

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MINNESOTA**

NANOFIRE LLC,

Plaintiff,

v.

FIREAWAY INC.,

Defendant.

Case No.: 23-443

JURY TRIAL DEMANDED

COMPLAINT

Plaintiff NanoFire LLC (“NanoFire” or “Plaintiff”) brings this action for patent infringement against Defendant Fireaway Inc. (“Fireaway” or “Defendant”) and alleges as follows:

NATURE OF THE ACTION

1. NanoFire fire suppression technology is a patented chemical compound, owned by Plaintiff NanoFire, invented as a solution to the widespread shortcomings of common fire extinguishers. NanoFire’s technology interrupts the chemical reaction that sustains fire, resulting in the successful production of revolutionary fire extinguishing products. NanoFire is classified as a clean agent and is one of the safest fire-extinguishing methods available and its specific chemical composition is non-toxic to humans. NanoFire technology also has an Ozone Depletion Potential of 0 as well as a Global Warming Potential of 0. NanoFire fire suppression technology can be integrated into countless numbers of consumer and industrial

fire safety products. NanoFire’s solution can revolutionize how lithium battery fires are addressed, saving lives and protecting property. NanoFire fire suppression technology has even been found to be effective at extinguishing lithium battery fires in electric vehicles.

2. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1, *et seq.*, resulting from Defendant’s unauthorized manufacture of, sale, and offers to sell aerosol fire extinguishers, including the Fireaway StatX 2500E Fire Suppression Aerosol Generator, in the United States, which infringes at least claims 1 and 13 of U.S. Patent No. 9,199,108 (the “108 Patent”), claim 1 of U.S. Patent No. 8,865,014 (the “014 Patent”), and claims 1 and 7 of U.S. Patent No. 9,248,328 (the “328 Patent”). These patents are owned by NanoFire.

THE PARTIES

3. Plaintiff NanoFire is a corporation organized under the laws of the State of New York and has a primary place of business at 30 Skyline Drive, Plainview, NY 11803.

4. On information and belief, Defendant Fireaway is a corporation organized under the laws of Minnesota and has a primary place of business at 5852 Baker Road, Minnetonka, MN 55345.

5. On information and belief, Defendant owns and operates the website at www.statx.com.

6. On information and belief, Defendant is in the business of manufacturing, selling, offering for sale, distributing and exporting fire extinguishers as well as other products for fire suppression use.

7. On information and belief, Defendant's products are sold to its consumers through sales representatives located throughout the United States and online.

JURISDICTION AND VENUE

8. This is an action arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.* Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

9. This Court may properly exercise personal jurisdiction over Fireaway because, on information and belief, Fireaway is incorporated in Minnesota and its headquarters is located in Minnetonka, Minnesota. On information and belief, Fireaway also manufactures products that have been and are used, offered for sale, sold, and purchased in Minnesota.

10. Under 28 U.S.C. §§ 1391 and 1400, venue is proper in this judicial district at least because Fireaway is incorporated in and has a principal place of business in this district, and, therefore, "resides" in this district.

THE PATENTS-IN-SUIT

11. U.S. Patent No. 9,199,108, entitled "Fire Extinguishing Composition Generating Fire Extinguishing Substance Through High-Temperature Decomposition," was duly and legally issued by the United States Patent and Trademark Office (USPTO) on December 1, 2015. A copy of U.S. Patent No. 9,199,108 is attached as Exhibit 1.

12. U.S. Patent No. 8,865,014, entitled "Fire Extinguishing Composition Generating Fire Extinguishing Substance By High Temperature Sublimation," was duly and

legally issued by the USPTO on October 21, 2014. A copy of U.S. Patent No. 8,865,014 is attached as Exhibit 2.

13. U.S. Patent No. 9,248,328, entitled “Explosion-Venting Method For Aerosol Suppression Apparatus,” was duly and legally issued by the USPTO on February 2, 2016. A copy of U.S. Patent No. 9,248,328 is attached as Exhibit 3.

14. NanoFire is the lawful owner by assignee of all right, title, and interest in and to U.S. Patent Nos. 9,199,108, 8,865,014, and 9,248,328.

15. Fireaway was put on notice of NanoFire’s patent rights and the existence of the 108, 014, and 328 Patents since at least November 15, 2021. Accordingly, NanoFire is a willful infringer of the 108, 014, and 328 Patents.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 9,199,108

16. The preceding paragraphs are incorporated by reference as if fully restated herein.

17. Fireaway manufactures, sells, and offers to sell aerosol fire extinguishers with fire extinguishing composition generating a fire extinguishing substance through high temperature decomposition, including at least the StatX 2500E fire suppression aerosol generator (the “StatX 2500E” or “Infringing Product”), through sales representatives located throughout the United States and online.

18. Attached hereto as Exhibit 4 is a true and correct screenshot of a portion of Fireaway’s website which allows customers to find a sales representative based on their location.

19. Attached hereto as Exhibit 5 are true and correct images of Fireaway's StatX 2500E fire suppression aerosol generator.

20. By manufacturing, selling, and offering to sell the StatX 2500E, Fireaway has infringed and is continuing to infringe at least claims 1 and 13 of the 108 Patent.

21. Claim 1 of the 108 Patent recites:

The Invention claimed is:

1. A fire extinguishing device wherein the fire extinguishing device comprising: a nozzle; and a composition comprising a pyrotechnic agent and a fire extinguishing composition placed within the fire extinguishing device; the fire extinguishing composition is arranged above the pyrotechnic agent within the fire extinguishing device closer to the nozzle of the fire extinguishing device, the fire extinguishing composition generates fire extinguishing substance by high-temperature decomposition, wherein the fire extinguishing composition comprises: a fire extinguishing material which can be decomposed to release a fire extinguishing substance with fire extinguishing properties during a heating process, the content of the fire extinguishing material being at least 80 wt %; wherein the pyrotechnic agent is adopted as a heat source and a power source in a process of fire extinguishing, the pyrotechnic agent is a pyrotechnic aerosol fire extinguishing agent, and wherein fire extinguishing is achieved by: igniting the pyrotechnic agent, generating a large quantity of fire extinguishing substance from the fire extinguishing composition in the use of high temperature produced by burning pyrotechnic agent, and the fire extinguishing substance spraying out together with the pyrotechnic agent.

22. The StatX 2500E embodies every element of claim 1 of the 108 Patent, literally or under the doctrine of equivalents.

23. The StatX 2500E is a fire extinguishing device.

24. The StatX 2500E has a nozzle.

25. Inside the StatX 2500E are a pyrotechnic agent and a fire extinguishing composition.

26. The fire extinguishing composition of the StatX 2500E is arranged above the pyrotechnic agent within the fire extinguishing device closer to the nozzle.

27. The fire extinguishing composition of the StatX 2500E generates a fire extinguishing substance by high-temperature decomposition.

28. The fire extinguishing composition of the StatX 2500E is a fire extinguishing material which can be decomposed to release a fire extinguishing substance with fire extinguishing properties during a heating process.

29. The content of the fire extinguishing material in the StatX 2500E has a weight percentage of at least 80.

30. The pyrotechnic agent in the StatX 2500E is adopted as a heat source and a power source in a process of fire extinguishing.

31. The pyrotechnic agent in the StatX 2500E is a pyrotechnic aerosol fire extinguishing agent.

32. The StatX 2500E achieves fire extinguishing by igniting the pyrotechnic agent, generating a large quantity of fire extinguishing substance from the fire extinguishing composition in the use of high temperature produced by burning the pyrotechnic agent, and the fire extinguishing substance spraying out together with the pyrotechnic agent.

33. The Infringing Product embodies all elements of claim 1 of the 108 Patent, literally or under the doctrine of equivalents.

34. Claim 3 of the 108 Patent recites:

3. The fire extinguishing device according to claim 1, wherein the composition comprises a bromine-based fire extinguishing material, a chlorine-based fire extinguishing material, an organophosphorus-based fire extinguishing material, a phosphorus-halogen based fire extinguishing material, a nitrogen-based and phosphorus-nitrogen based fire extinguishing material or an inorganic fire extinguishing material.

35. The StatX 2500E is a fire extinguishing device which embodies every element of claim 1 of the 108 Patent, literally or under the doctrine of equivalents, wherein the fire extinguishing composition comprises an inorganic fire extinguishing material, a mixture of potassium nitrate and dicyandiamide.

36. The Infringing Product embodies the required element of claim 3 of the 108 Patent, literally or under the doctrine of equivalents.

37. Claim 11 of the 108 Patent recites:

11. The fire extinguishing device according to claim 3, wherein the fire extinguishing composition also includes an additive, of which the content is less than or equal to 20 wt %.

38. The StatX 2500E is a fire extinguishing device which embodies every element of claim 1 of the 108 Patent, literally or under the doctrine of equivalents, wherein the fire extinguishing composition comprises an inorganic fire extinguishing material, and also includes an additive, phenol-formaldehyde or phenol resin, of which the content is less than or equal to 20 wt %.

39. The Infringing Product embodies every element of claim 11 of the 108 Patent, literally or under the doctrine of equivalents.

40. Claim 13 of the 108 Patent recites:

13. The fire extinguishing device according to claim **11**, wherein: each component of the fire extinguishing composition and the content thereof are:
the fire extinguishing material: 80 wt % to 90 wt %,
the additive: 10 wt % to 20 wt %.

41. The StatX 2500E is a fire extinguishing device which embodies every element of claim 1 of the 108 Patent, literally or under the doctrine of equivalents, wherein the fire extinguishing composition comprises an inorganic fire extinguishing material, also includes an additive, and the content of the fire extinguishing material and additive have weight percentages within the claimed ranges.

42. The StatX 2500E is a fire extinguishing device wherein a component of the fire extinguishing composition is the fire extinguishing material, Potassium Nitrate and DCDA, with a weight percentage of 80 to 90.

43. The StatX 2500E is a fire extinguishing device wherein a component of the fire extinguishing composition is an additive, Phenol-Formaldehyde or Phenol Resin, with a weight percentage of 10 to 20.

44. The Infringing Product embodies every element of claim 13 of the 108 Patent, literally or under the doctrine of equivalents.

45. At minimum, the StatX 2500E infringes claims 1 and 13 of the 108 Patent either literally or under the doctrine of equivalents.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 8,865,014

46. The preceding paragraphs are incorporated by reference as if fully restated herein.

47. By manufacturing, selling, and offering to sell the StatX 2500E, Fireaway has infringed and is continuing to infringe at least claims 1 of the 014 Patent.

48. Claim 1 of the 014 Patent recites:

What is claimed is:

A fire extinguishing composition which generates fire extinguishing substance by high temperature sublimation,

Wherein the fire extinguishing composition comprises:

a fire extinguishing material which can release a fire extinguishing substance with fire extinguishing properties by sublimation in a heating process, the content of the fire extinguishing material being at least 80 wt%; and

a pyrotechnic agent,

wherein the pyrotechnic agent of the fire extinguishing composition is adopted as a heat source and a power source in a process of fire extinguishing, and

wherein fire extinguishing is achieved by

igniting the pyrotechnic agent,

generating a large quantity of fire extinguishing substance from the fire extinguishing composition in the use of high temperature produced by burning pyrotechnic agent, and

the fire extinguishing substance spraying out together with the pyrotechnic agent.

49. The StatX 2500E embodies every element of claim 1 of the 014 Patent, literally or under the doctrine of equivalents.

50. The StatX 2500E contains a fire extinguishing composition which generates a fire extinguishing substance by high temperature sublimation.

51. The StatX 2500E fire extinguishing composition has a fire extinguishing material which can release a fire extinguishing substance with fire extinguishing properties by sublimation in a heating process.

52. The content of the fire extinguishing material in the StatX 2500E fire extinguishing composition has a weight percentage of at least 80.

53. The StatX 2500E fire extinguishing composition has a pyrotechnic agent.

54. The pyrotechnic agent of the StatX 2500E fire extinguishing composition is adopted as a heat source and a power source in a process of fire extinguishing.

55. The StatX 2500E achieves fire extinguishing by igniting the pyrotechnic agent, generating a large quantity of fire extinguishing substance from the fire extinguishing composition in the use of high temperature produced by burning the pyrotechnic agent, and the fire extinguishing substance spraying out together with the pyrotechnic agent.

56. The Infringing Product embodies every element of claim 1 of the 014 Patent, literally or under the doctrine of equivalents.

57. At minimum, the StatX 2500E infringes claim 1 of the 014 Patent either literally or under the doctrine of equivalents.

COUNT III – PATENT INFRINGEMENT OF U.S. PATENT NO. 9,248,328

58. The preceding paragraphs are incorporated by reference as if fully restated herein.

59. By manufacturing, selling, and offering to sell the StatX 2500E, Fireaway has infringed and is continuing to infringe at least claim 1 and 7 of the 328 Patent.

60. Claim 1 of the 328 Patent recites:

1. An explosion-venting method for an aerosol fire suppression apparatus, wherein the method comprises the following steps:
 - 1) When the aerosol fire suppression apparatus deflagrates, an explosion-venting device matching the aerosol fire suppression apparatus generates a limited displacement along a direction that a hot air stream of the aerosol fire suppression apparatus is jetting towards;
 - 2) When an extremity of the explosion-venting device reaches an edge of the aerosol fire suppression apparatus, being limited, the explosion-venting device stops the displacement along the direction that the hot air stream of the aerosol fire suppression apparatus is jetting towards, thus achieving for the aerosol fire suppression apparatus the purpose of explosive-venting, wherein the explosion-venting device comprises a friction layer, a connecting rod, a guiding unit and a limiting device; the guiding unit provides a sliding guide function for the connecting rod when the connecting rod is moving; the connecting rod is fixedly connected with the aerosol fire suppression apparatus through the limiting device; when an extremity of the connecting rod is to be separated from the aerosol fire suppression apparatus, the limiting device limits the connecting rod.

61. The StatX 2500E embodies every element of claim 1 of the 328 Patent, literally or under the doctrine of equivalents.

62. The StatX 2500E embodies an explosive-venting method for an aerosol fire suppression apparatus.

63. The explosive-venting method of the StatX 2500E is comprised of the two steps described in claim 1 of the 328 Patent.

64. The explosive-venting device of the StatX 2500E is comprised of a friction layer, a connecting rod, a guiding unit and a limiting device, each of which function as described in claim 1 of the 328 Patent.

65. The Infringing Product embodies every element of claim 1 of the 328 Patent, literally or under the doctrine of equivalents.

66. Claim 7 of the 328 Patent recites:

7. The explosion-venting method for the aerosol fire suppression apparatus according to claim 1, wherein the aerosol fire suppression apparatus is a portable fire suppression apparatus or a fixed aerosol fire suppression apparatus.

67. The StatX 2500E is a fixed aerosol fire suppression apparatus with an explosion-venting method.

68. The Infringing Product embodies every element of claim 7 of the 328 Patent, literally or under the doctrine of equivalents.

69. At minimum, the StatX 2500E infringes claim 1 and 7 of the 328 Patent either literally or under the doctrine of equivalents.

70. On November 15, 2021, NanoFire notified Fireaway of its rights in the 108, 014 and 328 Patents. Attached hereto as Exhibit 6 is a true and correct copy of the November 15, 2022 email informing Fireaway of NanoFire's rights in the 108, 014 and 328 Patents among others.

71. With knowledge of the 108, 014 and 328 Patents and their own infringing conduct, Fireaway willfully continues to infringe the 108, 014 and 328 Patents.

72. NanoFire has been and continues to be irreparably harmed by Fireaway's infringement of its valuable patent rights.

73. NanoFire is without adequate remedy at law.

74. NanoFire is entitled to recover damages adequate to compensate for the infringement of the 108, 014 and 328 Patents, as well as additional damages for willful infringement, including increased damages under 35 U.S.C. §284, and attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. §285.

PRAYER FOR RELIEF

WHEREFORE, NanoFire prays for judgment against Fireaway granting Nanofire relief as follows:

A. That this Court adjudge and decree that Fireaway has infringed and continues to infringe the 108 Patent;

B. That this Court adjudge and decree that Fireaway has infringed and continues to infringe the 014 Patent;

C. That this Court adjudge and decree that Fireaway has infringed and continues to infringe the 328 Patent;

D. That this Court grant injunctive relief enjoining the aforesaid acts of infringement by Fireaway, Fireaway's officers, agents, servants, employees, subsidiaries, and attorneys, and those acting in concert with Fireaway, including related individuals and entities, customers, representatives, original equipment manufacturers, dealers, and distributors;

E. That this Court enter an award to NanoFire of such damages as it shall prove at trial against Fireaway that are adequate to compensate NanoFire for said infringement, said damages to be no less than a reasonable royalty together with prejudgment interest and costs;

F. That this Court order an award to NanoFire of up to three times the amount of compensatory damages because of Fireaway's willful infringement, and any other enhanced damages provided by 35 U.S.C. §284;

G. That this Court render a finding that this case is "exceptional" and award to NanoFire its costs and reasonable attorneys' fees, as provided by 35 U.S.C. §285;

H. That this Court award NanoFire prejudgment interest against Fireaway on all sums allowed by law; and

I. That this Court grant NanoFire such other, further, and different relief as may be just and proper.

DEMAND FOR JURY
TRIAL

NanoFire demands a trial by jury of all matters to which it is entitled to trial by jury pursuant to Fed. R. Civ. P. 38.

Dated: February 22, 2023

Respectfully submitted,

By: /s/Shannon L. Bjorklund

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