

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

CARNEGIE INSTITUTION OF WASHINGTON,

M7D CORPORATION,

*Plaintiffs,*

v.

MAHENDRA BROTHERS EXPORTS PRIVATE LIMITED  
D/B/A MAHENDRA BROTHERS,

FENIX DIAMONDS LLC,

*Defendant.*

Civil Action No. \_\_\_\_\_

**COMPLAINT**

Plaintiffs Carnegie Institution of Washington and M7D Corporation (collectively, “Plaintiffs”) bring this action for patent infringement of U.S. Patent No. 6,858,078 and U.S. Patent No. RE41,189 (the “patents-in-suit”) against Defendants Mahendra Brothers Exports Private Limited and Fenix Diamonds LLC (collectively, “Defendants”).

**THE PARTIES**

**Plaintiffs—Carnegie Institution of Washington and M7D Corporation**

1. Plaintiff Carnegie Institution of Washington (“Carnegie”) is a Washington, D.C., corporation with its headquarters and principal place of business at 1530 P St. NW, Washington, DC 20005.

2. Carnegie is the assignee of the patents-in-suit.

3. Plaintiff M7D Corporation (“M7D”) is a Delaware corporation with its headquarters and principal place of business at 6700 Virginia Manor Road, Beltsville Maryland, 20705.

4. Carnegie and M7D are pioneers in the laboratory synthesis of high-clarity diamonds. Carnegie invented and patented technology using a chemical vapor deposition (“CVD”) process, specifically a microwave-plasma CVD (MPCVD) process, to control diamond growth from a diamond seed, atom by atom, to the highest purity and quality.



5. Carnegie also invented and patented an annealing process that improved the color of laboratory grown diamonds by removing the trapped nitrogen that otherwise caused brown discoloration.

6. M7D is the licensee of the patents-in-suit that possesses all rights to enforce the patents.

7. In 2017, M7D, then-named Washington Diamonds LP, successfully grew the largest known CVD diamond as well as the largest known round CVD diamond.

**Defendant—Mahendra Brothers Exports Private Limited**

8. Defendant Mahendra Brothers Exports Private Limited d/b/a Mahendra Brothers (“Mahendra”) describes itself as a “one-stop destination for diamonds. With a wide array of diamonds ranging from round, princess, marquise, taper and baguettes in all qualities from 300 per carat to 2 carats in VVS to I3 clarities, we are preferred partners to clients across the world.”<sup>1</sup>

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<sup>1</sup> <http://mahendrabrothers.com/about-us.html>; see also <http://mahendrabrothers.com/products-services.html>.

9. Mahendra further describes itself as having “vertical integration.” Upon information and belief, Mahendra both makes lab-grown diamonds and, alone or through its “Uni-Design” manufacturing division, also creates diamond jewelry.<sup>2</sup>

10. Mahendra states that it has “state-of-the-art manufacturing facilities.”<sup>3</sup> Upon information and belief, these manufacturing facilities include CVD and/or MPCVD lab-grown diamond facilities, and Mahendra manufactures, uses, offers for sale, sells, and imports such CVD/MPCVD diamonds.

11. Upon information and belief, Mahendra is an Indian corporation with its headquarters at 7015, 7th & 8th Floor, Bharat Diamond Bourse, G Block, Bandra-Kurla Complex, Bandra East, Mumbai, Maharashtra, India.<sup>4</sup>

12. Mahendra operates an interactive website which is accessible to and targets New York customers. From its main webpage, <http://mahendrabrothers.com/index.html>, Mahendra offers a link to its “live” inventory. From there, potential customers are directed to <http://emb.mahendrabrothers.com/>, which allows potential customers to register and view the “live” inventory.

13. Upon information and belief, Mahendra has knowledge of each of the patents-in-suit, including the subject matter and claims of the patents-in-suit. The existence of the patents-in-suit are well known in the lab-grown diamond industry, and in particular are well known by lab-grown diamond manufacturers, importers, and sellers, such as Mahendra.

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<sup>2</sup> <http://mahendrabrothers.com/infrastructure.html>

<sup>3</sup> <http://mahendrabrothers.com/products-services.html>

<sup>4</sup> <https://www.linkedin.com/company/mahendra-brothers---india/about/>

14. Upon information and belief, principals in Mahendra are aware of the existence of the patents-in-suit and that the manufacturing and annealing processes employed by Mahendra and/or its manufacturer(s) and distributor(s) fall within the scope of at least some of the claims in each of the patents-in-suit.

15. Upon information and belief, Mahendra, having knowledge of the patents-in-suit and knowledge that its respective CVD diamonds and/or annealed diamonds are made with processes that fall within the scope of at least some of the claims in the patents-in-suit, have, and are currently, manufacturing, importing, using, selling and/or offering for sale its CVD diamonds and annealed diamonds.

**Defendant—Fenix Diamonds LLC**

16. Defendant Fenix Diamonds LLC (“Fenix”) describes itself as “leading the diamond revolution, a rising star in the lab-grown sector, combining decades of diamantaire experience with production capabilities as a grower and global distributor.”<sup>5</sup>

17. Fenix manufactures lab-grown diamonds using “using the CVD method, or chemical vapor deposition. In this process, a hydrocarbon gas mixture activates the carbon-atom in a diamond-seed, recreating Earth's forces and conditions to grow a diamond in a state-of-the-art lab.”<sup>6</sup>

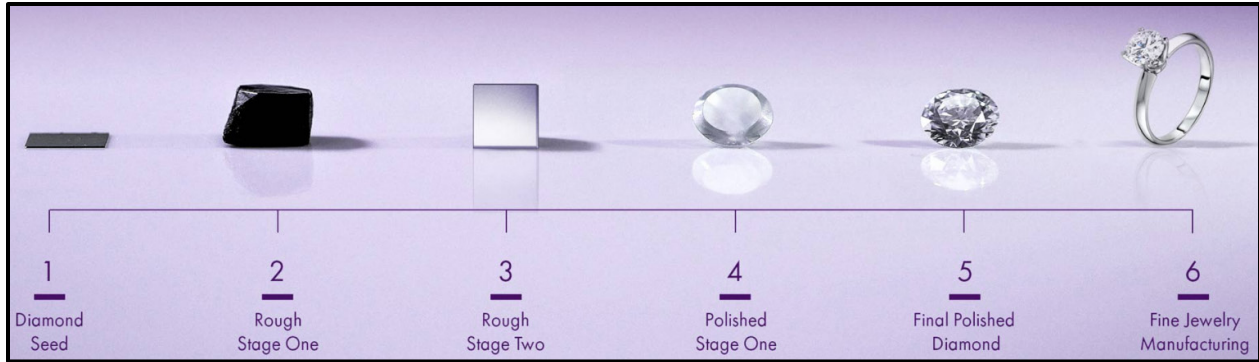
18. Fenix’s website shows its process and pipeline as beginning with a diamond seed, development into a dark and then clear rough diamond, polished diamond, and finally “fine jewelry manufacturing.”<sup>7</sup>

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<sup>5</sup> <https://fenixdiamonds.com/about>

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*



19. Fenix’s diamond-growing laboratories are owned by Fenix.<sup>8</sup>

20. Fenix’s lab-grown CVD diamonds are also cut in Fenix factories.<sup>9</sup>

21. Fenix offers a diamond “supply” “[p]ipeline” with “full transparency.”<sup>10</sup>

22. In addition, Fenix offers “marketing and brand support.” Upon information and belief these include wholesalers, distributors, and other third-party purchasers.<sup>11</sup>

23. Fenix offers an interactive website by which registered, potential customers may shop for jewelry and diamonds.<sup>12</sup>

24. Fenix is a New York corporation with a headquarters and principal place of business in New York, New York.

25. Fenix’s LinkedIn states that its “Primary” “Headquarters” location is at 592 5th Avenue, Suite 1103, 11th Floor, New York, New York 10036 (the “Fenix NYC Location”).<sup>13,14</sup>

26. Upon information and belief, Fenix is owned by, a subsidiary of, and/or an affiliate of Mahendra.

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<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> <https://fenixdiamonds.com/choose-option>

<sup>13</sup> <https://fenixdiamonds.com/contact>

<sup>14</sup> <https://www.linkedin.com/company/fenix-diamonds/about/>

27. Upon information and belief, Fenix has knowledge of each of the patents-in-suit, including the subject matter and claims of the patents-in-suit. The existence of the patents-in-suit are well known in the lab-grown diamond industry, and in particular are well known by lab-grown diamond manufacturers, importers, and sellers, such as Fenix. Additionally, Fenix has knowledge of the patents-in-suit through its relationship with Mahendra.

28. Upon information and belief, principals in Fenix are aware of the existence of the patents-in-suit and that the manufacturing and annealing processes employed by Fenix and/or its manufacturer(s) and distributor(s) fall within the scope of at least some of the claims in each of the patents-in-suit.

29. Upon information and belief, Fenix, having knowledge of the patents-in-suit and knowledge that its respective CVD diamonds and/or annealed diamonds are made with processes that fall within the scope of at least some of the claims in the patents-in-suit, have, and are currently, manufacturing, importing, using, selling and/or offering for sale its CVD diamonds and annealed diamonds.

### **JURISDICTION AND VENUE**

30. Plaintiffs incorporate and reallege paragraphs 1–29, above.

31. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) and the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

32. Plaintiffs have standing to bring this patent infringement action as the assignee and licensee of the patents-in-suit with all rights to enforce the patents.

#### **Personal Jurisdiction—Mahendra**

33. This Court has personal jurisdiction over Mahendra under at least the federal long-arm statute, Rule 4(k)(2) of the Federal Rules of Civil Procedure, at least because this action arises

under federal patent law and the federal declaratory judgment act; upon information and belief Mahendra has offered for sale or sold infringing CVD diamonds to United States customers; Mahendra's acts of infringement have caused tortious injury to Plaintiffs headquartered, incorporated, and operating in the United States; and because the exercise of personal jurisdiction over Mahendra would be reasonable, fair, and comport with due process.

34. Upon information and belief, Mahendra also directly or indirectly participates in the stream of commerce that results in products, including the infringing Mahendra CVD diamonds, being used, offered for sale, or sold in, and/or imported into, the United States. Upon information and belief, Mahendra derives revenues from its infringing acts occurring within the United States.

35. Upon information and belief, Mahendra has also induced acts of patent infringement by others, and/or has contributed to patent infringement by others in the United States. For example, upon information and belief, Mahendra offers for sale and sells its infringing CVD diamonds to third-parties such as retailers for their own infringing use, offer for sale, sale, or importation.

36. Upon further information and belief, Mahendra actively solicits purchases and sales from U.S. customers and does so with the knowledge of Plaintiffs' patents. For example, Mahendra's webpage <http://mahendrabrothers.com/index.html> hyperlinks to Mahendra's "live" inventory at <http://emb.mahendrabrothers.com/>, with New York City being one of the six locations listed on the landing page. United States customers may actively browse Mahendra's "live" diamond inventory.

37. The United States' exercise of personal jurisdiction over Mahendra is reasonable and consistent with due process at least because Mahendra has, upon information and belief,

manufactured and used CVD diamonds, offered for sale and sold infringing CVD diamonds to United States retailers and other customers, and imported infringing diamonds into the United States; Mahendra has infringed Plaintiff's United States patents; and Mahendra has caused tortious injury to Plaintiffs who are incorporated, headquartered, and operating in the United States.

**Personal Jurisdiction—Fenix**

38. New York has general personal jurisdiction over Fenix because Fenix incorporated in New York State. Additionally, New York has general jurisdiction over Fenix at least because Fenix has its headquarters and principal place of business in New York State, leases or owns real property in New York State, lists its address for service of process in New York State, employs workers in New York State, and transacts business in New York State.

39. New York also has personal jurisdiction over Fenix because Fenix website is interactive and solicits inquiries from users, including users in New York State.<sup>15</sup>

40. This Court also has specific personal jurisdiction over Fenix. Upon information and belief, Fenix regularly conducts business and has committed acts of patent infringement in this Judicial District, New York State, and elsewhere in the United States. New York has specific personal jurisdiction over Fenix at least because Fenix makes, uses, offers to sell, sells, and/or imports infringing diamonds from/to the Fenix NYC Location.

41. Upon information and belief, Fenix's website, promotional materials, advertisements, and other information encourage others, such as third-party diamond retailers and jewelry stores, to sell the infringing diamond products. Upon information and belief, Fenix's website, promotional materials, advertisements, and other information target third-party diamond retailers, jewelry stores, and other entities in New York State and this Judicial District.

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<sup>15</sup> <https://fenixdiamonds.com/choose-option>



42. Upon information and belief, Fenix, directly or indirectly, participates in the stream of commerce that results in products, including the infringing diamonds, being made, used, offered for sale, and/or sold in New York State and/or imported into the United States to New York State, including through Fenix's regular and established places of business and/or authorized dealers and sales agents in New York State and this Judicial District. Upon information and belief, Fenix derives revenues from its infringing acts occurring within New York State and in this Judicial District.

43. Upon information and belief, Fenix has also induced acts of patent infringement by others, and/or has contributed to patent infringement by others in this Judicial District, New York State, and elsewhere in the United States. For example, upon information and belief, Fenix offers for sale and sells its CVD diamonds and/or annealed diamonds to New York State third-parties such as retailers for their own infringing use, offer for sale, or sale. Upon further information and belief, Fenix actively solicits purchases and sales from such New York State retailers, partners with such retailers in advertising, and does so with the knowledge of Plaintiffs' patents.

44. New York's exercise of personal jurisdiction over Fenix is reasonable and consistent with due process at least because Fenix has, upon information and belief, is incorporated in New York State, headquartered in New York State, purposely conducted ongoing and continuous business activities in New York State, owns or leases real property in New York State, employs workers in New York State, manufactures and uses CVD diamonds and/or annealed diamonds in New York State, sells and offers for sale CVD diamonds and/or annealed diamonds to customers located or domiciled in New York State, sells and offers to sell CVD diamonds and/or annealed diamonds to retailers located in New York State, targets retailers in New York State and

provides them with marketing and other support, and imports CVD diamonds and/or annealed diamonds into New York State.

**Venue—Mahendra**

45. Venue is proper in this judicial district under 28 U.S.C. § 1391(c)(3) because, upon information and belief, Mahendra is “not resident in the United States [and therefore] may be sued in any judicial district.”

**Venue—Fenix**

46. Patent venue is proper in this judicial district under 28 U.S.C. § 1400(b) because Fenix is incorporated in New York State and resides at the Fenix NYC Location, and therefore Fenix resides in the Southern District of New York.

47. Patent venue is also proper in this judicial district under 28 U.S.C. § 1400(b) because the Fenix NYC Location is a regular and established place of business and Fenix has committed acts of patent infringement including, upon information and belief, manufacturing, using, selling, offering for sale, and/or importing CVD diamonds and/or annealed diamonds from/to its Fenix NYC Location, which is located in this Judicial District.

**THE PATENTS-IN-SUIT**

48. On February 22, 2005, the United States Patent Office duly and legally issued U.S. Patent No. 6,858,078 (“the ’078 Patent”), titled “Apparatus and Method of Diamond Production.” A true and correct copy of the ’078 Patent is attached as Exhibit A.

49. The ’078 Patent was issued based on Application No. 10/288,499, filed November 6, 2002.

50. The ’078 Patent was and is assigned to the Carnegie Institution of Washington.

51. M7D is the licensee of the '078 Patent that possesses all rights to enforce the '078 Patent.

52. The '078 Patent teaches a method for producing MPCVD diamonds using a faster grown rate, moderate pressures within the deposition chamber, and with a particular temperature gradient to be maintained during diamond growth.

53. The '078 Patent includes 64 claims. Independent claim 1 of the '078 Patent recites a method for diamond production by controlling the diamond's growth surface gradient temperature to within 20°C and growing a single-crystal diamond by MPCVD in a deposition chamber with an atmospheric pressure of at least 130 torr. Independent claim 12 similarly recites a method for diamond production, but with a growth temperature of 900–1400°C.

54. On April 6, 2010, the United States Patent Office duly and legally reissued U.S. Reissue Patent No. RE41,189 (“the '189 Patent”), titled “Method of Making Enhanced CVD Diamond.” A true and correct copy of the '189 Patent is attached as Exhibit B.

55. The '189 Patent is a reissue of U.S. Patent No. 6,811,610, filed on June 3, 2002 as Application No. 10/161,266 and issued on November 2, 2004.

56. The '189 Patent was and is assigned to the Carnegie Institution of Washington.

57. M7D is the licensee of the '189 Patent that possesses all rights to enforce the '189 Patent.

58. The '189 Patent teaches the benefits of a method for improving the optical properties of already-grown chemical vapor deposition (CVD) diamonds by heat treating single crystal CVD diamond at high temperature and pressure, resulting in increased clarity.

59. The '189 Patent also teaches the benefits of a method to form more perfect CVD diamonds with fewer defects.

60. The '189 Patent includes 7 claims. Independent claim 1 of the '189 Patent recites a method to improve the optical clarity of a single crystal CVD diamond by raising it to a set temperature of at least 1500°C and a pressure of at least 4.0 GPA outside of the diamond stable phase.

### **BACKGROUND ON NATURAL AND LAB-GROWN DIAMONDS**

61. A diamond is a solid form of carbon with the carbon atoms arranged in a crystal structure called diamond cubic. When formed by the Earth, the process requires temperatures over 2,000 degrees Fahrenheit and pressure in excess of 725,000 pounds per square inch.

62. Diamonds may also be created under certain laboratory conditions. Unlike diamond substitutes such as cubic zirconia, “grown” or “synthetic” diamonds are chemically, physically, and optically identical to “mined” diamonds. In fact, the Federal Trade Commission has recently changed the definition of the term “diamond” to remove the term “natural”, acknowledging that lab grown diamonds have the same physical, chemical and optical qualities as diamonds mined from the earth.<sup>16</sup>

63. One method to produce lab-grown diamonds is chemical vapor deposition (CVD). CVD starts with a diamond seed. A mixture of hydrocarbon gases is fed into a chamber under low pressure and energized under conditions for diamond growth. The CVD process is used to control the diamond growth and achieve a high purity.

64. Multiple techniques exist within CVD. Microwave-plasma CVD (MPCVD) can create high-quality diamond growth by, among other things, preventing electrode contamination as it uses no electrodes.

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<sup>16</sup> <https://www.ftc.gov/public-statements/2018/07/statement-basis-purpose-final-revisions-jewelry-guides>, see page 114.

65. CVD diamonds, like all diamonds, are sorted into either Type I (with nitrogen as the main impurity) and Type II (with no measurable nitrogen impurities). Within Type II, diamonds are further sorted into Type IIa and Type IIb. Type IIa have no measurable nitrogen impurities, but imperfections can impart color (yellow, brown, orange, pink, red, or purple) to the gem. CVD diamonds are typically Type IIa.

#### **MAHENDRA'S CVD DIAMOND PRODUCTS**

66. Upon information and belief, Mahendra, either directly or through intermediaries, makes, uses, offers to sell, sells, and/or imports lab-grown diamonds in or to the United States.

67. Mahendra describes itself as “craft[ing] and cut[ting]” diamonds and also manufacturing jewelry.<sup>17</sup>

68. Upon information and belief, Mahendra manufactures diamonds using a CVD method.

69. Upon information and belief, Mahendra's CVD method is, more specifically, MPCVD.

70. Mahendra also describes itself as having “successful vertical integration.”<sup>18</sup>

71. Upon information and belief, Mahendra is involved in the manufacture of infringing CVD diamonds, the use of infringing CVD diamonds in applications such as jewelry, and the offer for sale, sale, and importation of loose diamonds and jewelry using infringing CVD diamonds.

72. Upon information and belief, Mahendra markets a variety of polished loose diamonds as well as finished jewelry. Upon information and belief, these are available to retailers and end-customers and through at least <http://emb.mahendrabrothers.com/>.

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<sup>17</sup> <http://mahendrabrothers.com/infrastructure.html>

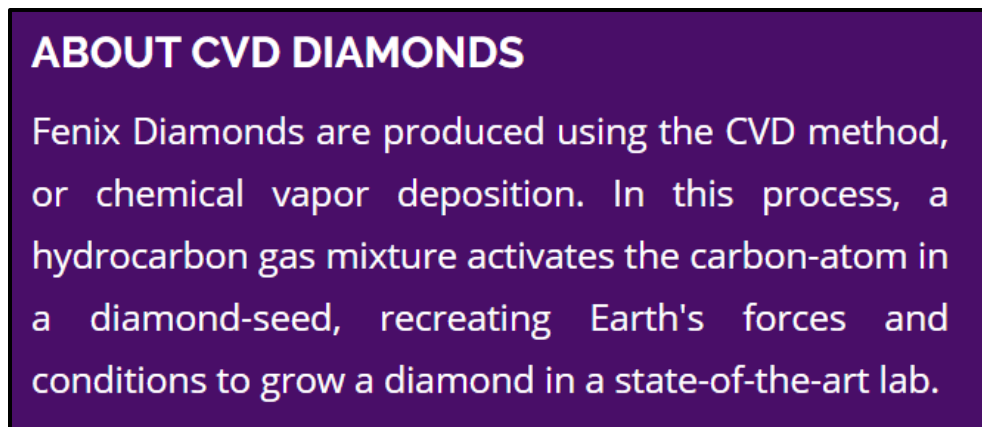
<sup>18</sup> *Id.*

73. Upon information and belief, Mahendra was made aware of the patents-in-suit. For example, an M7D customer, Richline, specifically informed Mahendra of the patents-in-suit.

### **FENIX'S CVD DIAMOND PRODUCTS**

74. Upon information and belief, Fenix, either directly or through intermediaries, makes, uses, offers to sell, sells, and/or imports lab-grown diamonds in or to the United States.

75. Fenix's diamonds are produced using chemical vapor deposition (CVD), which involves "a hydrocarbon gas mixture activat[ing] the carbon-atom in a diamond seed, recreating Earth's forces and conditions to grow a diamond in a state-of-the-art lab."<sup>19</sup>



76. Fenix's diamond-growing process is depicted below and begins with a "diamond seed."<sup>20</sup>



<sup>19</sup> <https://fenixdiamonds.com/about>

<sup>20</sup> *Id.*

77. Upon information and belief, Fenix's CVD process requires heightened atmospheric pressure.

78. Upon information and belief, Fenix's CVD process requires heightened temperatures, including temperatures between 900 and 1400°C.

79. Upon information and belief, Fenix's CVD process requires maintaining a growth surface temperature gradient to within 20°C.

80. Upon information and belief, Fenix anneals its lab-grown diamonds.

81. Fenix operates a lab-grown diamond "factory" and distributes its lab-grown CVD diamonds to "jewelry store[s] near you."<sup>21</sup>

82. Fenix's offers lab-grown diamonds.<sup>22</sup>

83. Fenix offers jewelry containing Fenix's lab-grown diamonds.<sup>23</sup>

84. Upon information and belief, Fenix's lab-grown diamonds are created with the knowledge and/or direction of Mahendra.

85. Upon information and belief, Fenix's lab-grown diamonds are created with the knowledge and/or direction of one or more principals, directors, and/or owners of Mahendra.

**COUNT ONE: INFRINGEMENT OF THE '078 PATENT**

86. Plaintiffs incorporate and reallege paragraphs 1–85, above.

87. Plaintiffs have not licensed or otherwise authorized Fenix or Mahendra to make, use, offer for sale, or sell within the United States, or import into the United States, any product(s) that embody the inventions of the '078 Patent.

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<sup>21</sup> *Id.*

<sup>22</sup> <https://fenixdiamonds.com/choose-option>

<sup>23</sup> *Id.*

**Direct Infringement**

88. Each Defendant has directly infringed and continues to directly infringe one or more claims of the '078 Patent, including at least independent claims 1 and 12, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offer to sell, and/or selling within the United States, or importing into the United States, products that satisfy each and every limitation of one or more claims of the '078 Patent (the “infringing CVD diamonds” or the “infringing CVD diamond products”).

89. Upon information and belief, Defendants’ infringing CVD diamonds are grown using a diamond seed, as recited in claims 1 and 12 of the '078 patent (which requires microwave plasma chemical vapor deposition (MPCVD) on the growth surface of the diamond). For example, Fenix’s website depicts a “CVD” manufacturing process beginning with a “diamond seed.”<sup>24</sup>

90. Upon information and belief, each Defendant makes the infringing CVD diamonds by a process requiring maintaining the growth surface temperature gradient to within 20°C, as recited in independent claims 1 and 12 of the '078 Patent.

91. Upon information and belief, each Defendant makes the infringing CVD diamonds by a process requiring an atmospheric pressure of at least 130 torr, as recited in independent claim 1 of the '078 Patent.

92. Upon information and belief, each Defendant makes the infringing CVD diamonds by a process requiring temperatures within about 900–1400°C, as recited in independent claim 12 of the '078 Patent.

93. Upon information and belief, each Defendant uses the infringing CVD diamonds to create additional items. For example, Mahendra, directly and/or through intermediaries, creates

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<sup>24</sup> <https://fenixdiamonds.com/about>



jewelry using its infringing CVD diamonds.<sup>25</sup> Fenix, directly and/or through intermediaries, also creates and sells jewelry using its infringing CVD diamonds.<sup>26</sup>

94. Upon information and belief, each Defendant offers for sale and sell the infringing CVD diamonds—including loose diamonds and diamond jewelry—to retailers, customers, and other third-parties in the United States.

95. Upon information and belief, each Defendant imports infringing CVD diamonds into New York State and the United States for purposes of using, offering for sale, and selling the infringing CVD diamonds.

96. Upon information and belief, Mahendra manufactures, uses, offers for sale, sells, and/or imports its infringing CVD diamonds for use, offer for sale, and sale by others, including Fenix.

**Induced Infringement**

97. Each Defendant has indirectly infringed and continues to indirectly infringe one or more claims of the '078 Patent, including at least independent claims 1 and 12, by knowingly and intentionally inducing others, including prospective and actual customers and retailers to directly infringe, literally or under the doctrine of equivalents, by using, offering to sell, and/or selling within the United States, and/or importing into the United States, products made by the infringing method, specifically Fenix's and/or Mahendra's infringing CVD diamonds.

98. Upon information and belief, each Defendant knowingly and intentionally induced infringement of one or more claims of the '078 Patent in violation of 35 U.S.C. § 271(b), including at least independent claims 1 and 12, by taking active steps, directly and/or through intermediaries, to encourage others, including customers and retailers, to use, offer to sell, and/or sell within the

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<sup>25</sup> *Id.*

<sup>26</sup> <https://fenixdiamonds.com/choose-option>

United States, and/or import into the United States, Defendants' infringing CVD diamond products.

99. Upon information and belief, each Defendant had the specific intent to cause third parties (such as retailers) to use, offer to sell, and/or sell Defendants' infringing CVD diamond products to others (such as customers) in an infringing manner. Upon information and belief, Defendants' steps include, among other things, making, offering for sale, selling, and importing Defendants' infringing CVD diamond products into the United States; marketing, offering for sale, and selling Defendants' infringing CVD diamond products for sale to retailers in the United States; marketing, offering for sale, and selling Defendants' infringing CVD diamond products for sale to customers and other end-users in the United States; and directly and indirectly promoting retailers' and others' use, sale, and offers for sale of Defendants' infringing CVD diamond products.

100. Upon information and belief, each of Mahendra and Fenix are performing these steps with actual knowledge of the '078 Patent and with knowledge that the induced acts constitute infringement, at least as of the date of the complaint filed against it in this action.

101. Upon information and belief, if Fenix did not have actual knowledge of the '078 Patent, Fenix's lack of knowledge of the '078 Patent was willful. Upon information and belief, Fenix did become aware, or should have become aware, of the '078 Patent.

102. Upon information and belief, if Mahendra did not have actual knowledge of the '078 Patent, Mahendra's lack of knowledge of the '078 Patent was willful. Upon information and belief, Mahendra did become aware, or should have become aware, of the '078 Patent.

103. Upon information and belief, each Defendant is aware that the normal and customary use of Defendants' infringing CVD diamond products by Defendants' customers and retailers would infringe the '078 Patent.

104. Each Defendant's inducement is ongoing.

**Willful Infringement**

105. Upon information and belief, each of Mahendra and Fenix has knowledge of the '078 Patent and knowledge that their CVD diamonds and/or annealed diamonds infringe at least one claim of the '078 Patent. Notwithstanding their knowledge (or willful blindness thereto), Mahendra and Fenix have continued to make, have made, import, use, offer for sale, and sell their infringing CVD diamonds and/or annealed diamonds in the United States.

106. Each Defendant has willfully infringed, and continue to willfully infringe, one or more claims of the '078 Patent.

107. As a direct and proximate cause of the direct, induced and willful infringement by each Defendant, Plaintiffs have been and will continue to be irreparably harmed in their business and property rights unless Defendants are enjoined from their infringing activity in the United States.

**COUNT TWO: INFRINGEMENT OF THE '189 PATENT**

108. Plaintiffs incorporate and reallege paragraphs 1–107, above.

109. Plaintiffs have not licensed or otherwise authorized Fenix or Mahendra to make, use, offer for sale, or sell within the United States, or import into the United States, any product(s) that embody the inventions of the '189 Patent.

**Direct Infringement**

110. Each Defendant has directly infringed and continues to directly infringe one or more claims of the '189 Patent, including at least independent claim 1, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offer to sell, and/or selling within the United States, or importing into the United States, the

infringing CVD diamonds and/or the infringing CVD diamond products, each of which satisfies each and every limitation of one or more claims of the '189 Patent.

111. Upon information and belief, each Defendant uses CVD/MPCVD technology to grow diamonds. Upon information and belief, such technology requires a diamond “seed” as recited in claim 1 of the '189 patent (requiring a “single crystal CVD diamond”).

112. Upon information and belief, Defendants’ infringing diamonds are Type IIa.

113. CVD diamonds, without additional processing, are unlikely to be Type IIa. Instead, the optical clarity of the CVD-grown diamond is improved by another method.

114. Upon information and belief, each of Mahendra and Fenix manufactures Type IIa diamonds by a process requiring a set temperature of at least 1500°C, as recited in claim 1 of the '189 Patent.

115. Upon information and belief, each of Mahendra and Fenix manufactures Type IIa diamonds by a process requiring a pressure, as recited in claim 1 of the '189 Patent.

116. Upon information and belief, each Defendant uses the infringing CVD diamonds to create additional items. For example, each Defendant, directly and/or through intermediaries, creates jewelry using its infringing CVD diamonds.<sup>27,28</sup>

117. Upon information and belief, each Defendant offers for sale and sells the infringing CVD diamonds, including loose diamonds and diamond jewelry, to retailers, customers, and other third-parties.

118. Upon information and belief, Mahendra offers for sale and sells the infringing CVD diamonds to Fenix.

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<sup>27</sup> *Id.*

<sup>28</sup> <https://fenixdiamonds.com/choose-option>

119. Upon information and belief, each of Mahendra and Fenix import infringing CVD diamonds into New York State and the United States for purposes of using, offering for sale, and selling the infringing CVD diamonds.

**Induced Infringement**

120. Each Defendant has indirectly infringed and continues to indirectly infringe one or more claims of the '189 Patent, including at least independent claim 1, by knowingly and intentionally inducing others, including prospective and actual customers and retailers to directly infringe, literally or under the doctrine of equivalents, by using, offering to sell, and/or selling within the United States, and/or importing into the United States, products made by the infringing method, specifically Fenix's and/or Mahendra's infringing CVD diamonds.

121. Upon information and belief, each Defendant knowingly and intentionally induced infringement of one or more claims of the '189 Patent in violation of 35 U.S.C. § 271(b), including at least independent claim 1, by taking active steps, directly and/or through intermediaries, to encourage others, including customers and retailers, to use, offer to sell, and/or sell within the United States, and/or import into the United States, Defendants' infringing CVD diamond products.

122. Upon information and belief, each Defendant had the specific intent to cause third parties (such as retailers) to use, offer to sell, and/or sell Defendants' infringing CVD diamond products to others (such as customers) in an infringing manner. Upon information and belief, Defendants' steps include, among other things, making, offering for sale, selling, and importing Defendants' infringing CVD diamond products to the United States; marketing, offering for sale, and selling Defendants' diamond products to retailers in the United States; marketing, offering for sale, and selling Defendants' infringing CVD diamond products for sale to customers and other

end-users; and providing educational and marketing support in order to increase indirect users, offers for sale, and sales of Defendants' diamond products including in the United States.

123. Upon information and belief, Mahendra and Fenix are performing these steps with actual knowledge of the '189 Patent and with knowledge that the induced acts constitute infringement, at least as of the date of the complaint filed against it in this action.

124. Upon information and belief, if each Defendant did not have actual knowledge of the '189 Patent, Defendants' lack of knowledge of the '189 Patent was willful. Upon information and belief, each Defendant did become aware, or should have become aware, of the '189 Patent.

125. Upon information and belief, Defendants are aware that the normal and customary use of Defendants' infringing CVD diamond products by Defendants' customers and retailers would infringe the '189 Patent.

126. Upon information and belief, if Defendants did not have actual knowledge of the '189 Patent, Defendants' lack of knowledge of the '189 Patent was willful.

127. Upon information and belief, each Defendant is aware that the normal and customary use of Defendants' infringing CVD diamond products by Defendants' customers and retailers would infringe the '189 Patent.

128. Each Defendant's inducement is ongoing.

**Willful Infringement**

129. Upon information and belief, Mahendra and Fenix have knowledge of the '189 Patent and knowledge that their CVD diamonds and/or annealed diamonds infringe at least one claim of the '189 Patent. Notwithstanding their knowledge (or willful blindness thereto), Mahendra and Fenix have continued to make, have made, import, use, offer for sale, and sell their infringing CVD diamonds and/or annealed diamonds in the United States.

130. Each Defendant has willfully infringed, and continue to willfully infringe, one or more claims of the '189 Patent.

131. As a direct and proximate cause of the direct, induced and willful infringement by the Defendants, Plaintiffs have been and will continue to be irreparably harmed in their business and property rights unless Defendants are enjoined from their infringing activity in the United States.

**DEMAND FOR JURY TRIAL**

Plaintiffs hereby demands a jury for all issues so triable.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs pray for relief against Defendants as follows:

- a. Entry of judgment declaring Mahendra and/or Fenix have directly and/or indirectly infringed one or more claims of the '078 Patent;
- b. Entry of judgment declaring Fenix's and/or Mahendra's infringement of the '078 Patent to be willful;
- c. Entry of judgment declaring Mahendra and/or Fenix have directly and/or indirectly infringed one or more claims of the '189 Patent;
- d. Entry of judgment declaring Fenix's and/or Mahendra's infringement of the '189 Patent to be willful;
- e. Entry of an order pursuant to 35 U.S.C. § 283 permanently enjoining Defendants, their officers, agents, servants, employees, attorneys, instrumentalities, and those persons in privity, active concert, or participation with them, from further acts of direct and/or indirect infringement of the '078 and '189 Patents including the manufacture, use, sale, offer for sale, and importation of the infringing products;

f. A full accounting for and an award of damages to Plaintiffs for Defendants' infringement of the '078 and '189 Patents, but in no event less than a reasonable royalty, including enhanced damages pursuant to 35 U.S.C. § 284, together with pre- and post-judgment interest;

g. Entry of judgment declaring that this case is exceptional and awarding Plaintiffs their costs and reasonable attorney fees under 35 U.S.C. § 285; and

h. Such other and further relief as the Court deems just and proper.



Dated: January 9, 2020

Respectfully submitted,

**PERKINS COIE LLP**

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