When the rated rotation speed is determined in this way, in a case where the ceiling fan is operated in an installation state away from the ceiling (distance L_h), the power consumption becomes 32 W as shown in FIG. 5(a). Accordingly, a margin is generated in constraint conditions, such as the increase in temperature of the component. Further, an output air volume becomes small relative to a rated value (an output in distance L_l).

[0011]

It should be noted that FIG. 5(b) shows a wind speed and an air volume in a case where the conventional ceiling fan installed in the installation state away from the ceiling (distance L_h) is operated at power consumption of 44 W which is the same as the power consumption of the ceiling fan installed at predetermined distance L_l close to the ceiling shown in FIG. 5(a). Both the wind speed and the air volume largely exceed the wind speed and the air volume of the operation at the power consumption of 44 W of the ceiling fan installed at predetermined distance L_l close to the ceiling.

Citation List

Patent Literature

[0012]

PTL 1: Japanese Patent No. 4649934

SUMMARY

[0013]

In this way, there is a problem in that the conventional ceiling fan cannot be operated with a capacity that the ceiling fan should have, depending on the installation state, in particular, the installation distance from the ceiling.

[0014]

In view of the above, the present disclosure provides a ceiling fan capable of operating with a predetermined capacity irrespective of an installation distance from a ceiling.

[0015]

In an aspect, the ceiling fan is provided with a blade, a DC motor for rotating the blade, and a controller for controlling the DC motor. Further, the controller is provided with a rotation speed detector for detecting a rotation speed of the DC motor, a current detector for detecting a current value energized to the DC motor, and a target rotation speed setting unit for setting a target rotation speed of the DC motor. The controller is further provided with a rotation speed controller for controlling the DC motor so that the rotation speed detected by the rotation speed detector becomes the target rotation speed, and a target rotation speed correction unit for performing modification of the target rotation speed so that the current value detected by the current detector falls within a predetermined range.

[0016]

With this configuration, the ceiling fan can be operated with a predetermined capacity irrespective of an installation distance from a ceiling.

BRIEF DESCRIPTION OF DRAWINGS

[0017]

FIG. 1 is a configuration diagram showing a ceiling fan according to an exemplary embodiment of the present invention.

FIG. 2 is a block circuit diagram of the ceiling fan according to the exemplary embodiment of the present invention.

FIG. 3 is explanatory diagram showing action patterns of the ceiling fan according to the exemplary embodiment of the present invention.