

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|             |                                              |                 |                |
|-------------|----------------------------------------------|-----------------|----------------|
| Applicant:  | Altamura                                     | Examiner:       | HINES, Anne M. |
| Serial No.: | 17/400338                                    | Group Art Unit: | 2879           |
| Filed:      | 11/25/2019                                   | Docket No.:     | 40617.0493usc5 |
| Title:      | Resistive bypass for series lighting circuit |                 |                |

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**Declaration Of Steven Altamura  
Under  
37 C.F.R. §1.131**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

1. I am Steven Altamura, an employee of Seasonal Specialties, LLC, the assignee of the above identified patent application and the inventor of the subject matter of the above application.
2. I began work on this invention in 2005 and began documenting my work on paper on January 2006.
3. In 2004 and 2005, it was known that blue and green LEDs had a high failure rate (relative to other colors) and thus multicolored light strings could go dark if there wasn't a solution to this failure rate problem. This problem had to be solved to create a commercially reliable product.
4. My employer was interested in finding a solution to the problem of series light strings, typically used for holiday or ornamental lighting, failing if a single illumination element burning out.
5. At the time, in 2005, most light strings were still using incandescent elements since they were much less expensive than LED elements, but I was working on a resistor by-pass circuit for both LED and incandescent elements simultaneously. I built LED and incandescent prototype light strings at the same

Page 1

131

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time. It was not known to me, until building the LED prototype, that the LED prototype would function, because it was unknown whether sufficient voltage and current would be applied across the LED if a bypass resistor was in parallel.

6. My first written documentation of this concept is dated January 12, 2006 and written in my own hand. I scanned this document into my computer shortly thereafter. See Exhibit A.
7. I documented in writing further refinements of this bypass concept on Jan 31, 2006 and Feb 27, 2006, showing an illumination element having a bypass resistor in the base of a mini-lamp socket. The socket is used to hold either incandescent or LED elements. See Exhibits B, C and D. I built a prototype of the subject matter of Exhibits A, B, C and D at least as early as 15 Jan 2006, in order to have it reviewed by a customer.
8. I personally hand made a prototype at least as early as 15 Jan 2006, to further test the concept of my invention in the above application.
9. The invention as disclosed in USSN 60/876,868 was submitted to our patent attorneys for drafting into a patent application as early as June 2006.
10. A provisional application according to this invention was filed on 11 Dec 2006 as USSN 60/876,868.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

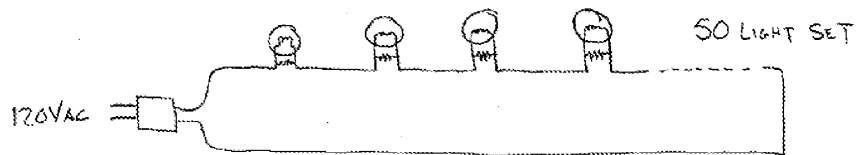
/\_\_Steven Altamura\_\_\_\_\_/

Steven Altamura

01 September 2022

Exhibit A

LIGHT SET WITH RESISTOR BACKUP  
SEASONAL SPECIALTIES LLC  
01/12/06 - Confidential



KEY

⊗ = MINI BULB 2.5V, 100mA (NO SHUNT!)

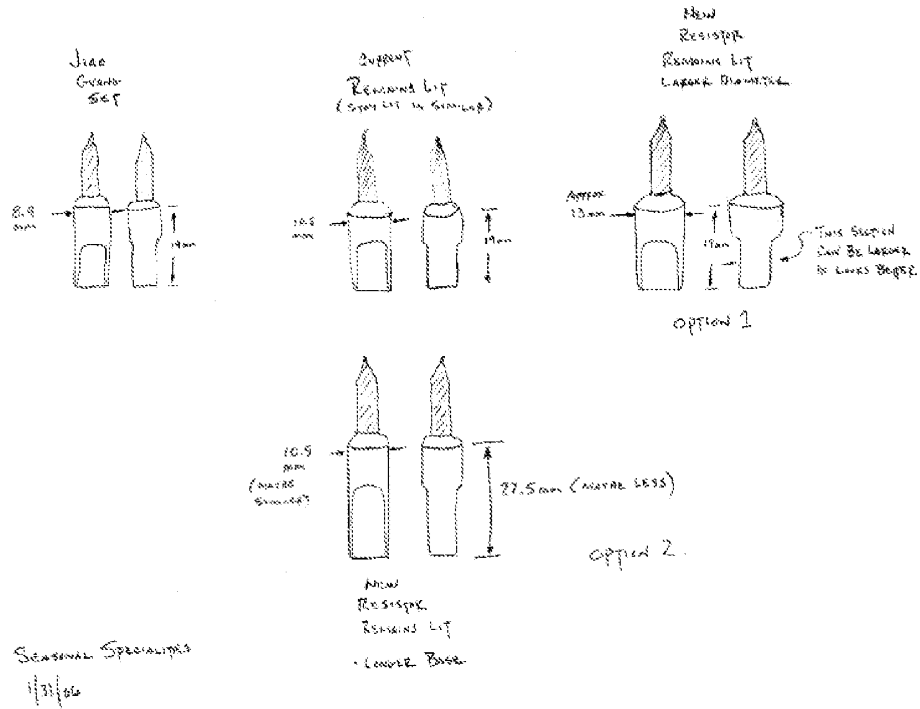
—||— = RESISTOR 45 TO 55Ω - MIN 1/4 WATT (1/2 WATT IS BETTER/COOLER)

Ω = OHM

NOTES

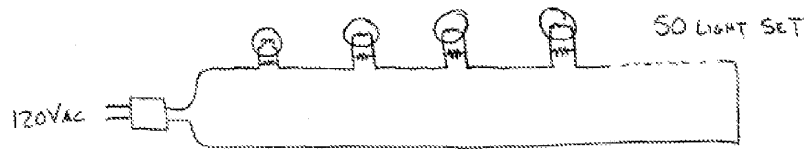
1. RESISTOR IS TO BE ACROSS EVERY BULB & LOCATED INSIDE LAMP HOLDER ACROSS BRASS CONTACTS
2. ELECTRICITY FLOWS THROUGH RESISTORS AT ALL TIMES
3. INPUT CURRENT WILL BE APPROX 150mA (100mA FOR BULBS & 50mA FOR RESISTORS)

# Exhibit B



# Exhibit C

LIGHT SET WITH RESISTOR BACKUP  
SEASONAL SPECIALTIES LLC  
2/27/06 - Confidential



KEY  
⊗ = MINI BULB 2.5V, 100mA (NO SHUNT!)  
--- = RESISTOR - 47Ω - 1/2 WATT  
Ω = OHM

- NOTES
1. RESISTOR IS TO BE ACROSS EVERY BULB & LOCATED INSIDE LAMP/HOLDER ACROSS BRASS CONTACTS
  2. ELECTRICITY FLOWS THROUGH RESISTOR AT ALL TIMES
  3. INPUT CURRENT WILL BE ~~200mA~~ 150mA (150mA FOR BULBS & 50mA FOR RESISTORS)
  4. STANDARD NUMBER OF WIRES NEEDED AS NO DC IS USED
- REV 2

# Exhibit D

