Claims

1. An absorption product comprising:

a sheet part having at least one pair of patterns including one positive pattern and one negative pattern for conducting electricity, wherein the patterns are spaced apart from each other in an excretion area that receives excretion of a user; and

a terminal unit selectively attachable to the sheet part and including at least one pair of terminals and a sensing module for generating a sensing signal to sense the excretion,

characterized in that, when the terminal unit is attached to the sheet part:

i. each pattern comes in physical contact with one terminal of each pair of terminals;

ii. the sensing module applies the sensing signal to the terminal in contact with the positive pattern and receives the sensing signal at the terminal in contact with the negative terminal, wherein the sensing signal passes through the positive pattern, the excretion and then the negative pattern; and

iii. a determining module applies a determination signal to the terminal connected to the positive pattern and receives the determination signal through the terminal

connected to the negative pattern to determine a physical characteristic of the corresponding pair of patterns for detecting a problem with the sheet part.

2. The absorption product of claim 1, wherein the terminal unit measures a resistance value between the terminals in physical contact with the corresponding patterns, andgenerates a warning signal saying a problem with the sheet part when the resistance value is greater than a setting value.

3. The absorption product of claim 1, wherein a fist terminal providing the sensing signal to a specific pattern of a plurality of patterns and a second terminal being in contact with the specific pattern together with the first terminal are provided in the terminal unit, and

the terminal unit determines an alignment state between the first terminal and the specific pattern or whether the first terminal and the specific pattern are physically in contact with each other, using the second terminal.

4. The absorption product of claim 1, wherein the terminal unit includes a first terminal and a second terminal that are formed to be able to come in contact with

one of the patterns, and a third terminal and a fourth terminal that are formed to be able to come in contact with one of the pattern,

when the first terminal and the second terminal both come in contact with the positive pattern, the first terminal and the second terminal are electrically connected to each other by the positive pattern,

when the third terminal and the fourth terminal both come in contact with the negative pattern, the third terminal and the fourth terminal are electrically connected to each other by the negative pattern,

the terminal unit applies a first determination signal to any one of the first terminal and the second terminal and applies a second determination signal to any one of the third terminal and the fourth terminal,

the terminal unit checks whether the first determination signal is received to the other one of the first terminal and the second terminal,

the terminal unit checks whether the second determination signal is received to the other one of the third terminal and the fourth terminal,

the sensing module generates the sensing signal only when the first determination signal and the second determination signal are both received,

the sensing module applies the sensing signal to at

least one of the first terminal and the second terminal and monitors the sensing signal that is received from at least one of the third terminal and the fourth terminal, and

the sensing module finds out whether there is the excretion or the amount of the excretion by monitoring the sensing signal.

5. The absorption product of claim 1, wherein the terminal unit operates in a slip mode that applies a determination signal determining whether a terminal is in contact with a pattern when power is applied,

the terminal operates in an on-mode that applies the sensing signal to the terminal when the terminal is determined as being in contact with the corresponding pattern while operating in the slip mode, and

the determination signal has a power value lower than the sensing signal.

6. The absorption product of claim 1, wherein a communication module performing wireless communication with a server is further provided in the terminal unit, and

when the excretion is sensed by the sensing module, the communication module generates and transmits a first notification message including recognition information of the terminal unit and first visual information with the

excretion sensed to the server.

7. The absorption product of claim 1, wherein a counting module counting the number of replaced sheet parts every time the sheet parts are replaced, and a communication module performing wireless communication with a server, and

the communication module transmits a second notification message including recognition information of the terminal unit, information about the number of the sheet parts replaced for the terminal unit, and second visual information with the sheet parts replaced to the server.

8. The absorption product of claim 1, wherein the sheet part includes a first sheet made of a material at least partially not passing the excretion and a second sheet stacked on a side of the first sheet, which is supposed to face the user, and passing the excretion,

the patterns are printed on a side of the first sheet that faces the second sheet,

a first attachment/detachment portion and a second attachment/detachment portion combined with each other with the sheet part therebetween are provided in the terminal unit,

the terminals are installed in the first attachment/detachment portion disposed on the side of the first sheet that is supposed to face the user, and

the terminals come physically in contact with the corresponding patterns through the second sheet when the terminal unit is mounted on the sheet part.

9. The absorption product of claim 1, wherein a first attachment/detachment portion, a second attachment/detachment portion, and a hinge portion are provided in the terminal unit,

the first attachment/detachment portion and the second attachment/detachment portion are attached and detached to and from the sheet part by coming in contact with each other or moving away from each other with the sheet part therebetween,

the hinge portion rotatably connects the first attachment/detachment portion and the second attachment/detachment portion, and

the first attachment/detachment portion and the second attachment/detachment portion come in contact with each other or move away from each other by rotating about the hinge portion.

10. The absorption product of claim 1, wherein a first

attachment/detachment portion and a second attachment/detachment portion combined with each other with the sheet part therebetween are provided in the terminal unit,

the terminals are installed in the first attachment/detachment portion facing the pattern,

an elastic part facing the terminals with the sheet part therebetween is provided in the second attachment/detachment portion, and

the terminals protrude toward the elastic part.

11. The absorption product of claim 12, wherein when the attachment/detachment portion and the second attachment/detachment portion are combined, the terminals press the elastic part in contact with the pattern, and

the elastic part is recessed together with the patterns by pressing of the terminals and brings the patterns and the terminals in close contact with each other using a recessing elastic reaction force.

12. The absorption product of claim 12, wherein the terminals are formed in a cone shape, and

when the first attachment/detachment portion and the second attachment/detachment portion are combined with each other, the terminals come in contact with the patterns

disposed in the sheet part through a surface of the sheet part supported on the elastic part and presses the elastic part.

13. The absorption product of claim 1, wherein a first attachment/detachment portion and a second attachment/detachment portion combined with each other with the sheet part therebetween are provided in the terminal unit,

the terminals are installed in the first attachment/detachment portion facing the pattern,

the sensing module is installed in the second attachment/detachment portion, and

a wire electrically connecting the terminals and the sensing module is provided between the first attachment/detachment portion and the second attachment/detachment portion.