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(19) **United States**(12) **Patent Application Publication**  
**Larribe**(10) **Pub. No.: US 2024/0215137 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **MULTI-BRANCH LIGHT SYSTEM WITH  
CURRENT BALANCING AND FAILURE  
INDICATION**(52) **U.S. Cl.**CPC ..... **H05B 47/21** (2020.01); **F21V 23/0457**  
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**45/35** (2020.01)(71) Applicant: **VALEO VISION**, Bobigny (FR)(72) Inventor: **Sylvain Larribe**, Troy, MI (US)(21) Appl. No.: **18/307,849**(22) Filed: **Apr. 27, 2023****Related U.S. Application Data**(60) Provisional application No. 63/434,734, filed on Dec.  
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(57)

**ABSTRACT**

A light system including: light branches extending in parallel to one another with each of the light branches have lights that provide light to a region around a vehicle, the light branches include: a primary light branch include: a bias circuit and a switch; and secondary light branches that are controlled by the primary light branch; wherein electricity is provided to the light branches and when all of the lights on the light branches are operating properly the electricity maintains the switch in a closed position; and when any of the lights fail or are not operating properly, electricity is prevented from extending through the light branch, by the lights that have failed, and the electricity continues to extend through the light branches that are operating properly so that the electricity that extends to the switch is not sufficient to maintain the switch in the closed position.

