

ABSTRACT

A secondary battery device charging apparatus
5 includes a number of first terminals, a pair of second
terminals, a power supply circuit, a switching element and a
control circuit. The secondary battery device includes an
even number of secondary batteries arranged with electrodes
facing in mutually opposite directions, a middle spacer set
10 up between the secondary batteries, a thermistor set up at
the middle spacer so as to be thermally in contact with the
secondary batteries, a pair of electrodes set up at the
middle spacer and a uniting member for uniting the secondary
batteries together into a single item. The pair of
15 electrodes are arranged symmetrically with respect to the
mechanical centre of the secondary batteries and the
thermistor is connected to the pair of electrodes. When the
secondary battery device is installed, the number of first
terminals come into contact with each of their corresponding
20 second battery electrodes. When the secondary battery is
installed, the pair of second terminals connect with the
pair of electrodes. The power supply circuit supplies a
charging current to the secondary batteries. The switching
element controls the supplying of the charging current
25 outputted from the power supply circuit. The control
circuit, to which the output signal from the thermistor is
provided, controls the switching element. When the
secondary battery charging device is installed, the
switching element is turned on by the control circuit so
30 that a charging current from the power supply circuit is
supplied via the two first terminals which are positioned at
the beginning and the end of the number of first terminals
so as to charge the secondary batteries. At the time of
charging, the temperature of the secondary batteries is
35 detected from the voltage for the pair of second terminals



so that when the detected temperature is not a suitable temperature for passing a current through the secondary batteries, the switching element is turned off and charging is halted.

This Sheet Has Been Replaced

