control part that performs control to cause the electric motor to rotate at at least two rotation speeds, which are a first rotation speed and a second rotation speed that is faster than the first rotation speed; and a cooking state monitor part that monitors a cooking state in the cooker, wherein the control part controls the rotation speed of the electric motor at the first rotation speed and the second rotation speed according to the cooking state monitored by the cooking state monitor part, an air volume of the air flow generated by the fan includes at least two air volumes, a first air volume and a second air volume larger than the first air volume, the second rotation speed used when the fan generates the air flow of the second air volume is faster than the second rotation speed used when the fan generates the air flow of the first air volume, and the first rotation speed used when the fan generates the air flow of the second air volume is faster than the first rotation speed used when the fan generates the air flow of the first air volume.

According to this configuration, the rotation speed of the electric motor that rotates the filter is controlled according to a cooking state, whereby the range hood that causes the filter to rotate at a high speed only when required and reduces the possibility of noise generation can be provided. In addition, noise generated by the filter is drowned out when the fan that generates an air flow rotates at a high speed. Therefore, in this case, the noise is hardly perceived even if the filter is made to rotate at a high speed. For this reason, the rotation speed of the filter is controlled according to whether the fan rotates at a high speed or a low speed, whereby the possibility of noise generation can be reduced and high oil gathering efficiency can be maintained. Further, since the flow speed of the oily smoke passing through the filter is different depending on an air volume, the required rotation speed of the filter is different. Accordingly, the first rotation speed and the second rotation speed can be made slow when an air volume is relatively small, whereby it is possible to reduce noise generated by the rotation of the filter while maintaining high oil gathering efficiency.

In addition, the range hood may further include: a determination part that determines whether oily smoke equal to or more than a prescribed threshold is generated on the basis of the cooking state monitored by the cooking state monitor part, wherein the control part causes the electric motor to rotate at the second rotation speed when the determination part determines that the oily smoke equal to or more than the prescribed threshold is generated.

According to this configuration, the filter is made to rotate at a high speed when the oily smoke equal to or more than the prescribed threshold is generated, whereby the possibility of large noise generation can be reduced.

In addition, when the determination part determines that the oily smoke equal to or more than the prescribed threshold or equal to or more than a threshold different from the prescribed threshold is not generated after determines that the oily smoke equal to or more than the prescribed threshold is generated, the control part may immediately stop rotation of the electric motor, cause the electric motor to immediately rotate at the first rotation speed, stop the rotation of the electric motor after maintaining the second rotation speed for a prescribed time, or cause the electric motor to rotate at the first rotation speed after maintaining the second rotation speed for a prescribed time.

According to this configuration, the filter is controlled to rotate at a low speed or stop when the oily smoke equal to or more than the prescribed threshold is not generated, whereby the possibility of noise generation can be reduced.

In addition, the cooking state monitor part may be separated from the range hood and perform radio communication with the control part.

According to this configuration, since the cooking state monitor part is separated from the range hood, the cooking state monitor part can be arranged at a position suitable for monitoring an object.

ADVANTAGEOUS EFFECTS OF INVENTION

As described above, the present invention can provide a range hood that causes a filter to rotate at a high speed only when required and reduces the possibility of noise generation.

BRIEF DESCRIPTION OF DRAWINGS

Figs. 1(A) and 1(B) are a front elevational view and a side elevational view in a case in which the range hood of a first embodiment according to the present invention is installed, respectively.

Figs 2(A) and 2(B) are a bottom view of the range hood of the first embodiment according to the present invention and a bottom view thereof in which an airflow guide

CLAIMS

1. A range hood provided above or near a cooker, comprising:

a fan configured to generate an air flow;

a filter disposed on a flow channel of the air flow and on an upstream side of the fan, and having holes for allowing the air flow to pass therethrough;

an electric motor configured to rotate the filter;

a control part configured to perform control to cause the electric motor to rotate at at least two rotation speeds, which are a first rotation speed and a second rotation speed that is faster than the first rotation speed; and

a cooking state monitor part configured to monitor a cooking state in the cooker, wherein

the control part controls the rotation speed of the electric motor at the first rotation speed and the second rotation speed according to the cooking state monitored by the cooking state monitor part,

an air volume of the air flow generated by the fan includes at least two air volumes, which are a first air volume and a second air volume that is larger than the first air volume,

the second rotation speed used when the fan generates the air flow of the second air volume is faster than the second rotation speed used when the fan generates the air flow of the first air volume, and

the first rotation speed used when the fan generates the air flow of the second air volume is faster than the first rotation speed used when the fan generates the air flow of the first air volume.

2. The range hood according to claim 1, further comprising:

a determination part configured to determine whether oily smoke equal to or more than a prescribed threshold is generated on the basis of the cooking state monitored by the cooking state monitor part, wherein

the control part causes the electric motor to rotate at the second rotation speed when the determination part determines that the oily smoke equal to or more than the prescribed threshold is generated.

3. The range hood according to claim 2, wherein,

when the determination part determines that the oily smoke equal to or more than the prescribed threshold or equal to or more than a threshold different from the prescribed threshold is not generated after determines that the oily smoke equal to or

more than the prescribed threshold is generated,

the control part immediately stops rotation of the electric motor, causes the electric motor to immediately rotate at the first rotation speed, stops the rotation of the electric motor after maintaining the second rotation speed for a prescribed time, or causes the electric motor to rotate at the first rotation speed after maintaining the second rotation speed for a prescribed time.

4. The range hood according to any one of claims 1 to 3, wherein

the cooking state monitor part is separated from the range hood and performs radio communication with the control part.