrepresented. The purchaser's problem, of course, is to identify quality. The presence of people in the market who are willing to offer inferior goods tends to drive the market out of existence—as in the case of our automobile "lemons." It is this possibility that represents the major costs of dishonesty—for dishonest dealings tend to drive honest dealings out of the market. There may be potential buyers of good quality products and there may be potential sellers of such products in the appropriate price range; however, the presence of people who wish to pawn bad wares as good wares tends to drive out the legitimate business. The cost of dishonesty, therefore, lies not only in the amount by which the purchaser is cheated; the cost also must include the loss incurred from driving legitimate business out of existence.

84 Q.J. Econ. at 495. In a modern twist on Gresham's Law, bad patents drive out good. See *Ibid*.

#### D. By Improving Patent Reliability, Assignor Estoppel Aids American Innovation And Competitiveness

Such a trajectory—*i.e.*, the proliferation of bad patents-would undermine the United States' patent system and harm its global economic competitiveness. Historically, estoppel doctrines have served as valuable tools for bolstering our nation's economic performance. See, e.g., Dreyfuss, 72 Va. L. Rev. at 677-678 (citing The Report of the President's Commission on Industrial Competitiveness, *Global Competition*: The New Reality 18, 21-22, 24-25, 52-53 (1985)); Hatfield, 68 Tex. L. Rev. at 251-253. These concerns remain salient today. The United States lags behind many other countries in innovation, investment in technology, education, number of patents issued, and more. See, e.g., William Hubbard, Competitive Patent Law, 65 Fla. L. Rev. 341, 342-345, 352-355 (2013); John Raidt, To Compete Globally, America Must Up Its *Game*, U.S. Chamber of Com. Found. (Mar. 7, 2017), https://tinyurl.com/nu2wjvde (discussing the United States' backsliding in "R&D spending as a percentage of GDP and in our tax treatment of R&D expenditures").

Preserving assignor estoppel counteracts this stagnation. By retaining assignor estoppel, this Court would mitigate the information asymmetries that produce bad patents, thus bolstering confidence in patent assignments and incentivizing assignees to commercialize assigned inventions. Assignor estoppel "promotes innovation by making the monopoly reward even more valuable," as it provides a form of "insurance" to assignees. Hatfield, 68 Tex. L. Rev. at 259. "[A]llowing assignors to reclaim what they have sold reduces investment incentives"; conversely, applying estoppel "increase[s] the worth of assignment agreements and correspondingly increase[s] the incentive to invest," thus "strik[ing] a balance between promoting free competition and encouraging innovation." Id. at 271. This, ultimately, "increase[s] investment in new technologies." Id. at 272.

It is worth noting, too, that assignor estoppel does not prevent parties other than the assignor and its privies from contesting validity. As this Court noted in *Scott Paper Co.* v. *Marcalus Manufacturing Co.*, only the "assignor can not be heard to question the right of his assignee to exclude him from its use." 326 U.S. 249, 252 (1945). Accordingly, if assignees or other rightsholders "price their goods significantly above their marginal costs or fail to meet consumer demand, competitors will enter the market, fill demand, and lower the price." Dreyfuss, 72 Va. L. Rev. at 697. The inability of assignors and their privies to lodge validity challenges will not matter if other players are incentivized to enter the market and can challenge validity themselves. Cf. *id.* at 704-705. Thus, "assignor estoppel is narrowly tailored," as "[i]t applies only to assignors and their privies, leaving 'the rest of the world' (including licensees) free to challenge the patent's validity." AIPLA Amicus Br. 9 (quoting *Westinghouse Elec. & Mfg. Co.* v. *Formica Insulation Co.*, 266 U.S. 342, 349 (1924)).

Assignor estoppel thus harmonizes patent doctrine and increases the value-generating potential of the patent system by providing a single, specific, and surgical protection to assignees.

#### III. Assignor Estoppel Is Not Analogous To Noncompete Agreements

Rather than acknowledging assignor estoppel's status as a long-standing, common-sense legal doctrine that merely instantiates in patent law a much broader and foundational legal principle, Minerva and its amici argue that the doctrine operates as an implied noncompete agreement and should be viewed as similarly suspect. Pet. Br. 40; IP Professors' Merits Amicus Br. 20-21; Engine Advocacy Merits Amicus Br. 17-18. Minerva goes further to claim, in fact, that assignor estoppel overrides many States' public policies against enforcing particular types of noncompete agreements. Pet. Br. 40. The aim of this analogy is clear: guilt by association. Minerva and its amici hope this Court will apply this particular and nonunanimous state policy to federal law and hold that assignor estoppel runs afoul of the requirements these States impose on noncompete agreements. *Ibid.*; IP Professors' Merits Amicus Br. 20-21; Engine Advocacy Merits Amicus Br. 16-18.

But the analogy fails. Assignor estoppel does not bar the assignor from practicing a trade or profession. Assignor estoppel does not prevent Truckai from inventing and marketing non-infringing medical devices. Truckai has become, in fact, a "prolific inventor who has developed multiple ground-breaking medical devices." Pet. Br. 3. He is a named inventor on over 160 issued U.S. patents and over 150 additional U.S. patent applications. J.A. 336. His own circumstances demonstrate that assignor estoppel places no unreasonable burden on assignor-inventors. All the doctrine does is stop Truckai from challenging the validity of a patent that he himself created and assigned. If Minerva asserts that obtaining a patent from a third party is tantamount to a noncompete agreement, then it must argue against the legitimacy of the entire U.S. patent system.

#### Conclusion

For the foregoing reasons, the judgment of the court of appeals should be affirmed.

Respectfully submitted,

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#### 28