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Hong

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(54) **APPARATUS FOR CONTACTLESS CHARGING OF MOBILE TERMINAL**

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(51) **Int. Cl.**
H02J 7/00 (2006.01)
H02J 7/02 (2006.01)
H01F 5/00 (2006.01)

(52) **U.S. Cl.**
CPC **H02J 7/025** (2013.01); **H01F 5/003** (2013.01)
USPC **320/108**; 320/107; 320/110; 320/111; 320/112

(58) **Field of Classification Search**
CPC Y02J 7/025
USPC 320/108
See application file for complete search history.

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(57) **ABSTRACT**

A contactless charging apparatus of a portable terminal is provided. The contactless charging apparatus of a portable terminal includes a main circuit board, a rectifying unit, a charging unit, and a secondary coil unit mounted on the main circuit board for generating an electromotive force. The secondary coil unit may be formed on the main circuit board in a patterning process instead of an existing copper line coil. A coil layer formed in the patterning process generates an electromotive force induced by a magnetic induction field created by a contactless charger, and a direct current is applied to a battery to charge the battery using the rectifying unit and the charging unit.

7 Claims, 6 Drawing Sheets

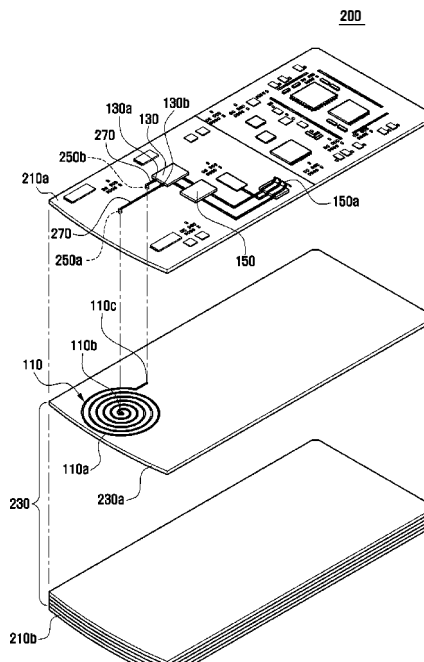


FIG. 1

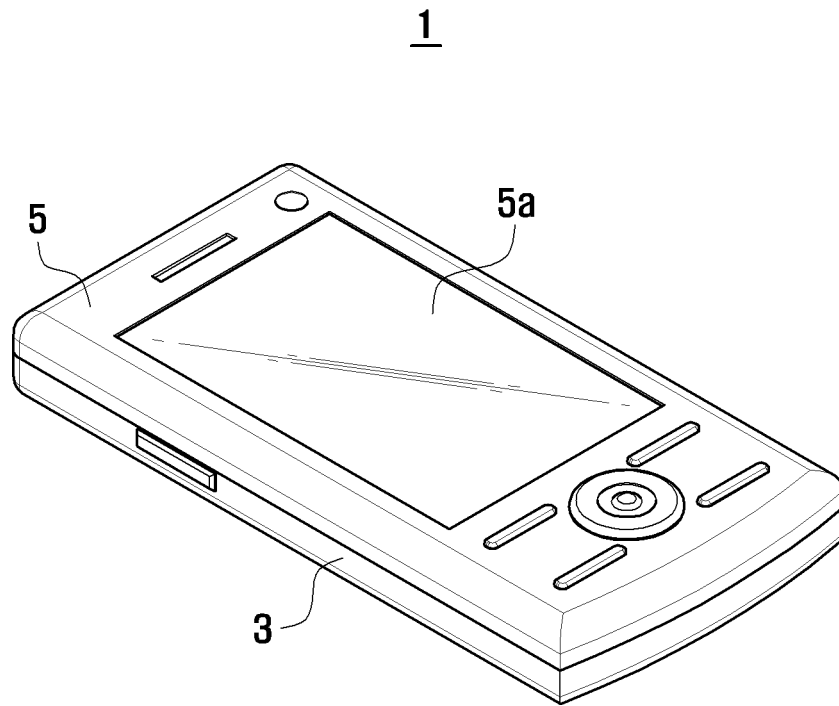


FIG. 2

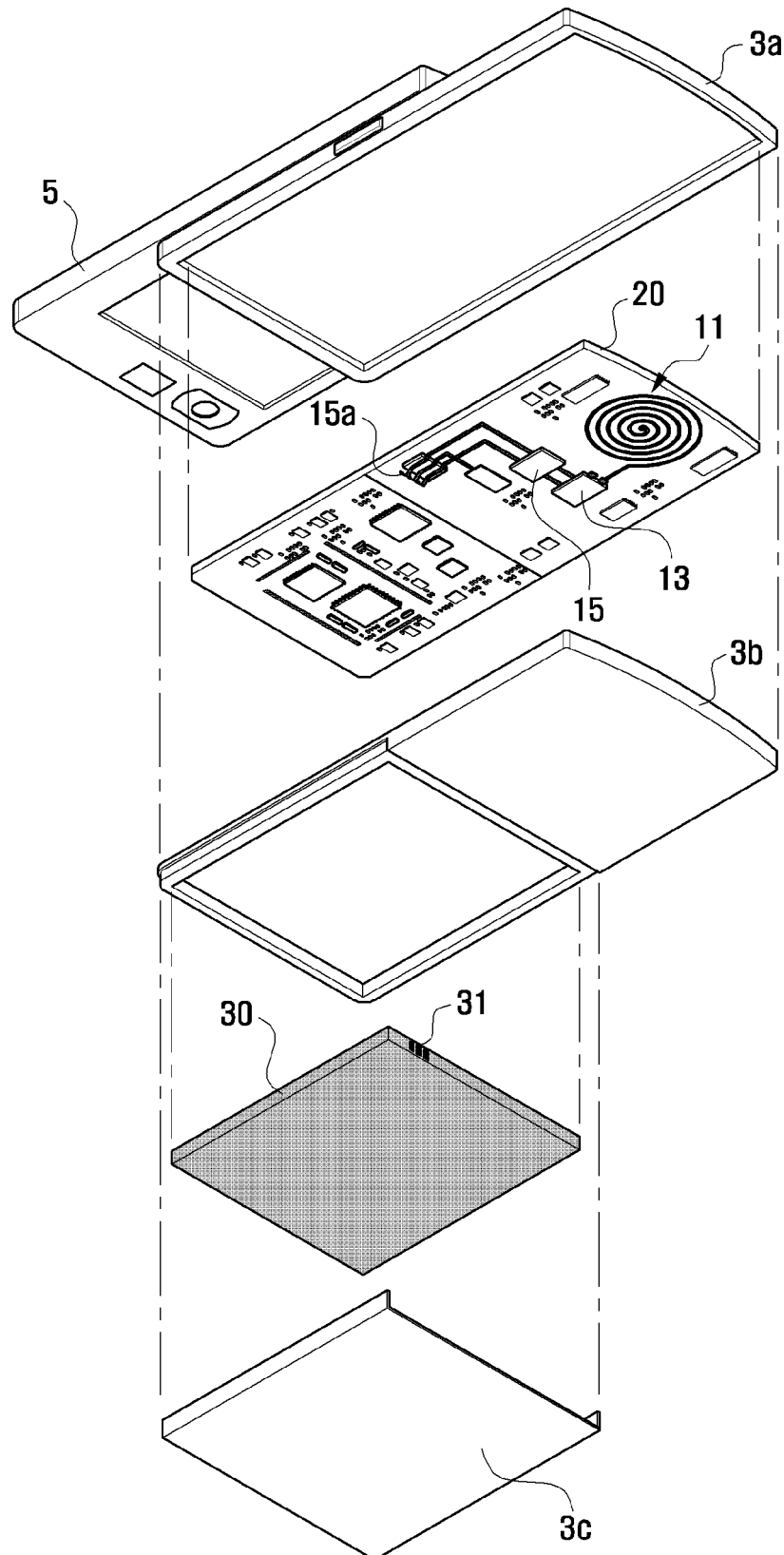


FIG. 3

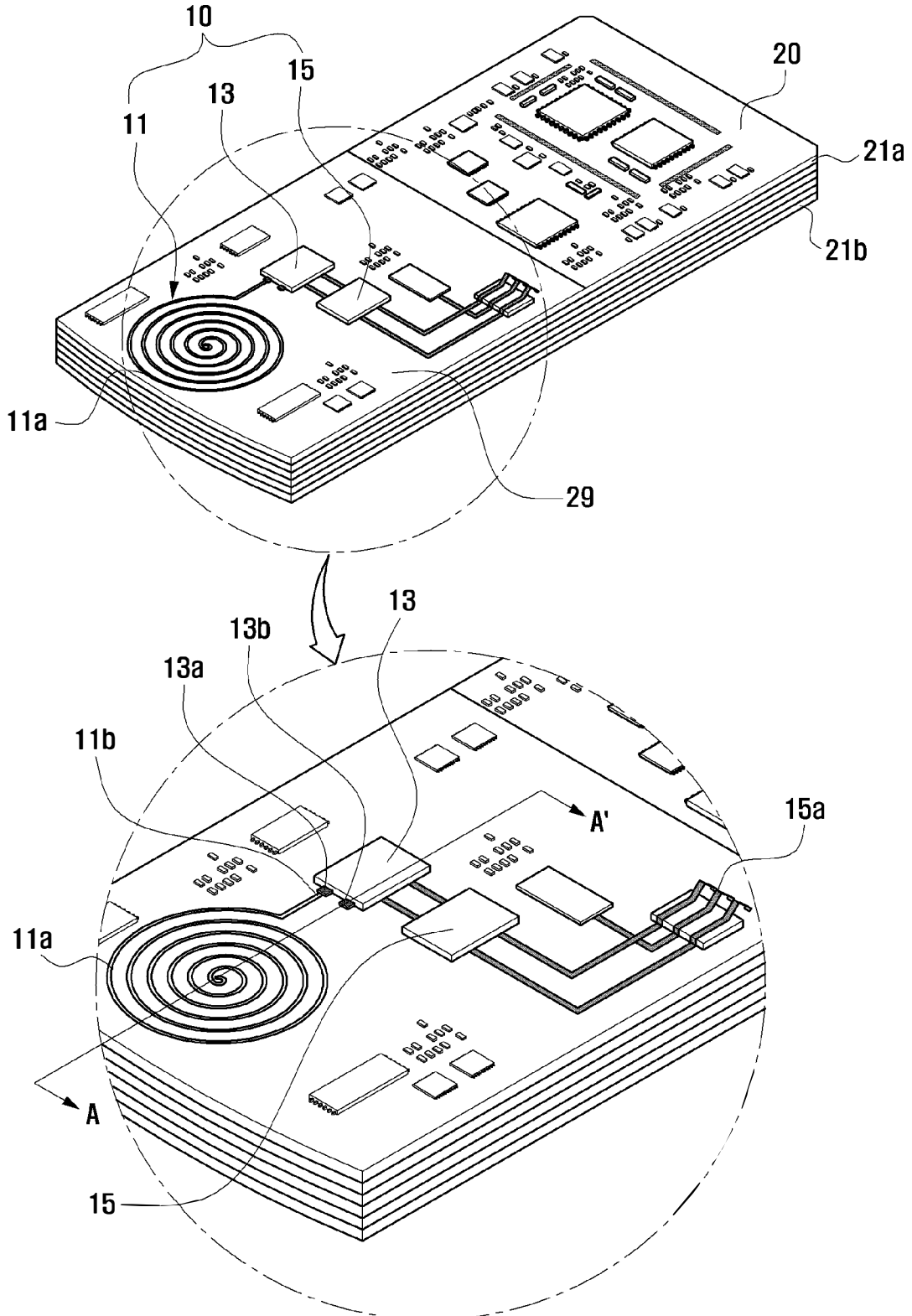
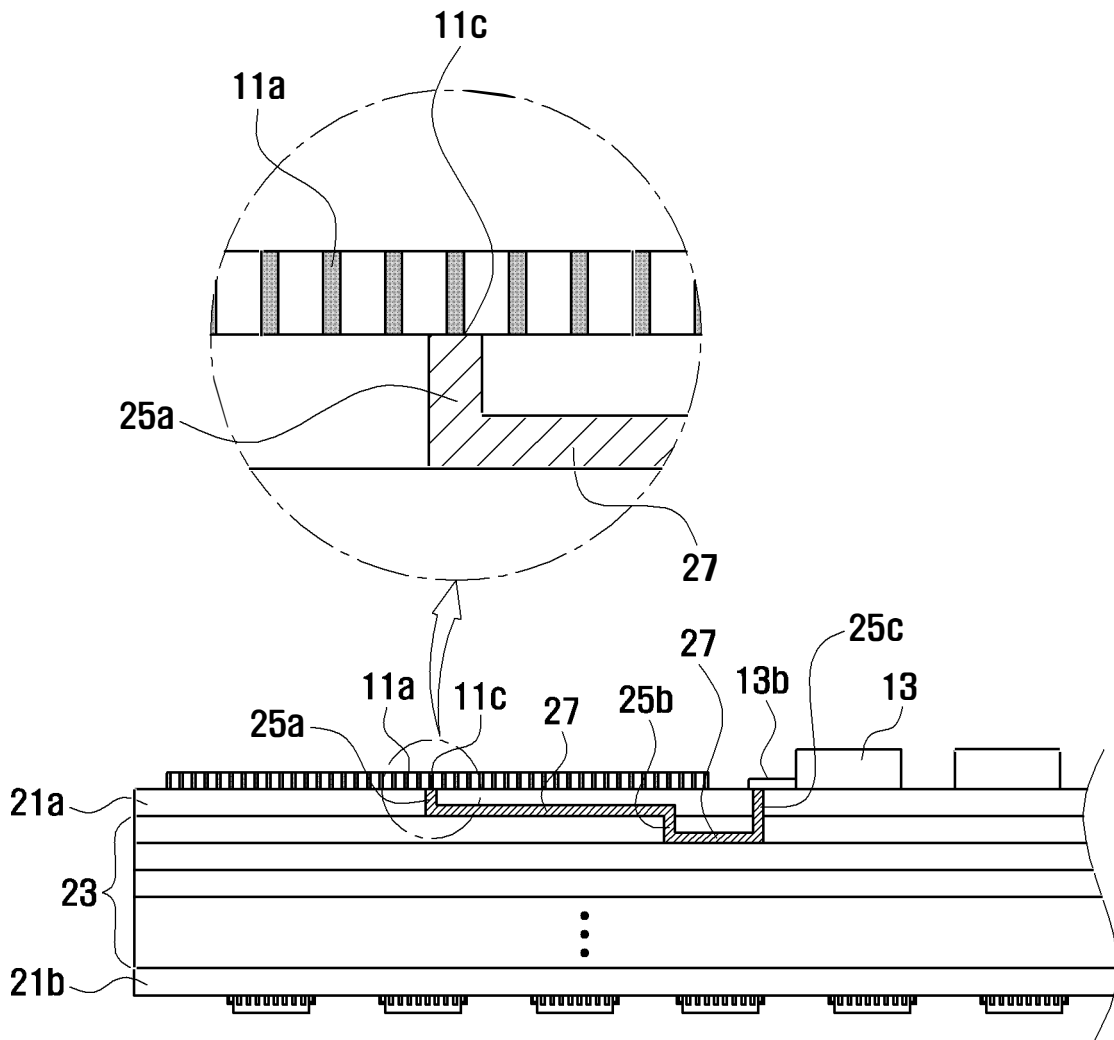


FIG. 4



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