EX1051

Comparison of invalidated ’015 patent claims to the claims of the ’203 patent

Invalidated claims/limitations of the ’015 patent (EX1033)	Matching claims/limitations of the ’203 patent (EX1001)
1[PRE]. Apparatus for jump starting a vehicle engine, comprising:	1[PRE]. A jump starter apparatus for jump starting a vehicle battery, comprising:
1[A] a power supply that includes one or more rechargeable batteries;	1[A]. a power supply that includes one or more rechargeable batteries;
1[B] a vehicle battery isolation sensor connected in circuit with said positive and negative polarity outputs, configured to detect presence of a vehicle battery connected between said positive and negative polarity outputs;	1[D] a vehicle battery isolation sensor configured to detect presence of the vehicle battery connected to the jump starter apparatus;
1[C] a reverse polarity sensor connected in circuit with said positive and negative polarity outputs, configured to detect polarity of a vehicle battery connected between said positive and negative polarity outputs and to provide an output signal indicating whether positive and negative terminals of said vehicle battery are properly connected with said positive and negative polarity outputs of said output port;	1[E] a reverse polarity sensor, separate from the vehicle battery isolation sensor, configured to detect a proper polarity connection between the jump starter apparatus and the vehicle battery
1[D] a power switch connected between said internal power supply and said output port; and	1[F] a power switch configured to electrically connect the power supply to the vehicle battery,

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1[E] a microcontroller configured to receive input signals from said vehicle isolation sensor and said reverse polarity sensor, and to provide an output signal to said power switch, such that said power switch is turned on to cause said internal power supply to be connected to said output port in response to signals from said sensors indicating the presence of a vehicle battery at said output port and proper polarity connection of positive and negative terminals of said vehicle battery with said positive and negative polarity outputs, and is not turned on when signals from said sensors indicate either the absence of a vehicle battery at said output port or improper polarity connection of positive and negative terminals of said vehicle battery with said positive and negative polarity outputs.	1[G] wherein the power switch is controlled based on signals from the vehicle battery isolation sensor and the reverse polarity sensor such that the power supply is connected to the vehicle battery when both (i) the vehicle battery isolation sensor currently indicates that the vehicle battery is connected to the jump starter apparatus, and (ii) the reverse polarity sensor currently indicates that the jump starter and the vehicle battery are connected with the proper polarity connection.
2. The apparatus of claim 1, wherein said internal power supply comprises a lithium ion battery.	
3. The apparatus of claim 2, wherein said lithium ion battery comprises a battery pack of multiple lithium ion batteries.	
4. The apparatus of claim 1, wherein said power switch comprises a plurality of FETs in parallel.	6. The jump starter apparatus of claim 1, wherein the power switch is a FET switch.

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5. The apparatus of claim 1, wherein said vehicle isolation sensor and reverse polarity sensor comprise optically coupled isolator phototransistors.	7. The jump starter apparatus of claim 1, wherein the reverse polarity sensor comprises an optically coupled isolator phototransistor coupled to a vehicle battery terminal connector via a diode.
6. The apparatus of claim 1, further comprising a plurality of power diodes coupled between said output port and said internal power supply to prevent back-charging of said internal power supply from an electrical system connected to said output port.	8. The jump starter apparatus of claim 1, wherein the vehicle battery isolation sensor comprises an optically coupled isolator phototransistor coupled to a vehicle battery terminal connector via a diode.
8. The apparatus of claim 1, further comprising a voltage measurement circuit configured to measure output voltage of said internal power supply and to provide a voltage measurement signal to said microcontroller.	
9. The apparatus of claim 1, further comprising a voltage regulator configured to convert output voltage of said internal power supply to a voltage level appropriate to provide operating power to internal components of the apparatus.	
10. The apparatus of claim 1, further comprising a USB output port configured to provide charging power from said internal power supply to a USB-chargeable device.	10. The jump starter apparatus of claim 9, wherein the jump starter apparatus is further configured to provide power for charging an external device. 11. The jump starter apparatus of claim 10, further comprising: a USB output port for providing power from the rechargeable power supply for charging the external device.

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12. The apparatus of claim 1, further comprising a flashlight circuit configured to provide a source of light to a user.	
13. The apparatus of claim 12, wherein said source of light is at least one LED.	
14. The apparatus of claim 13, wherein said microcontroller is configured to control said at least one LED to provide a visual alarm indicating an emergency situation.	
15. The apparatus of claim 1, further comprising a plurality of visual indicators configured to display remaining capacity status of said internal power supply.	
16. The apparatus of claim 15, wherein said plurality of visual indicators comprises a plurality of LEDs providing output light of different colors.	
17. The apparatus of claim 1, further comprising a visual indicator configured to warn a user when a vehicle battery is connected with reverse polarity.	
18. The apparatus of claim 1, further comprising separate visual indicators configured to display the power on status of the apparatus, and the jump start boost power status of power supplied to said output port.	
19. The apparatus of claim 1, further comprising a manual override switch configured to activate a manual override mode to enable a user to connect jump start power to said	

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output port when said vehicle battery isolation sensor is unable to detect presence of a vehicle battery.	
20. The apparatus of claim 19, wherein said microcontroller is configured to detect actuation of said manual override switch for at least a predetermined period of time before activation of said manual override mode.	
21. The apparatus of claim 1, further comprising a jumper cable device including a plug configured to plug into said output port, a pair of cables integrated with the plug at one respective end thereof and being configured to be connected to terminals of a battery at another respective end thereof.	3. The jump starter apparatus of claim 1, further comprising: a positive battery terminal connector for electrically connecting the jump starter apparatus to a positive terminal of the vehicle battery; and a negative battery terminal connector for electrically connecting the jump starter apparatus to a negative terminal of the vehicle battery.
22. The apparatus of claim 21, wherein said jumper cable device further comprises a pair of ring terminals configured to respectively connect said pair of cables at said another end thereof with one of a battery terminal and a battery terminal clamp.	
23. The apparatus of claim 21, wherein said output port and said plug are dimensioned so that the plug will fit into the output port only in one specific orientation.	