

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

LITTELFUSE, INC.,
a Delaware Corporation,

Plaintiff,

v.

**MERSEN USA NEWBURYPORT-MA,
L.L.C.**, a Delaware Limited Liability
Company,

Defendant.

Civil Action No. 1:17-cv-12375

**JURY TRIAL DEMANDED
INJUNCTIVE RELIEF SOUGHT**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

NOW COMES Plaintiff, Littelfuse, Inc., by and through its attorneys, and for its First Amended Complaint against Defendant Mersen USA Newburyport-MA, L.L.C., states as follows:

THE PARTIES

1. Plaintiff Littelfuse, Inc. (“Littelfuse”) is a Delaware corporation with a place of business in Chicago, Illinois.
2. Defendant Mersen USA Newburyport-MA, L.L.C. (“Mersen”) is a Delaware limited liability company with a place of business in Newburyport, Massachusetts.

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States (Title 35, United States Code).
4. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Mersen because Mersen is domiciled and transacts continuous and systematic business within the District of Massachusetts, including the distribution, use, sale and/or offer to sell, and/or importation of infringing products in and into the District of Massachusetts.

6. Venue properly lies within the District of Massachusetts pursuant to the provisions of 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

FACTUAL ALLEGATIONS

7. Littelfuse is a global leader in circuit protection, power control, and sensing platforms. Indeed, since its founding in 1927, Littelfuse has led the industry with innovative products and services to serve the engineering needs of customers in nearly every conceivable industry, including the solar industry, in which the invention covered by the patent at issue in this action is primarily applied.

8. On February 7, 2017, United States Letters Patent No. 9,564,281, entitled “Fuse End Cap With Crimpable Terminal,” was duly and legally issued by the United States Patent and Trademark Office. A copy of the ‘281 Patent is attached as Exhibit A.

9. Plaintiff Littelfuse, by lawful assignment, is the owner of all rights, title and interest in and to the ‘281 Patent.

10. While the devices and assemblies described in the ‘281 patent can be used in many applications, one use is with photovoltaic applications, i.e., solar panels. The ‘281 Patent is directed to a fuse end cap with a crimpable terminal. As background, fuses have long been used in electrical devices for providing an interruptible electrical connection between a source of electrical power and a component in an electrical circuit that is to be protected. *See* Attachment A at Col. 1:14-17. For example, upon the occurrence of a sudden electrical surge, an element

within a fuse may separate and interrupt the flow of electrical current to a protected circuit component, thereby preventing or mitigating potential damage to the component. *See id.* at Col. 1:17-24.

11. Fuses may be disposed between a component in an electric circuit and a source of electric power and connected by, for example, a conductive wire. *See id.* at Col. 1:25-27. Wires may be connected to the respective ends or end caps of fuses by soldering, welding, etc. *See id.* at Col. 1:27-28. These common methods of connecting conductive wires to a fuse or fuse end cap have a number of drawbacks, such as, for example, generating excessive heat that can damage a fuse. These methods are also problematic in that soldering of conductive wires to fuse ends is prone to inconsistencies that could potentially compromise the electrical connection. Additionally, some prior fuses require additional components that are awkward, cumbersome and take up valuable space in tight, complex circuitry. *See, e.g.,* at Col. 1:28-43.

12. The '281 Patent describes a simple, new and improved fuse end cap that eliminates the need for soldering or welding the fuse or fuse cap to an electrical wire or conductor, comprised generally as follows: (1) a mounting cuff defining a first cavity that receives an end of a fuse; (2) a terminal defining a second cavity that receives a conductor, wherein the terminal is crimped about conductor; and (3) a fastening stem that extends from the mounting cuff and into the second cavity of the terminal that receives the conductor. *See id.* at Col 7:30-42.

13. Mersen makes, uses, offers for sale, and sells fuses, including the following families of fuses, bearing the model numbers: HP10M, HP15M and HP15G. Within each of the three foregoing families, there are subsets of fuses denoted by the suffix "CC" after the model number, to wit: HP10MCC, HP15MCC, and HP15GCC. The "CC" indicates the presence of a




“Crimp Cap,” i.e., a terminal that can be crimped about the conductive wire to permit, as described in Mersen’s product literature “solderless wire-to-fuse connection[s....]”

14. On information and belief, to account for use in circuits with different amperages, Mersen makes, uses, sells and offers for sale 16 different versions of the HP10MCC; 12 different versions of the HP15MCC and 10 different versions of the HP15GCC (hereinafter referred to collectively as “Accused Fuses”). Regardless of the amperage ratings, on information and belief, all of the Accused Fuses share the same features that infringe the ‘281 patent.



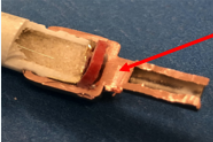
15. Mersen’s making, using, offering for sale and selling of the Accused Fuses infringes the ‘281 patent.

16. On information and belief, Mersen has been selling the Accused Fuses in the United States since at least 2016 and continuing through the present.

17. In the following chart, a cut-away photo of the HP10M4CC represents how the Mersen HP10MCC fuses infringes Claim 1 of the ‘281 patent:

Claim 1 of US Patent 9,564,281	Mersen’s HP10M4CC Photovoltaic Fuse
A fuse end cap comprising:	
<p>a mounting cuff defining a first cavity that receives an end of a fuse body, the end of the fuse body being electrically insulating;</p>	<p>mounting cuff  electrically insulated fuse body</p>
<p>a terminal defining a second cavity that receives a conductor, wherein the terminal is crimped about the conductor to retain the conductor within the second cavity; and</p>	<p>terminal  second cavity</p>
<p>a fastening stem that extends from the mounting cuff and into the second cavity of the terminal that receives the conductor.</p>	<p>a fastening stem </p>

18. In the following chart, a cut-away photo of the HP15M4CC represents how the Mersen HP15MCC fuses infringes Claim 1 of the ‘281 patent:

Claim 1 of US Patent 9,564,281	Mersen's HP15M4CC Photovoltaic Fuse
A fuse end cap comprising:	
a mounting cuff defining a first cavity that receives an end of a fuse body , the end of the fuse body being electrically insulating;	
a terminal defining a second cavity that receives a conductor, wherein the terminal is crimped about the conductor to retain the conductor within the second cavity; and	
a fastening stem that extends from the mounting cuff and into the second cavity of the terminal that receives the conductor.	

19. On information and belief, the Mersen HP15GCC family of fuses has similar features as those of the HP10MCC and HP15MCC that meet the limitations of the '281 patent. On information and belief, Mersen began making, using, selling and offering for sale the Accused Fuses to compete directly with Littelfuse's competitive line of fuses, including, but not limited to, Littelfuse's SPFI and SPXI Series of in-line fuses.

20. Mersen has had knowledge of the '281 Patent since December 6, 2017 at the latest, when Littelfuse's counsel communicated directly with Mersen's counsel and provided a copy of the original Complaint and the '281 Patent. Counsel for Mersen advised in response that he was already in receipt of the original Complaint.

21. On information and belief, Mersen sells its Accused Fuses through distributors and to customers, who directly infringe the '281 patent by using, selling and offering to sell the Accused Fuses.

22. In turn, Mersen's customers directly infringe the '281 patent by using the Accused Fuses, i.e., by using them in the way in which Mersen advertised and intended them to

be used, by having a solderless wire-to-fuse connection which meets the limitations of at least Claim 1 of the '281 patent.

23. On information and belief, there are no non-infringing uses of the Accused Fuses.

24. Upon information and belief, Mersen has intentionally recommended, encouraged, and promoted infringement of the '281 Patent, and continues to do so, by, among other things, providing and making available documentation that instructs distributors, customers and end users to make and use the Accused Fuses in the only way in which they are intended to be used, which directly infringes the '281 Patent.

25. Mersen's Accused Fuse product literature is one example of its intentional encouragement to customers and end users to directly infringe the '281 patent. One Mersen catalog describes the "Crimp Cap Termination" of the HP10M and HP15M as "[a] special cap [that] is applied to the fuse ferrules of our existing HP10M and HP15M fuses . . . to enable the user to attach wires directly to the fuses." The quoted Mersen catalog, titled Solar Power Product Solutions, can be found at <http://ep-us.mersen.com/fileadmin/catalog/Literature/Brochures/BR-Solar-Power-Product-Solutions-Guide-Brochure.pdf> In another catalog, Mersen states that the "Crimp cap termination for HP10M, HP15M, and HP15G fuses enables users to attach wires directly to the fuses" and notes that these models are "specifically designed for use in in-line fuse applications." This Mersen catalog, titled Electrical Protection Components for Solar Power, may be accessed at <http://ep-us.mersen.com/fileadmin/catalog/Literature/Misc/LC-Solar-PV-Electrical-Protection-Components-Line-Card.pdf>. These catalogs and other product literature pertaining to the Accused Fuses instruct distributors, customers and end users on how to utilize the Accused Fuses

in the only manner in which they are designed to be used, which directly infringes the '281 Patent.

26. Because there is no non-infringing use of the Accused Fuses, Mersen knows and has known that its customers' and end users' conduct directly infringes the claims of the '281 Patent. Mersen thus willfully and deliberately directly infringes and induces infringement of the '281 Patent.

27. Despite this knowledge, Mersen has purposefully sold, and continues to purposefully sell, its infringing Accused Fuses to its distributors, customers and end users, in complete and total disregard of Littelfuse's exclusive patent rights to the '281 patent technology.

28. Thus, since at least December 6, 2017, Mersen has intentionally indirectly infringed the '281 Patent, and continues to do so, in violation of 35 U.S.C. §§ 271(b) by actively, knowingly and purposefully inducing others to directly infringe the '281 patent.

29. Mersen's direct and indirect infringement has been and continues to be willful and deliberate because Mersen knows, or is willfully and deliberately ignoring that each of its actions constitutes infringement of the '281 Patent, and/or is willfully and deliberately ignoring an objectively high risk that each of its actions constitutes infringement of the '281 Patent.

COUNT I – DIRECT PATENT INFRINGEMENT BY MERSEN
(Violation of 35 U.S.C. § 271(a))

30. Littelfuse incorporates by reference herein each of the allegations set forth in paragraphs 1-20 and 29 above.

31. On information and belief, Mersen has directly infringed and continues to directly infringe the '281 Patent, under 35 U.S.C. § 271(a), at least by making, importing, distributing,

selling, offering for sale and/or using within the United States, the Mersen HP10MCC, HP15MCC, and HP15GCC models of photovoltaic fuses.

32. On information and belief, and, by way of example only and not limitation, the Accused Fuses meet each limitation of at least claim 1 of the '281 Patent, directly and/or under the doctrine of equivalents, because each is: A fuse end cap comprising a mounting cuff defining a first cavity that receives an end of a fuse body, the end of the fuse body being electrically insulating; a terminal defining a second cavity that receives a conductor, wherein the terminal is crimped about the conductor to retain the conductor within the second cavity; and a fastening stem that extends from the mounting cuff and into the second cavity of the terminal that receives the conductor.

33. As a direct and proximate result of Mersen's patent infringement, Littelfuse has suffered and will continue to suffer damages in an amount to be proven at trial.

34. Littelfuse has been irreparably harmed by these acts of patent infringement and will continue to be harmed unless Mersen's further acts of patent infringement are restrained and enjoined by order of this Court. Littelfuse has no adequate remedy at law.

35. On information and belief, Mersen's infringement has been and continues to be willful and deliberate because Mersen knows, or is willfully and deliberately ignoring that each of its actions constitutes infringement of the '281 Patent, and/or is willfully and deliberately ignoring an objectively high risk that each of its actions constitutes infringement of the '281 Patent.

36. Because Mersen's infringement is willful, Littelfuse is entitled to recover treble damages and attorneys' fees pursuant to 35 U.S.C. §§ 284 and 285.

COUNT II – INDIRECT PATENT INFRINGEMENT BY MERSEN
(Violation of 35 U.S.C. § 271(b) & (c))

37. Littelfuse incorporates by reference herein each of the allegations set forth in paragraphs 1-29 above.

38. Mersen has had actual knowledge of the '281 Patent and of Littelfuse's infringement allegations since at least December 6, 2017, as described in Paragraph 20, *supra*.

39. On information and belief, Mersen specifically intended the Accused Fuses to be made, used, sold and offered for sale in one way only, to wit: in a manner that directly infringes the '281 patent.

40. On information and belief, Mersen has specific knowledge that the manufacture, distribution, sale, offer for sale and use of the Accused Fuses by its distributors, customers and end users would directly, or under the doctrine of equivalents, infringe the '281 patent because Mersen specifically touted, and encouraged use of, the "Crimp Cap terminals" and "solderless wire-to-fuse connection" features of the '281 Patent in Mersen's own product literature.

41. Accordingly, Mersen has violated 35 U.S.C. § 271(b) by intentionally inducing its distributors, customers and end users to make, use sell and offer for sale the Accused Fuses in the manner described in Mersen's product literature, which directly infringes at least Claims 1 of the '281 patent.

42. The actions of Mersen demonstrate a clear intent to induce its distributors, customers and end users to directly infringe the '281 Patent, which constitutes a violation of 35 U.S.C. §271(b) by Mersen.

43. As a direct and proximate result of Mersen's inducement of patent infringement by its customers and end users, Littelfuse has suffered and will continue to suffer damages in an amount to be proven at trial.

44. Littelfuse has been irreparably harmed by these acts of patent infringement and will continue to be harmed unless Mersen's further acts of inducement of patent infringement are restrained and enjoined by order of this Court. Littelfuse has no adequate remedy at law.

45. On information and belief, Mersen's inducement of infringement has been and continues to be willful and deliberate because Mersen knows, or is willfully and deliberately ignoring that each of its actions constitutes inducement of infringement of the '281 Patent, and/or is willfully and deliberately ignoring an objectively high risk that each of its actions constitutes inducement of the '281 Patent.

46. Because Mersen's inducement of infringement is willful, Littelfuse is entitled to recover treble damages and attorneys' fees pursuant to 35 U.S.C. §§ 284 and 285.

RELIEF REQUESTED

WHEREFORE Plaintiff Littelfuse, Inc. requests a judgment in its favor and against Defendant Mersen USA Newburyport-MA, L.L.C. as follows:

- A. That Littelfuse be adjudged the owner of the '281 Patent and entitled to all rights of recovery thereunder, and that the '281 Patent is valid and enforceable;
- B. That Mersen be adjudged to have directly infringed the '281 Patent, and that such infringement has been willful and deliberate;
- C. That Mersen be adjudged to have indirectly infringed the '281 Patent by inducing its customers and end users to make and use the Accused Fuses in a manner that infringes the '281 Patent, and that such induced infringement has been willful and deliberate;

- D. That Mersen and its officers, principals, agents, attorneys, servants, employees, and all others in active concert or participation with Mersen, its successors and assigns, be enjoined by preliminary and permanent injunction from directly and indirectly infringing the '281 Patent, including but not limited to making, using, distributing, selling, offering to sell, and importing the Accused Fuses and inducing its customers and end users to make and use the Accused Fuses in an infringing manner;
- E. That Littelfuse be awarded damages, including, as appropriate, a reasonable royalty and/or lost profits and price erosion under 35 U.S.C. § 284, adequate to compensate it for Mersen's willful infringement of the '281 Patent, in an amount to be proven at trial, together with interest and costs as fixed by the Court;
- F. That this case be declared an exceptional case within the meaning of 35 U.S.C. § 285 and that Littelfuse be awarded the attorneys' fees, costs and expenses that it incurs prosecuting this action;
- G. That Littelfuse be awarded prejudgment interest; and
- H. That this Court award such other and further equitable relief as it deems proper.

DATED: March 2, 2018

By:

/s/ Margaret K. Minister
Margaret K. Minister (BBO #624975)
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Attorneys for Plaintiff Littelfuse, Inc.

DEMAND FOR JURY TRIAL

Plaintiff Littelfuse, Inc. hereby demands trial by jury for all issues so triable.

/s/ Margaret K. Minister
Margaret K. Minister (BBO #624975)

CERTIFICATE OF SERVICE

I hereby certify that on March 2, 2018 the foregoing **First Amended Complaint for Patent Infringement of Plaintiff Littelfuse, Inc.** was filed electronically, and that a true copy of the above document will be served upon the Defendant with the Complaint and associated documents in accordance with the service of process rules of the Federal Rules of Civil Procedure and the Local Rules of the District of Massachusetts.

/s/ Margaret K. Minister _____

Margaret K. Minister