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(72) Inventor; and

(71) Applicant: **BOSTICK, Randall** [US/US]; 41995 Ashby
Gap Place, Aldie, Virginia 20105 (US).

(74) Agent: **LANDAU, Daniel, H.** et al.; HAYES SOLOWAY
P.C., 4640 E. Skyline Drive, Tucson, Arizona 85718 (US).

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(54) Title: SYSTEM AND METHOD FOR PROVIDING ELECTRICAL POWER TO A TETHERED AERIAL VEHICLE

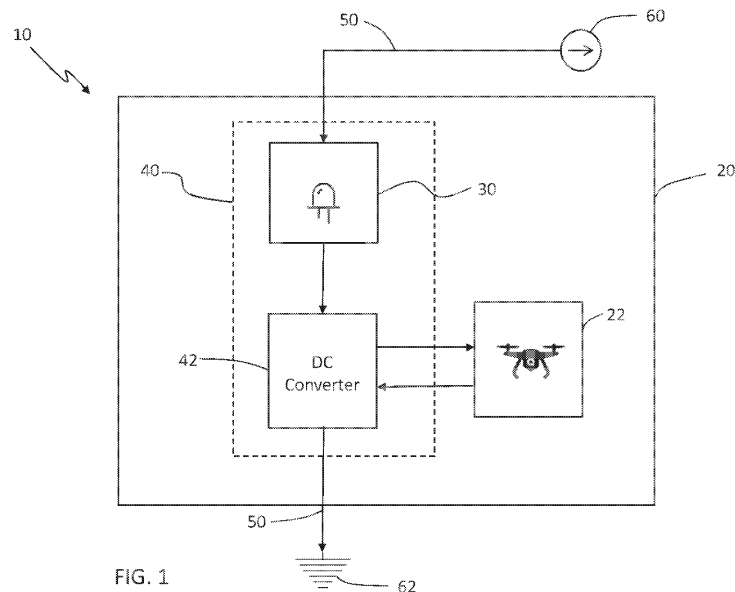


FIG. 1

(57) Abstract: An aerial vehicle electrical power system for use with a tethered aerial vehicle, and related methods are provided. The aerial vehicle electric power system includes a plurality of light-emitting diodes (LEDs) carried by an aerial vehicle. At least one electrical circuit is carried by the aerial vehicle. The at least one electrical circuit has a DC buck converter electrically in series with at least a portion of the plurality of LEDs. A tether is connected between the aerial vehicle and a power source positioned remote from the aerial vehicle. Electrical power is transmitted to the aerial vehicle and at least a portion of the plurality of LEDs through the tether. The electrical circuit minimizes variances in power supplied to the aerial vehicle and the plurality of LEDs.

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