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(12) **United States Patent**
Kuo

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(54) **INTELLIGENT COURT SYSTEM AND A DATA THEREOF ACQUISITION METHOD**

(58) **Field of Classification Search**
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See application file for complete search history.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

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An intelligent court system and a data acquisition method includes an intelligent ball, a plurality of wearing devices, a plurality of location base stations, gateway and server, the location base stations, the gateway; the intelligent ball is disposed with a first UWB label; the wearing device is disposed with a second UWB label; the location base station is disposed with a UWB receiving and transporting device, a micro-controller, a clock device and a data communication device, the micro-controller controls the UWB receiving and transporting device to receive the information from the intelligent ball and the wearing device and adds a timestamp of a clock signal from the UWB receiving and transporting device, and then transports the information to the gateway via the data communication device; the server receives the information from the gateway to determine the position and/or the motion trail of the intelligent ball and/or the wearing device.

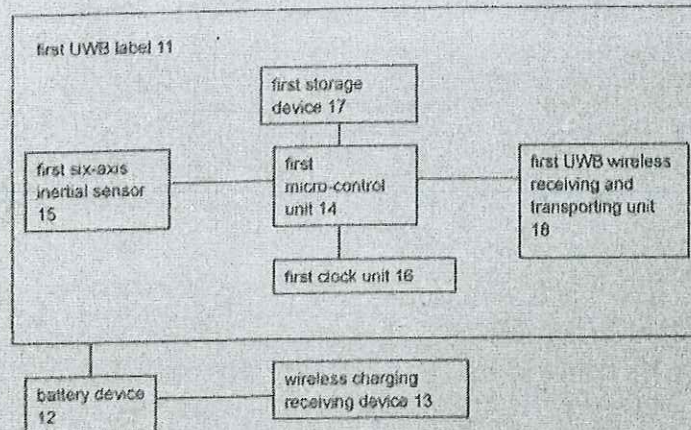
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(54) **AUTONOMOUS WALL CLEANER**

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(57)

ABSTRACT

An autonomous wall cleaner is disclosed. The autonomous wall cleaner comprises a vacuum generator, a number of suction cups, a number of wheels, a number of first actuators, a cleaning element and a controller located on a frame. The wheels are symmetrically arranged on both sides of the frame. The first actuator is capable of driving the wheels. Each suction cup is connected with the vacuum generators and has a sliding disk and an elastic bowl. When the wheels are moving on the wall, the suction cups are sucking to the wall and sliding.

19 Claims, 9 Drawing Sheets

