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How Small Cannabis Businesses Can Survive the Hurdles of IP Protection

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COMMENT

HOW SMALL CANNABIS BUSINESSES CAN SURVIVE THE HURDLES OF IP PROTECTION

by: *Spencer Keller**

ABSTRACT

The current state of cannabis and intellectual property laws and regulations leaves small and emerging cannabis businesses at a distinct disadvantage compared to those in other industries. Those wishing to pursue cannabis inventions and patents face an uphill battle as cannabis research and development is nearly impossible to conduct legally. The difficulty in researching cannabis has pushed companies to move their research outside of the United States, leaving those growing businesses unable to corner their market in the cannabis industry. Complicating matters further are the overly broad patents that cannabis patentees are likely receiving as a result of market participants leaving innovations undocumented due to fear of being prosecuted for their involvement in the industry. Although the cannabis-patenting field is cloudy, businesses can utilize alternative strategies such as state and ancillary trademarks, trade secrets, and first-mover advantages to protect their information and grow their brands.

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I. INTRODUCTION

Humans have utilized cannabis in its various forms for thousands of years.¹ Whether it be the strong and durable fibers of hemp, the psychoactive effects of tetrahydrocannabinol (“THC”), or the presently popular compound Cannabidiol (“CBD”), humans have an extended history with cannabis.² Throughout the history of the United States, cannabis’s status—both legally and socially—has undergone intense fluctuations.³ From North America’s colonization until the turn of the 20th century, cannabis was widely grown for use in clothing and other cloth materials.⁴ In the late nineteenth century, Americans started using marijuana for both recreational and medicinal products.⁵ As the Great Depression hit the United States, public sentiment toward marijuana became increasingly negative, and the federal government eventually imposed strict penalties for marijuana use and possession.⁶ In the 1960s and early 1970s, marijuana would slowly be decriminalized, but this trend would flip in the other direction with President George H. W. Bush declaring a “War on Drugs” in 1989.⁷ At this point, cannabis products were illegal under federal law and under all fifty states’ laws.⁸ In 1996, California would pass the “Compassionate Use Act,” allowing doctors to recommend medicinal marijuana.⁹ The California medicinal-use law empowered other states to take a federalist approach to marijuana law, leading to the current cannabis renaissance, which is unlikely to end anytime soon.

As of February 2020, eleven states allow adult recreational marijuana use, and an additional twenty-two states allow for some form of

1. *Marijuana*, HISTORY.COM (Oct. 10, 2019), <https://www.history.com/topics/crime/history-of-marijuana> [https://perma.cc/TC8D-9ZFC].

2. *Id.*

3. *Marijuana Timeline*, PBS: FRONTLINE, <https://www.pbs.org/wgbh/pages/frontline/shows/dope/etc/cron.html> [https://perma.cc/6AEG-5T4C].

4. *Id.*

5. *Id.*

6. *Id.*

7. *Id.*

8. See Keith Speights, *Timeline for Marijuana Legalization in the United States: How the Dominoes Are Falling*, THE MOTLEY FOOL (Jan. 2, 2020), <https://www.fool.com/investing/timeline-for-marijuana-legalization-in-the-united.aspx> [https://perma.cc/A8JQ-4TR5].

9. CAL. HEALTH & SAFETY CODE § 11362.5 (West 1996).

medicinal use.¹⁰ Legalizing and decriminalizing cannabis has led to expansive business opportunities both directly (i.e., growing and processing fresh cannabis) and indirectly (i.e., using cannabis in already established industries) related to cannabis.¹¹ Albeit possessing a wide range of industrial use, cannabis laws and regulations vary greatly among the fifty states and the federal government. Cannabis is a quickly emerging industry in the United States.¹² In 2019, legal cannabis sales in the United States totaled \$13.6 billion.¹³ Legal sales are expected to increase by 32% annually, with total sales expected to reach nearly \$30 billion by 2025.¹⁴ The legal cannabis market's astounding growth has opened doors to potential business owners in areas once occupied by black-market participants. With cannabis undergoing an economic renaissance, those wishing to build a cannabis business and stake their intellectual property ("IP") claims must do so strategically.

Businesses across all realms of industry use IP protection options such as patents, trademarks, and trade secrets. However, the federal illegality of most cannabis products inhibits cannabis business owners and researchers from fully benefiting from certain IP options.¹⁵ This Comment will describe the IP obstacles those in the cannabis industry face and how industry participants can strategically utilize the IP options available to them. Part II explores current cannabis and patent laws in the United States and explains the possibility that cannabis patents are invalid. Next, Part III examines the pros and cons of cannabis patenting and how the United States Patent and Trademark Office ("USPTO") continues to grant overly broad cannabis patents due to the insufficient record of technological advances in what has been a black-market industry for decades. Part IV examines how cannabis businesses can dance around federal trademark regulations by using ancillary federal trademark registration, state trademark registration, and common law trademark rights to protect their brands. Part V discusses other strategic options cannabis businesses can utilize such as trade secrets and the first-mover advantage. Finally, Part VI will con-

10. Jeremy Berke, *Legal Marijuana Just Went on Sale in Illinois. Here Are All the States Where Cannabis Is Legal.*, BUS. INSIDER (Jan. 1, 2020, 1:41 PM), <https://www.businessinsider.com/legal-marijuana-states-2018-1> [<https://perma.cc/NR73-HLLT>].

11. See generally Mrinalini Krishna, *The Economic Benefits of Legalizing Weed*, INVESTOPEDIA (Dec. 11, 2019), <https://www.investopedia.com/articles/insights/110916/economic-benefits-legalizing-weed.asp> [<https://perma.cc/293Q-5SM6>].

12. Chris Hudock, *U.S. Legal Cannabis Market Growth*, NEW FRONTIER DATA (Sept. 8, 2019), <https://newfrontierdata.com/marijuana-insights/u-s-legal-cannabis-market-growth> [<https://perma.cc/482E-8NUL>] (showing that the cannabis industry grew from \$3.5 billion in 2014 to \$13.6 billion in 2019).

13. *Id.*

14. *Id.*

15. See generally Manuela Cabal Carmona, *Dude, Where's My Patent: Illegality, Morality, and the Patentability of Marijuana*, 51 VAL. U. L. REV. 651 (2017).

clude by recommending how the federal government can cure the IP hurdles that are unique to the cannabis industry.

II. CURRENT CANNABIS AND PATENT LEGAL SCHEMES

Cannabis and IP laws form a convoluted web of regulation that can be extremely difficult to navigate. Cannabis laws vary widely between states. Even if a state legalizes marijuana, that state and all of its marijuana industry participants still violate federal law.¹⁶ Further complicating matters are agency rules promulgated by the USPTO. Thus, patents, trademarks, and trade secrets all have different eligibility rules and criteria that directly affect the IP options available to cannabis businesses.¹⁷

Patents are a valuable form of intellectual property that offer businesses exclusive property rights over their inventions while also signaling to consumers and investors that their businesses are worth financially supporting.¹⁸ Albeit valuable, the U.S. patent system is extremely complex with several nuances that directly implicate the cannabis industry. This Part will lay a groundwork of relevant cannabis and patent laws and how they intertwine. Specifically, this Part will discuss the complex history and relationship between cannabis and patents.

A. *Relevant Cannabis Laws*

The issues regarding the intersection of cannabis and IP began with the federal illegality of most cannabis products. The Controlled Substances Act of 1970 (“CSA”) placed cannabis as a “Schedule I” substance, deeming it as having very little medicinal value and a high potential for abuse.¹⁹ The Schedule I status of cannabis created extensive hurdles for those attempting to research cannabis, and outright outlawed any production, transport, sale, and use of medicinal and recreational cannabis products.²⁰ Even though states are increasingly legalizing medicinal and adult cannabis use, the federal illegality still controls.²¹

In 2018, Congress passed the latest rendition of the Farm Bill,²² which legalized cannabis products containing less than 0.3% of THC,

16. See 21 U.S.C. § 812(d)(1).

17. See generally Carmona, *supra* note 15.

18. See generally Carolin Haeussler et al., *To Be Financed or Not . . . - The Role of Patents for Venture Capital-Financing* (Ctr. for European Econ. Rsch., Discussion Paper No. 09-003, 2012), <ftp://ftp.zew.de/pub/zew-docs/dp/dp09003.pdf> (last visited Oct. 11, 2020).

19. 21 U.S.C. § 812(d)(1).

20. *Id.* § 841(a).

21. See U.S. CONST. art. I, § 8, cl. 8; see also Berke, *supra* note 10.

22. *2018 Farm Bill*, U.S. SENATE COMM. ON AGRIC., NUTRITION, & FORESTRY, <https://www.agriculture.senate.gov/2018-farm-bill> [<https://perma.cc/86S6-FGQA>] (stating that the Farm Bill is renewed approximately every five years).

but only if the products were derived from hemp.²³ This allowed for the legal cultivation of hemp and subsequent extraction of CBD from hemp products.²⁴ But the Farm Bill only legalized cannabis derived from hemp and not marijuana, as these are distinctly different plants.²⁵ This means any derivative from marijuana plants remains federally illegal, regardless of whether the product's THC content is less than the 0.3% threshold.²⁶ Thus, this Comment will refer to illegal cannabis as "marijuana."

B. U.S. Patent Laws

The U.S. patent system arises from the Constitution, which empowers Congress "[t]o 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."²⁷ In 1790, Congress enacted the first-ever federal patent legislation.²⁸ The most recent patent legislation, the America Invents Act ("AIA"),²⁹ enumerates specific criteria for obtaining a patent, which have existed and evolved over the last 230 years of jurisprudence.³⁰

A patentee starts the patent process by filing a patent application with the USPTO, where a patent examiner will scrutinize it to determine if all of the legal criteria for patent protection are met.³¹ There are three types of patents available to inventors: utility, design, and plant patents.³² Each involves different criteria and offers different types of protection.³³

23. *Hemp Production and the 2018 Farm Bill: Hearing on H.R. 2 Before the Senate Comm. on Agric., Nutrition, & Forestry*, 115th Cong. (July 25, 2018), https://www.agriculture.senate.gov/imo/media/doc/Testimony_Abernethy%2007.25.19.pdf [<https://perma.cc/S6JM-SZV5>] (statement of Amy Abernethy, MD, PHD, Principal Deputy Commissioner, Food and Drug Administration, Department of Health and Human Services).

24. *Id.*

25. *Id.*

26. *See id.*

27. U.S. CONST. art. I, § 8, cl. 8.

28. Ben McEniery, *Patent Eligibility and Physicality in the Early History of Patent Law and Practice*, 38 U. ARK. LITTLE ROCK L. REV. 175, 199 (2016).

29. *See generally* Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified as amended in scattered sections of 35 U.S.C.).

30. NAT'L RSCH. COUNCIL, REAPING THE BENEFITS OF GENOMIC AND PROTEOMIC RESEARCH: INTELLECTUAL PROPERTY RIGHTS, INNOVATION, AND PUBLIC HEALTH 70 (Stephen A. Merrill & Anne-Marie Mazza eds., The Nat'l Acads. Press 2006). The 1793 Patent Act stated "any new and useful art, machine, manufacture, or composition of matter, or any new or useful improvement thereof" may receive patent protection. *See id.* (quoting the 1793 Patent Act).

31. Manual of Patent Examining Procedure § 2103 (9th ed., rev. 10.2019, June 2020) [hereinafter MPEP]. Examiners also ensure certain patent formalities are met.

32. *See generally* *Types of Patent Applications and Proceedings*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/patents-getting-started/patent-basics/types-patent-applicationsproceedings> [<https://perma.cc/6E26-JL82>].

33. *See id.*

A utility patent application begins with a detailed description sufficient to allow a “person of skill in the art” (“POSITA”) to produce the invention without undue experimentation.³⁴ The patent application must also contain “claims,” which are the legally protected portion of the patent.³⁵ The claims must describe patent-eligible subject matter that is a “new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”³⁶ Certain abstract ideas, laws of nature, and natural phenomena are not patent eligible.³⁷ There are many patent statutory requirements, with the most relevant discussed below.

Section 101 of the AIA codifies a “utility” requirement.³⁸ Utility requires that an invention confer some sort of identifiable benefit.³⁹ Section 102 codifies a “novelty” requirement.⁴⁰ Novelty means the new invention must not be described in whole by a single piece of “prior art.”⁴¹ Prior art includes previous patents, patent applications, printed publications, evidence of public use or sale of the invention, or literature otherwise available to the public before the claimed invention’s filing date.⁴²

Section 103 codifies the “non-obvious” requirement, which precludes patent eligibility for inventions that would be obvious to a “person having ordinary skill in the art to which the invention pertains.”⁴³ Unlike the novelty requirement, non-obviousness deals with all prior art that pertains to the claimed invention. If all components of the invention can be gathered in bits and pieces from multiple pieces of prior art, then the invention is obvious.⁴⁴

A plant patent is different from a utility patent in that plant patents only protect unique, asexually produced plant species.⁴⁵ Although a plant patent may intuitively appear useful in the cannabis industry, only 1% of cannabis patents are plant patents.⁴⁶ Plant patent infringement claims are difficult to win, as plaintiffs must prove that alleged infringers asexually produced exactly the same plant that is protected

34. 37 C.F.R. § 1.71(a) (2020).

35. 35 U.S.C. § 112.

36. *Id.* § 101.

37. MPEP, *supra* note 31, § 2106.

38. 35 U.S.C. § 101.

39. *Id.*; *see also* MPEP, *supra* note 31, § 2106.

40. 35 U.S.C. § 102.

41. *Id.* § 102(a).

42. *Id.*

43. *Id.* § 103.

44. *Id.*; *see also* KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 415 (2007).

45. Clinton South & Brian Shortell, *Patenting Cannabis: Possibilities and Pitfalls*, IP WATCHDOG (Feb. 7, 2020), <https://www.ipwatchdog.com/2020/02/07/patenting-cannabis-possibilities-pitfalls/id=118615/> [<https://perma.cc/W8UP-43Q8>].

46. *Id.*

by patent.⁴⁷ Thus, alleged infringers may argue that they produced their plants using seeds, precluding any liability.⁴⁸

C. *Cannabis Patents in the United States*

Protecting an invention through patenting is common practice for American businesses, and this is no different in the cannabis industry. The USPTO has granted cannabis-related patents since 1942 when it issued Patent No. 2,304,669—a method for the Isolation of Cannabidiol.⁴⁹ Despite the CSA’s passage in 1970, the USPTO has not stopped granting cannabis-related patents. Ironically, the United States government owns a patent claiming CBD-related therapeutic benefits for neurological disorders such as epilepsy and Parkinson’s disease.⁵⁰

Historically, cannabis patenting was somewhat uncommon, but since 2012, the USPTO has issued over 400 cannabis-related patents, with hundreds of patent applications cycling through the USPTO annually.⁵¹ This recent surge is likely due to multiple states deregulating cannabis.⁵² The range of marijuana patents granted is wide and far reaching. For example, there are active patents for extraction techniques,⁵³ plant breeding techniques,⁵⁴ cannabis food and drinks,⁵⁵ and lotions.⁵⁶ Despite state reforms, marijuana use remains federally illegal.⁵⁷ Even though federal law is supreme over conflicting state laws,⁵⁸ the USPTO continues issuing cannabis- and marijuana-related patents, which poses the question: Are cannabis-related patents valid?

D. *Are Cannabis Patents Valid?*

For cannabis business owners and researchers, patenting cannabis-related inventions may appear to be a logical business and legal step, but marijuana’s federal illegality may render many cannabis patents invalid. Throughout patent law jurisprudence, courts have grappled with the principle that in order for an invention to be “useful” as required by section 101, the invention must be legal and “moral,” but

47. *Id.*

48. *Id.*

49. U.S. Patent No. 2,304,669 (filed Aug. 16, 1940).

50. U.S. Patent No. 6,630,507 (filed Apr. 21, 1999).

51. Matthew Bultman, *Cannabis Patent Activity Surges Amid Industry Gold Rush*, STERNE KESSLER (Oct. 16, 2019), <https://www.sternekessler.com/news-insights/news/cannabis-patent-activity-surges-amid-industry-gold-rush> [https://perma.cc/F8KV-L9WQ].

52. Berke, *supra* note 10.

53. U.S. Patent No. 8,980,941 (filed Aug. 19, 2010).

54. U.S. Patent No. 9,370,164 (filed June 17, 2015).

55. U.S. Patent No. 8,445,034 (filed Oct. 27, 2011).

56. U.S. Patent No. 9,095,563 (filed Sept. 26, 2014).

57. See 21 U.S.C. § 812(d)(1).

58. See U.S. CONST. art. VI, cl. 2.

courts have moved away from strictly applying morality and legality standards.⁵⁹

In *Lowell v. Lewis*, the federal court system first discussed the utility requirement in conjunction with illegal and “immoral” inventions.⁶⁰ In the majority opinion, Justice Story stated that “[a]ll that the law requires is, that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society.”⁶¹ This established what was known as the moral utility doctrine.⁶²

Courts have dismissed Story’s moral standards, instead requiring that inventions have “a significant and presently available benefit to the public.”⁶³ Even so, the Supreme Court has not decided whether the illegality of an invention should be considered when examining utility and overall patent validity.⁶⁴ But lower courts have, as was the case in *Whistler Corp. v. Autotronics, Inc.*

In a nonbinding decision, the United States District Court for the Northern District of Texas concluded that a patent for a radar detector satisfied the utility requirement even though the radar served illegal purposes.⁶⁵ A radar detector is an electronic device used by motorists to inform them of when a police car is nearby, thus allowing a speeding motorist advanced notice to slow down.⁶⁶ While examining if these devices were patent eligible, the *Whistler* court stated, “[u]nless and until [radar] detectors are banned outright, or Congress acts to withdraw patent protection for them, radar detector patentees are entitled to the protection of the patent laws.”⁶⁷ Put simply, although radar detectors can be used to aid in illegal activity, the detectors remain patent eligible because Congress has not otherwise prohibited them.

Whistler demonstrates that cannabis patentees should be careful not to claim inventions that are *only* related to marijuana, but should generally claim that the invention *can* serve marijuana-related purposes.⁶⁸ This strategy provides a safe route for cannabis patentees if courts

59. See *Juicy Whip, Inc. v. Orange Bang, Inc.*, 185 F.3d 1364, 1366–67 (Fed. Cir. 1999) (stating that courts have moved away from immoral patent rejections).

60. See *Lowell v. Lewis*, 15 F. Cas. 1018 (C.C.D. Mass. 1817) (No. 8,568).

61. *Id.* at 1019.

62. Carmona, *supra* note 15, at 664.

63. *In re Fisher*, 421 F.3d 1365, 1371 (Fed. Cir. 2005).

64. Carmona, *supra* note 15, at 665.

65. *Whistler Corp. v. Autotronics, Inc.*, No. CA3-85-2573-D, 1988 WL 212501, at *1 (N.D. Tex. July 28, 1988).

66. See *id.*; see generally Sarah Archer, *Are Radar Detectors Legal and How Do They Work?*, THE SIMPLE DOLLAR (Mar. 24, 2020), <https://www.thesimpledollar.com/insurance/auto/how-do-radar-detectors-work> [<https://perma.cc/JUQ2-AEUF>].

67. *Whistler Corp.*, 1988 WL 212501, at *1.

68. See, e.g., *Processes & Apparatus for Extraction of Active Substances & Enriched Extracts From Nat. Prods.*, U.S. Patent No. 7,622,140 (filed May 7, 2002) (This patent is not strictly directed towards extracting THC from illicit marijuana, but rather mentions that the invention can be used to do so.).

invalidate their cannabis patents to the extent they serve only illegal purposes.⁶⁹

The cannabis and legal communities hoped that the federal court system would clarify the speculation and questions regarding the eligibility and legality of cannabis patents as the first-ever cannabis patent infringement lawsuit was being litigated in 2018.⁷⁰ Unfortunately, after two years of litigation, the plaintiff, UCANN, filed for federal bankruptcy, pausing the litigation and ensuring continued uncertainty surrounding cannabis patents.⁷¹

III. THE ADVANTAGES AND DISADVANTAGES OF SEEKING CANNABIS PATENT PROTECTION

Patent protection can benefit an emerging cannabis business as patent rights grant the owner a monopoly over a given piece of technology for twenty years.⁷² Pursuing patent rights may also signal to investors that a business is worth investing in. But businesses must weigh the pros and cons of filing for and maintaining a patent, as patent filing can be both time consuming and costly, with no guarantees that a patent will ever be granted. This Part will first further describe prior art and how it relates to and uniquely affects the cannabis industry. Next, this Part discusses the risks of cannabis patenting in relation to the “enablement” and “non-obviousness” patent requirements. Last, this Part discusses the significant research hurdles cannabis businesses face.

A. *What Is Prior Art and How Does It Relate to Cannabis?*

Prior art is generally defined as the previous information that a patent application is compared against to ensure that only meritorious inventions are awarded protection.⁷³ When reviewing a patent application, patent examiners perform a worldwide search for various forms of prior art to determine if the claimed invention is already described, which may lead to a rejection.⁷⁴ Typically, prior art compels patent rejection if: (1) a single piece of prior art describes the new invention in whole; (2) multiple pieces of prior art can be combined to create the new invention; (3) the new invention would be obvious to create by a POSITA; or (4) the claimed invention was on sale or used

69. See *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208 (2014) (showing that courts do have the power to invalidate specific portions of a patent).

70. Matthew Bultman, *United Cannabis Patent Suit Stayed After Bankruptcy Filing*, BLOOMBERG (Apr. 22, 2020, 12:22 PM), <https://news.bloomberglaw.com/ip-law/united-cannabis-patent-suit-stayed-after-bankruptcy-filing> [<https://perma.cc/UWJ9-STM7>].

71. *Id.*

72. See 35 U.S.C. § 154(a)(2).

73. Timothy R. Holbrook, *Patent Prior Art and Possession*, 60 WM. & MARY L. REV. 123, 134 (2018).

74. MPEP, *supra* note 31, § 2121.

in public a year prior to the filing of the patent application.⁷⁵ Although some cannabis prior art exists, it is different than prior art in other industries.

The U.S. patent system promotes industrial growth by encouraging those within an industry to publish their inventions and discoveries.⁷⁶ But until recent widespread cannabis decriminalization, cannabis innovation was discouraged and suppressed,⁷⁷ causing a lack of cannabis literature that qualifies as prior art.⁷⁸ Further, cannabis-related transactions have long gone unrecorded, making it difficult to determine if a new cannabis-related invention was previously on the market or used in public.⁷⁹ Patent examiners are under time restrictions and thus often fail to find a piece of relevant prior art or they otherwise misinterpret existing prior art.⁸⁰ Given the suppressed nature of cannabis-related prior art and the time constraints examiners operate under, patent examiners may miss relevant prior art, and then inadvertently grant invalid patent claims. If a patent examiner grants a patent in spite of preclusive prior art, then a competitor may seek to invalidate the patent through judicial or agency action.⁸¹

Cannabis prior art, whether used to invalidate an existing patent or cited by an examiner to deny a patent application, can be difficult to find, but there are available disclosures to which emerging businesses should be aware. For example, the Open Cannabis Project (“OCP”), whose goal was “to defend the richness and diversity of cannabis from overbroad patents,” was created to prevent commonly used marijuana inventions and plant types from receiving patent protection.⁸² The OCP compiled over a thousand genetic sequences of different variations of the cannabis plant, publishing them as prior art.⁸³ The OCP

75. See generally *Rosaire v. Baroid Sales Div., Nat’l Lead Co.*, 218 F.2d 72 (5th Cir. 1955).

76. Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J. L. & ECON. 265 (Oct. 1977).

77. Emily Pyclik, *Obstacles to Obtaining and Enforcing Intellectual Property Rights in the Marijuana Industry*, 9 AM. U. INTELL. PROP. BRIEF 26, 44–45 (2018).

78. *Id.*

79. Josh Landau, *Granted in 19 Hours*, PAT. PROGRESS (Mar. 6, 2018), <https://www.patentprogress.org/2018/03/06/granted-19-hours/> [<https://perma.cc/7JAV-V9NB>].

80. U.S. GOV’T ACCOUNTABILITY OFF., GAO-16-479, INTELLECTUAL PROPERTY: PATENT OFFICE SHOULD STRENGTHEN SEARCH CAPABILITIES AND BETTER MONITOR EXAMINERS’ WORK (June 30, 2016), <https://www.gao.gov/products/GAO-16-479> [<https://perma.cc/H5LX-EPNT>].

81. Patent invalidation is initiated through federal courts or through the Patent Trial and Appeal Board. See Jeffrey A. Freeman & Jason E. Stach, *District Court or the PTO: Choosing Where to Litigate Patent Invalidity*, FINNEGAN (Mar./Apr. 2014), <https://www.finnegan.com/en/insights/district-court-or-the-pt-choosing-where-to-litigate-patent.html> [<https://perma.cc/B8BH-G236>].

82. *About, OPEN CANNABIS PROJECT*, <https://web.archive.org/web/20190529203529/https://opencannabisproject.org/> [<https://perma.cc/8Y74-7STQ>]. The Open Cannabis Project has shut down so the only way to reach their website is through TheWayBackMachine.com.

83. See *id.*

shut down in May of 2020, but there are multiple cannabis databases cannabis businesses can utilize such as The Phylos Galaxy⁸⁴ and Medical Genomics.⁸⁵

The small-business benefits of these prior art compilations are three-fold. First, they give those in the field a possible mechanism to challenge the validity of another's patent, or a defense mechanism for possible infringement litigation.⁸⁶ Second, those who wish to cultivate and grow cannabis can use the plant varieties and inventions disclosed on these databases without fear of patent-infringement litigation. Third, they can be a useful reference for small businesses that wish to pick specific varieties of the cannabis plants based off factors such as the content of different cannabinoids, turpentine, or other organic compounds.

B. Patents Require Invention Disclosure

The original crafters of American patent law sought to maintain a *quid pro quo* within the patent system.⁸⁷ On one hand, the system seeks to promote innovation by promising an inventor the sole right to exclude others from creating and using his or her invention for a finite period of time.⁸⁸ On the other hand, in return for this exclusivity, the patentee must provide a written description detailed enough to enable a POSITA to recreate and use the invention.⁸⁹ Enabling a POSITA to recreate an invention once the twenty-year patent monopoly lapses helps “[to] promote the Progress of Science and useful Arts” by sufficiently teaching those in the field of the new technology, creating an opportunity to build upon the technology.⁹⁰

Although invention enablement's *quid pro quo* with a twenty-year technological monopoly furthers innovation, it can disadvantage emerging businesses with limited resources. Once a patent or patent application is published, its enablement component is available worldwide.⁹¹ Theoretically, anyone can use the patented invention's description and produce or reduce the invention to practice.⁹² Conse-

84. PHYLOS: GALAXY, <https://phylos.bio/galaxy/> [<https://perma.cc/8ZMX-TEUR>].

85. MED. GENOMICS, <https://www.medicinalgenomics.com/> [<https://perma.cc/4NQS-GKF6>].

86. FAQ, OPEN CANNABIS PROJECT, <https://web.archive.org/web/20190529203844/https://opencannabisproject.org/faq/> [<https://perma.cc/RG5Z-E7JQ>].

87. See generally Jacob Adam Schroeder, *Written Description: Protecting the Quid Pro Quo Since 1793*, 21 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 63 (2010).

88. See MPEP, *supra* note 31, § 2701.

89. *Id.* § 2164.

90. *Invitrogen Corp. v. Clontech Labs., Inc.*, 429 F.3d 1052, 1070–71 (Fed. Cir. 2005); U.S. CONST. art. I, § 8, cl. 8.

91. See MPEP, *supra* note 31, § 1120.

92. Stephen Key, *In Today's Market, Do Patents Even Matter?*, FORBES (Nov. 13, 2017, 4:45 PM), <https://www.forbes.com/sites/stephenkey/2017/11/13/in-todays-market-do-patents-even-matter/#4ae878ab56f3> [<https://perma.cc/EQH2-864R>].

quently, there are no patent police.⁹³ Patent holders must police their own IP and initiate judicial action if they believe someone is infringing on their patent.⁹⁴ For an emerging cannabis business, given the worldwide cannabis black-market presence, policing a patent may be logistically and financially impossible. Those who participate in black-market marijuana business dealings obviously do not feel inclined to abide by the law. They may infringe on a marijuana patent, and given that they are on the black market, will do so on a secretive basis, with the chances that they are caught infringing on a patent low.

Pursuing patent infringement damages or declaratory judgments can be expensive.⁹⁵ For example, the average litigation costs for a patent lawsuit wherein the remedy sought is \$1 million–\$25 million, are \$1.6 million.⁹⁶ Other forms of review through the USPTO, while much less expensive than classic litigation, still can cost \$100 thousand–\$1 million.⁹⁷ For emerging cannabis businesses, these litigation costs are unlikely sustainable, as was the case of UCANN mentioned above.⁹⁸

C. *The Hurdles in Conducting Cannabis Research*

In the American patent system, small businesses and micro entities make up over a fourth of patent holders.⁹⁹ In 2015, independent inventors received over 25,000 granted patents.¹⁰⁰ But small businesses and individual inventors in the cannabis world face unique hurdles. Among them, the ability to conduct marijuana research legally may be the biggest.¹⁰¹ Until the 2018 Farm Bill’s passage, research on all forms of cannabis fell under the CSA’s strict regulations.¹⁰² Under the 2018 Farm Bill, cannabis containing less than 0.3% THC, legally named “hemp,” is no longer a controlled substance as defined in the

93. *Id.*

94. *Id.*

95. Chris Neumeyer, *Managing Costs of Patent Litigation*, IP WATCHDOG (Feb. 5, 2013), <https://www.ipwatchdog.com/2013/02/05/managing-costs-of-patent-litigation/id=34808/> [<https://perma.cc/BX4M-PQ84>].

96. *Id.*

97. *Cost of Inter Partes Review: Everything You Need to Know*, UPCOUNSEL, <https://www.upcounsel.com/cost-of-inter-partes-review> [<https://perma.cc/UHB2-AE4S>].

98. See *supra* notes 70–71 and accompanying text.

99. Dennis Crouch, *Micro Entity Early Stats*, PATENTLYO (Feb. 13, 2014), <https://patentlyo.com/patent/2014/02/entity-early-stats.html> [<https://perma.cc/S6YE-T6VX>].

100. *Number of Independent Inventors in the United States from 1998 to 2015*, STATISTA (Apr. 29, 2019), <https://www.statista.com/statistics/256679/number-of-independent-inventors-in-the-us/> [<https://perma.cc/59FY-GGGS>].

101. NAT’L ACADS. OF SCIS., ENG’G, & MED., *THE HEALTH EFFECTS OF CANNABIS AND CANNABINOIDS: THE CURRENT STATE OF EVIDENCE AND RECOMMENDATIONS FOR RESEARCH* 377–390 (The Nat’l Acads. Press 2017), <https://doi.org/10.17226/24625>.

102. *Research Involving Cannabis, Hemp, and Marijuana*, UCONN.EDU, <https://ovpr.uconn.edu/services/rics/research-involving-cannabis-hemp-and-marijuana-2/#> [<https://perma.cc/GQ3S-QZ6E>].

CSA.¹⁰³ Thus, forty-eight states have created hemp cultivation and research programs,¹⁰⁴ opening up numerous opportunities for emerging cannabis businesses. But the same cannot be said about cannabis containing over 0.3% THC, i.e., marijuana.

Marijuana, as a Schedule I drug under the CSA, is subject to the most strict drug research regulations.¹⁰⁵ Over the last forty-five years, the Drug Enforcement Agency (“DEA”) has consistently rejected petitions that would reclassify marijuana to a lower schedule, which would ease research constraints.¹⁰⁶ As it stands, the CSA sets forth regulations on who can grow marijuana for research and who can conduct the research,¹⁰⁷ with both activities subject to near impossible licensing procedures.¹⁰⁸ For example, the University of Mississippi (“Ole Miss”) is the only entity licensed by the federal government to grow marijuana for research.¹⁰⁹ Ole Miss has been the exclusive grower of research marijuana in the United States since 1968,¹¹⁰ and although the DEA actively receives applications from other entities seeking to grow research marijuana, the DEA has accepted none.¹¹¹

Research marijuana grown and distributed by Ole Miss has not met necessary scientific standards.¹¹² Researchers have found Ole Miss’s marijuana contaminated with various substances such as mold and lead.¹¹³ Not only can these contaminants potentially harm researchers and human subjects, they can potentially skew research results.¹¹⁴ Quality-control testing by researchers revealed discrepancies between the claimed and actual potency of Ole Miss’s research marijuana.¹¹⁵ One research group requested marijuana with a 13% THC concentra-

103. *Id.*

104. *State Industrial Hemp Statutes*, NAT’L CONF. OF STATE LEGS. (Apr. 16, 2020), <https://www.ncsl.org/research/agriculture-and-rural-development/state-industrial-hemp-statutes.aspx> [<https://perma.cc/3EGT-DVHK>].

105. 21 U.S.C. § 812.

106. 21 C.F.R. §§ 1301.11–19 (2020); Anna Gunther, *DEA Says It Will Expand Marijuana Research, Ending Years of Delay*, CBSNEWS (Aug. 26, 2019, 6:27 PM), <https://www.cbsnews.com/news/legal-marijuana-growers-dea-says-it-will-expand-marijuana-research-ending-years-of-delay/> [<https://perma.cc/SA9L-AZD4>].

107. UCONN.EDU, *supra* note 102.

108. *Id.*

109. Xander Peters, *What’s the DEA’s Announcement Mean for the Future of Cannabis Research?*, ROLLING STONE (Sept. 18, 2019, 3:13 PM), <https://www.rollingstone.com/culture/culture-features/pot-research-university-mississippi-cannabis-license-dea-886606/> [<https://perma.cc/3MKL-9V89>].

110. *Id.*

111. 21 C.F.R. §§ 1301.11–19 (2020).

112. Caleb Hellerman, *Scientists Say the Government’s Only Pot Farm Has Moldy Samples — and No Federal Testing Standards*, PBS: NEWS HOUR (Mar. 8, 2017, 3:55 PM), <https://www.pbs.org/newshour/nation/scientists-say-governments-pot-farm-moldy-samples-no-guidelines> [<https://perma.cc/BP5U-WXRU>].

113. *Id.*

114. NAT’L ACADS. OF SCIS., ENG’G, & MED., *FOSTERING INTEGRITY IN RESEARCH* 84–87 (The Nat’l Acads. Press 2017), <https://doi.org/10.17226/21896>.

115. Hellerman, *supra* note 112.

tion, but received cannabis that contained only 8% THC, even though Ole Miss packaged the cannabis as containing the promised 13% THC.¹¹⁶ Conducting research with flawed materials can yield flawed results, running counterproductive to the goals of research.¹¹⁷

Further, American businesses are moving research operations overseas to countries where cannabis research is less regulated and more governmentally encouraged,¹¹⁸ likely compounding the issues faced by emerging cannabis businesses. For example, Israel maintains the oldest and most well-developed cannabis research program in the world.¹¹⁹ Over the last fifty years, numerous cannabis breakthroughs, such as the discovery of the human endocannabinoid system, have come via Israel-based research.¹²⁰ Due to significant cannabis research regulation in the U.S. and comparatively less restrictions in Israel, fifteen U.S.-based companies have moved their research operations to Israel.¹²¹ Israeli companies conduct significant research—not only on the components of cannabis—but also how these components can treat conditions such as autism, Parkinson’s, and schizophrenia.¹²²

Conducting research overseas is nearly impossible for small businesses, whereas foreign countries incentivize large businesses to actually move their operations there.¹²³ Ultimately, these foreign-based businesses are free to patent their technology in the United States, likely capturing a large part of the available market while leaving small U.S. entities at an IP disadvantage.

D. *Should Emerging Cannabis Businesses Utilize Patent Protection?*

Whether it makes business sense to patent cannabis-related products boils down to a cost-benefit analysis. In summary, the benefits of patent protection include a twenty-year monopoly over the claimed invention.¹²⁴ A patentee has the sole “right to exclude others from

116. *Id.*

117. NAT’L ACADS. OF SCIS., ENG’G, & MED., *supra* note 114.

118. Yardena Schwartz, *How the Booming Israeli Weed Industry Is Changing American Pot*, ROLLING STONE (Aug. 24, 2017, 5:49 PM), <https://www.rollingstone.com/culture/culture-features/how-the-booming-israeli-weed-industry-is-changing-american-pot-197414/> [https://perma.cc/F2UP-9KR2].

119. Yardena Schwartz, *The Holy Land of Medical Marijuana*, U.S. NEWS (Apr. 11, 2017, 11:04 AM), <https://www.usnews.com/news/best-countries/articles/2017-04-11/israel-is-a-global-leader-in-marijuana-research> [https://perma.cc/8QE4-G9PD].

120. *Id.*

121. *Id.*

122. See Adi Aran et al., *Brief Report: Cannabidiol-Rich Cannabis in Children with Autism Spectrum Disorder and Severe Behavioral Problems—A Retrospective Feasibility Study*, 49 J. AUTISM & DEVELOPMENTAL DISORDERS 1284 (Oct. 31, 2018), <https://doi.org/10.1007/s10803-018-3808-2> (This study was conducted in Israel.).

123. Schwartz, *supra* note 118.

124. See MPEP, *supra* note 31, § 2701.

making, using, offering for sale, or selling the invention.”¹²⁵ While a business awaits the grant of patent, it can claim their product is “patent pending,” which can have a positive effect on consumer confidence in the product.¹²⁶ Once a patent is granted, a business can announce on packaging and other marketing that the product or process is patented, likely adding to branding and consumer confidence. But often the costs—financial and material—may weigh against pursuing and maintaining patent protection.¹²⁷

By pursuing patent protection, cannabis business owners risk wasting money acquiring an invalid or infringing patent.¹²⁸ Seeking patent protection can take years and cost thousands of dollars without a guarantee that the patent will result in profit.¹²⁹ But often for emerging businesses, the legal rights that patents grant are not the only benefit of patent ownership and monopolization.

Patents can be a critical component for an emerging business to attract venture capital financing.¹³⁰ Venture capitalism inherently involves a degree of uncertainty, leading investors to weigh several factors when deciding what businesses they wish to invest in.¹³¹ Pursuing patents signals to venture capitalists that a business is diligent and focused because the business has put in the time, effort, and money to file for a patent.¹³² A business that has filed at least one patent application receives venture capital funding 76% times faster than a business with no patent portfolio.¹³³ Startup businesses’ patent portfolios further incentivize venture capitalists because the capitalists can potentially recover the portfolio if the business they invested in fails.¹³⁴

Businesses must weigh the costs and benefits of pursuing patents in light of their business goals and overall plans. The cannabis industry

125. *General Information Concerning Patents*, U.S. PAT. & TRADEMARK OFF., (Oct. 2015), <https://www.uspto.gov/patents-getting-started/general-information-concerning-patents> [https://perma.cc/7MTH-8RG8].

126. Gene Quinn, *Patent Pending: The Road to Obtaining a U.S. Patent*, IP WATCHDOG (Dec. 15, 2018), <https://www.ipwatchdog.com/2018/12/15/patent-pending-u-s-patent/id=102130/> [https://perma.cc/KT8C-C3R3].

127. Neumeyer, *supra* note 95.

128. *See How Much is My Patent Worth: Everything You Need to Know*, UPCOUNSEL, <https://www.upcounsel.com/how-much-is-my-patent-worth#:~:text=While%20there%20is%20no%20E%20%9Caverage%20price%20%9D%20for%20obtaining,on%20achieving%20the%20invention%20in%20the%20first%20place> [https://perma.cc/9ZRM-3WQV].

129. Stephen Key, *97 Percent of All Patents Never Make Any Money*, ALLBUSINESS, <https://www.allbusiness.com/97-percent-of-all-patents-never-make-any-money-15258080-1.html> [https://perma.cc/G92T-WM6L] (stating 3% of patents result in the patentee making profit off of a patent).

130. Haeussler, *supra* note 18, at 1.

131. *Id.* at 4.

132. *Id.*

133. *Id.* at 2.

134. *Id.* at 5.

encompasses multiple sub-categories of business types.¹³⁵ The type of business and level of goals may dictate the decision to seek patent protection, but businesses should keep in mind that patents are not the only form of protection for their IP.

IV. TRADEMARKS AND CANNABIS

Trademarks are a valuable form of IP businesses use to protect and build their brands.¹³⁶ A trademark is a “word, phrase, symbol, and/or design that identifies and distinguishes the source of the goods of one party from those of others.”¹³⁷ Trademarks do not have a finite protection period, as they remain in effect as long as the owner uses the mark in association with goods and services.¹³⁸

Generally, there are two types of trademark protection that cannabis businesses should consider: federal trademark protection and state trademark protection. Cannabis businesses may also attempt to invoke common law trademark rights.¹³⁹ Each trademark form confers different rights and protections. Cannabis businesses should utilize all forms of trademarks as they offer unique brand protections that other forms of IP do not.

Given the lack of clarity regarding federal trademarks in relation to cannabis, cannabis businesses must use them strategically, with state trademarks and common law rights used to fill the gaps left by their federal counterparts. Exploring federal trademark registration should be a cannabis business’s first step as trademark registration provides the greatest benefit. Federal trademark registration gives a rights holder protection from confusingly similar marks entering the market across the entire United States.¹⁴⁰ Federally registered marks may have the “®” stamp on their logos and brand names, which helps deter copycat producers by putting the public on notice that a brand is being exclusively used.¹⁴¹ Federal trademark protection also eases the process of bringing infringement claims to federal court and can lead

135. *Setting Up a Marijuana Business: The Basics*, FINDLAW (Oct. 18, 2019), <https://public.findlaw.com/cannabis-law/starting-a-cannabis-business/setting-up-a-marijuana-business-the-basics.html#:~:text=%20Types%20of%20Marijuana%20Businesses%20%201%20Cultivation%3A,or%20%22collectives%2C%22%20but%20are%20generally%20stores.%20More%20> [https://perma.cc/5UMU-4AKA].

136. *Trademark Process*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/trademarks-getting-started/trademark-process#step1> [https://perma.cc/R2PU-V8S4].

137. *Trademark, Patent, or Copyright?*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/trademarks-getting-started/trademark-basics/trademark-patent-or-copyright> [https://perma.cc/XL2Y-SFPJ].

138. *Id.* There are other nuanced manners in which a trademark can be invalidated that will not be discussed in this Comment.

139. *Id.*

140. *Id.*

141. *Id.*

to a business receiving greater legal remedies.¹⁴² While federal trademarks provide the most legal rights and protections, they also carry the most strict application criteria.

Much like the patent process, federal trademark registration begins with an application to the USPTO.¹⁴³ Then, an examiner reviews whether the applicant met all statutory and regulatory registration requirements.¹⁴⁴ There are many nuanced federal trademark registration requirements, but only a few merit discussion. First, federal trademark protection requires that a business use the word, phrase, symbol, or design in interstate commerce.¹⁴⁵ If a business only uses its mark in intrastate commerce, then the mark does not qualify for federal trademark registration.¹⁴⁶ Second, a trademark must be descriptive and not generic in nature.¹⁴⁷ Generic words and symbols cannot be registered for protection because everyone has the right to use generic words and symbols to describe their goods or services.¹⁴⁸ Trademark registration also requires that the mark not be confusingly similar to another mark in commerce, i.e., it must be unique.¹⁴⁹ Finally, the trademark must be used in lawful commercial actions.¹⁵⁰ The final requirement is where cannabis gets hung up.

The federal illegality of marijuana leaves many cannabis businesses' marks on goods unprotectable, even if the goods are made and sold in jurisdictions with legal cannabis.¹⁵¹ Marks on goods such as packaged psychoactive marijuana, CBD products derived from marijuana, ingestible CBD products, and consumption devices such as pipes and vapes remain trademark ineligible.¹⁵² This poses significant risk for businesses wishing to establish their brands. For example, if Company A sells a trademark-ineligible marijuana drink and Company B subsequently begins selling a similar drink with Company A's logo on it, Company A could not bring federal suit against Company B because

142. Lindsay Stern, *Roses Are Red, Marijuana Is Green, Cannabis Trademarks Are Unlawful but What Exactly Does That Mean?*, 27 FED. CIR. B.J. 241, 250–51 (2018).

143. *Trademark Process*, *supra* note 136.

144. *Id.*

145. Stern, *supra* note 142, at 245.

146. *Id.*

147. U.S. PAT. & TRADEMARK OFF., PROTECTING YOUR TRADEMARK: ENHANCING YOUR RIGHTS THROUGH FEDERAL REGISTRATION 8 (Feb. 2020), <https://www.uspto.gov/sites/default/files/documents/BasicFacts.pdf> [<https://perma.cc/G5Y9-YFDK>].

148. *Generic Trademark: Everything You Need to Know*, UPCOUNSEL, <https://www.upcounsel.com/generic-trademark> [<https://perma.cc/L6HL-Q62S>].

149. *Id.* Confusingly similar means the trademark examiner believes there is a likelihood of confusion between your mark and an existing mark.

150. Stern, *supra* note 142, at 257.

151. *Id.*

152. Parna Mehrbani, *The Challenging State of Brand Protection in the Cannabis Industry*, PORTLAND BUS. J. (Sept. 5, 2019), <https://www.bizjournals.com/portland/news/2019/09/05/the-challenging-state-of-brand-protection-in-the.html> [<https://perma.cc/G4PY-9YUX>].

Company A does not and cannot own federal trademark rights to its logo for that marijuana drink.

Despite the inability to federally register certain cannabis-related marks, there are strategies small businesses can utilize to help mimic the benefits of direct federal trademark registration. The strategy most commonly used by cannabis businesses is best described as “boxing out” competitors from using their unprotected marks.¹⁵³ In order to “box out” competitors, businesses will register their marks for ancillary items such as clothing, stickers, and federally legal- and trademark registration-eligible CBD products.¹⁵⁴ Brand recognition is important for businesses, and building a trademark portfolio based on ancillary products can help cannabis businesses build their overall brand within the market. This strategy not only helps build brand recognition, but also puts competitors on notice that the mark is protected in some way, albeit not on the marijuana product.

Another commonly used strategy is placing the “TM” logo on marijuana items. Using the “TM” logo is an attempt to invoke common law trademark rights, which do not require registration.¹⁵⁵ But these common law rights only exist in the geographic area in which the marks are used in commerce and are not subject to any statutory remedies.¹⁵⁶ These common law rights can be difficult to uphold in a lawsuit, but the recognizable “TM” logo may help deter potential copycats.

Cannabis businesses can also acquire state trademark registration for their otherwise federally illegal goods.¹⁵⁷ State trademark registration is inexpensive and easily obtainable, but does not grant nearly the same protections as federal trademark registration.¹⁵⁸ The state trademark schemes of the fifty states all differ, with some granting greater protection and enhanced rights than others.¹⁵⁹ In some states, trademark registration is simply a certificate that may serve in state court as evidence of a common law infringement claim.¹⁶⁰ In other states,

153. See Kourtney Mulcahy, *Trademark Protection and the Cannabis Sector*, JD SUPRA (Oct. 7, 2019), <https://www.jdsupra.com/legalnews/trademark-protection-and-the-cannabis-45642/> [<https://perma.cc/96KL-FFHW>].

154. *See id.*

155. Sam Kamin & Viva R. Moffat, *Trademark Laundering, Useless Patents, and Other IP Challenges for the Marijuana Industry*, 73 WASH. & LEE L. REV. 217, 258 (2016).

156. Alison Malsbury, *Does Your Cannabis Business Qualify for Trademark Protection? The Answer Is Most Certainly “Yes!”*, HARRIS BRICKEN (Jan. 21, 2020), <https://harrisbricken.com/cannalawblog/does-your-cannabis-business-qualify-for-trademark-protection-the-answer-is-most-certainly-yes/> [<https://perma.cc/WMV7-26UY>].

157. *Id.*

158. Kamin & Moffat, *supra* note 155, at 257.

159. Lee Ann W. Lockridge, *Abolishing State Trademark Registrations*, 29 CARDOZO ARTS & ENT. L.J. 597, 618 (2011) (describing the differences in state trademark schemes).

160. *Id.*

trademark registration may provide prima facie evidence of the mark's validity and that the mark's owner has the exclusive right to use the mark in association with goods and services.¹⁶¹ Unfortunately, claimants can only commence state trademark infringement action in the state where the trademark is registered, with many states further limiting protection to the city or "geographic area" where the mark is sold and used.¹⁶²

Regardless of the strength of a state's trademark laws, cannabis businesses should register their marks within all states they do business. State trademark registration does not offer the same protections and benefits as federal trademark registration, but cannabis businesses should make every attempt to protect their IP through every available mechanism.

V. OTHER MECHANISMS FOR SMALL CANNABIS BUSINESSES TO PROTECT THEIR INTELLECTUAL PROPERTY

With the uncertainty surrounding cannabis patents and trademarks, emerging cannabis businesses must leverage every possible avenue of protection. Trade secrets and the first-mover advantage can work hand-in-hand to help emerging businesses clear the IP hurdles that patent and trademark law present.

Trade secrets are a unique form of IP that protects secret information which confers economic benefit to a business.¹⁶³ Trade secrets are perhaps the most useful tool that a cannabis business can utilize because they do not require any form of registration or public disclosure.¹⁶⁴

The first-mover advantage, while not technically an IP right, can supplement trade secrets. The first-mover advantage is the economic principle wherein the first to introduce a product or concept to the market is usually at an economic advantage compared to competitors.¹⁶⁵ This concept can ride the coattails of trade secrets, as businesses can create potentially profitable goods or services in secret and then be the first to introduce the product or service to market. These mechanisms are frequently used by both emerging and established businesses in other industries and should be used to a cannabis business's advantage.¹⁶⁶

161. *Id.*

162. Kamin & Moffat, *supra* note 155, at 257.

163. *Trade Secret Policy*, U.S. PAT. & TRADEMARK OFF., <https://www.uspto.gov/ip-policy/trade-secret-policy> [<https://perma.cc/8U5E-A3GR>].

164. *Id.*

165. Evan Tarver, *First Mover Definition*, INVESTOPEDIA (Jan. 15, 2020), <https://www.investopedia.com/terms/f/firstmover.asp> [<https://perma.cc/F27J-6PDK>].

166. See Catherine Lui, *Trade Secrets and Start-Ups: What to Do When Secrets Walk out the Front Door*, JD SUPRA (Dec. 22, 2017), <https://www.jdsupra.com/legalnews/trade-secrets-and-start-ups-what-to-do-10726/> [<https://perma.cc/LQ5H-HRLY>]; Emily Ashcraft, *Monsanto Files Injunctive Lawsuit to Protect Trade Secrets*,

A. Trade Secrets and Their Place in Cannabis

U.S. businesses have long used trade secrets as a tool to protect secret information from falling into the hands of competitors. Forty-seven states have adopted the Uniform Trade Secrets Act (“UTSA”), which defines a trade secret as:

[I]nformation, including a formula, pattern, compilation, program, device, method, technique, or process, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.¹⁶⁷

In 2016, Congress passed the Defend Trade Secrets Act (“DTSA”),¹⁶⁸ which is written nearly identical to the UTSA but gives claimants a federal mechanism for bringing a trade secret misappropriation claim to federal court.¹⁶⁹ There are some differences between the two legal schemes, but this Comment will not discuss them.

A trade secret is business-related information that derives value from the fact that it is not readily ascertainable by the public and competitors.¹⁷⁰ Unlike patent and trademark protection, trade secrets do not have rigid eligibility requirements, as virtually any secret that gives advantage to a business over its competitors can qualify.¹⁷¹ Trade secrets do not undergo review by a federal agency and do not require any third-party review.¹⁷² Although there is no registration process for a trade secret, businesses must be proactive in maintaining their trade secrets as required by statute.¹⁷³ In order for a business to bring a lawsuit against a business who has stolen or “misappropriated” a trade secret, the suing business must establish that the secret provided economic value and that reasonable means were taken to protect the secret.¹⁷⁴ Establishing that a trade secret exists does not require that the information be in absolute secrecy.¹⁷⁵ For example, a

LAW STREET (Aug. 14, 2020), <https://lawstreetmedia.com/agriculture/monsanto-files-injunctive-lawsuit-to-protect-trade-secrets/> [<https://perma.cc/E7DG-U6BV>].

167. UNIF. TRADE SECRETS ACT § 1 (UNIF. L. COMM’N, amended 1985).

168. 18 U.S.C. § 1836.

169. Bret Cohen et al., *Recourse for Trade Secret Misappropriation Under the Federal Defend Trade Secrets Act*, LEXISNEXIS (Apr. 18, 2018), <https://www.lexisnexis.com/lexis-practice-advisor/the-journal/b/lpa/posts/recourse-for-trade-secret-misappropriation-under-the-federal-defend-trade-secrets-act> [<https://perma.cc/W729-C5GF>].

170. *Id.*

171. *Id.*

172. *How to Apply for Trade Secret Protection*, UPCOUNSEL, <https://www.upcounsel.com/how-to-apply-for-trade-secret-protection> [<https://perma.cc/DTW9-GPV3>].

173. See 18 U.S.C. § 1836.

174. *Trade Secret Policy*, *supra* note 163.

175. *Frequently Asked Questions: Trade Secrets*, WORLD INTELL. PROP. ORG., https://www.wipo.int/tradesecrets/en/tradesecrets_faqs.html [<https://perma.cc/ZS65-R7GZ>].

business's board members may know a secret business practice and the secret business practice may still be considered a trade secret.¹⁷⁶

In order to maintain valuable secrets, businesses can utilize various physical and legal means.¹⁷⁷ The first thing a business should do to protect its trade secrets is not tell the secrets to anyone who does not need to know them. Maintaining a small group with knowledge of the secret is the single most important tool to keeping a secret.¹⁷⁸ Next, businesses should place in sensitive business documents "proprietary legend" clauses that announce the secrecy, sensitivity, and confidentiality of the information therein and that copying is prohibited.¹⁷⁹ Proprietary legends should ideally be tailored to the content contained in the document and should be used only when necessary as overuse can diminish the impact the legends have.¹⁸⁰

Courts consistently recognize the importance of confidentiality and non-disclosure agreements ("NDA").¹⁸¹ NDAs should be tailored to the content that is being disclosed, if possible.¹⁸² A properly crafted and implemented NDA creates an implied duty of confidentiality with the recipient of the information and is evidence that the secret holder took reasonable measures to protect the secret.¹⁸³

Although not necessary to bring a trade secret misappropriation claim, businesses should implement protective measures such as carefully locking areas or places where sensitive documents are stored or where business techniques take place.¹⁸⁴ Access to these areas should be limited to those who absolutely need access.¹⁸⁵

Like other IP forms, trade secrets have their disadvantages. Trade secret law does not protect against reverse engineering and accidental discovery of the secret.¹⁸⁶ Further, if someone illegally obtains a trade secret, that trade secret may become fully accessible to the public, thus diminishing the secret's overall business value. Despite these risks, cannabis companies should consider taking steps to protect secret practices, because not only can lax protection procedures leave

176. *Id.*

177. Pamela Passman, *Eight Steps to Secure Trade Secrets*, WORLD INTELL. PROP. ORG. (Feb. 2016), https://www.wipo.int/wipo_magazine/en/2016/01/article_0006.html [<https://perma.cc/ZJM9-Q6XD>].

178. *Id.*

179. *Should You Use Proprietary Legends?*, HARNESS DICKEY, <https://www.hdp.com/wordpress/wp-content/uploads/2020/01/Should-You-Use-Proprietary-Legends.pdf> [<https://perma.cc/Y6HS-L63E>].

180. *Id.*

181. Passman, *supra* note 177. Courts use both the terms "nondisclosure agreement" and "confidentiality agreement" interchangeably.

182. *Id.*

183. *Nilssen v. Motorola, Inc.*, 963 F. Supp. 664, 680 (N.D. Ill. 1997).

184. Passman, *supra* note 177.

185. *Id.*

186. Andrew Beckerman-Rodau, *The Choice Between Patent Protection and Trade Secret Protection*, 84 J. PAT. & TRADEMARK OFF. SOC'Y 371, 391 (2002).

secrets vulnerable, they can foreclose a business's ability to pursue legal recourse.

B. *Trade Secrets vs. Patents*

Trade secrets have advantages and disadvantages when compared with patent protection. The most prominent advantage is that they can save time and money. Trade secrets do not require an application process and do not bear any direct costs such as application fees or attorney fees.¹⁸⁷ The only costs are the costs of keeping the secret, which may include increasing cyber security, preparing NDAs, and implementing physical security systems.¹⁸⁸ Patents on the other hand can cost tens of thousands of dollars in filing and attorney fees.¹⁸⁹ Patents are also finite as their protection only lasts for twenty years from the application time.¹⁹⁰ Yet trade secrets last for as long as they are kept a secret and can theoretically last forever.¹⁹¹ For example, the recipes for Coca-Cola and Kentucky Fried Chicken's chicken batter are both trade secrets that remain unknown to the public, and which continue to bring their respective businesses revenue.¹⁹² Conversely, patents and patent applications are published and available to the public.¹⁹³ As discussed, patentees must sufficiently describe their invention in the application process such that a POSITA could reproduce it without difficulty.¹⁹⁴ Patents do not allow for sensitive information to remain secret. Trade secrets do the opposite. Trade secret law protects the secrecy of profitable information and practices.¹⁹⁵ Further, trade secret law can protect information or business practices that would otherwise not be patent eligible.¹⁹⁶

Trade secrets do have some disadvantages when compared to patent protection. Similar to the prior art and public use principles of patent law, courts do not recognize trade secret rights for information that is *directly* known to the public.¹⁹⁷ If one were to reverse engineer a busi-

187. *Id.* at 400–01.

188. Passman, *supra* note 177.

189. Beckerman-Rodau, *supra* note 186, at 400 n.210.

190. *Id.* at 383.

191. *Frequently Asked Questions: Trade Secrets*, *supra* note 175.

192. Sheppard Mullin Richter & Hampton LLP, *Don't Spill Your Trade Secrets: Protecting Your Competitive Advantage in the Food and Beverage Industry (Part 1 of 2)*, LEXOLOGY (July 17, 2019), <https://www.lexology.com/library/detail.aspx?g=8c5da957-d6c6-4c2b-a1b2-2d2821be6c48> [<https://perma.cc/P9QR-NCP2>].

193. Beckerman-Rodau, *supra* note 186, at 401.

194. *Supra* Section III.B.

195. *See generally* Beckerman-Rodau, *supra* note 186.

196. James Pooley, *Choosing Between Patents and Trade Secrets, a Discussion Worth Revisiting*, IP WATCHDOG (Nov. 1, 2017), <https://www.ipwatchdog.com/2017/11/01/patents-and-trade-secrets-revisited/id=89641/> [<https://perma.cc/8TDD-4GED>].

197. *Id.* A trade secret can be a combination of components in the public domain, but if the combination is itself known to the public, trade secret rights would not apply. *See, e.g.*, *Minn. Mining & Mfg. Co. v. Pribyl*, 259 F.3d 587, 595 (7th Cir. 2001).

ness's trade secret, rights for the information would no longer exist whereas patents give the holder exclusive rights.¹⁹⁸

Realistically, emerging businesses should not build either a trade secrets portfolio or a patent portfolio, but rather they should utilize both protections strategically.¹⁹⁹ There may be times when a patent is preferable. Patents mitigate IP risks in general whereas trade secrets are risky, especially if an industry has a critical need for an innovation.²⁰⁰ For example, if a business invents a cure for a critical need and chooses to rely on trade secrecy, another business could independently invent the same cure and patent it because the first inventor never disclosed the invention to the public.²⁰¹ This situation would prevent the first-inventing company from profiting off something it originally invented.²⁰²

When deciding if IP should be protected by trade secrecy or patent coverage, cannabis businesses should assess each protection's pros and cons, the company's goals, and the IP's value. Both forms of protection offer unique and valuable rights, and both can be valuable to a business's IP portfolio.

C. *First-Mover Advantage*

The first-mover advantage is a term that refers to the economic advantage that a business has when it is the first competitor to introduce a product or service to the market.²⁰³ Because it is first, the business can establish and maintain the product or service's brand recognition and overall market dominance without immediate competition.²⁰⁴ The first-mover advantage is not technically an IP term, but when businesses combine the strategy with trade secrets, businesses can create novel products and concepts in secret and then be the first to introduce them to market.²⁰⁵ The major disadvantage that a first mover has is that competitors can attempt to copy or improve upon the first-mover's practices. But if first movers keep their trade secrets and techniques in-house, they can mitigate the effects of intentional copying.²⁰⁶ Albeit simple in concept, businesses should consider the first-mover advantage as a supplemental strategy to their IP portfolio.

198. Pooley, *supra* note 196.

199. *Id.*

200. *Id.*

201. *Id.*

202. *Id.*

203. Tarver, *supra* note 165.

204. *Id.*

205. Andrew Beattie, *Understanding First Mover Advantage*, INVESTOPEDIA (Nov. 10, 2016), <https://www.investopedia.com/articles/investing/111016/understanding-first-mover-advantage.asp> [<https://perma.cc/5ZBH-XJVX>].

206. *Id.*

VI. CONCLUSION

Emerging cannabis businesses face significantly different hurdles compared to emerging businesses in other industries. Due to federal laws and administrative rulings, cannabis businesses cannot and do not enjoy the same patent and trademark advantages that emerging businesses in other industries enjoy.

These IP disadvantages mean that cannabis businesses must be mindful of their legal options and take advantage of these options in an effective and creative manner. Ideally, emerging cannabis businesses should utilize a combination of IP mechanisms to protect and build their brands as each confers different protections. When patenting is not a viable option, businesses can utilize ancillary and state trademarks, carefully protect trade secrets, and capitalize on branding techniques like the first-mover advantage. But given the cannabis industry's exponential growth, the federal government must remove the IP hurdles that emerging cannabis businesses face. Congress can and should act to faithfully execute its duty to "promote the Progress of Science and useful Arts"²⁰⁷ and grant cannabis businesses rights enjoyed by other industries. The most obvious measure Congress can take is legalizing the cultivation, transportation, sale, and use of marijuana on a federal level. Such action would likely create uniform regulation throughout the country whereas currently marijuana law is a patchwork of state law.

Federal legalization would quickly clear the questions over the legality of marijuana-related patents and would likely fill the gap of missing prior art. Legalization may entice black-market participants to seek patent protection, or more likely, simply disclose their technology, thereby placing it into the public domain. If these inventions and innovations are known to the public, they can qualify as prior art, preventing cannabis patentees from acquiring overly broad patent rights. Over time, cannabis businesses seeking patent protection would all be on an equal playing field, as the scope of patent rights would be more precise instead of overly broad as it likely is today.

Legalization would allow for more cannabis research opportunities within the United States, adding an influx of money to the economy while helping the United States gain a global foothold on the international cannabis industry as the industry is currently digging its foundation in foreign nations. Enticing research would also help the above-mentioned realm of cannabis patents by progressing technology to a point where a cannabis patent is undoubtedly novel and non-obvious.

Furthermore, legalization would bring black-market participants into the legal market. Such a move would allow for better policing of patents, trademarks, and trade secrets as legal participants are subject to increased regulations including inspections and disclosures. Such

207. U.S. CONST. art. I, § 8, cl. 8.

regulations also increase the tracking of goods from production to market, increasing policing capabilities while also increasing brand competition.

Although legalization could potentially cure many of the problems outlined in this Comment, such a drastic change is unlikely in the near future. Even if the federal government's policies begin to move away from marijuana prohibition, such legalization is unlikely to be instantaneous.

Until the federal government acts, those wishing to break into the cannabis industry should utilize a combination of IP techniques. Cannabis businesses should be cautious when weighing whether to pursue patent protection because patents would force businesses to disclose their innovation while leaving the door open to potential infringement or costly litigation. But patents can offer monopolistic rights and opportunities for venture capitalist funding.

In conjunction with patents, businesses should also rely on protections such as trade secrets and trademarks. Trade secrets give businesses the most flexibility as it is the one form of IP that creates absolute secrecy. In what has become an extremely competitive industry, absolute secrecy is valuable and necessary. Along with trade secrets, ancillary trademarks on products that are related to the cannabis business, but not marijuana, allow for brand recognition and consumer confidence in the brand. Trademarking ancillary products can box out competitors and disincentivize any willful copying.

Overall, cannabis businesses' IP options are limited but not impossible to implement. There are measures these businesses can take, and if done strategically, they can build successful, long-lasting businesses.

