

PATENTABILITY

Collateral Estoppel Does Not Apply to Richardson Analysis

Richardson Fails to Teach Vehicle Battery Isolation Sensor Claim Limitations

Richardson is Inoperable Under Petitioner's Interpretation

Richardson Fails to Teach Claim 5 Limitations

Yu Fails to Teach Vehicle Battery Isolation Sensor Claim Limitations

A POSITA Would Not Have Modified Richardson to Add USB Charging

The Petition Fails to Establish How to Combine Richardson and Zhao

A POSITA Would Not Have Modified Yu to Add USB Charging

The Petition Fails to Establish How to Combine Yu and Paparrizos

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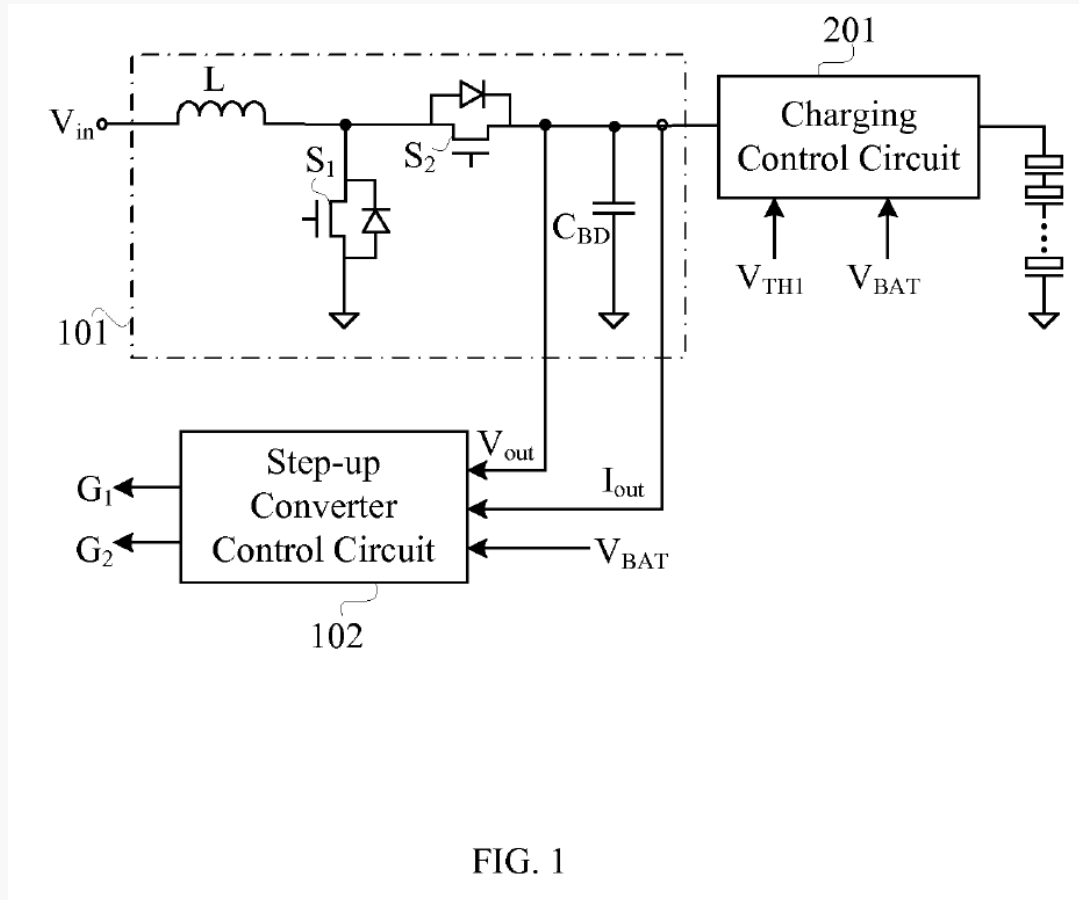
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Zhao is a Step-Up Charger for Low Power Devices.



When battery voltage V_{BAT} is greater than threshold voltage V_{TH1} , comparator 303 can output a high level signal to fully turn on power transistor Q_1 . In this case, the output signal of power stage circuit 101 can directly charge the battery device. When battery voltage V_{BAT} is greater than threshold voltage V_{TH1} but less than final voltage V_{CV} (e.g., final voltage V_{CV} can be about 8.4V if two lithium batteries are connected in series), step-up converter control circuit 102 can maintain output current I_{out} at a predetermined operating current...

FIG. 1

A POSITA Would Have Been Particularly Dissuaded From Even Attempting To Add USB Charging To The Unique Jump Starters Of Richardson

- The Petition fails to consider the actual system of Richardson, which has a very large capacity battery that relies on rapid recharging from a vehicle's electrical system
- A POSITA would not have considered the low-voltage, low-power charger of Zhao for jump starting vehicle batteries up to 48V
- A POSITA would not have considered Zhao's system suitable for rapid recharging a high-capacity battery ("in about 1 to 5 minutes")

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A POSITA would have been motivated to combine Zhao's charging system—which uses a DC-DC converter to boost a 5V USB input—with Richardson's jump starter in order to provide multiple ways of charging Richardson's battery, including through the use of a 5V USB input.

Petition, p. 39

The Petition Fails to Establish How to Combine Richardson and Zhao

~~A POSITA would have been motivated to combine Zhao's charging system—which uses a DC-DC converter to boost a 5V USB input—with Richardson's jump starter in order to provide multiple ways of charging Richardson's battery, including through the use of a 5V USB input.~~

Richardson

[0034] ...The jump starter 10 may be configured for 12, 18, 24, 30, 36, 42 or 48 volts, for example, using a selector jumper 55. For example, if the batteries 23 are both 12-volt batteries, the system may be configured for 12- or 24-volt operation.

Ex. 1005 (Richardson), para. [0034]

Zhao

When battery voltage V_{BAT} is greater than threshold voltage V_{TH1} , comparator 303 can output a high level signal to fully turn on power transistor Q_1 . In this case, the output signal of power stage circuit 101 can directly charge the battery device. When battery voltage V_{BAT} is greater than threshold voltage V_{TH1} but less than final voltage V_{CV} (e.g., final voltage V_{CV} can be about 8.4V if two lithium batteries are connected in series)...

Ex. 1006 (Zhao), 4:34-41

The Petition Fails to Establish How to Combine Richardson and Zhao

- Richardson is a heavy-duty jump starter (12V-48V) that is unsuitable for USB charging
- Richardson emphasizes the importance of rapid recharging which could not have been achieved with USB charging
- Richardson discloses no charging circuitry other than charging from the vehicle battery
- The Petition fails to demonstrate *how* to incorporate Zhao's low-power charging system into Richardson's high-power jump starter
- The Petition fails to demonstrate that Zhao's step-up converter is compatible with Richardson's high-power jump starter

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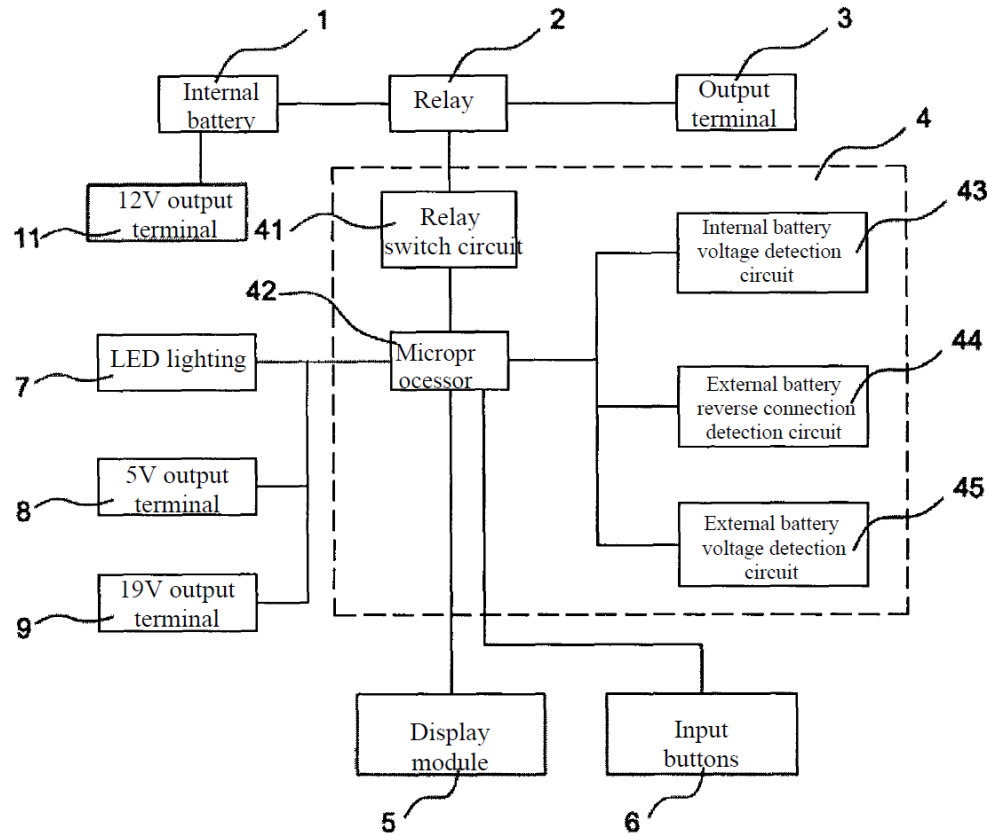


Fig. 1

Ex. 1008 (Yu), Fig. 1

DEMONSTRATIVE
EXHIBIT - NOT EVIDENCE

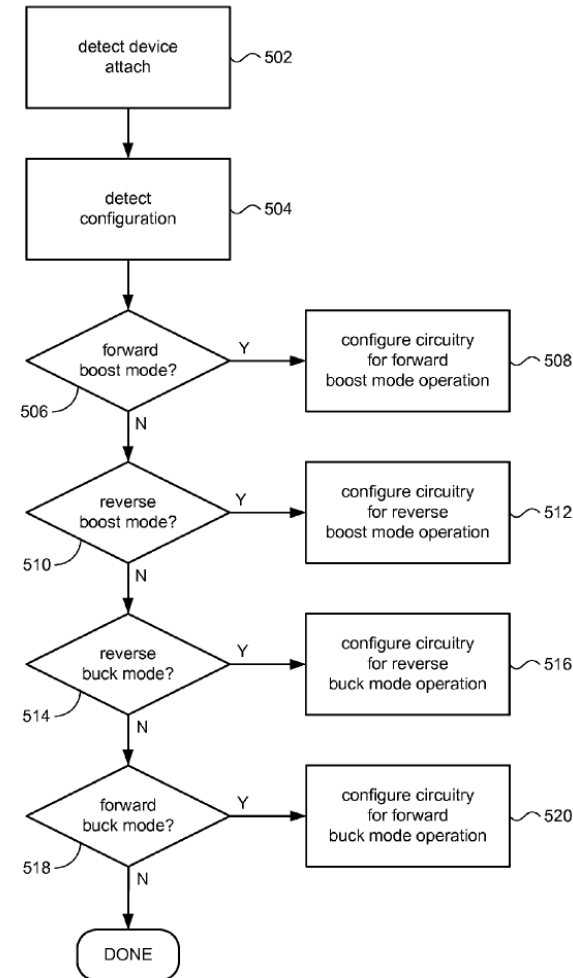


Fig. 5

Ex. 1009 (Paparrizos),
Fig. 5

PO Response, pp. 59-61;
Ex. 2003 (Fayed Decl.),
para. 132-135;
PO Preliminary Response,
pp. 49-51

JONES
DAY