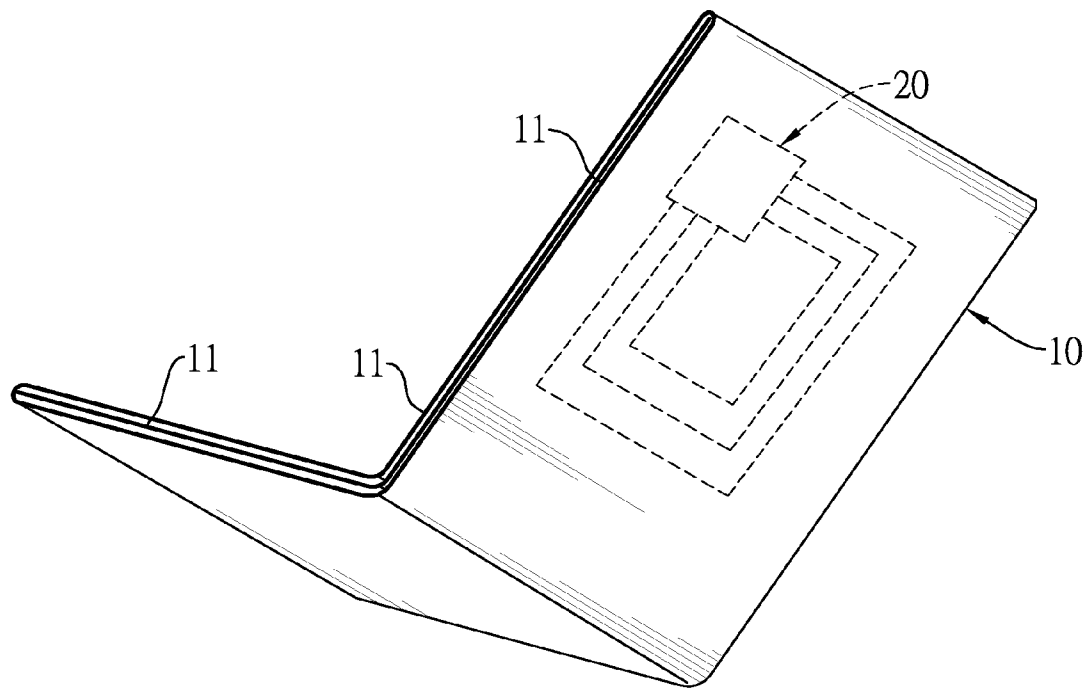




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(19) **United States**(12) **Patent Application Publication**
CHUEH(10) **Pub. No.: US 2013/0319587 A1**(43) **Pub. Date: Dec. 5, 2013**(54) **PAPER WALLET WITH A WIRELESS DEVICE**(52) **U.S. Cl.**
USPC 150/132(76) Inventor: **Ho-Jen CHUEH**, Taipei (TW)(21) Appl. No.: **13/488,121**(22) Filed: **Jun. 4, 2012****Publication Classification**(51) **Int. Cl.**
A45C 1/06 (2006.01)(57) **ABSTRACT**

A paper wallet with a wireless device has a wallet body and a wireless device. The wallet body is made of a paper template folded to form multiple pockets. The wireless device is securely mounted on the paper template and received in one of the pockets of the wallet body. Since the wireless device is preliminarily fixed on the paper template, the wireless device is free of damage caused when the paper template is being folded. Additionally, as electromagnetic wave can easily penetrate the paper wallet, the wireless device inside the paper wallet can be easily detected.



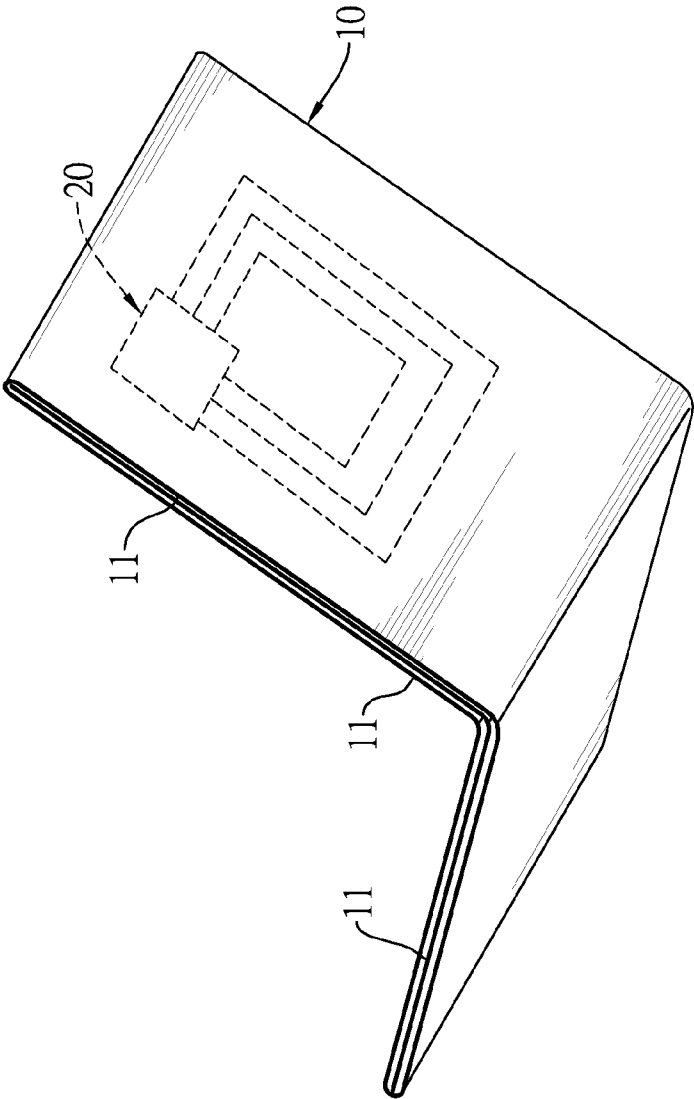


FIG. 1

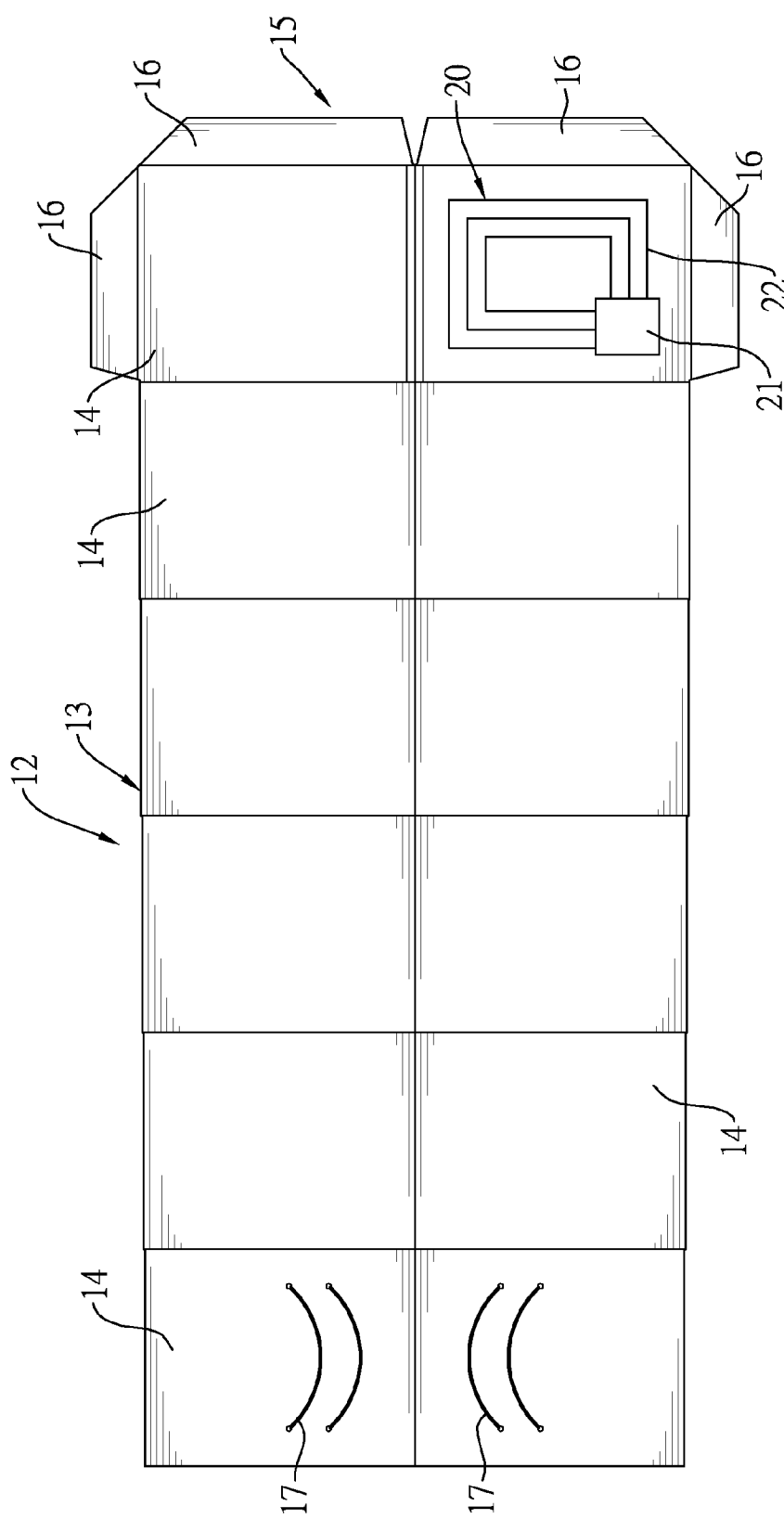


FIG. 2

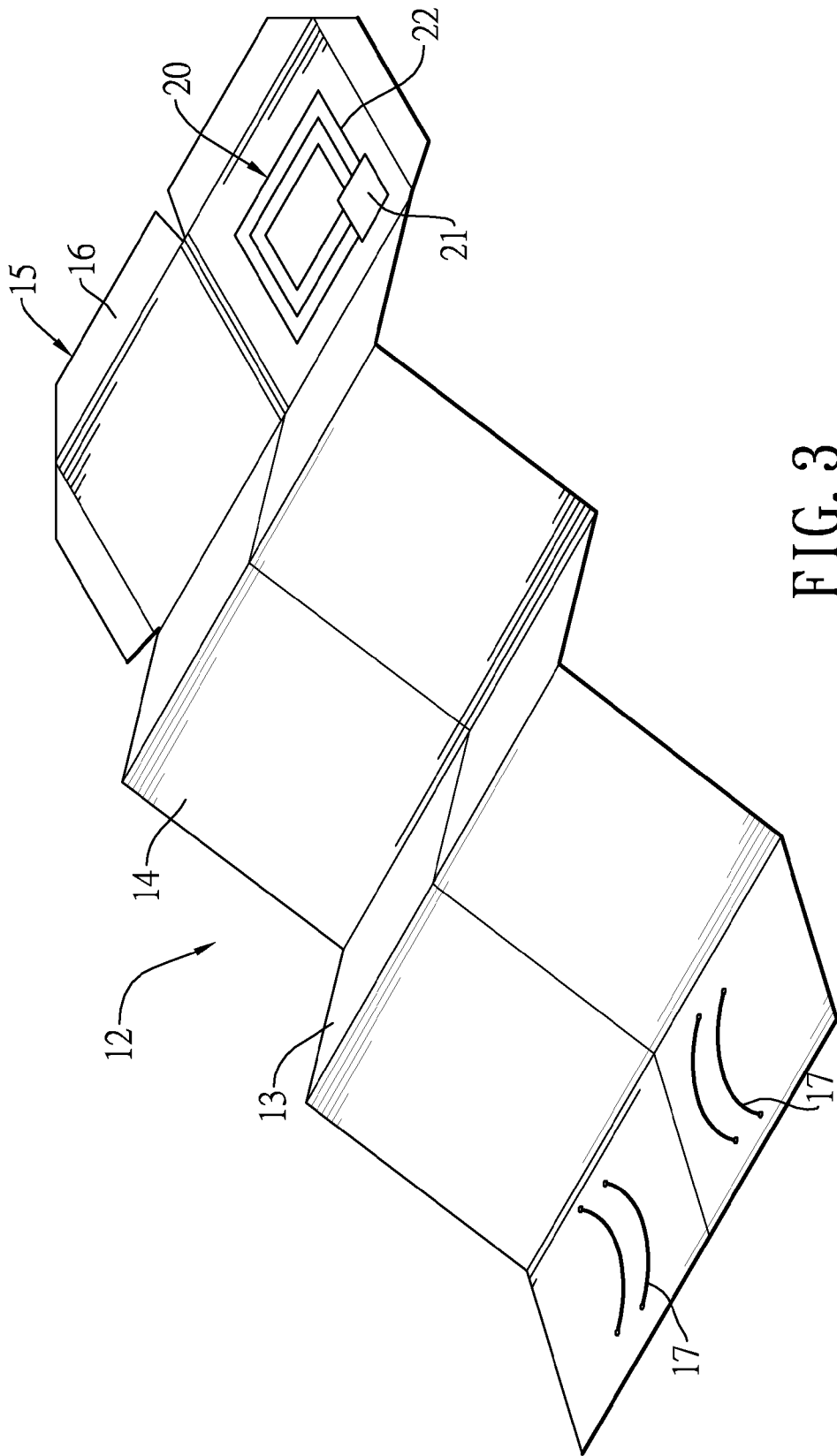


FIG. 3

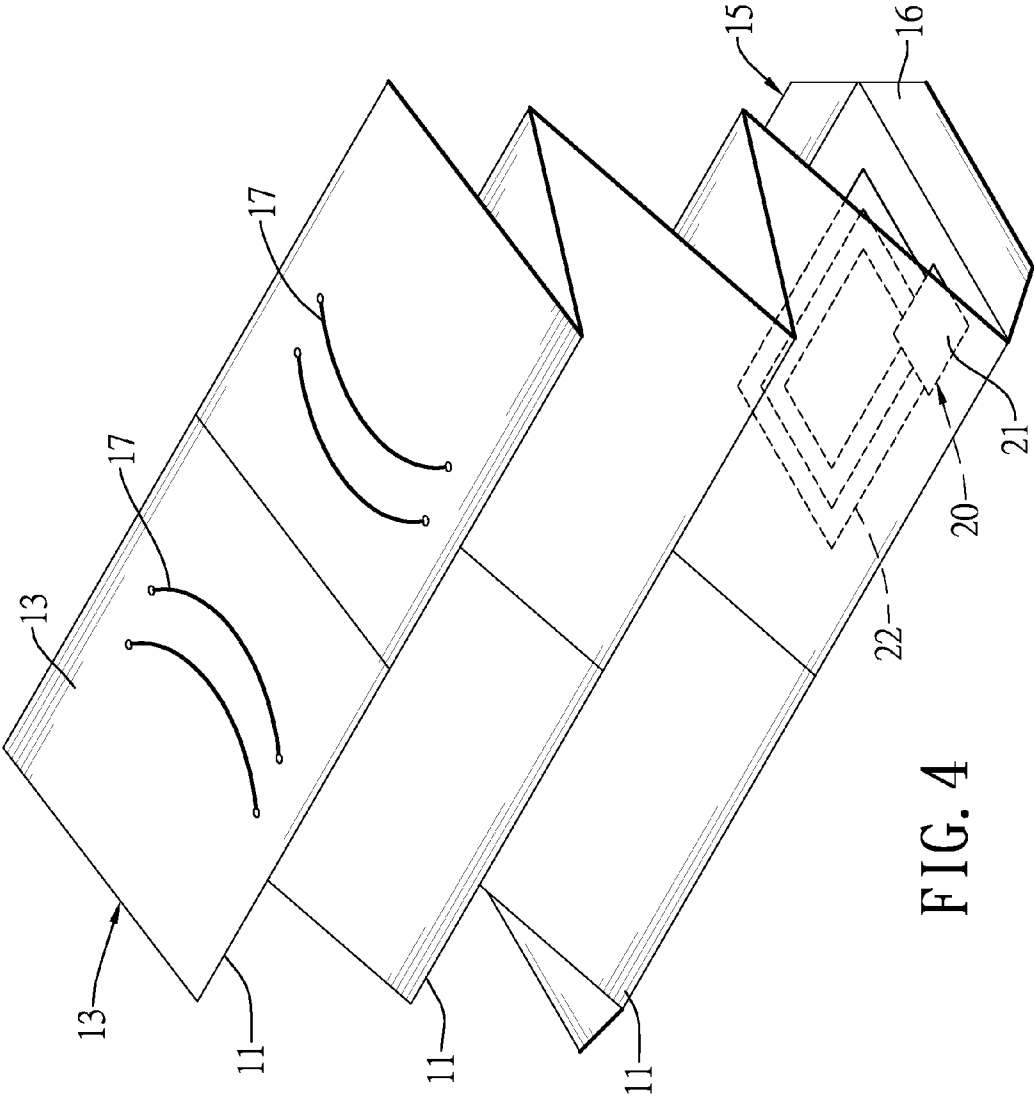


FIG. 4

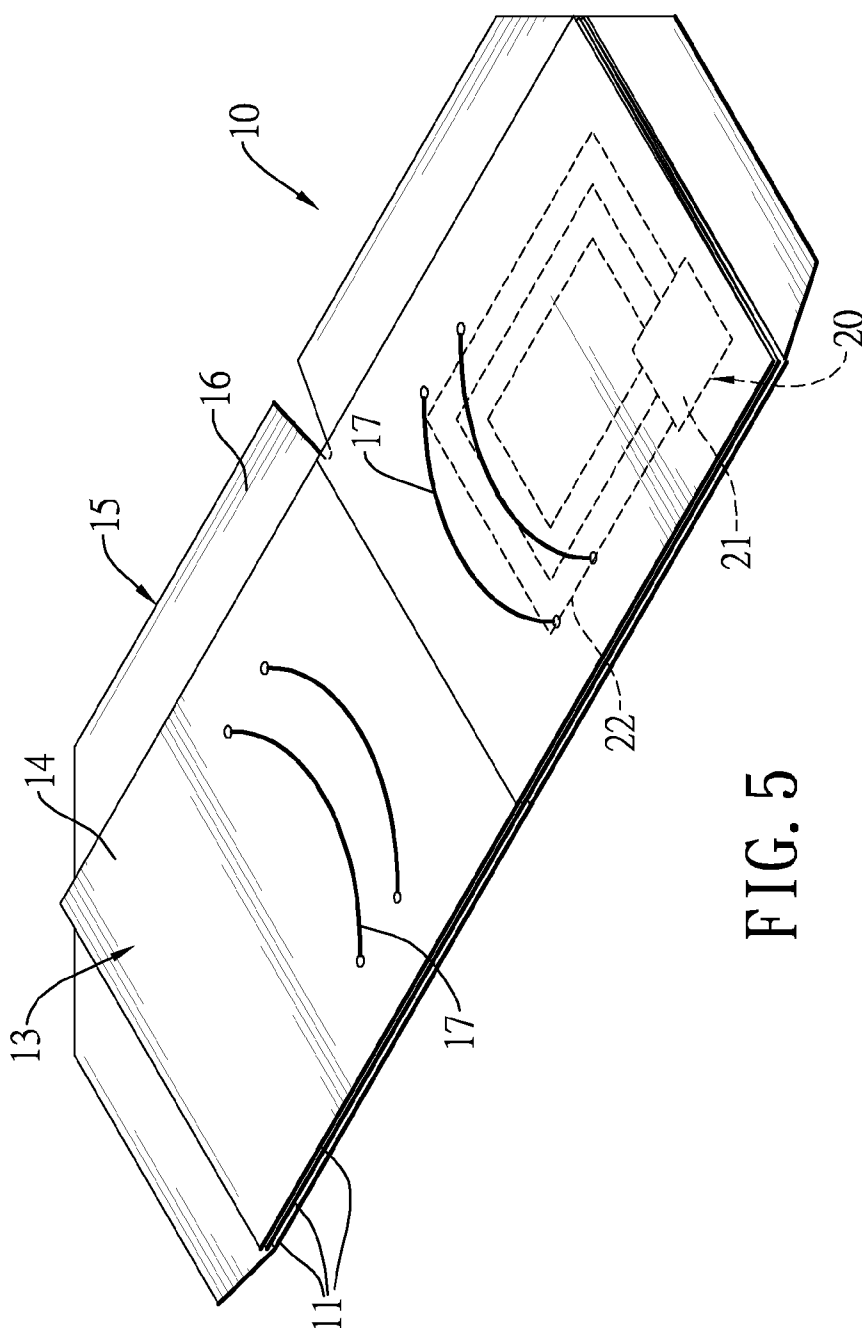
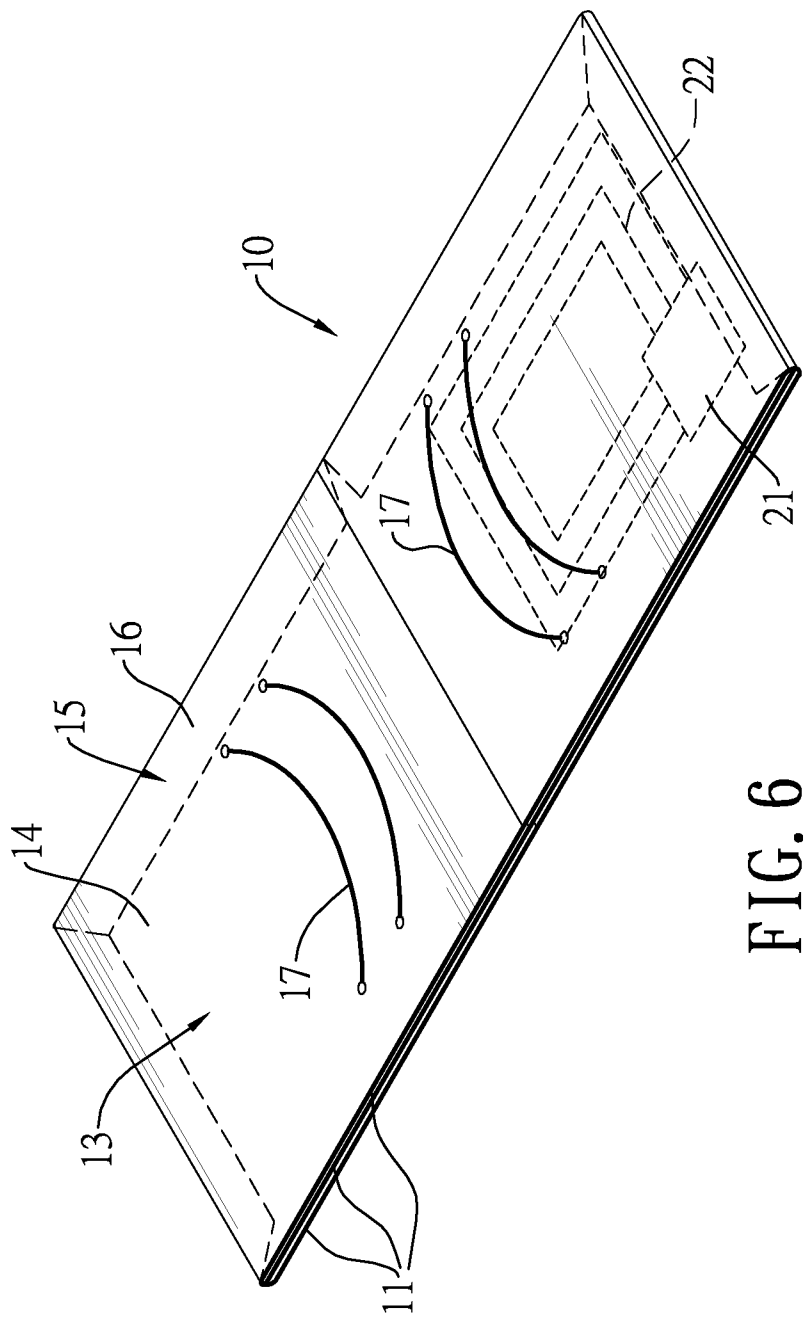


FIG. 5



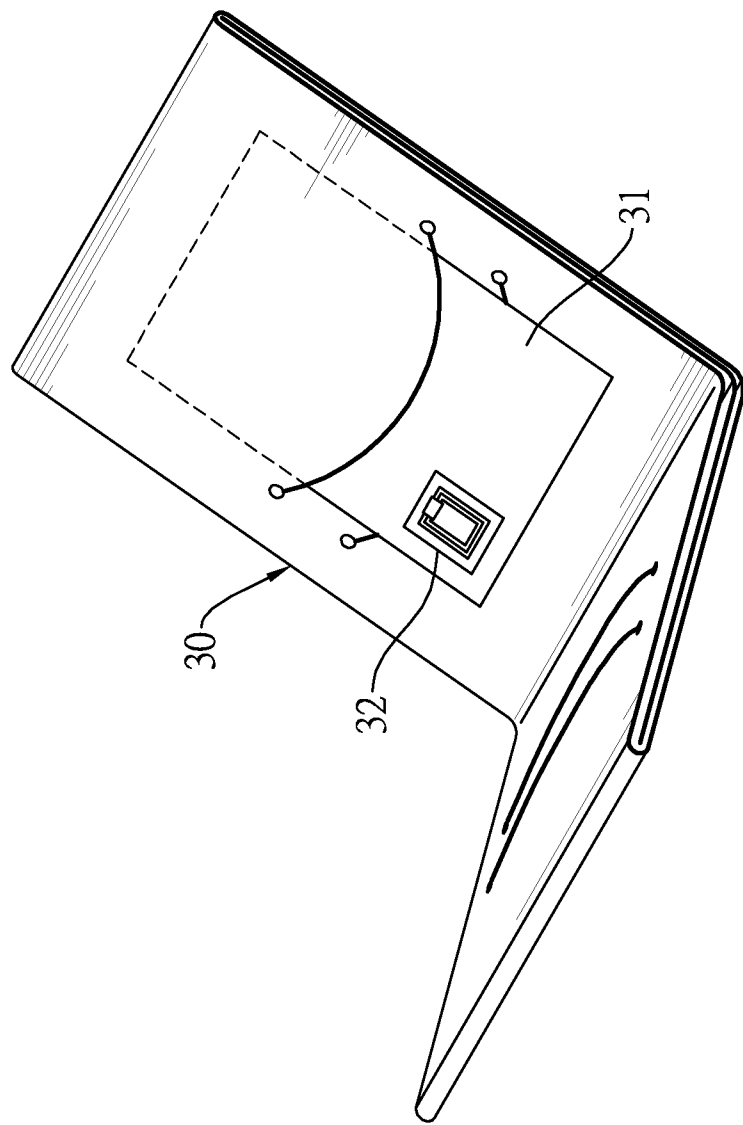


FIG. 7

PAPER WALLET WITH A WIRELESS DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a paper wallet and more particularly to a paper wallet with a wireless device.

[0003] 2. Description of the Related Art

[0004] With reference to FIG. 7, a conventional wallet 30 serves to keep money, identification cards and the like frequently used in daily life. According to current payment habit of consumers upon shopping, consumers tend to pick cash, a credit card or a stored value card 31 with a wireless device 32 from the wallet 30, hand the cash or the card to a clerk at a point of sale, pay for a transaction, and get the change, the credit card or the stored-value card 31 back. However, the credit card or the stored-value card could be easily lost due to such payment habit because consumers may forget to get the credit card or the stored-value card back from time to time. To tackle the aforementioned issue, a direct means is to fix the wireless device 32 inside the wallet 30.

[0005] The conventional wallet is normally made of cloth, plastic, leather or a combination thereof and is produced with many manufacturing processes, such as cutting, sewing and the like. As far as the production of a multi-layer wallet 30 is concerned, more and more time-consuming and complicated manufacturing processes should be involved. Hence, if the wireless device 32 is hastily fixed by the foregoing manufacturing processes, not only may the manufacturing processes increase their complication, but also the wireless device 32 may be possibly damaged.

[0006] Furthermore, the material of the conventional wallet 30 is so thick that electromagnetic wave can hardly penetrate therethrough. If the wireless device 32 is fixed inside the wallet 30, there is a high likelihood that the wireless device 32 is difficult to be sensed by a corresponding detection device and the expected effect fails to be achieved.

SUMMARY OF THE INVENTION

[0007] An objective of the present invention is to provide a paper wallet requiring no complicated manufacturing process to fix the wireless device therein and ensuring the wireless device to be easily detected.

[0008] To achieve the foregoing objective, the paper wallet has a wallet body and a wireless device.

[0009] The wallet body is made of a paper template folded to form multiple pockets.

[0010] The wireless device is securely mounted on the paper template and received in one of the pockets of the wallet body.

[0011] As the wireless device can be preliminarily mounted on the paper template before the paper template is folded to form the paper wallet, the wireless device can be easily mounted inside a corresponding pocket. The production processes of the present invention are simpler and are less likely to damage the wireless device compared with those of the conventional wallets. Moreover, as the paper wallet can be easier to be penetrated by electromagnetic wave than the conventional wallets, it is easier for the wireless device of the present invention to be detected by a corresponding detection device.

[0012] Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] FIG. 1 is a perspective view of a paper wallet with a wireless device in accordance with the present invention;

[0014] FIG. 2 is a top view of the unfolded paper wallet in FIG. 1;

[0015] FIG. 3 is a first operational perspective view of the folded paper wallet in FIG. 1;

[0016] FIG. 4 is a second operational perspective view of the folded paper wallet in FIG. 1;

[0017] FIG. 5 is a third operational perspective view of the folded paper wallet in FIG. 1;

[0018] FIG. 6 is a fourth operational perspective view of the folded paper wallet in FIG. 1; and

[0019] FIG. 7 is a perspective view of a conventional paper wallet.

DETAILED DESCRIPTION OF THE INVENTION

[0020] With reference to FIGS. 1 and 2, a paper wallet with a wireless device in accordance with the present invention has a wallet body 10 and a wireless device 20.

[0021] The wallet body 10 is made of a paper template 12 folded to form multiple pockets 11.

[0022] The wireless device 20 is securely mounted inside one of the pockets 11 of the wallet body 10 and may be a radio frequency identification (RFID) device adopted by stored value cards, smart cards, charge cards, debit cards, proximity cards and the like.

[0023] In the present embodiment, the wireless device 20 has a detection chip 21 and a loop antenna 22. The loop antenna 22 is electrically connected to the detection chip 21.

[0024] The paper template 12 has a substrate 13 and a binding flange 15. The substrate 13 has multiple pocket layers 14 divided from the substrate 13 and arranged in the form of a matrix having multiple rows and columns. The pocket layers 14 arranged in each adjacent two columns of the matrix constitute a pocket 11. The wireless device 20 is securely mounted on a top of one of the pocket layers 14. In the present embodiment, the pocket layers 14 are arranged in the form of a matrix having six columns and two rows. The wireless device 20 is fixed on the pocket layer on the sixth column and the second row of the matrix. Two slots 17 are formed through each of the two pocket layers 14 on the first column for card insertion.

[0025] The binding flange 15 is partially formed on and protrudes from a perimeter of the substrate 13 and has multiple affixing portions 16. Each affixing portion 16 corresponds to and is formed on the external side of one of the pocket layers 14 surrounded by the binding flange 15. In the present embodiment, the binding flange 15 is formed around the two rightmost pocket layers 14 and has four affixing portions 16. The four affixing portions 16 are respectively connected with a top side and a right side of the pocket layer 14 on the sixth column and the first row of the matrix and the bottom side and the right side of the pocket layer 14 on the sixth column and the second row.

[0026] With reference to FIGS. 3 and 4, when users intend to fold the paper template 12 into the wallet body 10, tops of the two pocket layers 14 on the fifth column are folded toward

tops of the two pocket layers **14** on the sixth column to form a first one of the pockets **11**. Then, bottoms of the two pocket layers **14** on the fourth column are folded toward bottoms of the two pocket layers **14** on the fifth column to form a second one of the pockets **11**. The paper template **12** is repeatedly folded in a similar fashion until tops of the two pocket layers **14** on the first column are folded toward tops of the two pocket layers **14** on the second column to form a last one of the pockets **11**.

[0027] With reference to FIG. 5, after the pocket layers **14** are folded, the pocket layers **14** on the first column is stacked on the pocket layers **14** on the second column, and the pocket layers **14** on the second column is stacked on the pocket layers **14** on the third column. After the pocket layers **14** on all other columns are respectively stacked on the pocket layers **14** on the next columns, the paper template **12** is compressed to be flat and is rectangular. The wireless device **20** is securely mounted between the pocket layer **14** on the fifth column and the first row and the pocket layer **14** on the sixth column and the first row. With reference to FIG. 6, the affixing portions **16** on the sixth column are folded along the corresponding external sides of the pocket layers **14** on the sixth column and then are affixed on the tops of the pocket layers **14** on the first column in completion of production of the paper wallet so that the wireless device **20** is fixed inside the pocket **11** of the wallet body **10**.

[0028] As the wallet body **10** is made by folding a paper template **12** up and down, the wireless device **20** can be directly affixed or securely mounted on one of the pocket layers **14** of the wallet body **10**. In contrast to the production processes of conventional wallets, the production processes of the present invention is simpler, more convenient and less complicated. Also because involving folding steps only, production of the present invention is less destructive to the wireless device **20** than production of the conventional wallets made by cutting and sewing processes. Additionally, the paper wallet is not as thick as the conventional wallets and is easily penetrated by electromagnetic wave. Accordingly, the paper wallet of the present invention ensures easy mounting of the wireless device **20** therein and easy detection by a corresponding detection device.

[0029] Even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only. Changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A paper wallet comprising:
 - a wallet body made of a paper template folded to form multiple pockets; and
 - a wireless device securely mounted on the paper template and received in one of the pockets of the wallet body.
2. The paper wallet as claimed in claim 1, wherein the wireless device has:
 - a detection chip; and
 - a loop antenna electrically connected to the detection chip.
3. The paper wallet as claimed in claim 1, wherein the paper template has:
 - a substrate having multiple pocket layers divided from the substrate and arranged in the form of a matrix having

multiple rows and columns, wherein the pocket layers arranged in each adjacent two columns of the matrix constitute a pocket, and the wireless device is securely mounted on a top of one of the pocket layers; and

a binding flange partially formed on and protruding from a perimeter of the substrate and having multiple affixing portions, wherein each affixing portion corresponds to and is formed on one external side of one of the pocket layers surrounded by the binding flange.

4. The paper wallet as claimed in claim 2, wherein the paper template has:

a substrate having multiple pocket layers divided from the substrate and aligned in the form of a matrix having multiple rows and columns, wherein the pocket layers aligned in each adjacent two columns of the matrix constitute a pocket, and the wireless device is fixed on a top of one of the pocket layers; and

a binding flange partially formed on and protruding from a perimeter of the substrate and having multiple affixing portions, wherein each affixing portion corresponds to and is formed on one external side of each of the pocket layers surrounded by the binding flange.

5. The paper wallet as claimed in claim 3, wherein

the pocket layers are arranged in the form of a matrix having six columns and two rows, and the wireless device is mounted on the pocket layer on the sixth column and the second row of the matrix; and

the binding flange is formed around two rightmost pocket layers and has four affixing portions respectively connected with a top side and a right side of the pocket layer on the sixth column and the first row of the matrix and a bottom side and a right side of the pocket layer on the sixth column and the second row of the matrix.

6. The paper wallet as claimed in claim 4, wherein

the pocket layers are aligned in the form of a matrix having six columns and two rows, and the wireless device is mounted on the pocket layer on the sixth column and the second row of the matrix; and

the binding flange is formed around the two rightmost pocket layers and has four affixing portions respectively connected with a top side and a right side of the pocket layer on the sixth column and the first row of the matrix and the bottom side and the right side of the pocket layer on the sixth column and the second row of the matrix.

7. The paper wallet as claimed in claim 5 further comprising two slots formed through each of the two pocket layers on the first column of the matrix.

8. The paper wallet as claimed in claim 6 further comprising two slots formed through each of the two pocket layers on the first column of the matrix.

9. The paper wallet as claimed in claim 1, wherein the wireless device is a radio frequency identification (RFID) device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

10. The paper wallet as claimed in claim 2, wherein the wireless device is an RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

11. The paper wallet as claimed in claim 3, wherein the wireless device is an RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

12. The paper wallet as claimed in claim 4, wherein the wireless device is an RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

13. The paper wallet as claimed in claim 5, wherein the wireless device is an RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

14. The paper wallet as claimed in claim 6, wherein the wireless device is a RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

15. The paper wallet as claimed in claim 7, wherein the wireless device is an RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

16. The paper wallet as claimed in claim 8, wherein the wireless device is an RFID device adopted by one of stored value cards, smart cards, charge cards, debit cards and proximity cards.

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