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(54) Title: SIMULTANEOUS PARALLEL CHARGING IN UNINTERRUPTIBLE SERIES DISCHARGING ENERGY STORAGE
SYSTEMS

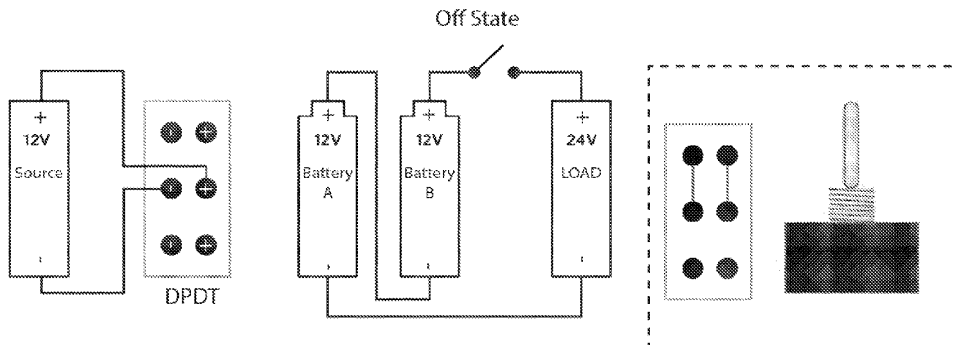


FIG. 1A is an exemplary embodiment of a DPDT switch (Off State) used to charge a series-stacked battery system to power
24V load using a 12V power source.

(57) Abstract: A solution to the challenge of maintaining uninterrupted power supply to the load while charging batteries simultaneously from a power source such as renewable energy. This is achieved by arranging batteries in a series-pack configuration connected to the load and allowing parallel charging of a subset of batteries within the series-pack. The incorporation of interchangeability using low frequency switching ensures a seamless and uninterrupted flow of electrical energy.

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