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**UNITED STATES DISTRICT COURT**

**CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION**

| | |
|---|---|
| SEASONAL SPECIALTIES, LLC,<br><br>Plaintiff,<br><br>vs.<br><br>LEDUP MANUFACTURING GROUP LTD.<br><br>Defendant. | Case No. 2:23-cv-06318-KK-AS |

**PLAINTIFF'S RESPONSES TO DEFENDANT'S FIRST SET OF INTERROGATORIES**

Plaintiff Seasonal Specialties, LLC ("Seasonal" or "Plaintiff"), by and through its counsel, hereby objects and responds to Defendant LEDup Manufacturing Group Ltd.'s ("LEDup" or "Defendant") First Set of Interrogatories as follows:



Seasonal Specialties - EX2011
LEDUP MANUFACTURING GROUP, LTD v. Seasonal Specialties, LLC [2024-01259]

## GENERAL OBJECTIONS

These general objections form a part of the response to each and every interrogatory. Thus, the absence of a reference to a general objection should not be construed as a waiver of the general objections to a specific interrogatory.

1. Seasonal objects to the interrogatories to the extent they seek information protected by the attorney/client privilege, the work product doctrine or another applicable privilege.

2. Seasonal objects to the interrogatories to the extent they seek documents and information that are irrelevant, immaterial, or not reasonably calculated to lead to the discovery of admissible evidence in this litigation.

3. Seasonal reserves all objections, including, but not limited to, objections as to competency, relevance, privilege, or admissibility of evidence in any trial of this or any other action of any information produced in response to these interrogatories.

4. Seasonal objects to the interrogatories to the extent they seek information that is unreasonably cumulative or duplicative, or is obtainable from some other source that is more convenient, less burdensome, or less expensive.

5. Seasonal objects to the interrogatories to the extent they are vague, ambiguous, overly broad, and not identified with reasonable particularity.

6. Seasonal objects to the interrogatories to the extent they are unable to be answered fully, absent discovery responses from Defendant.

7. Seasonal objects to Defendant's definitions and instructions to the extent they require responses beyond those required by the Federal Rules of Civil Procedure.

8. Seasonal reserves the right to supplement these responses if and when additional information is found, and as discovery continues. Subject to the above general objections and any specific objection asserted herein and without waiving any objection, Seasonal responds to Defendant's interrogatories as follows:

## RESPONSES TO INTERROGATORIES

**INTERROGATORY NO. 1:** Identify for each invention described in the Claims-in-Suit the dates of conception, reduction to practice, testing, prototyping, first offer to sell, and first production of product incorporating the invention, and identify all material and substantive witnesses and participants, documents and other evidence that supports Your claimed dates. Provide, for each witness, the relevant information they have.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal states:

**Steady-On Patents**[1]

The Steady-On Patents claim priority to Provisional Application No. 62/061,836, filed on October 9, 2014. See '437 patent, Related U.S. Application Data. LEDup has not identified how dates of conception, reduction to practice, testing, prototyping, first offer to sell, and first production of product incorporating the invention are relevant to infringement, validity, damages, or other issues in this case.

[1] U.S. Patent No. 9,554,437 and U.S. Patent No. 10,080,265. Together the '437 and '265 patents are referred to as the "Steady-On Patents." See 1st Am. Compl. [Dkt. 19] ¶ 22.

**Resistive Bypass Patent**[2]

The Resistive Bypass Patents claim priority to Provisional Application No. 62/876,868, filed on December 22, 2006. However, Seasonal identifies the declarations of Steven Altamura submitted during prosecution of the Resistive Bypass Patents. Mr. Altamura's declaration states that his first written documentation of the Resistive Bypass invention was dated January 12, 2006, and that he built a functioning prototype in "the early spring of 2006." See Paragraphs 2 and 7 of the Declaration of Mr. Altamura, dated August 26, 2020. (SS00001153-1154)

Mr. Altamura submitted a revised declaration during prosecution of the '794 patent. Mr. Altamura's revised declaration states that he built a functioning prototype at least as early as January 15, 2006. See Paragraphs 2 and 7 of the Declaration of Mr. Altamura, dated September 1, 2022. (SS00000974-975).

Discovery continues. Seasonal reserves the right to supplement this response to identify additional products or additional information responsive to this interrogatory

**INTERROGATORY NO. 2:** For each of the Claims-in-Suit provide the factual basis of any disagreement or challenge to Defendant's Preliminary Invalidity Contentions based on Section 102 and 103 of the Patent Statute and the incorporated or cited prior art claim charts, and describe each of the elements of the Claims-in-Suit that You contend are missing from the cited prior art or any other basis contrary to the Invalidity Contentions. Provide a description of all documents or opinions that support Your claims, including the names of any witnesses that have relevant information and a description of said information.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this

[2] U.S. Patent No. 11,096,252 and U.S. Patent No. 11,533,794. Together the '252 and '794 patents are hereafter referred to the "Resistive Bypass Patents." See 1st Am. Compl. [Dkt. 19] ¶ 30.

interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal states

**Resistive Bypass Patents**

**U.S. Patent No. 7,963,670 to Yu**

(Filed July 31, 2006; Issued June 21, 2011)

Yu was made of record before the examiner during prosecution of the Resistive Bypass Patents. See References Cited. Yu, however, does not qualify as prior art under 35 U.S.C. § 102 (pre-AIA) because date of invention for the Resistive Bypass Patents predates the July 31, 2006, filing date of Yu. See Response to Interrogatory No. 1, above.

Mr. Altamura's declarations filed during prosecution of the Resistive Bypass Patents establish diligence in the filing of an application for patent for patent protection following conception of the invention. However, his actual reduction to practice—before Yu's filing date—renders irrelevant the issue of reasonable diligence. *Shindlear v. Holdeman*, 628 F.2d 1337, 1341 (C.C.P.A. 1980); *Paulik v. Rizkalla*, 760 F. 2d 1270, 1273 (Fed. Cir. 1985).

Regardless of whether Yu qualifies as prior art under Section 102, Yu does not render the asserted claims of the Resistive Bypass Patents unpatentable. Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough". Yu lacks disclosure of a bypass resistor conducting current at all times during operation.

LEDup's invalidity chart contends that this claim limitation is an "inherent design choice," without identifying any specific disclosure in Yu as satisfying the

limitation. Yu describes the bypass component (318 in Fig. 3 & 4; 604 in Fig. 6; 806 in Fig. 8; and 1214 in Fig. 12) as having a resistor or diode having "a forward breakdown voltage" that is higher than the twinkle LED 602, such that current does not flow through the bypass component when current is flowing through the circuit in normal operation. See Col. 5:61-67, 6:23-31, 7:42-53. Current flows through the bypass component only when an LED burns out. Id. Therefore, Yu fails to disclose or render obvious the invention of claim 1 because Yu lacks disclosure of a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Yu fails to render unpatentable the remaining asserted claims of the '252 patent, and the asserted claims of the '794 patent, for the same reasons Yu fails to render unpatentable claim 1 of the '252 patent.

**U.S. Patent No. 6,518,707 to Gershen**

(Filed June 22, 2001; Issued Feb. 11, 2003)

Claim 1 of the '252 patent requires "a plurality of serially connected LED light sources". Gershen discloses a string of conventional incandescent lights. See Figures 1-3, Col. 3:37-46, and miniature lamp 12. Gershen does not disclose use of LED lights. LEDup offers no explanation or reason why, at the time of invention, a person of skill in the art would be motivated to replace the incandescent lamp disclosed in Gershen with an LED. Accordingly, Gershen fails to anticipate or render obvious claim 1 of the '252 patent.

Claim 1 of the '252 patent also requires a "bypass resistor" "in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough". Gershen lacks disclosure of a bypass resistor conducting current at all times during operation. Gershen discloses a resistor 30 that draws only a "negligible" amount of current until the lamp burns out, or, if the socket is defective causing the lamp to be "off," at which point the lamp increases to almost the full voltage. See Gershen 4:50-67. Gershen's resistor 30

does not "conduct current at all times when current is flowing the circuit regardless of whether the LED light sources are conducting current," because the resistor is substantially out of the circuit when the miniature lamp 12 is operative. Accordingly, Gershen fails to disclose or render obvious the invention of claim 10 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Gershen fails to render unpatentable the remaining asserted claims of the '252 patent, and the asserted claims of the '794 patent, for the same reasons Gershen fails to render unpatentable claim 1 of the '252 patent.

**U.S. Patent No. 6,323,597 to Janning**

(Filed Jul. 10, 2000; Issued Nov. 27, 2001)

Janning was made of record before the examiner during prosecution of the Resistive Bypass Patents. See References Cited. Claim 1 of the '252 patent requires "a plurality of serially connected LED light sources". Janning discloses a string of conventional incandescent lamps 1, 2, 3, 4, 5 in Fig. 1; it does not disclose use of LED lights. See Janning 3:34, 4:40-43, 5:15-16, 5:45-46. LEDup offers no explanation or reason why, at the time of the Resistive Bypass invention, a person of skill in the art would be motivated to replace the incandescent lamp disclosed in Janning with an LED. Accordingly, Janning fails to disclose or render obvious claim 1 of the '252 patent.

Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough". Janning discloses a "thermistor" shunt system, similar to prior art systems at the time, in which current flow was "substantially zero," until a lamp failed. Janning 2:29-31. Only a "small amount of current will flow through the shunt" (51-55 in Figure 1), when the string is operating normally. Janning 4:47-54. When "failure occurs in the shunted lamp, current would start to flow through the thermistor, warming it, and lowering its electrical resistance". Id. 5:1-4. The shunt in Janning has a resistance value of at least twenty

times than the resistance of the lamp, when the lamp is operating under normal conditions. Id. 5:19-25. Therefore, Janning's shunt does not "conduct current at all times when current is flowing the circuit regardless of whether the LED light sources are conducting current," because the shunt is substantially out of the circuit when the lamp operative. Accordingly, Janning fails to disclose or render obvious the invention of claim 10 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Janning fails to render unpatentable the remaining asserted claims of the '252 patent, and the asserted claims of the '794 patent, for the same reasons that Janning fails to render unpatentable claim 1 of the '252 patent.

**U.S. Patent No. 2,870,377 to Ovrevik**

(Filed May 18, 1954; Issued Lan. 20, 1959)

Claim 1 of the '252 patent requires "a plurality of serially connected LED light sources". Ovrevik discloses a lamp socket for an incandescent light bulb, not an LED light source. See Figures 2-4. LEDup offers no explanation or reason why, at the time of the invention, a person of skill in the art would replace the incandescent bulb disclosed in Ovrevik with an LED. Accordingly, Ovrevik fails to disclose or render obvious claim 1 of the '252 patent.

Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough". Ovrevik discloses a "heating element [12] of relatively high impedance is shunted across each low impedance [filamentary] element and is substantially out of the circuit when the low impedance element is operative." Ovrevik 1:70-2:2. When one lamp in the string burns out, all the lamps in the string go dark and become cool. Id. 2:42-61. Current to the heating element 12 allows the burned-out lamp to be readily identified in the string, amongst the dark lamps. Id. Ovrevik's heating element 12—identified by LEDup as a "bypass resistor"—does not "conduct current at all times when current is flowing the

circuit regardless of whether he LED light sources are conducting current," as required by claim 1. The heating element is "substantially out of the circuit when the low impedance element is operative." Ovrevik 2:1-2. Accordingly, Ovrevik fails to disclose or render obvious the invention of claim 1 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Ovrevik fails to render unpatentable the remaining asserted claims of the '252 patent, and the asserted claims of the '794 patent, for the same reasons Ovrevik fails to render unpatentable claim 1 of the '252 patent.

**U.S. Patent No. 2,760,120 to Fisherman**

(Filed Oct. 26, 1955; Issued Aug. 21, 1956)

Fisherman is discussed in the specification of the Resistive Bypass Patents and of record during examiner. See '252 patent, Col. 1:46-64; see also References Cited. Claim 1 of the '252 patent requires a "plurality of serially connected LED light sources". Fisherman discloses a series circuit for a light set with individual incandescent bulbs. See Fisherman 2:9-17 describing lighting filament 11 and lamp 10. LEDup offers no explanation or reason why, at the time of the Resistive Bypass invention, a person of skill in the art would replace the incandescent bulb disclosed in Fisherman with an LED. Accordingly, Fisherman fails to disclose or render obvious claim 1.

Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough". Fisherman discloses that the lighting filament 11 of lamp 10 is shunted by resistance 13. See Fisherman 1:39-40, 2:9-20. Fisherman also disclose that the "resistance 13 are so dimensioned that when the system functions normally, the electrical current will flow through the filaments 11 of the lamps 10, so that all the lamps 10 will be illuminated." Id. 2:18-21. Therefore, Fisherman discloses that the resistance 13 is largely non-conducting current, until the bimetallic strip 12 overheats and moves away from the filament. Id. 2:23-32.

The lamp then ceases to be illuminated, the electrical current is diverted to the shunt 13, but all the remaining lamps continue to be illuminated. Id. Accordingly, Fisherman fails to disclose or render obvious the invention of claim 1 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Claim 1 of the ’252 patent requires a bypass resistor capable of operating on a one hundred percent duty cycle. The operation of the Fisherman light set is limited to bulbs that flash on and off, a duty cycle of less than 100%. See ’252 patent 1:50-51. Accordingly, Fisherman fails to disclose or render obvious claim 1 for this additional reason.

Fisherman fails to render unpatentable the remaining asserted claims of the ’252 patent, and the asserted claims of the ’794 patent, for the same reasons Fisherman fails to render unpatentable claim 1 of the ’252 patent.

**U.S. Patent No. 2,484,596 to Waltz**

(Filed Sept. 27, 1947; Issued Oct. 11, 1949)

Claim 1 of the ’252 patent requires “a plurality of serially connected LED light sources”. Waltz discloses a lamp socket for an incandescent light bulb, not an LED light source. Waltz 1:1-3. LEDup offers no explanation or reason why, at the time of the invention, a person of skill in the art would replace the incandescent bulb disclosed in Waltz with an LED. Accordingly, Waltz fails to disclose or render obvious claim 1 of the ’252 patent.

Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough”. Waltz discloses a disc 16 supporting a central contact 12. Waltz 2:27-44 and depicted in Figure 1. “[O]n rupture of the circuit through the lamp an increased electromotive force is impressed across the disc causing an increase in the normally minute current flowing therethrough. The increased current flow increases the rate of heat generation within the disc such … and

a corresponding decrease of the resistance of the disc to a point limited by the resistance of the circuit where the resistance of the disc again stabilizes." *Id.* Waltz disclosures makes clear that the disc only conducts current when the incandescent bulb fails, the disc heats up and overcomes the resistance otherwise present when the bulb is functioning normally in the socket. Thus, Waltz fails to disclose or render obvious the invention of claim 1 because its lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Waltz fails to render unpatentable the remaining asserted claims of the '252 patent, and the asserted claims of the '794 patent, for the same reasons Waltz fails to render unpatentable claim 1 of the '252 patent.

**U.S. Patent No. 2,461,962 to Carlson**

(Filed Aug. 26, 1947; Issued Feb. 15, 1949)

Claim 1 of the '252 patent requires "a plurality of serially connected LED light sources". Carlson discloses a plurality of incandescent lamps 13 connected in series; it does not disclose use of LED lights. See Carlson 1:3, 1:11, 1:24-28 and Figures 1-3. LEDup offers no explanation or reason why at the time of the Resistive Bypass invention, a person of skill in the art would be motivated to replace the incandescent lamp disclosed in Carlson with an LED. Accordingly, Carlson fails to disclose or render obvious claim 1 of the '252 patent.

Claim 1 of the '252 patent requires a "bypass resistor" "in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough." Carlson discloses resistors 14 by-passing the small incandescent lamp 13. Carlson 1:23-27. Resistors 14 having resistance "sufficiently great that insufficient current normally flows through" a glow tube 15 in the bypass circuit used to indicate failure of the lamp. Id. However, if the filament in the incandescent lamp 13 ruptures or burns out, current travels through the bypass circuit, illuminate the glow tube, and indicate which specific lamp in the circuit is inoperative. Carlson 1:27-33. Thus, Carlson discloses that the resistors 14 are largely

non-conducting, until lamp 13 burns out or becomes inoperative. Accordingly, Carlson fails to disclose or render obvious the invention of claim 1 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Carlson fails to render unpatentable the remaining asserted claims of the ’252 patent, and the asserted claims of the ’794 patent, for the same reasons Carlson fails to render unpatentable claim 1 of the ’252 patent.

**U.S. Patent No. 2,072,337 to Kamm**

(Filed May 5, 1936; Issued May 5, 1939)

Claim 1 of the ’252 patent requires “a plurality of serially connected LED light sources”. Kamm discloses a plurality of incandescent lamps 5 connected in series; it does not disclose use of LED lights. Kamm 1:4, and Figs. 1 and 2. LEDup offers no explanation or reason why, at the time of the invention, a person of skill in the art would be motivated to replace the incandescent lamp disclosed in Kamm with an LED. Accordingly, Kamm fails to disclose or render obvious claim 1 of the ’252 patent.

Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough.” Kamm discloses shunt member 26 arranged to complete the circuit in the event the incandescent lamp becomes burned out. See Kamm 2:54-3:1. As shown in Figure 3, shunt 26 comprises an insulating tube 27 provided with metal plugs 28 inserted in it opposed ends and respectively connect to the lead wires 24 and 25. Id. 2:5-9. The cavity between the inner plugs 28 is partially filled with minute metallic clips which tend to oxidize. Id. 2:19-21. The oxidation increases the resistance to electrical flow through the chips, preventing any appreciable flow of electrical current between the plugs 28, and causing current to take the easier path through a lamp. Id. 2:25-32. If lamp D burns out, the current flow will pass through the metallic chips with the metal plugs 28 connected to the lead wires 24 and 25. Kamm 2:38-41. Kamm does not disclose current passing

through the shunt member 26, unless the lamp is burned out or otherwise inoperable. Accordingly, Kamm fails to disclose or render obvious the invention of claim 1 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Kamm fails to render unpatentable the remaining asserted claims of the ’252 patent, and the asserted claims of the ’794 patent, for the same reasons Carlson fails to render unpatentable claim 1 of the ’252 patent.

**U.S. Patent No. 1,510,847 to Holler**

(Filed April 18, 1922; Issued Oct. 7, 1924)

Claim 1 of the ’252 patent requires “a plurality of serially connected LED light sources”. Holler discloses a plurality of incandescent lamps 5 connected in series; it does not disclose use of LED lights. See Holler 1:42-43 and Figures 4-5. LEDup offers no explanation or reason why, at the time of the invention, a person of skill in the art would be motivated to replace the incandescent lamp disclosed in Holler with an LED. Accordingly, Holler fails to disclose or render obvious claim 1 of the ’252 patent.

Claim 1 of the ’252 patent requires a “bypass resistor” “in current and conducting current at all times when current is flowing through the circuit regardless of whether the LED light sources are conducting current therethrough.” Holler discloses resistance shunts 6 (see Fig. 2) with resistance at least equal to lamps 5 and approximately twice the current carrying capacity. See Holler 2:96-102. However, when power is flowing through the lamp 5, Holler does not disclose that the resistance shunts 6 conduct current, until a lamp burns out. Id. Accordingly, Holler fails to disclose or render obvious the invention of claim 1 because it lacks a bypass resistor in current and conducting current at all times when current is flowing through the circuit.

Holler fails to render unpatentable the remaining asserted claims of the ’252 patent, and the asserted claims of the ’794 patent, for the same reasons Holler fails to render unpatentable claim 1 of the ’252 patent.

**Steady-On Patents**

The independent claims of the Steady-On Patents require a first circuit that controls power to a bulb, causing the bulb to produce a predetermined special visual lighting effect. See generally ’437 patent claims 1 and 11 and ’265 patent claim 1. A second circuit allows a user to periodically and repeatedly interrupt current to the first circuit. The repeating interruption frequency is sufficient to cause the first circuit to remain in a steady-on state so long as power continues to be interrupted. The special lighting effect bulb remains steady-on until the user discontinues the power interruption, thereby returning the first circuit to its preprogrammed special lighting effect cycle.

Among other deficiencies, none of the four prior art references identified in LEDup’s Invalidity Contentions regarding the Steady On patents discloses sending an interruption frequency to a circuit controlling power to a special light effect bulb, sufficient to cause the circuit to reset, and remain in a steady-on state so long as power continues to be interrupted.

**U.S. Patent No. 7,015,825 to Callahan**

(Filed April 14, 2004; Issued March 21, 2006)

Callahan discloses a decorative lighting system that uses Pulse Width Modulation (PWM), controlled by an integrated circuit, to create blink rates undetectable to the human eye, to control of brightness and otherwise vary the lighting display. Callahan 4:17-22, 4:29-35, 4:41-45. The portions of Callahan that LEDup contends disclose an interruption frequency disclose use of an integrated circuit to create PWM waveforms and “prescaler registers 36, 38 that combine to permit blink rates of the LEDs to be selected. The prescalers 36, 38 generate the period the PWM signal from a high frequency oscillator.” Callahan 4:17-20. Callahan discloses that brightness is also controlled by brightness registers generating a high frequency PWM signal. Id. 4:41-45.

All the disclosures in Callahan identified by LEDup are directed to using PWM to vary the lighting display. None of the disclosures in Callahan cited by LEDup address sending a separate signal to the circuit creating the light display to reset the circuit to stay steady on. Callahan lacks any disclosure, or suggestion, for sending an interruption frequency sufficient to cause a circuit for controlling power to a special light effect bulb, to reset, and remain in a steady-on state so long as power continues to be interrupted. Moreover, LEDup fails to offer any rational as to why a person of ordinary skill in the art would have been motivated to modify the any of the identified prior references to include the missing interruption signal, how a person of skill would have modified the prior art to do so, or why a person of skill would have expected to achieve success in doing.

**U.S. 6,424,096 to Lowe**

(Filed April 18, 2000: Issued July 23, 2006)

Lowe discloses light strings using Triac, also known as a Bi-directional Thyristor, switches that conduct current when a trigger signal is applied to their control terminal. Lowe 5:30-44. LEDup identifies the Thyristor as the "first switching circuit" used to produce lighting effects. See claim charts. Lowe discloses that the appearance of the lighting can be changed over time by ramping up and delaying the triac triggers and, thereby, causing the lights to fade from light to dark, or modifying brightness over time. Lowe 6:35-54. Lowe, however, lacks any disclosure, or suggestion, for sending an interruption frequency, sufficient to cause a circuit for controlling power to a special light effect bulb, to reset, and remain in a steady-on state so long as power continues to be interrupted.

**German DE27299466 A1 to Soell**

(Published Jan. 18, 1979)

Soell discloses a system for controlling the visual appearance of incandescent lamps used in artificial combustion candles, e.g., varying the brightness of the lamps. See Soell Abstract. Soell discloses use of a circuit generating different levels and

frequencies, modulated by the logic of the circuit, to vary the visual appearance of the lights. See Soell [0016], [0021] and Fig. 1. LEDup identifies circuit 6 as constituting a "first switching circuit." See claim chart citing [0021]. LEDup identifies the "pulse shaper circuit 12" shown in Fig. 2 as constituting the second circuit, and allegedly sending an interruption frequency to the first circuit. See claim chart citing [0022]. However, the square wave depicted in shaper circuit 12 is not a separate wave form sent to circuit 6 (shown in Fig. 1). The shaper circuit 12 is the pulsed signal used to generate the brightness levels in the lamp. Soell [0022]. Soell lacks any disclosure, or suggestion, of a second switching circuit sending an interruption frequency, sufficient to cause a first circuit for controlling power to a special light effect bulb (e.g., circuit 6 as shown Fig. 1), to reset, and remain in a steady-on state so long as power continues to be interrupted.

**U.S. Pat. Pub. 2009/0121651 A1 to Gandhi**

(Priority Sept. 16, 2005; Published May 14, 2009)

Gandhi discloses "a color-changing light array powered by a driver circuit, the driver circuit responsive to a controller circuit, and the controller circuit configured to change display lighting patterns or colors based on modes of operation and off-on power cycle intervals." Gandhi, Abstract. The lights are configured to change display lighting patterns or colors based on modes of operation and off-on power cycle intervals. Id. Brightness is changed using pulse width modulation. Id. [0016] The resulting illumination may be controlled by a computer/micro-controller program to provide pre-designed patterns of light in various environments. Id.; see also [0041]. LEDup's claim charts do not identify any specific component constituting a second switching circuit sending an interruption frequency, sufficient to cause a first circuit for controlling power to a special function light, causing the circuit to reset, and for the light to remain in a steady-on state so long as power continues to be interrupted. Brightness of the of the changed using PWM but in Gandhi discloses sending a square

wave signal to the controller circuit to cause it to reset and maintain the light in a steady-on state.

Discovery is ongoing. Seasonal reserves the right to supplement or amend this interrogatory answer.

**INTERROGATORY NO. 3:** For each of the Claims-in-Suit provide the factual basis of Your response and position with respect to the invalidity contentions based on Section 112 of the Patent Statute contained in the Preliminary Invalidity Contentions. Provide a description of all documents that support Your position and the names of any witnesses with relevant information and a description of the relevant information.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. Moreover, LEDup's indefiniteness and lack of enablement allegation are unclear, and do not specifically identify which specific claims and claim terms LEDup contends re invalid under 35 U.S.C. § 112.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal denies that the asserted claims are invalid for failure to comply with the written description and enablement requirements. After LEDup provides sufficient detail as to the which specific claims and claim terms it contends are invalid for lack of compliance with 35 U.S.C. 112, Seasonal will supplement this response.

**INTERROGATORY NO. 4:** For each Claims-in-Suit that the Preliminary Invalidity Contentions assert would have been obvious in light of the cited prior art, provide the factual basis for any counter-contention that it would have been non-

obvious in light of the cited prior art including a description of any evidence and documents related to Second Considerations that You assert exist.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence. LEDup has yet to identify a basis for and alleged obviousness defense or make a prima facie showing of obviousness, making proof of secondary considerations unnecessary and irrelevant. Seasonal specifically objects to this interrogatory's demand that Seasonal identify secondary considerations on a "claim-by-claim" basis as being contrary to law.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal refers to its answer to Interrogatory No. 2 regarding the lack of motivation or suggestion to combine prior art. Seasonal further states that non-obviousness of the Asserted Patents is supported by at least the following relevant secondary considerations:

**Resistive Bypass Patents**

*Commercial Success.* Seasonal will produce pursuant to Fed. R. Civ. P. 33(d) non-privileged business records identifying products practicing the Resistive Bypass Patents. Seasonal's products practicing the Resistive Bypass Patents have been commercially successful due to inclusion of the patented invention. Other companies, including at least LEDup and Inliten, have incorporated the Resistive Bypass invention into their competing decorative lighting products, and have also enjoyed commercial success due to inclusion of the invention.

*Long Felt Need.* Decorative lighting products are often connected in "series" in a string of lights, whereby electrical current flows from one light to the next in the

circuit, end-to-end. A drawback to series connected decorative lighting strings is that when a lighting source, e.g., a bulb, is removed from the circuit, is burnt out, defective, or has a loose connection, the entire lighting circuit is rendered inoperable. See '252 patent at 1:26-45.

To address this drawback, lighting string manufactures utilize circuit bypasses to permit electrical current to continue to flow through the circuit even though after one or more bulbs in the lighting string have become inoperable. For example, U.S. Patent No. 5,886,423 to Gershon discloses a lighting string containing incandescent bulbs with a parallel solid state bypass circuit that conducts electricity only when the bulb becomes inoperable. When one or more bulbs in the Gershon system become inoperable, the bypass then permits current to bypass the inoperable lamp and flow to the remaining bulbs.

Drawbacks remain, however, with circuit bypasses. The solid state bypass circuit in Gershon creates no voltage load on the circuit, until engaged when a bulb in the circuit fails. When engaged, the bypass circuits like those described in Gershon provide insufficient resistance to that portion of the circuit bypassed. If enough bulbs fail, the circuit current will increase causing early failure of the remaining bulbs as too much current flows through the remaining bulbs, overheating them and causing them to prematurely fail.

Seasonal's engineers developed an improved circuit bypass that addresses problems in bypass circuits including a reduction in the cost, complexity, and size of the solid state bypass circuits, i.e., the "Resistive Bypass Invention." The Resistive Bypass Invention permits serially-connected LED lights to remain lit, after one or more bulbs become defective, burnt out, loose, or removed, by conducting current at all times when current is flowing through the circuit, regardless of whether the LED light sources are conducting current therethrough.

**Steady-On Patents**

*Commercial Success.* Seasonal lighting products (781308-101 & 781309-101) practice the patented Steady On invention. Seasonal's products have been commercially successful due to inclusion of the patented invention. Other companies, including Everstar, LEDup, National Tree and Holiday Designs, subsequently incorporated the patented invention into their competing decorative lighting products, and have also enjoyed commercial success due to inclusion of the invention.

*Long Felt Need.* The patented invention allows an LED bulb that normally has a special lighting effect (e.g., turning on and off, i.e., "twinkling," or changing from dim to bright, or changing color) when a power source is applied, to become a steady-on bulb, by sending a pulsed signal to the IC in that special lighting effect LED, causing the IC in the LED never to complete its program and cause the LED to stay steady on, or steady on in a specific color. For the sake of this document, Seasonal will refer to the special bulb to be of the random "twinkle" type, as that is what is used in the infringing Accused Product.

Before the patented invention, there were two main types of "twinkle" or specialty decorative lighting sets available, not including sets where each bulb was independently addressable, which is much more costly. First, there were true random twinkle sets, in which each specialty bulb independently turns on and off at its own rate, not affecting the status rate of other bulbs. Second, standard bulbs where all the bulbs in the same circuit turn on and off at the same time in a simulated rate to look like they are twinkling or other effect by means of some sort of controller, turning on and off that circuit, or diming that circuit. For example, a non-electronic controller, such as a flasher bulb, which turns on and off the whole circuit. This second type of "twinkle" bulb was a "fake" twinkle, or fake effect, because all the bulbs turned on and off (or some other specialty lighting variation) at the same time in the same circuit. Prior to the patented invention, true random twinkle sets (where each bulb independently turns on and off, unaffected by other bulbs), could not be made to easily

switch to a steady-on mode unless they were a much higher cost addressable bulb where each or some bulbs were controlled independently.

Seasonal was contacted by customers requesting to be able to turn on or off the twinkling mode, as it was sometime too distracting and desirable to switch from "twinkle" (or some other special mode) to steady-on mode. Seasonal was able to provide this feature with the patented invention because of the IC inside of the special effect LED bulb. Instead of employing high-cost addressable LEDs and a complicated controller, Seasonal took a low cost controller, and existing "semi-smart" LEDs (where the IC inside of the specialty bulb simply turns on and off that one LED instead of addressable and completely independently controllable) and created a set that could switch from twinkling to steady-on mode by pulsing the IC on the specialty LED bulbs to cause them to stop twinkling. The patented invention satisfied customers long-felt need for a true random twinkle light set, without high-cost independently addressable LEDs and a complicated controller, but could also switch from a twinkle (or other specialty lighting) mode to steady-on.

*Copying*. Seasonal competitors, including Everstar, LEDup, National Tree and Holiday Designs, had access to Seasonal products incorporating the claimed invention due to the products presence in the marketplace and their commercial success. Seasonal also began marking products using the patented invention with the numbers of the Asserted Patents on products sold since at least September 2020. Thereafter, the aforementioned competitors introduced decorative lighting products that infringed the Asserted Patents by including the claimed twinkle to steady-on feature.

In at least one case, a competitor, Holiday Designs, offered decorative lighting products containing the patented invention to a retailer (Home Depot) that had committed to purchasing products containing the invention from Seasonal, resulting in the retailer deciding to purchase products from the competitor instead of from Seasonal. The aforementioned evidence creates a presumption of copying.

*Licensing*. At least one company has taken a license to the Steady-On Patents. Evidence that competitors have licensed a patent may provide probative and cogent evidence of non-obviousness of the claims at issue.

Discovery continues. Seasonal reserves the right to supplement this interrogatory response to identify additional evidence and additional bases of secondary considerations supporting non-obviousness of the patented invention.]

**INTERROGATORY NO. 5:** Describe all tests, inspections, evaluations, analysis or comparisons conducted by You or on Your behalf on any of Defendant's products, whether they are accused products or not, and describe the dates acquired and the source for all such products, the dates of all tests, inspections, evaluations, analysis or comparison, the persons and their employers who performed them, the documents or recordings or other preservation of them, the product SKU or other identifier of the products examined and the purpose and conclusions made. Describe all documents, recordings, photos, test equipment, wiring diagrams of any test setup, the test methods used, videos, or other means of recording them.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal will produce pursuant to Fed. R. Civ. P. 33(d) non-privileged business records regarding third party testing of Seasonal products practicing the Patents-in-Suit, made in the ordinary course of business, from which information responsive to this interrogatory can be ascertained. Testing of the Accused Products constitutes work product and expert testimony that will be produced in accordance with Scheduling Order regarding disclosure of expert testimony.

**INTERROGATORY NO. 6:** Describe on a week-by-week basis from Your earliest date of conception of the invention of the Claims-in-Suit of the '252 and '794 patents, what actions, research, analysis, testing, written descriptions, disclosures, drafts of patent applications, evaluation of options or of patentability, or efforts You or anyone on Your behalf that led up to and contributed to Your filing Your December 22, 2006 patent application Ser. No. 60/876,868. Identify all documents, persons or things that corroborate or otherwise support Your answer.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, please see Seasonal's response to Interrogatory No. 1 and Interrogatory No. 2 above regarding U.S. Patent No. 7,963,670 to Yu's qualification as prior art against the Resistive Bypass Patents, including reference to Mr. Altamura's declarations and documents contained within the patent file histories.

**INTERROGATORY NO. 7:** Describe what considerations were evaluated in selecting the patent claims chosen for further prosecution as a divisional in Ser. No. 11/962,964, filed on December 21, 2007, instead of the resistor bypass claims (which, for clarification, are those claims of the original patent application that were directed toward the invention later claimed in the '252 patent), and describe all documents, persons, opinions, and things that were considered or what documents went into Your decision, including any prior art, patentability probability evaluations, or other factors.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client

privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, Seasonal's non-privileged considerations and evaluations for selecting the patent claims chosen for further prosecution in Ser. No. 11/962,964, are set forth in the file histories of the Patent-in-Suit and the file histories of the other applications in the same family. Any other considerations and evaluations for selecting patent claims is attorney work product or otherwise privileged.

**INTERROGATORY NO. 8:** Do You contend that any of Defendant's products infringe on any of the Claims-in-Suit under the Doctrine of Equivalents and if so, set forth the factual basis for such claims as to each element to which it is applied and describe all documents and things that support Your contentions.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal states: LEDup has not identified any element of the Asserted Claims missing from Seasonal's infringement allegations and on which Defendant avoids infringement. LEDup has not refuted the evidence of infringement identified in Seasonal's Infringement Contentions. Because LEDup has not identified any element of the Asserted Claims missing from the accused products, Seasonal has no need to

rely upon the doctrine of equivalents to prove infringement. To the extent LEDup identifies any element absent from Seasonal's Infringement Contentions, Seasonal reserves the right to rely upon the doctrine of equivalents to prove infringement.

**INTERROGATORY NO. 9:** Identify all facts that support Your allegation that Defendant willfully infringed any of the Patents-in-Suit or that this is an exceptional case warranting additional relief under Sections 284 and 285 of the Patent Statute.

**OBJECTION:** In addition to its general objections, Seasonal specifically objects to this interrogatory as seeking information protected by the attorney-client privilege and/or protected by the work product doctrine. Seasonal further objects to this interrogatory as seeking legal conclusions and theories as opposed to discovery of factual evidence. Seasonal further objects to this interrogatory as overly broad, unduly burdensome, and as seeking information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence.

**RESPONSE:** Subject to the above general objections, and without waiving any objection, Seasonal states: LEDup undertook and continues its infringing actions despite that it knew and/or should have known that its actions constituted an unjustifiably high risk, and that its activities infringed the Patents-in-Suit, which were duly issued and are presumed valid. For example, since at least receiving actual notice of infringement from Seasonal, LEDup has been aware of the unjustifiably high risk that its actions constituted and continue to constitute infringement of the Patents-in-Suit, and that the Patents-in-Suit are valid. On information and belief, LEDup could not reasonably, subjectively believe that its actions do not constitute infringement of the Patents-in-Suit, and it could not reasonably, subjectively believe that the Patents-in-Suit are invalid. Despite this knowledge and subjective belief, and the unjustifiably high risk that its actions constitute infringement, LEDup has continued its infringing activities.

Discovery continues and Seasonal reserves the right to supplement this answer after it receives discovery from LEDup.

Dated: June 24, 2024

SAUL EWING LLP

By */s/ Courtland C. Merrill*
Courtland C. Merrill
Attorneys for Plaintiff
SEASONAL SPECIALTIES, LLC

## CERTIFICATE OF SERVICE

The undersigned certifies that on June 24, 2024, the foregoing **Plaintiff's Responses to Defendant's First Set of Interrogatories** were served on Defendant's counsel of record by electronic mail, as agreed upon by counsel, at the addresses identified below:

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