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Specification
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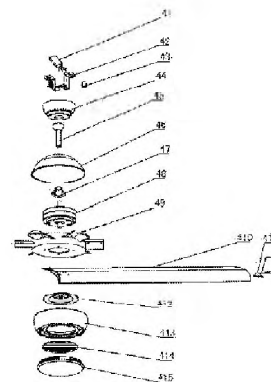
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(54) Name of Utility Model

A Ceiling Fan Device Controllable Via a Mobile Phone

(57) Abstract

The present utility model relates to a ceiling fan device controllable via a mobile phone, including a ceiling fan body, composed of a housing cover, a ceiling fan DC brushless motor, a rotor, a blade, and a light disk. Wherein, several blades are uniformly mounted on the periphery of the rotor, and each blade is fixedly installed with a blade wing at its outer end; the housing cover is installed above the rotor, and the top of the housing cover has an opening where a downrod is fixed, with a yoke at the lower end thereof, and the ceiling fan DC brushless motor is disposed on the upper surface of the rotor. Additionally, a canopy is installed at the upper end of the downrod, a mounting bracket is fixedly set on the canopy, and the mounting bracket is equipped with a receiver for controlling the DC brushless ceiling fan motor. The beneficial effect of the present utility model is that this may be applied in homes or public settings. By providing mobile phone control for the ceiling fan, wireless remote control of the fan is achieved using a mobile phone, which enhances the enjoyment of the ceiling fan as a practical leisure tool and elevates traditional home appliances to smart home appliances, thereby realizing wireless control of the ceiling fan status.



CN 204716567 U

1. A ceiling fan device controllable via a mobile phone, comprising a ceiling fan remote control receiving module (2), a remote control (3) and a ceiling fan body (4), characterized in that:

the ceiling fan body (4) is composed of a housing cover (46), a ceiling fan DC brushless motor (48), a rotor (49), a blade (410), and a light disk (413). Wherein, several blades (410) are uniformly mounted on the periphery of the rotor (49), and each blade (410) is fixedly installed with a blade wing (411) at its outer end; the housing cover (46) is installed above the rotor (49), and the top of the housing cover (46) has an opening where a downrod (45) is fixed, with a yoke (47) at the lower end thereof, and the ceiling fan DC brushless motor (48) is disposed on the upper surface of the rotor (49); additionally, a canopy (44) is installed at the upper end of the downrod (45), a mounting bracket (42) is fixedly set on the canopy (44), and the mounting bracket (42) is equipped with a receiver (41) for controlling the DC brushless ceiling fan motor;

accordingly, a Bluetooth or WiFi receiving module (43) is fixedly installed inside the mounting bracket (42), a light disk (413) is installed below the rotor (49), with a glass lampshade (415) disposed at the bottom of the light disk (413), a bearing plate (412) is fixed above the light disk (413), and an LED light board (414) is installed inside the light disk (413);

the combination of the ceiling fan remote control receiving module (2), remote control (3), and ceiling fan body (4) may be operated independently of each other; the combination of the Bluetooth device (1), ceiling fan remote control receiving module (2), ceiling fan body (4), and mobile phone (5) may also be operated independently of each other; the Bluetooth device (1) is connected to the ceiling fan remote control receiving module (2) as an accessory to enable the control thereof, and the mobile phone (5) is wirelessly connected to the Bluetooth device (1) to enable control of the ceiling fan.

2. According to the ceiling fan device controllable via a mobile phone according to Claim 1, wherein the Bluetooth device (1) receives control instructions sent by the mobile phone via Bluetooth and transmits them to the ceiling fan remote control receiving module (2), which controls the ceiling fan's power, speed, direction of rotation, timer settings, and light switch based on the instructions received from the Bluetooth module.

3. According to the ceiling fan device controllable via a mobile phone according to Claim 1, wherein the combination of the ceiling fan remote control receiving module (2), remote control (3), and ceiling fan body (4) may be operated independently of each other, with the ceiling fan receiving control from the remote control (3); the combination of the Bluetooth device (1), ceiling fan remote control receiving module (2), ceiling fan body (4), and mobile phone (5) may also be operated independently of each other, with the ceiling fan receiving control from the mobile phone application via the Bluetooth device (1).

A Ceiling Fan Device Controllable Via a Mobile Phone

Technical Field

[0001] The present utility model relates to the technical field of household appliances, particularly a ceiling fan device controllable via a mobile phone.

Background Art

[0002] With the rapid advancement of technology, smart homes are becoming a part of people's daily lives. The widespread use of smartphones has awakened the demand for interconnected control of household appliances. As a traditional and classical ceiling fan, the integration with advanced Bluetooth technology enables communication with smartphones, enabling the control of functions such as power, speed, timer, and light settings through a mobile phone. The combination with high-tech chips significantly enhances the convenience and comfort of using a ceiling fan, giving a traditional ceiling fan a modern and high-tech feel.

[0003] For example, publication number CN 204082608 U, application number 201420422764.5 discloses a Chinese patent for an electric fan controllable via a mobile phone speaker, including a fan blade, a motor for driving the fan blade, and a control circuit for controlling the electric fan, of which, the control circuit comprises a button circuit, an infrared receiving circuit, a fan motor control circuit, a display circuit, an ultrasonic receiving circuit, and a microprocessor, as well as a power supply circuit providing operating voltage for the aforementioned circuits. The ultrasonic receiving circuit includes a microphone connected electrically to the microprocessor. By utilizing the ultrasonic waves emitted by the speaker of a mobile phone or computer, the fan may be controlled. This requires only the download of corresponding software, providing users with a convenient and easy way to control the fan. Additionally, the display circuit and audio amplification circuit of this utility model have the characteristics of clear voice prompts and an aesthetically pleasing display interface. This patent specifically sets forth the circuit, revealing the control circuit for similar ceiling fans. However, it does not specify the structural features of the particular ceiling fan.

[0004] In another example, application publication number CN 103850966 A, application number 201210498518.3 discloses a Chinese patent for a fan controllable via a mobile phone for adjusting the wind speed, including a fan body, a Bluetooth communication module, a CPU control module, a motor speed control module, an LED wind speed indicator light, and a fan motor, of which, the Bluetooth communication module is connected to the CPU control module, the CPU control module is connected to the motor speed control module and LED wind speed indicator light, and the motor speed control module is connected to the fan motor. This invention is mainly suitable for household use, allowing [users to] adjust the fan speed using a mobile phone without the need to approach the fan, providing a convenient and quick wireless operation. However, this patent also does not specify the structural features of the particular ceiling fan.

[0005] Therefore, there is a need for reasonable improvements in the prior art in these aspects.

Summary of the Utility Model

[0006] To address the above shortcomings, the present utility model provides a ceiling fan device controllable via a mobile phone that may be applied in homes or public settings. By providing mobile phone control for the ceiling fan, wireless remote control of the fan is achieved using a mobile phone, which enhances the enjoyment of the ceiling fan as a practical leisure tool and elevates traditional home appliances to smart home appliances, while addressing the various deficiencies in the prior art.

[0007] In order to achieve the aforementioned objective, the following technical solutions are adopted in the present utility model:

[0008] a ceiling fan device controllable via a mobile phone, including a ceiling fan body, composed of a housing cover, a ceiling fan DC brushless motor, a rotor, a blade, and a light disk, wherein, several blades are uniformly mounted on the periphery of the rotor, and each blade is fixedly installed with a blade wing at its outer end; the housing cover is installed above the rotor, and the top of the housing cover has an opening where a downrod is fixed, with a yoke at the lower end thereof, and the ceiling fan DC brushless motor is disposed on the upper surface of the rotor; additionally, a canopy is installed at the upper end of the downrod, a mounting bracket is fixedly set on the canopy, and the mounting bracket is equipped with a receiver for controlling the DC brushless ceiling fan motor;

[0009] accordingly, a Bluetooth or WiFi receiving module is fixedly installed inside the mounting bracket, a light disk is installed below the rotor, with a glass lampshade disposed at the bottom of the light disk, a bearing plate is fixed above the light disk, and an LED light board is installed inside the light disk.

[0010] The combination of the ceiling fan remote control receiving module, remote control, and ceiling fan body may be operated independently of each other; the combination of the Bluetooth device, ceiling fan remote control receiving module, ceiling fan body, and mobile phone may also be operated independently of each other; the Bluetooth device is connected to the ceiling fan remote control receiving module as an accessory to enable the control thereof, and the mobile phone is wirelessly connected to the Bluetooth device to enable control of the ceiling fan.

[0011] The Bluetooth device receives control instructions sent by the mobile phone via Bluetooth and transmits them to the ceiling fan remote control receiving module, which controls various parameters of the ceiling fan such as power, speed, direction of rotation, timer settings, and light switch based on the instructions received from the Bluetooth module.

[0012] The combination of the ceiling fan remote control receiving module, remote control, and ceiling fan body may be operated independently of each other, with the ceiling fan receiving control from the remote control; the combination of the Bluetooth device, ceiling fan remote control receiving module, ceiling fan body, and mobile phone may also be operated independently of each other, with the ceiling fan receiving control from the mobile phone application via the Bluetooth device.

[0013] The beneficial effect of the ceiling fan device controllable via a mobile phone described in the present utility model is that this may be applied in homes or public settings. By providing mobile

phone control for the ceiling fan, wireless remote control of the fan is achieved using a mobile phone, which enhances the enjoyment of the ceiling fan as a practical leisure tool and elevates traditional home appliances to smart home appliances, thereby realizing wireless control of the ceiling fan status (for example, power, speed, timer, and lighting).

Description of Drawings

[0014] The present utility model is further described in detail below according to the attached drawings.

[0015] FIG. 1 is a schematic diagram of the overall structure of the ceiling fan body in an example of the present utility model;

[0016] FIG. 2 is an exploded schematic diagram of the ceiling fan body controllable via a mobile phone in an example of the present utility model;

[0017] FIG. 3 is a schematic diagram illustrating the application principle of the ceiling fan device controllable via a mobile phone in an example of the present utility model.

[0018] In the diagram:

[0019] 1. Bluetooth device; 2. ceiling fan remote control receiving module; 3. remote control; 4. ceiling fan body; 5. mobile phone;

[0020] 41. DC brushless ceiling fan motor control receiver; 42. mounting bracket; 43. Bluetooth or WIFI receiving module; 44. canopy; 45. downrod; 46. housing cover; 47. yoke; 48. ceiling fan DC brushless motor; 49. rotor; 410. blade; 411. blade wing; 412. bearing plate; 413. light disk; 414. LED light board; 415. glass lampshade.

Specific Embodiments

[0021] As shown in Figs 1 - 2, the ceiling fan device controllable via a mobile phone described in an example of the present utility model includes a ceiling fan body 4, composed of a housing cover 46, a ceiling fan DC brushless motor 48, a rotor 49, a blade 410, and a light disk 413, wherein, several blades 410 are uniformly mounted on the periphery of the rotor 49, and each blade 410 is fixedly installed with a blade wing 411 at its outer end; the housing cover 46 is installed above the rotor 49, and the top of the housing cover 46 has an opening where a downrod 45 is fixed, with a yoke 47 at the lower end thereof, and the ceiling fan DC brushless motor 48 is disposed on the upper surface of the rotor 49; additionally, a canopy 44 is installed at the upper end of the downrod 45, a mounting bracket 42 is fixedly set on the canopy 44, and the mounting bracket 42 is equipped with a receiver 41 for controlling the DC brushless ceiling fan motor.

[0022] Accordingly, a Bluetooth or WiFi receiving module 43 is fixedly installed inside the mounting bracket 42, a light disk 413 is installed below the rotor 49, with a glass lampshade 415 disposed at the bottom of the light disk 413, a bearing plate 412 is fixed above the light disk 413, and an LED light board 414 is installed inside the light disk 413.

[0023] As shown in FIG. 3, in an example of the present utility model, the ceiling fan device

controllable via a mobile phone includes a combination of the ceiling fan remote control receiving module 2, remote control 3, and ceiling fan body 4, which may be operated independently of each other; the combination of the Bluetooth device 1, ceiling fan remote control receiving module 2, ceiling fan body 4, and mobile phone 5 may also be operated independently of each other; the Bluetooth device 1 is connected to the ceiling fan remote control receiving module 2 as an accessory to enable the control thereof, and the mobile phone 5 is wirelessly connected to the Bluetooth device 1 to enable control of the ceiling fan. The mobile phone application displays the current actual status of the ceiling fan.

[0024] The Bluetooth device 1 receives control instructions sent by the mobile phone via Bluetooth and transmits them to the ceiling fan remote control receiving module 2, which controls various parameters of the ceiling fan such as power, speed, direction of rotation, timer settings, and light switch based on the instructions received from the Bluetooth module.

[0025] The ceiling fan remote control receiving module 2 sends the current status to the mobile phone via the Bluetooth device 1, the mobile phone application receives the status information sent by the Bluetooth device 1, and is capable of displaying the current actual status of the ceiling fan. The status of the ceiling fan includes the on/off state, speed, forward/reverse direction, remaining timer duration, and light switch status.

[0026] The combination of the ceiling fan remote control receiving module 2, remote control 3, and ceiling fan body 4 may be operated independently of each other, with the ceiling fan receiving control from the remote control 3; the combination of the Bluetooth device 1, ceiling fan remote control receiving module 2, ceiling fan body 4, and mobile phone 5 may also be operated independently of each other, with the ceiling fan receiving control from the mobile phone application via the Bluetooth device; the remote control 3 changes the status of the ceiling fan, and the mobile phone application is also capable of receiving the corresponding status changes for display. The status of the ceiling fan includes the on/off state, speed, forward/reverse direction, remaining timer duration, and light switch status.

[0027] The description of the examples above is provided to facilitate understanding and application of the technology for those with ordinary skill in the art. For example, the circuit diagram of the Bluetooth device and remote control may be implemented directly using the prior art, which is already a mature circuit, and additional details are not necessary in this case. According to the disclosure of this case, those skilled in the art should consider improvements and modifications made to this case within the scope of protection of this case.

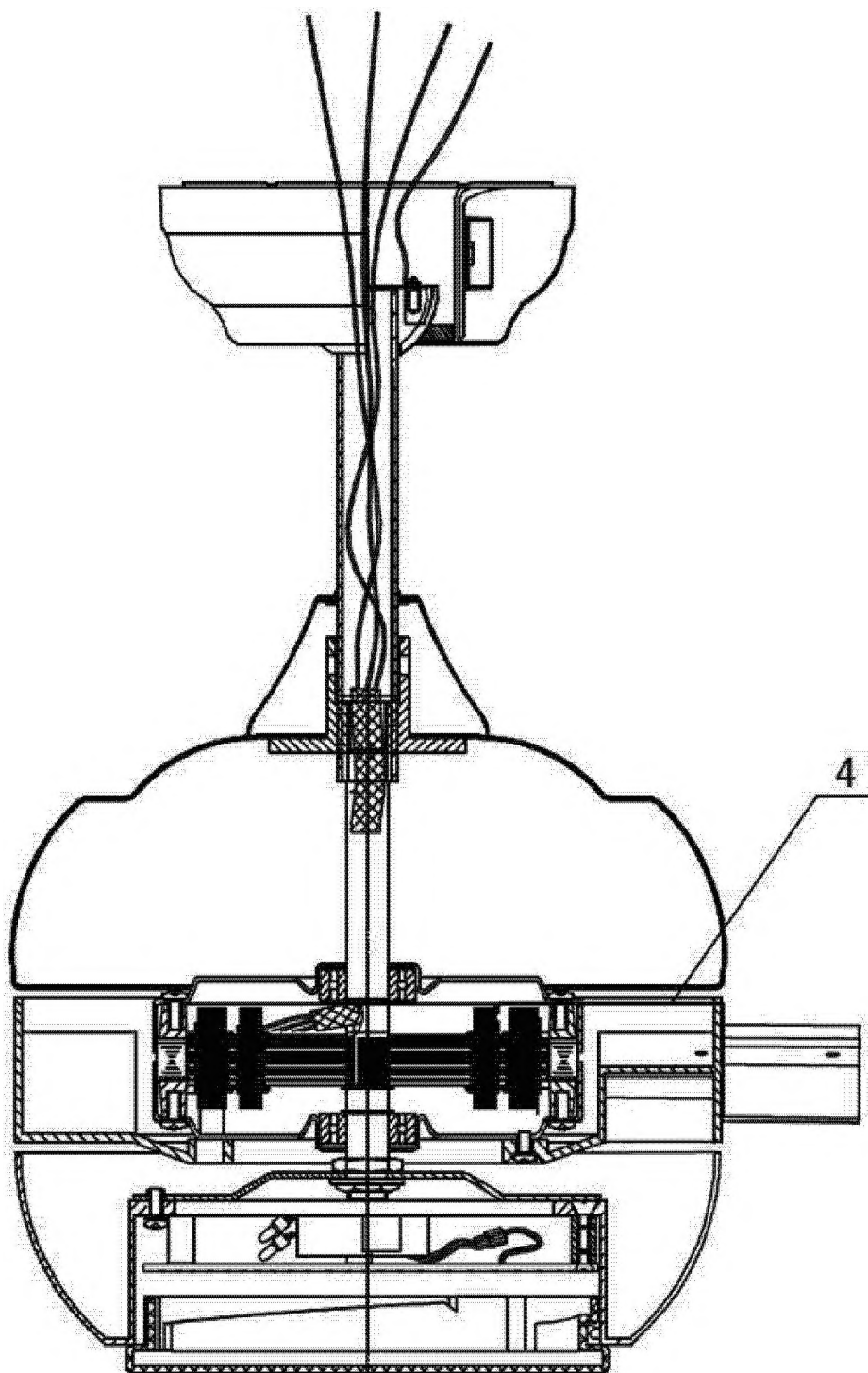


FIG. 1

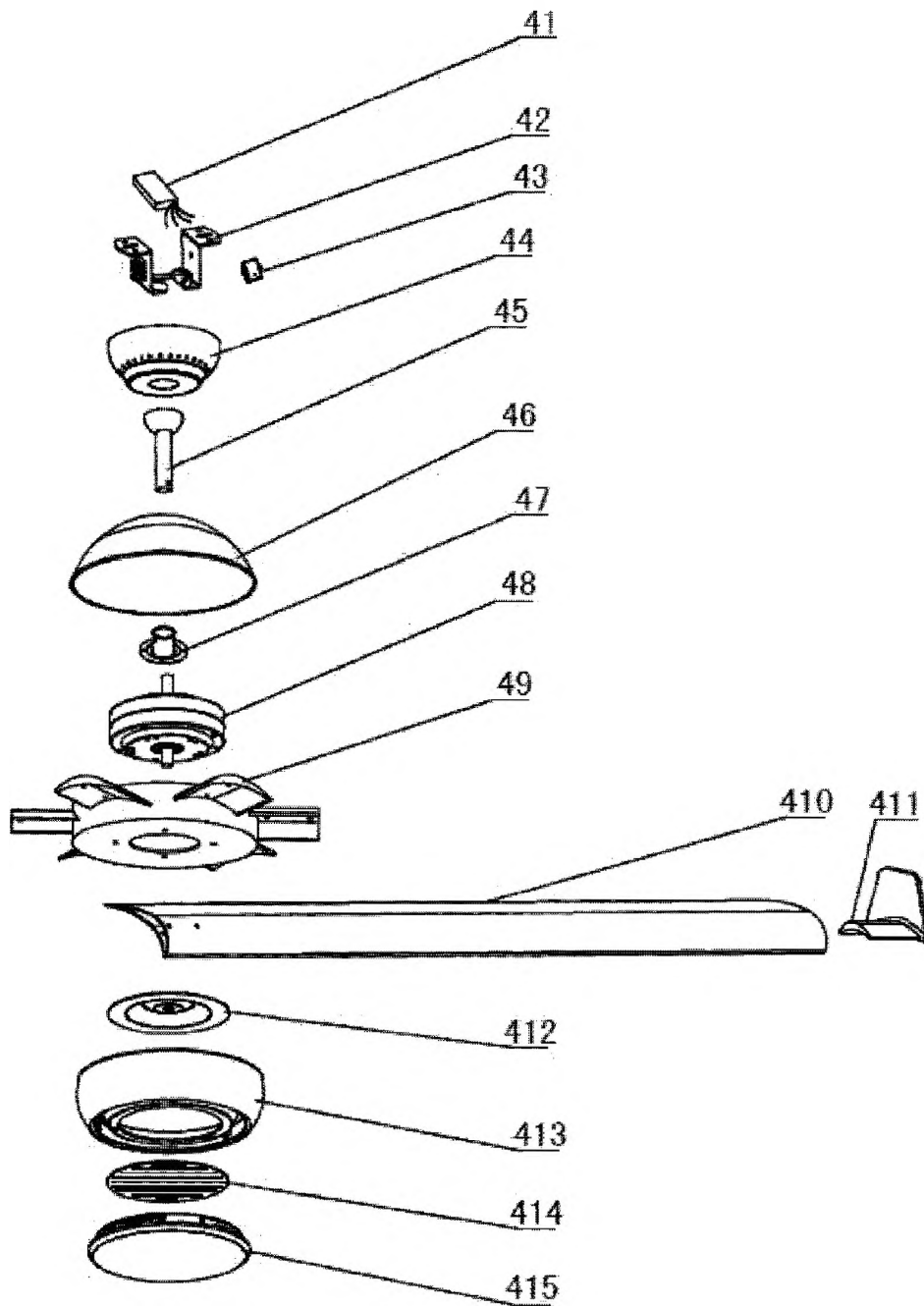


FIG. 2

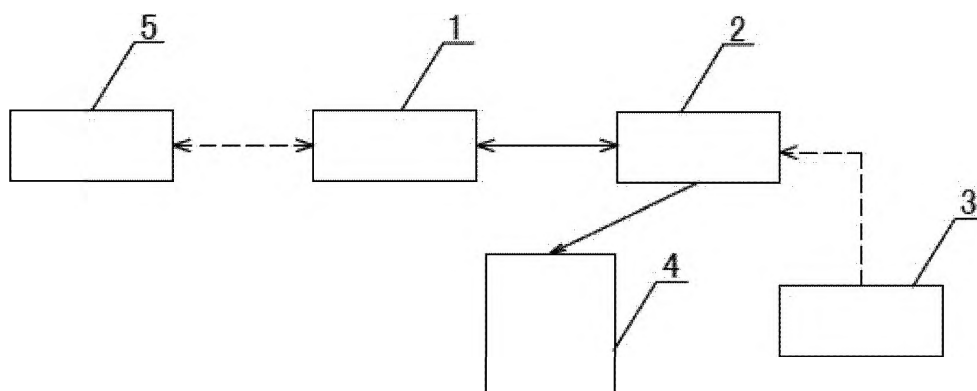


FIG. 3



(12) 实用新型专利

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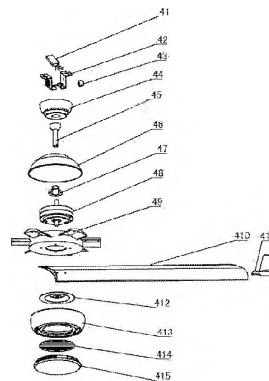
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(54) 实用新型名称

一种可用手机控制的吊扇装置

(57) 摘要

本实用新型涉及一种可用手机控制的吊扇装置,包括吊扇本体,所述吊扇本体由外罩、吊扇直流无刷电机、转盘、叶片、灯盘组成,其中的转盘外围均匀安装若干叶片并且每个叶片外端固定安装叶翼,该转盘上方安装外罩,所述外罩顶部开孔内固定吊杆并且吊杆下端带有吊头,其中的转盘上表面设置吊扇直流无刷电机;同时,所述吊杆上端安装吊盅并且吊盅上固定设置吊架,所述吊架上设有直流无刷吊扇电机控制接收器。本实用新型有益效果为:可适用于家庭或公共场合,通过提供手机控制吊扇功能,可使用手机对吊扇进行无线遥控、增加吊扇作为实用休闲工具的乐趣、使传统家电提升为智能家电,从而实现对吊扇状态的无线控制。



1. 一种可用手机控制的吊扇装置,包括吊扇遥控接收模块(2)、遥控器(3)及吊扇本体(4),其特征在于:

所述吊扇本体(4)由外罩(46)、吊扇直流无刷电机(48)、转盘(49)、叶片(410)、灯盘(413)组成,其中的转盘(49)外围均匀安装若干叶片(410)并且每个叶片(410)外端固定安装叶翼(411),该转盘(49)上方安装外罩(46),所述外罩(46)顶部开孔内固定吊杆(45)并且吊杆(45)下端带有吊头(47),其中的转盘(49)上表面设置吊扇直流无刷电机(48);同时,所述吊杆(45)上端安装吊盅(44)并且吊盅(44)上固定设置吊架(42),所述吊架(42)上设有直流无刷吊扇电机控制接收器(41);

相应地,所述吊架(42)内固定安装一个蓝牙或WIFI接收模组(43);所述转盘(49)下方安装灯盘(413)并且灯盘(413)底部设置玻璃灯罩(415),灯盘(413)上方固定支承板(412),灯盘(413)内部安装LED灯板(414);

所述吊扇遥控接收模块(2)、遥控器(3)、吊扇本体(4)组合可独立工作;蓝牙装置(1)、吊扇遥控接收模块(2)、吊扇本体(4)、手机(5)组合也可独立工作;蓝牙装置(1)作为一个附件与吊扇遥控接收模块(2)连接,实现对吊扇遥控接收模块(2)的控制,手机(5)与蓝牙装置(1)通过无线连接,实现对吊扇的控制。

2. 根据权利要求1所述的可用手机控制的吊扇装置,其特征在于:所述蓝牙装置(1)接收手机蓝牙发送的控制指令,传递给吊扇遥控接收模块(2),吊扇遥控接收模块(2)根据蓝牙模块传递的指令控制吊扇开关、转速、正反转方向、定时时间、灯开关。

3. 根据权利要求1所述的可用手机控制的吊扇装置,其特征在于:所述吊扇遥控接收模块(2)、遥控器(3)、吊扇本体(4)三件组合可独立工作,这时吊扇接受遥控器(3)的控制;蓝牙装置(1)、吊扇遥控接收模块(2)、吊扇本体(4)、手机(5)四件组合也可独立工作这时吊扇通过蓝牙装置(1)接受手机应用的控制。

一种可用手机控制的吊扇装置

技术领域

[0001] 本实用新型涉及家用电器技术领域,尤其涉及一种可用手机控制的吊扇装置。

背景技术

[0002] 随着科技的日新月异,智能家居开始进入人们的日常生活,智能手机的普及唤起了人们对家居电器联网控制的需求。作为传统、古典的吊扇,通过与高科技的蓝牙芯片结合,就实现了与智能手机的通信,就可通过手机来控制吊扇的开关、转速、定时、灯光控制等功能,通过与高科技的芯片结合,大大提升了吊扇使用的舒适方便性,更使传统吊扇有了前卫的高科技感。

[0003] 例如,授权公告号为 CN 204082608 U,申请号为 201420422764.5 的中国专利公开了一种可用手机扬声器控制的电风扇,包括扇叶、驱动所述扇叶的电机以及控制所述电风扇的控制电路,所述控制电路包括按键电路、红外接收电路、风扇电机控制电路、显示电路、超声波接收电路和微处理器,以及为上述电路提供工作电压的电源电路;所述超声波接收电路内包括麦克风,所述麦克风与所述微处理器相电连接;利用手机或电脑等客户端的扬声器所发射的超声波对电风扇进行控制,只需要下载相应的软件即可实现,为使用者操控电风扇提供便捷,操作简单且方便实现,并且本实用新型的显示电路和音频放大电路,具有语音提示清晰、显示界面美观的特点。该案只设置了电路,从而揭示了同类吊扇的控制电路,但是没有对具体的吊扇结构特征进行设置。

[0004] 再如,申请公布号为 CN 103850966 A,申请号为 201210498518.3 的中国专利公开了一种可用手机控制风速的风扇,包括风扇主体,蓝牙通信模块,CPU 控制模块,电机调速模块,LED 风速指示灯,风扇电机;其中蓝牙通信模块与 CPU 控制模块连接,CPU 控制模块连接电机调速模块和 LED 风速指示灯,电机调速模块,连接风扇电机;主要适用于家庭中,通过手机对风扇进行调速,不需要接近风扇,使用手机进行无线操作,方便快捷。但是,也没有对具体的吊扇结构特征进行设置。

[0005] 因此,针对以上方面,需要对现有技术进行合理的改进。

实用新型内容

[0006] 针对以上缺陷,本实用新型提供一种可适用于家庭或公共场合、提供手机控制吊扇功能、可使用手机对吊扇进行无线遥控、增加吊扇作为实用休闲工具的乐趣、使传统家电提升为智能家电的可用手机控制的吊扇装置,以解决现有技术的诸多不足。

[0007] 为实现上述目的,本实用新型采用以下技术方案:

[0008] 一种可用手机控制的吊扇装置,包括吊扇本体,所述吊扇本体由外罩、吊扇直流无刷电机、转盘、叶片、灯盘组成,其中的转盘外围均匀安装若干叶片并且每个叶片外端固定安装叶翼,该转盘上方安装外罩,所述外罩顶部开孔内固定吊杆并且吊杆下端带有吊头,其中的转盘上表面设置吊扇直流无刷电机;同时,所述吊杆上端安装吊盅并且吊盅上固定设置吊架,所述吊架上设有直流无刷吊扇电机控制接收器;

[0009] 相应地,所述吊架内固定安装一个蓝牙或 WIFI 接收模组;所述转盘下方安装灯盘并且灯盘底部设置玻璃灯罩,灯盘上方固定支承板,灯盘内部安装 LED 灯板。

[0010] 所述吊扇遥控接收模块、遥控器、吊扇本体组合可独立工作;蓝牙装置、吊扇遥控接收模块、吊扇本体、手机组合也可独立工作;蓝牙装置作为一个附件与吊扇遥控接收模块连接,实现对吊扇遥控接收模块的控制,手机与蓝牙装置通过无线连接,实现对吊扇的控制。

[0011] 所述蓝牙装置接收手机蓝牙发送的控制指令,传递给吊扇遥控接收模块,吊扇遥控接收模块根据蓝牙模块传递的指令控制吊扇开关、转速、正反转方向、定时时间、灯开关等参数。

[0012] 所述吊扇遥控接收模块、遥控器、吊扇本体三件组合可以独立工作,这时吊扇接受遥控器的控制;蓝牙装置、吊扇遥控接收模块、吊扇本体、手机四件组合也可独立工作这时吊扇通过蓝牙装置接受手机应用的控制。

[0013] 本实用新型所述的可用手机控制的吊扇装置的有益效果为:可适用于家庭或公共场合,通过提供手机控制吊扇功能,可使用手机对吊扇进行无线遥控、增加吊扇作为实用休闲工具的乐趣、使传统家电提升为智能家电,从而实现对吊扇状态(例如,开关、转速、定时、灯光)的无线控制。

附图说明

[0014] 下面根据附图对本实用新型作进一步详细说明。

[0015] 图 1 是本实用新型实施例所述的吊扇本体整体结构示意图;

[0016] 图 2 是本实用新型实施例所述可用手机控制的吊扇本体的分解示意图;

[0017] 图 3 是本实用新型实施例所述可用手机控制的吊扇装置应用原理示意图。

[0018] 图中:

[0019] 1、蓝牙装置;2、吊扇遥控接收模块;3、遥控器;4、吊扇本体;5、手机;

[0020] 41、直流无刷吊扇电机控制接收器;42、吊架;43、蓝牙或 WIFI 接收模组;44、吊盅;45、吊杆;46、外罩;47、吊头;48、吊扇直流无刷电机;49、转盘;410、叶片;411、叶翼;412、支承板;413、灯盘;414、LED 灯板;415、玻璃灯罩。

具体实施方式

[0021] 如图 1-2 所示,本实用新型实施例所述的可用手机控制的吊扇装置,包括吊扇本体 4,所述吊扇本体 4 由外罩 46、吊扇直流无刷电机 48、转盘 49、叶片 410、灯盘 413 组成,其中的转盘 49 外围均匀安装若干叶片 410 并且每个叶片 410 外端固定安装叶翼 411,该转盘 49 上方安装外罩 46,所述外罩 46 顶部开孔内固定吊杆 45 并且吊杆 45 下端带有吊头 47,其中的转盘 49 上表面设置吊扇直流无刷电机 48;同时,所述吊杆 45 上端安装吊盅 44 并且吊盅 44 上固定设置吊架 42,所述吊架 42 上设有直流无刷吊扇电机控制接收器 41;

[0022] 相应地,所述吊架 42 内固定安装一个蓝牙或 WIFI 接收模组 43;所述转盘 49 下方安装灯盘 413 并且灯盘 413 底部设置玻璃灯罩 415,灯盘 413 上方固定支承板 412,灯盘 413 内部安装 LED 灯板 414。

[0023] 如图 3 所示,本实用新型实施例所述的可用手机控制的吊扇装置,其中的吊扇遥

控接收模块 2、遥控器 3、吊扇本体 4 组合可独立工作；蓝牙装置 1、吊扇遥控接收模块 2、吊扇本体 4、手机 5 组合也可独立工作；蓝牙装置 1 作为一个附件与吊扇遥控接收模块 2 连接，实现对吊扇遥控接收模块 2 的控制，手机 5 与蓝牙装置 1 通过无线连接，实现对吊扇的控制；手机应用显示吊扇当前实际状态。

[0024] 蓝牙装置 1 接收手机蓝牙发送的控制指令，传递给吊扇遥控接收模块 2，吊扇遥控接收模块 2 根据蓝牙模块传递的指令控制吊扇开关、转速、正反转方向、定时时间、灯开关等参数；

[0025] 吊扇遥控接收模块 2 将当前状态通过蓝牙装置 1 发送给手机，手机应用接收蓝牙装置 1 发送的状态信息，可以显示吊扇当前实际状态，状态包括吊扇的开关、转速、正反转方向、定时剩余时间、灯开关状态；

[0026] 吊扇遥控接收模块 2、遥控器 3、吊扇本体 4 三件组合可以独立工作，这时吊扇接受遥控器 3 的控制；蓝牙装置 1、吊扇遥控接收模块 2、吊扇本体 4、手机 5 四件组合也可独立工作这时吊扇通过蓝牙装置 1 接受手机应用的控制；遥控器 3 控制吊扇状态改变后手机应用也可以接收到相应状态改变的显示，状态包括吊扇的开关、转速、正反转方向、定时剩余时间、灯开关状态。

[0027] 上述对实施例的描述是为了便于该技术领域的普通技术人员能够理解和应用本案技术，例如，蓝牙装置与遥控器的电路图等都可由现有技术直接实施，早已是成熟的电路，本案不需另外给出。本领域的技术人员根据本案的揭示，对于本案做出的改进和修改都应该在本案的保护范围内。

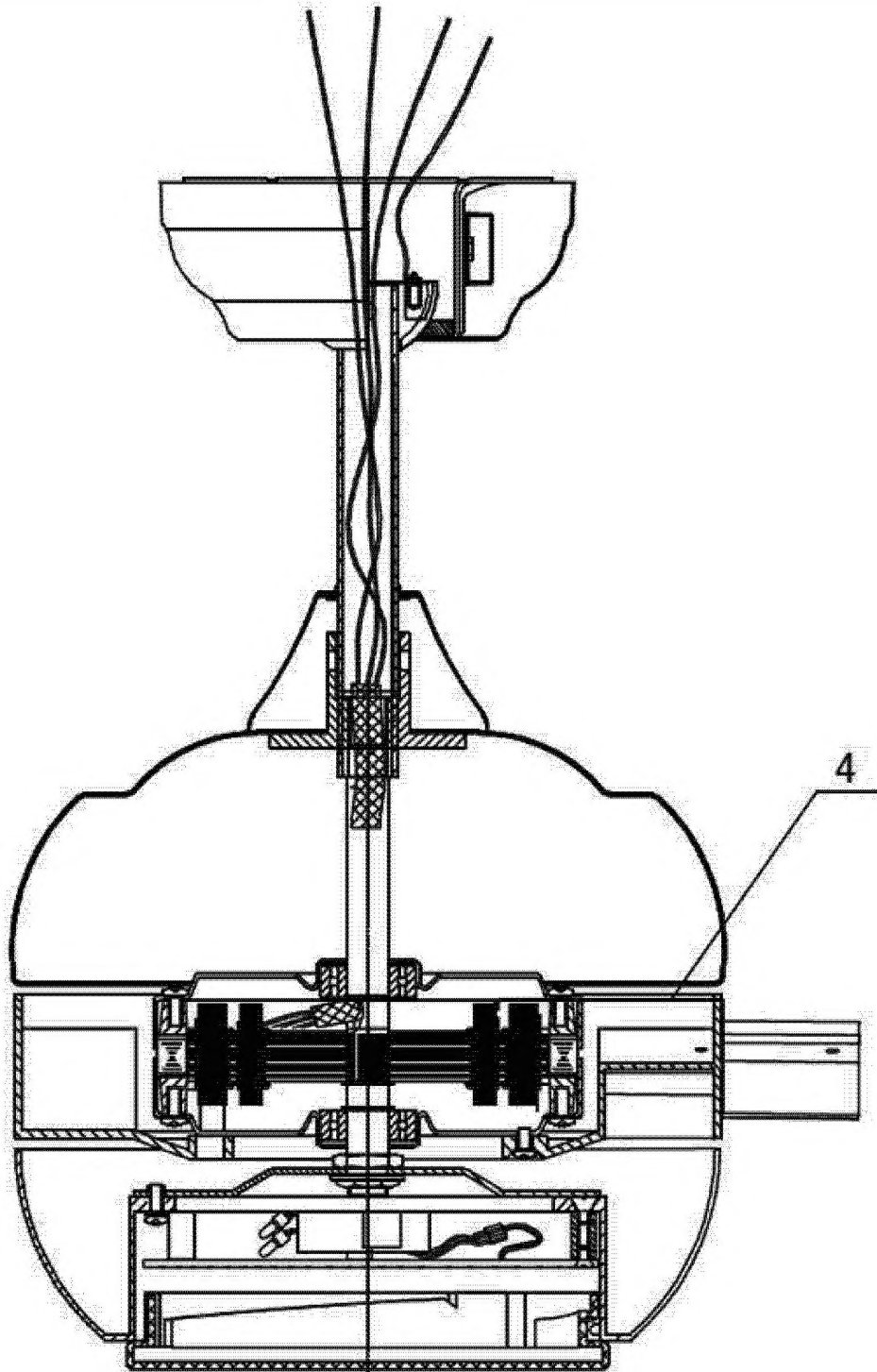


图 1

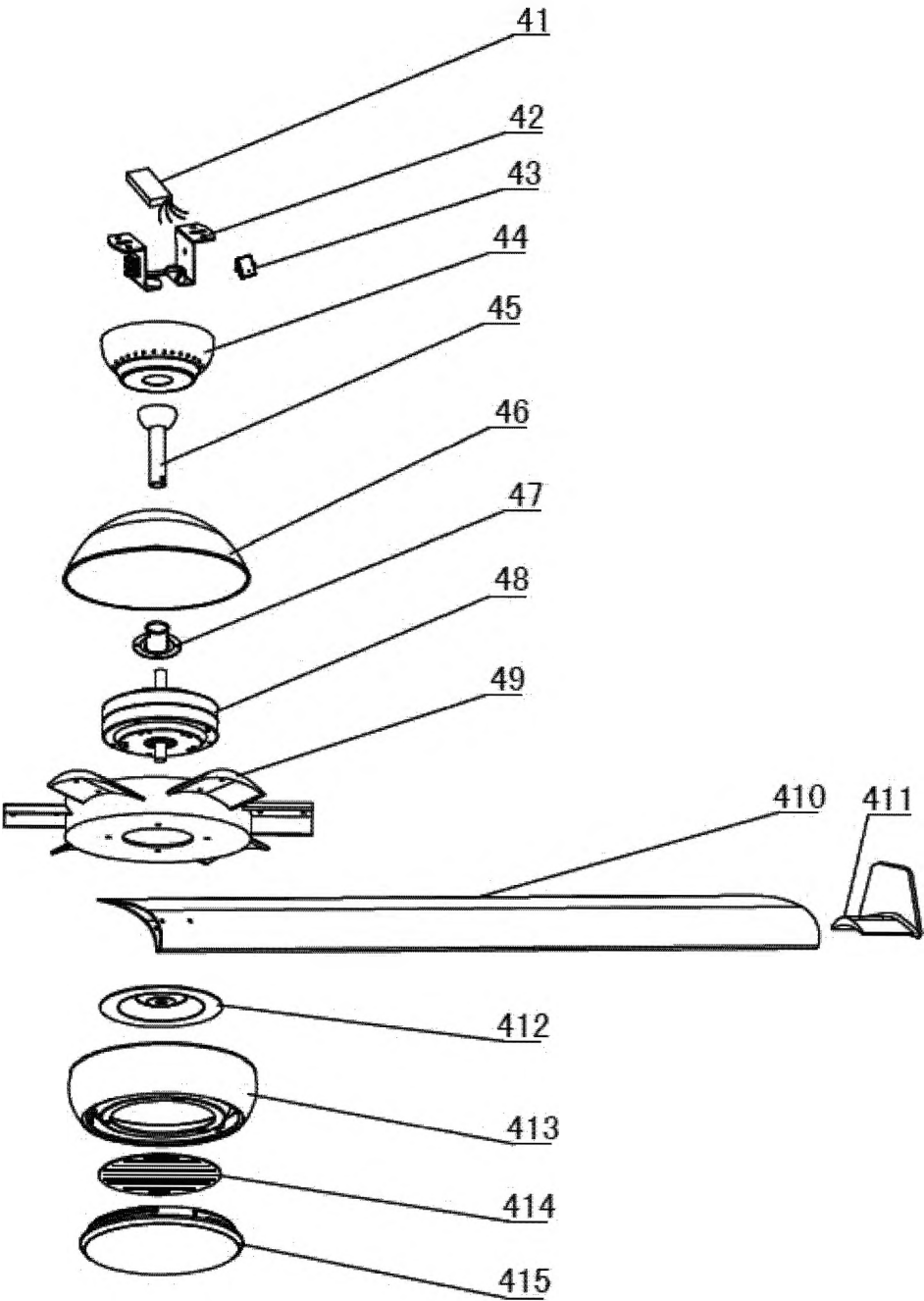


图 2

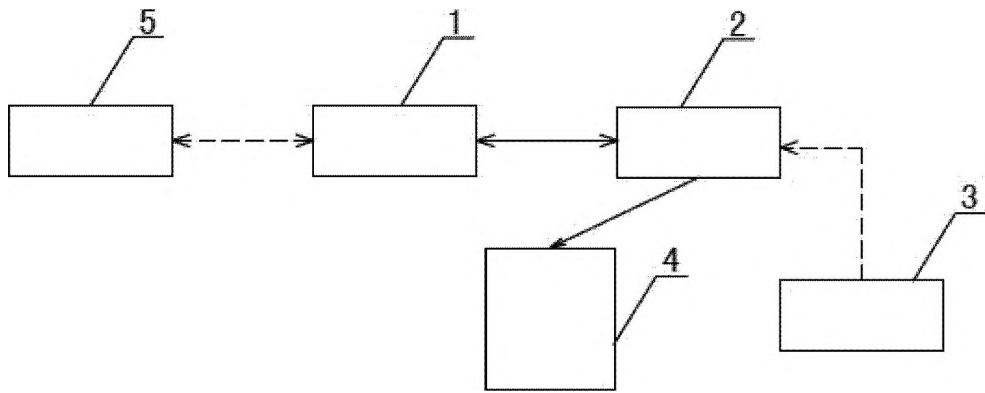


图 3

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I hereby certify under penalty of perjury under the laws of the United States that the following is, to the best of my knowledge and belief, a true and accurate translation of the attached CN204716567U and CN206738206U from [SIMPLIFIED CHINESE] into [ENGLISH].

Signature:



VIVIAN KHAW RUI FANG

[December 07, 2023]