WHAT IS CLAIMED IS:

1. A quick charging method, wherein, the method is applied to a power adapter, the power adapter is coupled to a mobile terminal through a universal serial bus (USB) interface, a power line in the USB interface is used by the power adapter to charge the mobile terminal, a D+ line and/or D- line in the USB interface is used by the power adapter to conduct a bidirectional communication with the mobile terminal, and the power adapter supports a common charging mode and a quick charging mode, wherein a charging current of the quick charging mode is greater than that of the common charging mode; the method comprises:

conducting by the power adapter a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine to charge the mobile terminal in the quick charging mode; and

adjusting by the power adapter a charging current to a charging current corresponding to the quick charging mode so as to charge the mobile terminal.

2. The method according to claim 1, further comprising:

conducting by the power adapter a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine a charging voltage corresponding to the quick charging mode; and

adjusting by the power adapter a charging voltage to the charging voltage corresponding to the quick charging mode.

3. The method according to claim 1 or 2, further comprising:

conducting by the power adapter a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine the charging current corresponding to the quick charging mode.

4. The method according to any of claims 1-3, further comprising:

in a process that the power adapter charges the mobile terminal in the quick charging mode, conducting by the power adapter a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to adjust the charging current of the power adapter continuously.

5. The method according to any of claims 1-4, further comprising:

in a process that the power adapter charges the mobile terminal in the quick charging mode, conducting by the power adapter a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine whether a poor contact occurs in the USB interface; and

if it is determined that the poor contact occurs in the USB interface, quitting by the power adapter the quick charging mode.

6. A quick charging method, wherein, the method is applied to a mobile terminal, the mobile terminal is coupled to a power adapter through a universal serial bus (USB) interface, a power line in the USB interface is configured to charge the mobile terminal, a D+ line and/or D- line in the USB interface is used by the mobile terminal to conduct a bidirectional communication with the power adapter, and the mobile terminal supports a common charging mode and a quick charging mode, in which a charging current of the quick charging mode is greater than that of the common charging mode; the method comprises:

conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface, such that the power adapter determines to charge the mobile terminal in the quick charging mode; and

receiving by the mobile terminal a charging current corresponding to the quick charging mode from the power adapter so as to charge a battery in the mobile terminal.

7. The method according to claim 6, wherein, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter determines to charge the mobile terminal in the quick charging mode comprises:

receiving by the mobile terminal a first instruction sent by the power adapter, wherein the first instruction is configured to ask the mobile terminal whether to start the quick charging mode; and

sending by the mobile terminal a replying instruction of the first instruction to the power adapter, wherein the replying instruction of the first instruction is configured to indicate that the mobile terminal agrees to start the quick charging mode.

8. The method according to claim 6 or 7, further comprising:

conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface, such that the power adapter determines a charging voltage corresponding to the quick charging mode.

9. The method according to claim 8, wherein, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter determines a charging voltage corresponding to the quick charging mode comprises:

receiving by the mobile terminal a second instruction sent by the power adapter, wherein the second instruction is configured to ask whether a current voltage of the power adapter is suitable as a charging voltage of the quick charging mode; and

sending by the mobile terminal a replying instruction of the second instruction to the power adapter, wherein the replying instruction of the second instruction is configured to indicate that the current voltage of the power adapter is suitable, high or low.

10. The method according to any of claims 6-9, further comprising:

conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface, such that the power adapter determines the charging current corresponding to the quick charging mode.

11. The method according to claim 10, wherein, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter determines the charging current corresponding to the quick charging mode comprises:

receiving by the mobile terminal a third instruction sent by the power adapter, wherein the third instruction is configured to inquire a maximum charging current supported currently by the mobile terminal; and

sending by the mobile terminal a replying instruction of the third instruction to the power adapter, wherein the replying instruction of the third instruction is configured to indicate the maximum charging current supported currently by the mobile terminal, such that the power adapter determines the charging current corresponding to the quick charging mode according to the maximum charging current.

12. The method according to any of claims 6-11, further comprising:

in a process that the power adapter charges the mobile terminal in the quick charging mode, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter adjusts the charging current of the power adapter continuously.

13. The method according to claim 12, wherein, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter adjusts the charging current of the power adapter continuously comprises:

receiving by the mobile terminal a fourth instruction sent by the power adapter, wherein the fourth instruction is configured to inquire a current voltage of a battery in the mobile terminal; and

sending by the mobile terminal a replying instruction of the fourth instruction to the power adapter, wherein the replying instruction of the fourth instruction is configured to indicate the current voltage of the battery in the mobile terminal, such that the power adapter adjusts the charging current of the power adapter continuously according to the current voltage of the battery.

14. The method according to any of claims 6-12, further comprising:

in a process that the power adapter charges the mobile terminal in the quick charging mode, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface, such that the power adapter determines whether a poor contact occurs in the USB interface.

15. The method according to claim 14, wherein, conducting by the mobile terminal a bidirectional communication with the power adapter through the D+ line and/or D-

line in the USB interface, such that the mobile terminal determines whether a poor contact occurs in the USB interface comprises:

receiving by the mobile terminal the fourth instruction sent by the power adapter, wherein the fourth instruction is configured to inquire a current voltage of a battery in the mobile terminal; and

sending by the mobile terminal a replying instruction of the fourth instruction to the power adapter, wherein the replying instruction of the fourth instruction is configured to indicate the current voltage of the battery in the mobile terminal, such that the power adapter determines whether the poor contact occurs in the USB interface according to a charging voltage of the power adapter and the current voltage of the battery.

16. A power adapter, wherein, the power adapter is coupled to a mobile terminal through a universal serial bus (USB) interface, a power line in the USB interface is used by the power adapter to charge the mobile terminal, a D+ line and/or D- line in the USB interface is used by the power adapter to conduct a bidirectional communication with the mobile terminal, and the power adapter supports a common charging mode and a quick charging mode, in which a charging current of the quick charging mode is greater than that of the common charging mode; the power adapter comprises:

a communication unit, configured to conduct a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine to charge the mobile terminal in the quick charging mode; and

a current adjusting unit, configured to adjust a charging current to a charging current corresponding to the quick charging mode so as to charge the mobile terminal.

17. The power adapter according to claim 16, wherein, the communication unit is configured to send a first instruction to the mobile terminal, wherein the first instruction is configured to ask the mobile terminal whether to start the quick charging mode; and to receive a replying instruction of the first instruction from the mobile terminal, wherein the replying instruction of the first instruction is configured to indicate that the mobile terminal agrees to start the quick charging mode.

18. The power adapter according to claim 17, further comprising:

a power conversion unit, configured to perform a charging with the mobile terminal in the common charging mode;

wherein the communication unit is configured to send the first instruction to the mobile terminal after it is determined that a charging time of the common charging mode is larger than a preset threshold.

19. The power adapter according to any of claims 16-18, wherein, the communication unit is further configured to conduct a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine a charging voltage corresponding to the quick charging mode;

wherein the power adapter further comprises:

a voltage adjusting unit, configured to adjust a charging voltage to the charging voltage corresponding to the quick charging mode.

20. The power adapter according to claim 19, wherein, the communication unit is further configured to send a second instruction to the mobile terminal, wherein the second instruction is configured to ask whether a current voltage of the power adapter is suitable as a charging voltage of the quick charging mode; to receive a replying instruction of the second instruction sent by the mobile terminal, wherein the replying

instruction of the second instruction is configured to indicate that the current voltage of the power adapter is suitable, high or low; and the voltage adjusting unit is configured to determine the charging voltage of the quick charging mode according to the replying instruction of the second instruction.

21. The power adapter according to any of claims 16-20, wherein, the communication unit is configured to conduct a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface so as to determine the charging current corresponding to the quick charging mode.

22. The power adapter according to claim 21, wherein, the communication unit is configured to send a third instruction to the mobile terminal, wherein the third instruction is configured to inquire a maximum charging current supported currently by the mobile terminal; to receive a replying instruction of the third instruction sent by the mobile terminal, wherein the replying instruction of the third instruction is configured to indicate the maximum charging current supported currently by the mobile terminal; and to determine the charging current of the quick charging mode according to the replying instruction of the third instruction.

23. The power adapter according to any of claims 16-22, wherein, the communication unit is further configured to conduct a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface in a process that the power adapter charges the mobile terminal in the quick charging mode, so as to adjust the charging current of the power adapter continuously.

24. The power adapter according to claim 23, wherein, the communication unit is configured to send a fourth instruction to the mobile terminal, wherein the fourth instruction is configured to inquire a current voltage of a battery in the mobile terminal;

and to receive a replying instruction of the fourth instruction sent by the mobile terminal, wherein the replying instruction of the fourth instruction is configured to indicate the current voltage of the battery in the mobile terminal; and the current adjusting unit is configured to adjust the charging current of the power adapter according to the current voltage of the battery.

25. The power adapter according to any of claims 16-24, wherein, the communication unit is further configured to conduct a bidirectional communication with the mobile terminal through the D+ line and/or D- line in the USB interface in a process that the power adapter charges the mobile terminal in the quick charging mode, so as to determine whether a poor contact occurs in the USB interface; and to quit the quick charging mode if it is determined that the poor contact occurs in the USB interface.

26. The power adapter according to claim 25, wherein, the communication unit is configured to receive information for indicating a path impedance of the mobile terminal from the mobile terminal; to receive a replying instruction of the fourth instruction sent by the mobile terminal, wherein the replying instruction of the fourth instruction is configured to indicate a voltage of a battery in the mobile terminal; to determine a path impedance from the power adapter to the battery according to a charging voltage of the power adapter and the voltage of the battery; and to determine whether the poor contact occurs in the USB interface according to the path impedance from the power adapter to the battery, the path impedance of the mobile terminal and a path impedance of a charging circuit between the power adapter and the mobile terminal.

27. A mobile terminal, wherein, the mobile terminal is coupled to a power adapter through a universal serial bus (USB) interface, a power line in the USB interface is configured to charge the mobile terminal, a D+ line and/or D- line in the USB interface is used by the mobile terminal to conduct a bidirectional communication with the power adapter, and the mobile terminal supports a common charging mode and a quick charging mode, in which a charging current of the quick charging mode is greater than that of the common charging mode; the mobile terminal comprises:

a communication unit, configured to conduct a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter determines to charge the mobile terminal in the quick charging mode; and

a charging unit, configured to receive a charging current corresponding to the quick charging mode from the power adapter so as to charge a battery in the mobile terminal.

28. The mobile terminal according to claim 27, wherein, the communication unit is further configured to conduct a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter determines a charging voltage corresponding to the quick charging mode.

29. The mobile terminal according to claim 27 or 28, wherein, the communication unit is further configured to conduct a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface such that the power adapter determines the charging current corresponding to the quick charging mode.

30. The mobile terminal according to any of claims 27-29, wherein, the communication unit is further configured to conduct a bidirectional communication with the power adapter through the D+ line and/or D- line in the USB interface in a

process that the power adapter charges the mobile terminal in the quick charging mode, such that the power adapter adjusts the charging current of the power adapter continuously.