**WHAT IS CLAIMED IS:**

1. A quick-charging control method, applied to a charging system comprising a charging adapter and a mobile terminal, and comprising:

with a second controller, sending a quick-charging request to a first controller, wherein the mobile terminal comprises the first controller, a cell connector and a cell, the charging adapter comprises the second controller;

with the first controller, feeding back a quick-charging permission instruction to the second controller;

with the second controller, sending a notification request for obtaining a voltage value of the cell to the first controller;

with the first controller, obtaining the voltage value of the cell via the cell connector according to the notification request, and sending the voltage value of the cell to the second controller, the cell connector is configured to be coupled to an anode of the cell and a cathode of the cell, and to obtain the voltage value of the cell cross the anode of the cell and the cathode of the cell;

with the second controller, searching a threshold segment table to find a current regulation instruction matched with a threshold segment containing the voltage value of the cell, and sending the current regulation instruction to a regulation circuit, wherein the charging adapter comprises the regulation circuit, and the threshold segment table records one or more threshold segments and current regulation instructions having a mapping relation with the threshold segments;

with the regulation circuit, performing a current regulation according to the current regulation instruction, and outputting a power signal after the current regulation, such that the charging adapter outputs the power signal after the current regulation;

with the second controller, sending a second switch-off instruction to the first controller and a second switch circuit respectively if second abnormal charging information is detected, wherein the charging adapter comprises the second switch circuit; and

with the second switch circuit, controlling the charging adapter to stop sending the power signal after the current regulation if the second switch circuit receives the second switch-off instruction.

2. The quick-charging control method according to claim 1, wherein, the regulation circuit comprises a current detection circuit;

with the regulation circuit, performing the current regulation according to the current regulation instruction and outputting the power signal after the current regulation comprises:

with the current detection circuit, detecting a current value of the power signal outputted from the regulation circuit, and sending the current value detected to the second controller;

with the second controller, calculating a difference between the current value detected and a current value specified by the current regulation instruction, and sending a calibration instruction to the regulation circuit if an absolute value of the difference calculated is greater than a difference threshold;

with the regulation circuit, calibrating the power signal according to a current difference specified by the calibration instruction, and outputting the power signal after calibration, wherein a current value of the power signal after calibration is equal to the current value specified by the current regulation instruction.

3. The quick-charging control method according to claim 1 or 2, wherein, the charging adapter further comprises a current and voltage detection circuit;

with the second controller, sending the second switch-off instruction to the first controller and the second switch circuit respectively if second abnormal charging information is detected comprises:

with the second controller, obtaining a voltage value and a current value of the power signal after the current regulation via the current and voltage detection circuit, and sending the second switch-off instruction to the first controller and the second switch circuit respectively if the current value of the power signal after the current regulation is greater than an overcurrent threshold and/or the voltage value of the power signal after the current regulation is greater than an overvoltage threshold.

4. The quick-charging control method according to any one of claims 1-3, wherein, after with the regulation circuit, performing the current regulation according to the current regulation instruction and outputting the power signal after the current regulation, the quick-charging control method further comprises:

with the charging adapter, sending the power signal to a first charging interface of the mobile terminal via a second charging interface, such that the charging adapter charges the cell of the mobile terminal, wherein there are P first power wires and Q first ground wires in the first charging interface, there are P second power wires and Q second ground wires in the second charging interface, the P first power wires are coupled to the P second power wires

correspondingly, the Q first ground wires are coupled to the Q second ground wires correspondingly, P is greater than or equal to 2, and Q is greater than or equal to 2.

5. The quick-charging control method according to any one of claims 1-4, wherein, the mobile terminal further comprises a first switch circuit, and the first switch circuit is controlled by the first controller to switch on or off;

the quick-charging control method further comprises:

with the first controller, sending a switch-off instruction to the second controller and the first switch circuit respectively if first abnormal charging information is detected, wherein the first abnormal charging information comprises an anode contact signal generated when an anode of the cell is not in good contact, a cathode contact signal generated when a cathode of the cell is not in good contact, and a temperature signal generated when a temperature of the cell is greater than a temperature threshold;

with the first switch circuit, controlling to switch off a charging loop for the charging adapter to charge the cell via the first switch circuit, if the first switch circuit receives the switch-off instruction.

6. The quick-charging control method according to claim 2, wherein the regulation circuit comprises a voltage and current regulation circuit;

the quick-charging control method further comprises:

with the regulation circuit, sending a voltage regulation instruction to the voltage and current regulation circuit according to the calibration instruction;

with the voltage and current regulation circuit, performing a voltage regulation according to the voltage regulation instruction, and outputting the power signal after the voltage regulation;

with the current detection circuit, re-detecting whether a current value of the power signal after the voltage regulation is equal to the current value specified by the current regulation instruction;

with the regulation circuit, stopping determining the voltage regulation instruction according to the calibration instruction, and with the voltage and current regulation circuit, stopping performing the voltage regulation if current value of the power signal after the voltage regulation is equal to the current value specified by the current regulation instruction.

7. The quick-charging control method according to any one of claims 1-6, wherein the second abnormal charging information further comprising: information indicating an abnormal

temperature of the charging adapter, or information indicating that the charging adapter has been pulled out;

with the second controller, sending the second switch-off instruction to the first controller and the second switch circuit respectively if second abnormal charging information is detected comprises:

with the second controller, sending the second switch-off instruction to the first controller and the second switch circuit respectively if the information indicating an abnormal temperature of the charging adapter is detected, or if the information indicating that the charging adapter has been pulled out is detected.

8. The quick-charging control method according to claim 5, further comprising:

with the first controller, controlling the first switch circuit to switch off the charging loop for the charging adapter to charge the cell via the first switch circuit, if the first controller receives the second switch-off instruction.

9. The quick-charging control method according to claim 5, further comprising:

with the second controller, controlling the second switch circuit to control the charging adapter to stop sending the power signal after the current regulation if the second controller receives the switch-off instruction.

10. The quick-charging control method according to any one of claims 2-9, wherein the current detection circuit has a current detection resistor; the quick-charging control method further comprises:

with the current detection resistor, detecting the current value of the power signal outputted by the regulation circuit in real time, converting to the voltage value and sending the voltage value converted to the second controller;

with the second controller, determining the current value of the power signal outputted by the regulation circuit according to the voltage value received from the current detection resistor and the resistance of the current detection resistor.

11. The quick-charging control method according to any one of claims 1-10, further comprising:

with the second controller, sending a quick-charging request to the first controller, the quick-charging request for asking the first controller whether to accept a high-current charging of the charging adapter on the cell of the mobile terminal;

with the first controller, sending a quick-charging permission instruction to the second controller if the first controller accepts the high-current charging of the charging adapter on the cell of the mobile terminal; and

with the second controller, determining that the high-current charging for the cell of the mobile terminal is performed after receiving the quick-charging permission instruction.

12. A quick-charging control system, comprising:

a charging adapter, comprising a second controller, a regulation circuit and a second switch circuit; and

a mobile terminal, comprising a cell connector, a first controller and a cell; wherein

the second controller is configured to send a quick-charging request to the first controller;

the first controller is configured to feed back a quick-charging permission instruction to the second controller;

the second controller is further configured to send a notification request for obtaining a voltage value of the cell to the first controller;

the first controller is further configured to obtain the voltage value of the cell via the cell connector, and to send the voltage value of the cell to the second controller, and the cell connector is configured to be coupled to an anode of the cell and a cathode of the cell, and to obtain the voltage value of the cell cross the anode of the cell and the cathode of the cell;

the second controller is further configured to search a threshold segment table to find a current regulation instruction matched with a threshold segment containing the voltage value of the cell, to send the current regulation instruction to the regulation circuit, and to send a second switch-off instruction to the first controller and the second switch circuit respectively if second abnormal charging information is detected;

the regulation circuit is configured to perform a current regulation according to the current regulation instruction, and to output a power signal after the current regulation, such that the charging adapter outputs the power signal after the current regulation; and

the second switch circuit is configured to control the charging adapter to stop sending the power signal after the current regulation if the second switch-off instruction is received.

13. The quick-charging control system according to claim 12, wherein, the regulation circuit comprises a current detection circuit;

the current detection circuit is configured to detect a current value of the power signal outputted from the regulation circuit, and to send the current value detected to the second controller;

the second controller is further configured to calculate a difference between the current value detected and a current value specified by the current regulation instruction, and to send a calibration instruction to the regulation circuit if an absolute value of the difference calculated is greater than a difference threshold;

the regulation circuit is further configured to calibrate the power signal according to a current difference specified by the calibration instruction, and to output the power signal after calibration, wherein a current value of the power signal after calibration is equal to the current value specified by the current regulation instruction.

14. The quick-charging control system according to claim 12 or 13, wherein, the charging adapter further comprises a current and voltage detection circuit;

the second controller is further configured to obtain a current value and a voltage value of the power signal after the current regulation via the voltage and current detection circuit, and to send the second switch-off instruction to the second switch circuit if the current value of the power signal after the current regulation is greater than an overcurrent threshold and/or the voltage value of the power signal after the current regulation is greater than an overvoltage threshold.

15. The quick-charging control system according to any one of claims 12-14, wherein, the charging adapter is further configured to send the power signal to a first charging interface of the mobile terminal via a second charging interface, such that the charging adapter charges the cell of the mobile terminal, wherein there are P first power wires and Q first ground wires in the first charging interface, there are P second power wires and Q second ground wires in the second charging interface, the P first power wires are coupled to the P second power wires correspondingly, the Q first ground wires are coupled to the Q second ground wires correspondingly, P is greater than or equal to 2, and Q is greater than or equal to 2.

16. The quick-charging control system according to any one of claims 12-15, wherein, the mobile terminal further comprises a first switch circuit;

the first controller is further configured to send a switch-off instruction to the second controller and the first switch circuit respectively if first abnormal charging information is detected, wherein the first abnormal charging information comprises an anode contact signal generated when an anode of the cell is not in good contact, a cathode contact signal generated when a cathode of the cell is not in good contact, and a temperature signal generated when a temperature of the cell is greater than a temperature threshold;

the first switch circuit is configured to switch off a charging loop for the charging adapter to charge the cell via the first switch circuit, if the switch-off instruction is received.

17. The quick-charging control system according to claim 13, wherein the regulation circuit comprises a voltage and current regulation circuit;

the regulation circuit is further configured to send a voltage regulation instruction to the voltage and current regulation circuit according to the calibration instruction;

the voltage and current regulation circuit is configured to perform a voltage regulation according to the voltage regulation instruction, and to output the power signal after the voltage regulation;

the current detection circuit is further configured to re-detect whether a current value of the power signal after the voltage regulation is equal to the current value specified by the current regulation instruction;

the regulation circuit is further configured to stop determining the voltage regulation instruction according to the calibration instruction, and the voltage and current regulation circuit is further configured to stop performing the voltage regulation if current value of the power signal after the voltage regulation is equal to the current value specified by the current regulation instruction.

18. The quick-charging control system according to any one of claims 12-17, wherein the second abnormal charging information further comprising: information indicating an abnormal temperature of the charging adapter, or information indicating that the charging adapter has been pulled out;

the second controller is further configured to send the second switch-off instruction to the first controller and the second switch circuit respectively if the information indicating an abnormal temperature of the charging adapter is detected, or if the information indicating that the charging adapter has been pulled out is detected.

19. The quick-charging control system according to any one of claims 16-18, wherein

the first controller is further configured to control the first switch circuit to switch off the charging loop for the charging adapter to charge the cell via the first switch circuit, if the first controller receives the second switch-off instruction.

20. The quick-charging control system according to any one of claims 16-18, wherein

the second controller is further configured to control the second switch circuit to control the charging adapter to stop sending the power signal after the current regulation if the second controller receives the switch-off instruction.

21. The quick-charging control system according to any one of claims 13-20, wherein the current detection circuit has a current detection resistor;

the current detection resistor is configured to detect the current value of the power signal outputted by the regulation circuit in real time, to convert to the voltage value and to send the voltage value converted to the second controller;

the second controller is further configured to determine the current value of the power signal outputted by the regulation circuit according to the voltage value received from the current detection resistor and the resistance of the current detection resistor.

22. The quick-charging control system according to any one of claims 12-21, wherein

the second controller is further configured to send a quick-charging request to the first controller, the quick-charging request for asking the first controller whether to accept a high-current charging of the charging adapter on the cell of the mobile terminal;

the first controller is further configured to send a quick-charging permission instruction to the second controller if the first controller accepts the high-current charging of the charging adapter on the cell of the mobile terminal; and

the second controller is further configured to determine that the high-current charging for the cell of the mobile terminal is performed after receiving the quick-charging permission instruction.