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## (54) SYSTEM AND METHOD FOR DISCERNING ARCING IN ELECTRICAL WIRING

- (71) Applicant: Hubbell Incorporated, Shelton, CT
- William Vernon Miller, III, Aldie, VA Inventor: (US)
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#### (57)ABSTRACT

A wiring device may include an interrupting device configured to be placed in a tripped condition. A wiring device may include a controller having an electronic processor and a memory, the controller configured to identify a presence of an in-rush condition conforming with a decay progression envelope falling between an upper limit and a lower limit specific to a cycle's position in sequence, and prevent the tripped condition upon identifying the in-rush condition.

