K SIDDHARTHAN
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ORIGINAL

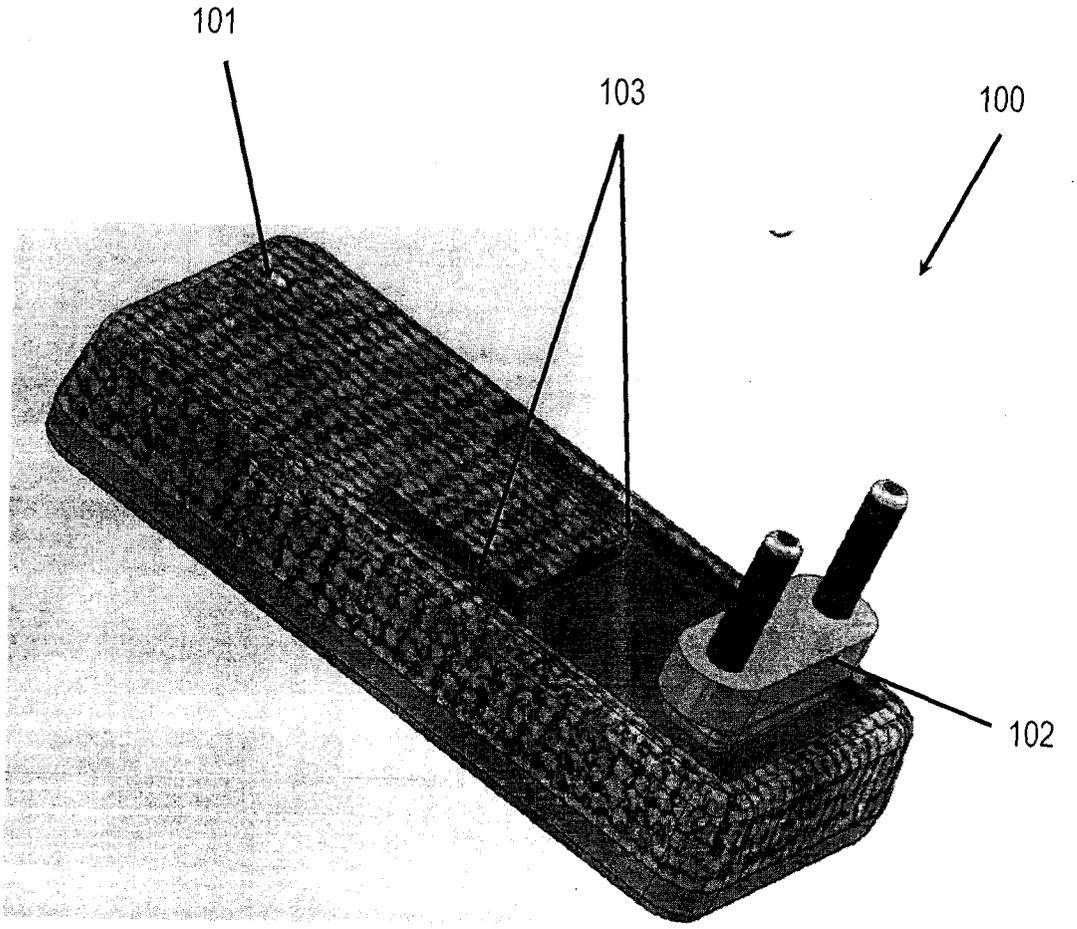


Figure 1

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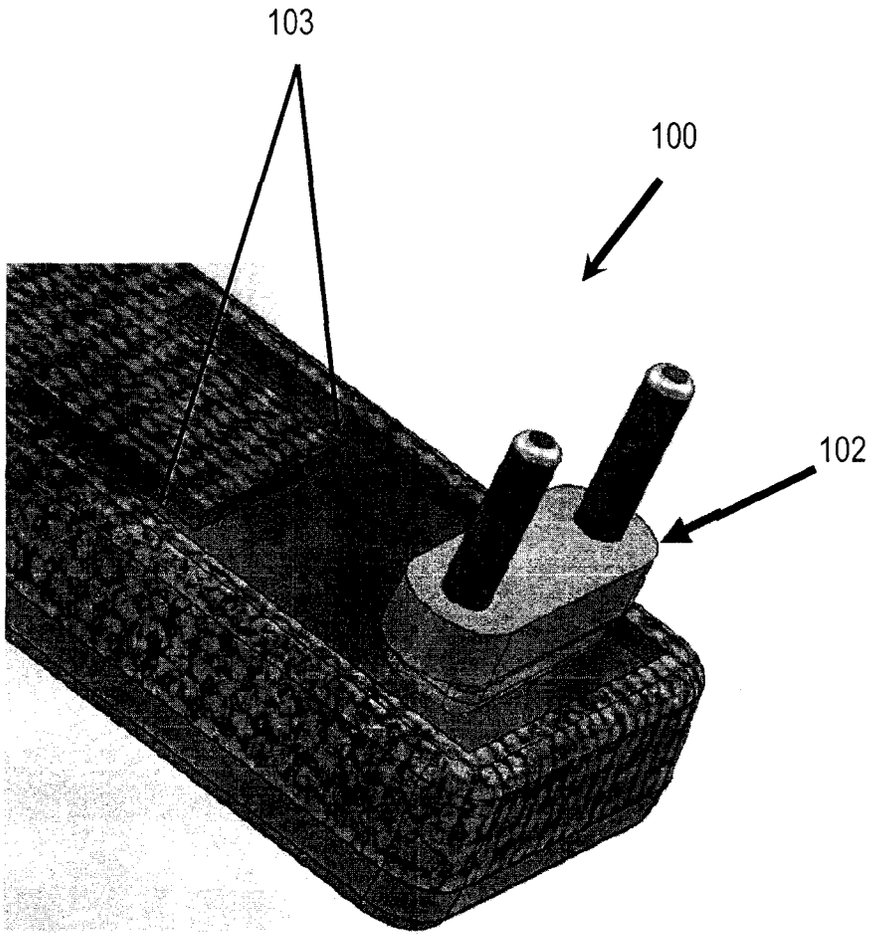


Figure 2

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REFERENCE LIST

100 - Fixed mobile charger

101 - Mobile phone back panel

102 - Charging power pin

103 - Specifically designed slot on the back panel

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TITLE OF THE INVENTION: INTEGRATED MOBILE PHONE-CHARGER ASSEMBLY

FIELD OF THE INVENTION

The present invention relates to chargers for mobile phones. Particularly, the present invention relates to an integrated mobile phone-charger assembly.

BACKGROUND OF THE INVENTION

Mobile phones have become an integral part of peoples' lives. Depending on a particular person's budget, a range of mobile phones are available right from low-end models that just have basic calling and texting capacity to high-end smartphones that can be used to perform a range of functions such as photography, email, gaming, video and movie watching, document creation and editing etc.

A mobile phone can only be used if its battery has been charged. The frequency at which a mobile phone needs to be charged depends on the extent of use. Generally, while low-end models may retain their charge for several days, high-end models may need to be charged at least once in a day. Thus, there is a necessity for a user to carry a charger with him/her during his/her travels.

There is therefore a need in the art for an integrated mobile phone-charger assembly that eliminates the need for carrying a charger separately.

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There is therefore a need in the art for an integrated mobile phone-charger assembly that eliminates the need for carrying a charger separately, is economical, and is simple to assemble.

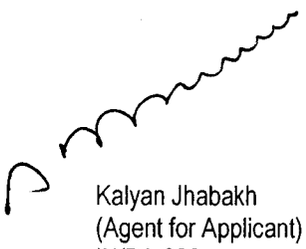
DESCRIPTION OF THE INVENTION:

Figures 1 and 2 illustrates a mobile phone-charger assembly according to an exemplary embodiment of the present invention. As illustrated in figures, the mobile phone charger

assembly (100) comprises of a mobile phone back panel (101), a charging power pin (102) that is removably attachable to the mobile phone back panel (101) and an adapter (not shown) that is associated with the mobile phone back panel (101) to convert AC power in to constant DC power. The adaptor comprises an internal circuit comprising either a transformer or a combination of diodes, resistors, transistors, and/or capacitors for stepping-down the input voltage, a rectifier for converting AC to DC, a filter for smoothening the output of the rectifier and a regulator for supplying DC power at a regulated voltage. Any suitable rectifier, filter and regulator may be used. Further, the adaptor receives AC power input via charging power pin (102), which has a plurality of pins (preferably two or three) that can be plugged into a plug point. The power pin (102) is fixed on the mobile phone back panel (101) such that the plurality of pins can be folded down into specifically designed slots (103) on the mobile phone back panel (101) provided for the purpose of facilitating easy handing of a mobile phone containing the integrated charger without any disturbance to a user(s) in normal use. During charging, the plurality of pins can be folded up from the mobile phone back panel (101) such that the plurality of pins can be plugged into the plug point directly, here there is no additional or extended power cable involved. The output of the charging assembly is accordingly connected with the mobile phone battery.

In another embodiment, the charging power pin (102) and the adaptor may be fixed on the back panel of existing mobile phones as well. This way, users of old mobile phones will also be able to take advantage of this assembly.

While a mobile phone-charger assembly according to exemplary embodiments of the present invention may be implemented, and the present invention has been shown and described with reference to certain exemplary embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention as defined and their equivalents.



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