

RANGE HOOD

CROSS-REFERENCE TO RELATED APPLICATION

[0001] The present application claims priority and benefits to Chinese Patent Application No. 202211138589.2, No. 202211138583.5, No. 202222483218.X, and No. 202222483232.X, filed to China National Intellectual Property Administration on September, 19, 2022, the entire disclosures of which are incorporated herein by reference.

FIELD

[0002] The present disclosure relates to the technical field of kitchen appliances, and more particularly, to a range hood.

BACKGROUND

[0003] Currently, for a range hood of a structure only with a single air inlet, the air inlet is usually disposed at an upper part of the range hood. In this case, however, since the air inlet is far away from the stove, it is difficult to generate sufficient negative pressure near a stove, and oil fume cannot be sucked quickly, limiting an oil fume suction effect. The range hood of the structure with the single air inlet has a small air inlet area, and its fume collection range is still limited. The oil fume suction effect is restricted to a certain extent, so that the oil fume is easily escaped.

SUMMARY

[0004] An embodiment of the present disclosure provides a range hood.

[0005] A range hood according to an embodiment of the present disclosure includes a chamber assembly and a flow guide plate assembly. The chamber assembly has an accommodation chamber and a mounting opening. A fan system is mounted in the

accommodation chamber. The flow guide plate assembly is mounted at the mounting opening. The flow guide plate assembly includes a mounting portion, a flow guide panel movably connected to the mounting portion, a first oil screen fixed to the mounting portion, and a second oil screen disposed on the flow guide panel. The flow guide panel is switchable between the first position and the second position. When the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other. When the flow guide panel is located at the second position, the first oil screen and the second oil screen are offset from each other without overlap.

[0006] In the range hood described above, when the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other, and an overlapping between the first oil screen and the second oil screen defines a single oil fume suction inlet. When the flow guide panel is located at the second position, the first oil screen and the second oil screen are offset from each other without overlap, and two oil fume suction inlets are defined, including a first oil fume suction inlet defined by the first oil screen and a second oil fume suction inlet defined by the second oil screen. Thus, the range hood is switchable between the single oil fume suction inlet arrangement and the dual oil fume suction inlet arrangement to meet requirements for oil fume suction and to ensure oil fume suction effects under different scene requirements.

[0007] In some embodiments, the flow guide panel includes a first panel and a second panel. The first panel is rotatably connected to the second panel. The second oil screen is disposed on the second panel; when the flow guide panel is located at the first position, the first panel is parallel to the second panel; and when the flow guide panel is located at the second position, the first panel is inclined relative to the second panel.

[0008] In some embodiments, the flow guide panel includes a first panel and a second panel that are rotatably connected to each other. The second oil screen is disposed on the second panel. The flow guide plate assembly further includes a movement mechanism. The movement mechanism is connected to at least one of the first panel and the second panel. The movement mechanism is configured to drive the first panel and/or the second panel to move to switch the flow guide panel between the first position and the second position.

[0009] A range hood according to an embodiment of the present disclosure includes a

chamber assembly and a flow guide plate assembly. The chamber assembly has an accommodation chamber and a mounting opening. A fan system is mounted in the accommodation chamber. The flow guide plate assembly is mounted at the mounting opening. The flow guide plate assembly includes a flow guide panel and a movement mechanism. The movement mechanism is connected to the flow guide panel. The movement mechanism includes a motor and a linkage assembly. The motor is connected to the flow guide panel through the linkage assembly. The motor is configured to drive the linkage assembly to move, enabling the linkage assembly to drive the flow guide panel to move.

[0010] In the range hood described above, stability of the movement of the flow guide panel can be ensured with the motor driving the flow guide panel to move through the linkage assembly.

[0011] In some embodiments, the linkage assembly includes a first linkage group and a second linkage group. The movement mechanism further includes a fixing plate. The first linkage group is rotatably connected to the flow guide panel and the fixing plate. The second linkage group is rotatably connected to the flow guide panel and the fixing plate. The first linkage group is rotatably connected to the second linkage group. The motor is configured to drive the first linkage group to rotate to drive the second linkage group and the flow guide panel to move.

[0012] In some embodiments, the movement mechanism includes a synchronizer and two linkage assemblies. The synchronizer is connected to the two linkage assemblies. The two linkage assemblies are connected to two sides of the flow guide panel, respectively. The motor is configured to drive one of the two linkage assemblies to move, to enable the synchronizer to drive the other one of the two linkage assemblies to move.

[0013] In some embodiments, the linkage assembly is connected to an end of the flow guide panel. The movement mechanism further includes a roller. The roller is disposed at another end of the flow guide panel. The flow guide plate assembly includes a mounting portion. The mounting portion has a slide rail. The roller is connected to the slide rail.

[0014] In some embodiments, the flow guide panel includes a first panel and a second panel that are rotatably connected to each other. The linkage assembly is connected to an end of the first panel. The other end of the first panel is rotatably connected to an end of the second panel.

The roller is disposed at the other end of the second panel.

[0015] In some embodiments, a first oil screen is fixed to the mounting portion; a second oil screen is disposed on the second panel; the flow guide panel is switchable between a first position and a second position; when the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other; and when the flow guide panel is located at the second position, the first oil screen and the second oil screen are offset from each other without overlap.

[0016] In some embodiments, when the flow guide panel is located at the first position, the first panel is parallel to the second panel; and when the flow guide panel is located at the second position, the first panel is inclined relative to the second panel.

[0017] In some embodiments, the flow guide plate assembly further includes a baffle; when the flow guide panel is located at the first position, the first panel and the second panel are connected to form a flat plate, and the baffle is accommodated in the accommodation chamber; and when the flow guide panel is located at the second position, the first panel and the second panel are connected to form a V shape, and the baffle is located in a gap between the first panel and the second panel.

[0018] In some embodiments, the baffle is connected to the first panel and movable along with the first panel.

[0019] A range hood according to an embodiment of the present disclosure includes a chamber assembly and a flow guide plate assembly.

[0020] The chamber assembly has an accommodation chamber and a mounting opening. A fan system is mounted in the accommodation chamber. The flow guide plate assembly is mounted at the mounting opening. The flow guide plate assembly includes a mounting portion and a flow guide panel movably mounted at the mounting portion. The flow guide includes a first panel and a second panel that are rotatably connected to each other. Each of two sides of one of the first panel and the second panel is connected to a baffle. When the flow guide panel is flapped upwards and outwards, the baffle is located in a gap between the first panel and the second panel.

[0021] In the range hood described above, when the flow guide panel is flapped upwards and outwards, the baffle is located in the gap between the first panel and the second panel.

Therefore, an area of a space between the first panel and the second panel can be reduced. Thus, the space has a less negative impact on the oil fume suction effect. In this way, the oil fume suction effect is ensured.

[0022] In some embodiments, the flow guide panel is switchable between a first position and a second position; when the flow guide panel is located at the first position, the first panel and the second panel are connected to form a flat plate, and the baffle is accommodated in the accommodation chamber; and when the flow guide panel is located at the second position, the first panel and the second panel are connected to form a V shape, and the second position is a position where the flow guide panel is flapped upwards and outwards.

[0023] In some embodiments, a first oil screen is fixed to the mounting portion, and a second oil screen is disposed on the second panel; when the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other; and when the flow guide panel is located at the second position, the first oil screen and the second oil screen are offset from each other without overlap.

[0024] In some embodiments, the mounting portion has a through hole. The baffle passes through the through hole.

[0025] In some embodiments, the flow guide plate assembly further includes a movement mechanism. The movement mechanism is connected to at least one of the first panel and the second panel and configured to drive the first panel and/or the second panel to move to switch the flow guide panel between the first position and the second position.

[0026] In some embodiments, the flow guide plate assembly further includes an operation panel located above the flow guide panel.

[0027] In some embodiments, the second oil screen is located obliquely above the first oil screen when the flow guide panel is located at the second position.

[0028] In some embodiments, the movement mechanism includes a motor and a linkage assembly. The motor is connected to the first panel through the linkage assembly. The motor is configured to drive the linkage assembly to move, enabling the linkage assembly to drive the first panel and the second panel to flap upwards and outwards.

[0029] In some embodiments, the linkage assembly includes a multi-linkage assembly.

[0030] In some embodiments, the movement mechanism includes a synchronizer and two

linkage assemblies. The synchronizer is connected to the two linkage assemblies. The motor is configured to drive one of the two linkage assemblies to move, to enable the synchronizer to drive the other one of the two linkage assemblies to move.

[0031] In some embodiments, the mounting portion has a slide rail; and the second panel is provided with a roller. The roller is connected to the slide rail. The slide rail is configured to guide the second panel to move by the roller.

[0032] Additional aspects and advantages of the embodiments of the present disclosure will be provided at least in part in the following description, or will become apparent in part from the following description, or can be learned from the practice of the embodiments of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0033] These and other aspects and advantages of embodiments of the present disclosure will become apparent and more readily appreciated from the following descriptions made with reference to the accompanying drawings.

[0034] FIG. 1 is a schematic structural view of a range hood according to an embodiment of the present disclosure.

[0035] FIG. 2 is a schematic exploded view of a range hood according to an embodiment of the present disclosure.

[0036] FIG. 3 is a schematic exploded view of a flow guide plate assembly according to an embodiment of the present disclosure.

[0037] FIG. 4 is a schematic structural view of a mounting portion according to an embodiment of the present disclosure.

[0038] FIG. 5 is a schematic structural view of a movement mechanism according to an embodiment of the present disclosure.

[0039] FIG. 6 is a schematic structural view of a slide rail according to an embodiment of the present disclosure.

[0040] FIG. 7 is a schematic cross-sectional view of a slide rail according to an embodiment of the present disclosure.

[0041] FIG. 8 is a schematic view of air flow of a range hood according to an embodiment of the present disclosure.

[0042] FIG. 9 is another schematic view of air flow of a range hood according to an embodiment of the present disclosure.

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DETAILED DESCRIPTION OF THE EMBODIMENTS

[0043] Embodiments of the present disclosure are described in detail below, examples of which are illustrated in the accompanying drawings, where the same or similar reference numerals throughout represent the same or similar elements or elements with the same or similar functions. The embodiments described below with reference to the drawings are
10 exemplary and are only used to explain the present disclosure and cannot be understood as limiting the present disclosure.

[0044] In the description of the present disclosure, it is to be understood that, terms such as “center”, “longitudinal”, “lateral”, “length”, “width”, “thickness”, “over”, “below”, “front”, “back”, “left”, “right”, “vertical”, “horizontal”, “top”, “bottom”, “in”, “out”, “clockwise”,
15 “anti-clockwise” refer to the directions and location relations which are the directions and location relations shown in the drawings, and for describing the present disclosure and for describing in simple, and which are not intended to indicate or imply that the device or the elements are disposed to locate at the specific directions or are structured and performed in the specific directions, which could not to be understood to the limitation of the present disclosure.
20 In the description of the present disclosure, “plurality of” means two or more than two, unless specified otherwise.

[0045] In the present disclosure, unless specified or limited otherwise, terms “mounted,” “connected,” and “coupled” are understood broadly, such as fixed, detachable mountings, connections and couplings or integrated, and can be mechanical or electrical mountings,
25 connections and couplings, and also can be direct and via media indirect mountings, connections, and couplings, and further may be inner mountings, connections and couplings of two components or interaction relations between two components. For those skilled in the art, the specific meaning of the above-mentioned terms in the embodiments of the present

disclosure can be understood according to specific circumstances.

[0046] In the description of the present disclosure, unless specified or limited otherwise, a first characteristic is “on” or “under” a second characteristic refers to the first characteristic and the second characteristic may be direct or via another characteristic indirect mountings, connections, and couplings. And, the first characteristic is “on”, “above”, “over” the second characteristic may refer to the first characteristic is right over the second characteristic or is diagonal above the second characteristic, or just refer to the horizontal height of the first characteristic is higher than the horizontal height of the second characteristic. The first characteristic is “below” or “under” the second characteristic may refer to the first characteristic is right over the second characteristic or is diagonal under the second characteristic, or just refer to the horizontal height of the first characteristic is lower than the horizontal height of the second characteristic.

[0047] Many different embodiments or examples according to the present disclosure are used to realize different structures of the present disclosure. To simplify the present disclosure, components and settings in specific examples are described herein. Of course, they are merely exemplary and are not intended to limit the present disclosure. Moreover, the present disclosure may repeat reference numbers and/or reference letters in different examples. Such repetition is for purposes of simplicity and clarity and is in itself indicative of a relationship among the various embodiments and/or settings discussed. In addition, the present disclosure provides examples of various specific processes and materials, but those skilled in the art may recognize application of other processes and/or use of other materials.

[0048] Reference is made to FIGS. 1 to 9, in which FIG. 1 is a schematic structural view of a range hood 100 according to an embodiment of the present disclosure;

[0049] FIG. 2 is a schematic exploded view of a range hood 100 according to an embodiment of the present disclosure; FIG. 3 is a schematic exploded view of a flow guide plate assembly 18 according to an embodiment of the present disclosure; FIG. 4 is a schematic structural view of a mounting portion according to an embodiment of the present disclosure; FIG. 5 is a schematic structural view of a movement mechanism 32 according to an embodiment of the present disclosure; FIG. 6 is a schematic structural view of a slide rail 42 according to an embodiment of the present disclosure; FIG. 7 is a schematic cross-sectional view of a slide rail

42 according to an embodiment of the present disclosure; FIG. 8 is a schematic view of air flow of a range hood 100 according to an embodiment of the present disclosure; and FIG. 9 is another schematic view of air flow of a range hood 100 according to an embodiment of the present disclosure.

5 **[0050]** In embodiments of a first aspect of the present disclosure, a range hood 100 according to an embodiment of the present disclosure includes a chamber assembly 10 and a flow guide plate assembly 18. The chamber assembly 10 has an accommodation chamber 12 and a mounting opening 14. The accommodation chamber 12 may be understood as an internal chamber of the chamber assembly 10. The mounting opening 14 may be an opening of a
10 rectangular shape at the chamber assembly 10. A fan system 16 is mounted in the accommodation chamber 12. The fan system 16 can suck airflow outside the range hood 100 into the chamber assembly 10.

[0051] The flow guide plate assembly 18 is mounted at the mounting opening 14. The flow guide plate assembly 18 includes a mounting portion 20, a flow guide panel 22 movably
15 connected to the mounting portion 20, a first oil screen 24 fixed to the mounting portion 20, and a second oil screen 26 disposed on the flow guide panel 22. The flow guide panel 22 is switchable between the first position and the second position. When the flow guide panel 22 is located at the first position, as illustrated in FIGS. 1 and 8, the first oil screen 24 and the second
20 oil screen 26 are overlapped with each other. When the flow guide panel 22 is located at the second position, as illustrated in FIGS. 2 and 9, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap.

[0052] In the range hood 100 described above, when the flow guide panel 22 is located at the first position, the first oil screen 24 and the second oil screen 26 are overlapped with each other, and an overlapping between the first oil screen 24 and the second oil screen 26 defines a
25 single oil fume suction inlet. When the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap, and two oil fume suction inlets are defined, including a first oil fume suction inlet defined by the first oil screen 24 and a second oil fume suction inlet defined by the second oil screen 26. Thus, the range hood 100 is switchable between the single oil fume suction inlet arrangement
30 and the dual oil fume suction inlet arrangement to meet requirements for sucking oil fume and

to ensure oil fume suction effects under different scene requirements.

[0053] In an exemplary embodiment of the present disclosure, referring to FIGS. 1 and 2, the chamber assembly 10 may specifically have a structure including two different parts. One part of the structure may have a shape of a triangular prism, and a side surface of the triangular prism has a mounting opening 14. An interior of the triangular prism is hollow and serves as a part of the accommodation chamber 12. The other part of the structure may have a shape of a quadrangular prism with a hollow interior and serves as a part of the accommodation chamber 12 configured for mounting of the fan system 16. The quadrangular prism is disposed above the triangular prism and in communication with the hollow interior of the triangular prism. In an operating state, airflow flows to the fan system 16 through meshes of the first oil screen 24 and meshes of the second oil screen 26. In this way, the effect of the range hood 100 on the oil fume suction can be improved with a reduction in escape of the oil fume. It can be understood that in other embodiments, the chamber assembly 10 is not limited to the structure described above, but may also be of other structures, which are not specifically limited herein.

[0054] The flow guide plate assembly 18 is mounted at the mounting opening 14, the flow guide panel 22 may be movably connected to the mounting portion 20, and the first oil screen 24 is fixed to the mounting portion 20. The flow guide panel 22 is switchable between the first position and the second position. When the flow guide panel 22 is located at the first position, the first oil screen 24 and the second oil screen 26 are overlapped from each other. Therefore, an overlapping between the first oil screen 24 and the second oil screen 26 may define an oil fume suction inlet in a flow direction of the airflow. When the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap. Therefore, the first oil screen 24 and the second oil screen 26 may define two oil fume suction inlets, respectively. Thus, the range hood 100 is switchable between the single oil fume suction inlet arrangement and a dual oil fume suction inlet arrangement to meet the requirements for sucking the oil fume, to improve a negative pressure distribution, and to enhance the oil fume suction effect. In this way, the oil fume suction effects under different scene requirements can be ensured.

[0055] In an embodiment illustrated in the drawings, the first oil screen 24 has an area larger than an area of the second oil screen 26, and the flow guide panel 22 is closer to an outer side

of the range hood 100 than the first oil screen 24. When the flow guide panel 22 is located at the first position, the second oil screen 26 covers a part of the first oil screen 24, and the flow guide panel 22 blocks the other parts of the first oil screen 24. From an appearance, basically only the second oil screen 26 is seen. It can be understood that in other embodiments, the first oil screen 24 may be closer to the outer side of the range hood 100 than the flow guide panel 22, which is not specifically limited herein.

[0056] In the process that the flow guide panel 22 is switchable between the first position and the second position, the first oil screen 24 does not move, and the flow guide panel 22 drives the second oil screen 26 to be offset without overlap from or overlapped with the first oil screen 24. It can be understood that a plurality of first positions may be provided, and in the flow direction of the airflow, when the first oil screen 24 and the second oil screen 26 are overlapped with each other, corresponding positions of the flow guide panel 22 may be the first position. A plurality of second positions may be provided, that is, in the direction of airflow, when the first oil screen 24 and the second oil screen 26 are offset from each other without overlap, corresponding positions of the flow guide panel 22 may be the second position.

[0057] In an embodiment illustrated in FIG. 1, the first oil screen 24 has an area larger than an area of the second oil screen 26. When the flow guide panel 22 is located at the first position, an overlapping between the first oil screen 24 and the second oil screen 26 is the second oil screen 26, forming a single oil screen. In this way, a use scenario of a user's low air volume requirement can be met, or air inside a kitchen can be purified through this screen, serving as an air steward.

[0058] When the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap to define two oil fume suction inlets, that is, when a large air volume or a high-height pot is required, the second oil screen 26 may be moved up and flapped outward. A part of the oil fume that has not risen and diffused is quickly sucked away by the lower first oil screen 24, and remaining rising and diffused oil fume is sucked away by the second oil screen 26 flapped outwards, and the oil fume suction effect can be greatly improved through the dual suction.

[0059] In some embodiments, the flow guide panel 22 includes a first panel 28 and a second panel 30. The first panel 28 is rotatably connected to the second panel 30. The second oil screen

26 is disposed on the second panel 30. When the flow guide panel 22 is located at the first position, the first panel 28 is parallel to the second panel 30. When the flow guide panel 22 is located at the second position, the first panel 28 is inclined relative to the second panel 30. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0060] In an exemplary embodiment of the present disclosure, referring to FIGS. 1 and 2, when the flow guide panel 22 is located at the first position, the first panel 28 is parallel to the second panel 30. The first panel 28 and the second panel 30 may be connected along a same plane, and adjacent sides of the first panel 28 and the second panel 30 are basically sealingly connected to each other, and an outer side of the flow guide panel 22, that is, the first panel 28 and the second panel 30, may be sealingly connected to the mounting portion 20. The second oil screen 26 is disposed on the second panel 30, and the second panel 30 is closer to the first oil screen 24 than the first panel 28. In some embodiments, when the flow guide panel 22 is located at the first position, the second panel 30 faces the first oil screen 24. When the flow guide panel 22 is located at the second position, the first panel 28 is inclined relative to the second panel 30, and the first panel 28 and the second panel 30 are inclined relative to the mounting portion 20 and both are inclined away from the accommodation chamber 12 to form an angle with an opening facing towards the accommodation chamber 12. This angle is not a zero angle or a 180° angle. It may be a right angle, an obtuse angle, or other angles, which are not limited herein. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0061] In some embodiments, when the flow guide panel 22 is located at the second position, the second oil screen 26 is located obliquely above the first oil screen 24. In this way, on the one hand, the first oil screen 24 and the second panel 30 may form an oil fume collection portion to facilitate oil fume collection. On the other hand, the second oil screen 26 is located obliquely above the first oil screen 24 to facilitate collection of cooking oil fume gathered by

the second panel 30.

[0062] In an exemplary embodiment of the present disclosure, referring to FIGS. 2 and 9, when the flow guide panel 22 is located at the second position, the second oil screen 26 is located obliquely above the first oil screen 24, and an angle α between the second panel 30 and a horizontal plane may fall within a range of $0^\circ < \alpha < 12^\circ$. In this way, on the one hand, the first oil screen 24 and the second panel 30 may form an oil fume collection portion to facilitate oil fume collection. On the other hand, the second oil screen 26 is located obliquely above the first oil screen 24, and the cooking oil fume gathered on the second panel 30 flows to a bottom end along the second panel 30 to easily collect the cooking oil fume gathered by the second panel 30. In some embodiments, an oil storage box 48 may be provided below the mounting portion 20 close to the first oil screen 24 for storing the cooking oil fume.

[0063] In some embodiments, the flow guide panel 22 includes a first panel 28 and a second panel 30 that are rotatably connected to each other. The second oil screen 26 is disposed on the second panel 30. The flow guide plate assembly 18 further includes a movement mechanism 32. The movement mechanism 32 is connected to at least one of the first panel 28 and the second panel 30 and configured to drive the first panel 28 and/or the second panel 30 to move to enable the flow guide panel 22 to switch between the first position and the second position. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0064] In an exemplary embodiment of the present disclosure, referring to FIG. 3, the movement mechanism 32 may be mounted above the mounting portion 20 close to a side of the accommodation chamber 12 and connected to the first panel 28. In other embodiments, the kinematic mechanism 32 may be connected to the second panel 30, or connected to the first panel 28 and the second panel 30. The movement mechanism 32 is connected to at least one of the first panel 28 and the second panel 30 and is configured to drive the first panel 28 and/or the second panel 30 to move to switch the flow guide panel 22 between the first position and the second position. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the

negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0065] In some embodiments, the movement mechanism 32 includes a motor 34 and a linkage assembly 36. The motor 34 is connected to the first panel 28 through the linkage assembly 36. The motor 34 is configured to drive the linkage assembly 36 to move, enabling the linkage assembly 36 to drive the first panel 28 and the second panel 30 to flap upwards and outwards. In this way, the stability of the movement of the flow guide panel 22 can be ensured with the motor 34 driving the flow guide panel 22 to move through the linkage assembly 36. In addition, it is also convenient for the diversion panel 22 to switch between the first position and the second position. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0066] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the linkage assembly 36 may include a first linkage group 361 and a second linkage group 362, and each linkage group may include a first bar 363 and a second bar 362 hinged to each other. The first bar 363 of the first linkage group 361 is connected to the motor 34, and the first bar 363 of the second linkage group 361 is rotatably connected to a fixing plate 54. The fixing plate 54 is fixed to the mounting portion 20. The second bar 364 of the first linkage group 361 and the second bar 364 of the second linkage group 362 are rotatably connected to the first panel 28. The first bar 363 of the first linkage group 361 is rotatably connected to a middle part of the second bar 364 of the second linkage group 362. An end of the first bar 363 of the first linkage group 361 is fixedly connected to an output shaft of the motor 34. In this way, the motor 34 can drive the first bar 363 to rotate to enable the linkage assembly 36 to drive the first panel 28 to flap upwards and outwards. Since the first panel 28 is rotatably connected to the second panel 30, the second panel 30 can be driven to flap upwards and outwards while the first panel 28 is flapped upwards and outwards. As such, the flow guide panel 22 can switch between the first position and the second position through the movement of the first panel 28 and the second panel 30. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative

pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0067] In other embodiments, the movement mechanism 32 may be connected to the second panel 30, that is, the linkage assembly 36 is connected to the second panel 30. In an exemplary embodiment of the present disclosure, the second bar 364 of the linkage assembly 36 is connected to the second panel 30. In this way, the motor 34 can drive the first bar 363 and the second bar 364 to rotate to enable the linkage assembly 36 to drive the second panel 30 to flap upwards and outwards. Since the first panel 28 is rotatably connected to the second panel 30, the first panel 28 is driven to flap upwards and outwards while the second panel 30 is flapped upwards and outwards. In addition, the movement mechanism 32 may also be connected to the first panel 28 and the second panel 30, that is, the linkage assembly 36 is connected to the first panel 28 and the second panel 30 simultaneously. In an exemplary embodiment of the present disclosure, the second bar 364 of the linkage assembly 36 is connected to the first panel 28 and the second panel 30. As such, the motor 34 can drive the first bar 363 and the second bar 364 to rotate to enable the linkage assembly 36 to drive the first panel 28 and the second panel 30 to flap upwards and outwards.

[0068] In certain embodiments, the linkage assembly 36 includes a multi-linkage assembly 36. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect.

[0069] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the multi-linkage assembly 36 herein may be a six-bar linkage assembly 36. In other embodiments, the multi-linkage assembly 36 may also be other multi-linkage assemblies 36, and details thereof in this embodiment do not limit the present disclosure.

[0070] The six-bar linkage assembly 36 may include a first linkage group 361 and a second linkage group 362. Each linkage group may include a first bar 363 and a second bar 364 that have ends hinged to each other. The first bar 363 of the first linkage group 361 is connected to the motor 34, and the first bar 363 of the second linkage group 361 is rotatably connected to a fixing plate 54. The fixing plate 54 is fixed to the mounting portion 20. The second bar 364 of the first linkage group 361 and the second bar 364 of the second linkage group 362 are rotatably

connected to the first panel 28. The first bar 363 of the first linkage group 361 is rotatably connected to a middle part of the second bar 364 of the second linkage group 362. In this way, transmission is facilitated and stability of the multi-linkage assembly 36 can also be enhanced.

[0071] An end of the first rod 363 of the first linkage group 361 is fixedly connected to an output shaft of the motor 34. During the switching process between the single oil fume suction inlet and the double oil fume suction inlet, the motor 34 drives the first bar 363 of the first linkage group 361 to rotate to drive the second bar 364. Since the first bar 363 of the first linkage group 361 is rotatably connected to a middle part of the second bar 364 of the second linkage group 362, a rotational force of the second bar 364 can be transmitted to the first panel 28 to realize the switching between single oil fume suction inlet and the dual oil fume suction inlet.

[0072] In some other embodiments, the linkage assembly may also include linkage assemblies of other structures, and is not limited to the six-bar linkage assembly.

[0073] In some embodiments, the movement mechanism 32 includes a synchronizer 40 and two linkage assemblies 36. The synchronizer 40 is connected to the two linkage assemblies 36. The motor 34 is configured to drive one of the two linkage assemblies 36 to move, to enable the synchronizer 40 to drive the other one of the two linkage assemblies 36 to move. In this way, the two linkage assemblies 36 can rotate synchronously.

[0074] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the synchronizer 40 may be a long circular rod, and the two linkage assemblies 36 are located at a left side and a right side of the first panel 28, respectively. The first linkage group 361 and the second linkage group 362 are arranged at two ends of the synchronizer 40, respectively. The movement mechanism 32 may also include two fixing plates 54. Each of the two fixing plate 54 is disposed at outer side of the linkage assembly 36 relative to the synchronizer 40 and is rotatably connected to the synchronizer 40. The first bars 363 of the two second linkage groups 362 are fixedly connected to the two ends of the synchronizer 40, respectively. The motor 34 is mounted at an outer side of one of the two fixing plates 54. The output end of the motor 34 is connected to the first bar 363 of the first linkage group 361 and configured to drive the first linkage group 361 to rotate to drive the linkage assembly 36 at the side of the first panel 28 to move. Since the synchronizer 40 is fixedly connected to the first bar 363 of the second linkage group 362, the synchronizer 40 can transmit motion to enable the linkage assembly 36 at an

opposite side of the movement mechanism 32 to rotate. The motor 34 drives the linkage assembly 36 to move and the synchronizer 40 transmits the motion to enable the linkage assembly 36 to directly drive the first panel 28 to flap upwards and outwards, and therefore, the linkage assemblies 36 located at the tow sides of the first panel 28 move synchronously. On the one hand, the two linkage assemblies 36 are arranged at the two sides of the first panel 28 respectively to ensure stability of the position switching of the flow guide panel 22. On the other hand, the synchronizer 40 is connected to the two linkage assemblies 36 to ensure the synchronicity of the movement of the two linkage assemblies 36. In an embodiment, a side of the second bar 364 is rotatably connected to a connection plate 52, and the connection plate 52 is fixed on the first panel 28.

[0075] In some embodiments, the mounting portion 20 has a slide rail 42; and

[0076] the second panel 30 is provided with a roller 44. The roller 44 is connected to the slide rail 42. The slide rail 42 is configured to guide the second panel 30 to move by the roller 44. In this way, guidance may be performed during the movement of the second panel 30, ensuring the stability of the movement of the second panel 30.

[0077] In an exemplary embodiment of the present disclosure, referring to FIGS. 3, 6, and 7, the mounting portion 20 has a slide rail 42 at a left side and a right side of the mounting portion 20, respectively. A roller 44 is provided at each of the left side and the right side of the second panel 30. The roller 44 may be mounted on the second panel 30 by a support 45. The roller 44 may be accommodated in the slide rail 42 and is connected to an inner wall of the slide rail 42 in a rolling manner. The slide rail 42 is configured to guide the movement of the second panel 30 by the roller 44. A bottom of the slide rail 42 has a through hole of an elongated shape through which the slide rail 42 passes. The support 45 may extend into the slide rail through the through hole and is connected to the roller 44. The slide rail 42 has a rear opening. A slide rail cover 56 may be provided to cover the rear opening of the slide rail 42 to prevent the oil fume from flowing into the slide rail 42, and thus to ensure smooth rolling of the roller 44.

[0078] In some embodiments, the flow guide plate assembly 18 further includes a baffle 46. When the flow guide panel 22 is located at the first position, the first panel 28 and the second panel 30 are connected to form a flat plate, and the baffle 46 is accommodated in the accommodation chamber 12. When the flow guide panel 22 is located at the second position,

the first panel 28 and the second panel 30 are connected to form a V shape, and the baffle 46 is located in space between the first panel 28 and the second panel 30. In this way, when the flow guide panel 22 is located at the second position, the baffle 46 is located in the gap between the first panel 28 and the second panel 30. Therefore, a space area between the first panel 28 and the second panel 30 can be reduced. Thus, a negative impact that this space has on the oil fume suction effect can be reduced to ensure the oil fume suction effect.

[0079] In an exemplary embodiment of the present disclosure, referring to FIG. 3, the flow guide plate assembly 18 includes two baffles 46. The two baffles 46 are arranged on a surface of the first panel 28 close to the accommodation chamber 12 and located at a left side and a right side of the surface of the flow guide panel 28. Since the baffles 46 is fixedly connected to the first panel 28, the baffle 46 moves along with the first panel 28 when the flow guide panel 22 is switched from the first position to the second position.

[0080] When the flow guide panel 22 is located at the first position, the first panel 28 and the second panel 30 are connected to form a flat plate. The flow guide panel 22 of the flat plate shape may be attached to an edge of the mounting portion 20. A spacing between the flow guide panel 22 and the edge of the portion 20 is small, which has basically no impact on the oil fume suction effect. The baffle 46 is accommodated in the accommodation chamber 12 to prevent the baffle 46 from being visible to the user on an exterior.

[0081] When the flow guide panel 22 is located at the second position, the first panel 28 and the second panel 30 are connected to form a V shape, and a gap with a triangular-shaped region is formed between the first panel 28 and the second panel 30. The gap with the triangular-shaped region is in communication with the interior and the exterior of the range hood 100, and the oil fume is likely to flow out from the gap with the triangular-shaped region, which affects the oil fume suction effect. By disposing the baffle 46 in the gap, on the one hand, negative pressure at an inner oil screen 50 inside the second oil screen 26 can be prevented from spreading through two sides of the second oil screen 26, preventing the negative pressure at the second oil screen 26 and thus the oil fume suction effect from being weakened. On the one hand, it can provide an aesthetic effect by shielding the internal mechanisms.

[0082] In some embodiments, the baffle 46 is connected to the first panel 28 and movable along with the first panel 28. In this way, there is no need to add an additional mechanism for

driving the baffle 46, which can reduce cost and simplify the structure.

[0083] In an exemplary embodiment of the present disclosure, the movement mechanism 32 is configured to drive the first panel 28 to move. The baffle 46 can be driven to move while the first panel 28 moves. As a result, when the flow guide panel 22 switches its position, the baffle 46 also moves synchronously along with the flow guide panel 22. Therefore, there is no need to add the additional mechanism for driving the baffle 46, which can reduce the cost and simplify the structure.

[0084] The range hood 100 mainly includes the following components of a chamber assembly 10, a fan system 16, a flow guide plate assembly 18, a first oil screen 24, and a second oil screen 26. The chamber assembly 10 mainly provides support and fixing on the fan system 16 and provides power. The fan system 16 is a power part of the entire range hood 100.

[0085] In order to improve a problem that a fixed oil fume suction inlet of a range hood cannot be adapted to more oil fume suction scenarios, a range hood in embodiments of a second aspect of the present disclosure has a movable flow guide panel, and an oil fume suction inlet distribution is changed by a movement of the flow guide panel to meet corresponding usage scenarios. Therefore, a movement mechanism is required for the range hood to drive the movement of the flow guide panel to ensure the stability of the movement of the flow guide panel.

[0086] A range hood 100 according to an embodiment of the present disclosure includes a chamber assembly 10 and a flow guide plate assembly 18. The chamber assembly 10 has an accommodation chamber 12 and a mounting opening 14. A fan system 16 is mounted in the accommodation chamber 12. The flow guide plate assembly 18 is mounted in the mounting opening 14. The flow guide plate assembly 18 includes a flow guide panel 22 and a movement mechanism 32. The movement mechanism 32 is connected to the flow guide panel 22. The movement mechanism 32 includes a motor 34 and a linkage assembly 36. The motor 34 is connected to the flow guide panel 22 through the linkage assembly 36. The motor 34 is configured to drive the linkage assembly 36 to move to enable the linkage assembly 36 to drive the flow guide panel 22 to move.

[0087] In the range hood described above, the stability of the movement of the flow guide panel 22 can be ensured with the motor 34 driving the flow guide panel 22 to move through the

linkage assembly 36.

[0088] In an exemplary embodiment of the present disclosure, referring to FIGS. 1 and 2, the chamber assembly 10 may specifically have a structure including two different parts. One part of the structure may have a shape of a triangular prism, and a side surface of the triangular prism has a mounting opening 14. An interior of the triangular prism is hollow and serves as a part of the accommodation chamber 12. The other part of the structure may have a shape of a quadrangular prism with a hollow interior and serves as a part of the accommodation chamber 12 configured for mounting of the fan system 16. The quadrangular prism is disposed above the triangular prism and in communication with the hollow interior of the triangular prism. It can be understood that in other embodiments, the chamber assembly 10 is not limited to the structure described above, but may also be of other structures, which are not specifically limited herein.

[0089] Referring to FIGS. 2 and 3, the flow guide plate assembly 18 is mounted at the mounting opening 14. The flow guide plate assembly 18 includes a flow guide panel 22 and a movement mechanism 32. The movement mechanism 32 includes a motor 34 and a linkage assembly 36. The motor 34 is connected to the flow guide panel 22 through the linkage assembly 36. The motor 34 is configured to drive the linkage assembly 36 to move, to enable the linkage assembly 36 to drive the flow guide panel 22 to move. In this way, the stability of the movement of the flow guide panel 22 can be ensured. The flow guide plate assembly 18 may further include a mounting portion 20, and the movement mechanism 32 may be mounted above the mounting portion 20 close to a side of the accommodation chamber 12 and connected to the flow guide panel 22. The movement mechanism 32 is connected to the flow guide panel 22 and is configured to drive the flow guide panel 22 to move.

[0090] In some embodiments, the linkage assembly 36 includes a first linkage group 361 and a second linkage group 362. The movement mechanism 32 also includes a fixing plate 54. The first linkage group 361 is rotatably connected to the flow guide panel 22 and the fixing plate 54. The second linkage group 362 is rotatably connected to the flow guide panel 22 and the fixing plate 54. The first linkage group 361 is rotatably connected to the second linkage group 362. The motor 34 is configured to drive the first linkage group 361 to rotate to drive the second linkage group 362 and the flow guide panel 22 to move. In this way, the movement of

the flow guide panel 22 is facilitated.

[0091] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the linkage assembly 36 may include a first linkage group 361 and a second linkage group 362. The movement mechanism 32 further includes a fixing plate 54. The first linkage group 361 is rotatably connected to the flow guide panel 22 and the fixing plate 54. The second linkage group 362 is rotatably connected to the flow guide panel 22 and the fixing plate 54. The first linkage group 361 is rotatably connected to the second linkage group 362. The motor 34 is configured to drive the first linkage group 361 to rotate to drive the second linkage group 362 and the flow guide panel 22 to move. Each linkage group may include a first bar 363 and a second bar 364 hinged to each other. The first bar 363 of the first linkage group 361 is connected to the motor 34, and the first bar 363 of the second linkage group 362 is rotatably connected to the fixing plate 54. The fixing plate 54 is fixed to the mounting portion 20. The second bar 364 of the first linkage group 361 and the second bar 364 of the second linkage group 362 are rotatably connected to a side of the flow guide panel 22. The first bar 363 of the first linkage group 361 is rotatably connected to a middle part of the second bar 364 of the second linkage group 362. An end of the first bar 363 of the first linkage group 361 is fixedly connected to an output shaft of the motor 34. In this way, the motor 34 can drive the first bar 363 to rotate, to enable the linkage assembly 36 to drive a side of the flow guide panel 22 to flap upwards and outwards, and another side of the flow guide panel 22 can be driven to move upwards and outwards while the side of the flow guide panel 22 is flapped upwards and outwards.

[0092] In some embodiments, the movement mechanism 32 includes a synchronizer 40 and two linkage assemblies 36. The synchronizer 40 is connected to the two linkage assemblies 36. The two linkage assemblies 36 are connected to the two sides of the flow guide panel 22, respectively. The motor 34 is configured to drive one of the two linkage assemblies 36 to move, to enable the synchronizer 40 to drive the other one of the two linkage assemblies 36 to move. In this way, the two linkage assemblies 36 can rotate synchronously.

[0093] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the synchronizer 40 may be a long circular bar, and the two linkage assemblies 36 are located on a left side and a right side above the flow guide panel 22, respectively. The first linkage group 361 and the second linkage group 362 are arranged at two ends of the synchronizer 40,

respectively. The movement mechanism 32 may further include two fixing plates 54. Each of the two fixing plates 54 is disposed at an outer side of the linkage assembly 36 relative to the synchronizer 40 and rotatably connected to the synchronizer 40.

[0094] The first bars 363 of the two second linkage groups 362 are fixedly connected to the two ends of the synchronizer 40, respectively. The motor 34 is mounted at an outer side of one of the two fixing plates 54. The output end of the motor 34 is connected to the first bar 363 of the first linkage group 361 and configured to drive the first linkage group 361 to rotate to drive the linkage assembly 36 at the side of the first panel 28 to move. Since the synchronizer 40 is fixedly connected to the first bar 363 of the second linkage group 362, the synchronizer 40 can transmit motion to enable the linkage assembly 36 at an opposite side of the movement mechanism 32 to rotate. The motor 34 drives the linkage assembly 36 to move and the synchronizer 40 transmits the motion to enable the linkage assembly 36 to directly drive the flow guide panel 22 to flap upwards and outwards, and therefore, the linkage assemblies 36 located at the two sides above the flow guide panel 22 move synchronously. On the one hand, the two linkage assemblies 36 are arranged the two sides above the flow guide panel 22 respectively to ensure the stability of the position switching of the flow guide panel 22. On the other hand, the synchronizer 40 is connected to the two linkage assemblies 36 to ensure the synchronicity of the movement of the two linkage assemblies 36. In an embodiment, a side of the second bar 364 is rotatably connected to a connection plate 52, and the connection plate 52 is fixed to the flow guide panel 22.

[0095] In some embodiments, the linkage assembly 36 is connected to an end of the flow guide panel 22. The movement mechanism 32 further includes a roller 44. The roller 44 is disposed at another end of the flow guide panel 22. The mounting portion 20 has a slide rail 42. The roller 44 is connected to the slide rail 42. In this way, the stability of the movement of the flow guide panel 22 can be ensured.

[0096] In an exemplary embodiment of the present disclosure, referring to FIGS. 3, 6, and 7, the mounting portion 20 has the slide rail 42 on a left side and a right side of the mounting portion 20, respectively. The roller 44 is disposed at a left side and a right side below the flow guide panel 22. The roller 44 may be mounted on the flow guide panel 22 by the support 45. The roller 44 may be accommodated in the slide rail 42 and is connected to an inner wall of the

slide rail 42 in a rolling manner. The slide rail 42 is configured to guide the movement of the flow guide panel 22 by the roller 44. A bottom of the slide rail 42 has a through hole of an elongated shape through which the slide rail 42 passes. The support 45 may extend into the slide rail 42 through the through hole and is connected to the roller 44. The slide rail 42 has a rear opening. A slide rail cover 56 may be provided to cover the rear opening of the slide rail 42 to prevent the oil fume from flowing into the slide rail 42, and thus to ensure smooth rolling of the roller 44.

[0097] In some embodiments, the flow guide panel 22 includes a first panel 28 and a second panel 30 that are rotatably connected to each other. The linkage assembly 36 is connected to an end of the first panel 28. The other end of the first panel 28 is rotatably connected to the second panel 28. The roller 44 is disposed at the other end of the second panel 30. In this way, the movement of the flow guide panel 22 can be achieved through the rotational connection of the two panels. Moreover, the stability of the movement of the second panel 30 can also be ensured during the movement.

[0098] In an exemplary embodiment of the present disclosure, referring to FIG. 3, the movement mechanism 32 may be mounted above the mounting portion 20 close to a side of the accommodation chamber 12 and connected to the first panel 28. The movement mechanism 32 is connected to the first panel 28 and is configured to drive the first panel 28 to move to enable the flow guide panel 22 to move. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[0099] The linkage assembly 36 is connected to an upper end of the first panel 28. A lower end of the first panel 28 is rotatably connected to the upper end of the second panel 30. The roller 44 is disposed at a lower end of the second panel 30. By disposing the roller 44 at the lower end of the second panel 30, the lower end of the second panel 30 away from the movement mechanism 32 can also move relatively stably when the movement mechanism 32 drives the first panel 28 to move.

[00100] In other embodiments, the movement mechanism 32 may be connected to the second panel 30 to drive the second panel 30 to move, or connected to the first panel 28 and the second

panel 30 to drive the first panel 28 and the second panel 30.

[00101] In some embodiments, the first oil screen 24 is fixed to the mounting portion 20, and the second oil screen 26 is disposed on the second panel 30; when the flow guide panel 22 is located at the first position, the first oil screen 24 and the second oil screen 26 are overlapped with each other; and when the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap. In this way, the range hood 100 can define the two oil fume suction inlets, including the first oil fume suction inlet defined by the first oil screen 24 and the second oil fume suction inlet defined by the second oil screen 26. Thus, the range hood 100 is switchable between the single oil fume suction inlet arrangement and the dual oil fume suction inlet arrangement to meet the oil fume suction requirements and to ensure the oil fume suction effects under different scene requirements.

[00102] In an exemplary embodiment of the present disclosure, referring to FIGS. 2 and 3, the first oil screen 24 is fixed to the mounting portion 20, and the second oil screen 26 is disposed on the second panel 30. The flow guide panel 22 is switchable between the first position and the second position. When the flow guide panel 22 is located at the first position, the first oil screen 24 and the second oil screen 26 are overlapped from each other. Therefore, the overlapping between the first oil screen 24 and the second oil screen 26 may define an oil fume suction inlet in a flow direction of the airflow. When the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap. Therefore, the first oil screen 24 and the second oil screen 26 may define two oil fume suction inlets, including a first oil fume suction inlet defined by the first oil screen 24 and a second oil fume suction inlet defined by the second oil screen 26, respectively. Thus, the range hood 100 is switchable between the single oil fume suction inlet arrangement and a dual oil fume suction inlet arrangement to meet the requirements for sucking the oil fume, to improve a negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scenes requirements can be ensured. In an operating state, airflow flows to the fan system 16 through meshes of the first oil screen 24 and meshes of the second oil screen 26. In this way, the effect of the range hood 100 on the oil fume suction can be improved with a reduction in escape of the oil fume. It can be understood that in other embodiments, the chamber assembly 10 is not limited to the structure described above,

but may also be of other structures, which are not specifically limited herein.

[00103] In an embodiment illustrated in the figures, the first oil screen 24 has an area larger than an area of the second oil screen 26, and the flow guide panel 22 is closer to an outer side of the range hood 100 than the first oil screen 24. When the flow guide panel 22 is located at the first position, the second oil screen 26 covers a part of the first oil screen 24, and the flow guide panel 22 blocks the other parts of the first oil screen 24. From an appearance, basically only the second oil screen 26 is seen. It can be understood that in other embodiments, the first oil screen 24 may be closer to the outer side of the range hood 100 than the flow guide panel 22, which is not specifically limited herein.

[00104] In the process that the flow guide panel 22 is switchable between the first position and the second position, the first oil screen 24 does not move, and the flow guide panel 22 drives the second oil screen 26 to be offset without overlap from or overlapped with the first oil screen 24. It can be understood that a plurality of first positions may be provided, and in the flow direction of the airflow, when the first oil screen 24 and the second oil screen 26 are overlapped with each other, corresponding positions of the flow guide panel 22 may be the first position. A plurality of second positions may be provided, that is, in the direction of airflow, when the first oil screen 24 and the second oil screen 26 are offset from each other without overlap, corresponding positions of the flow guide panel 22 may be the second position.

[00105] In an embodiment illustrated in FIG. 1, the first oil screen 24 has an area larger than an area of the second oil screen 26. When the flow guide panel 22 is located at the first position, an overlapping between the first oil screen 24 and the second oil screen 26 is the second oil screen 26, forming a single oil screen. In this way, a use scenario of a user's low air volume requirement can be met, or air inside a kitchen can be purified through this screen, serving as an air steward.

[00106] When the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap to define two oil fume suction inlets, that is, when a large air volume or a high-height pot is required, the second oil screen 26 may be moved up and flapped outward. A part of the oil fume that has not risen and diffused is quickly sucked away by the lower first oil screen 24, and remaining rising and diffused oil fume is sucked away by the second oil screen 26 flapped outwards, and the oil fume

suction effect can be greatly improved through the dual suction.

[00107] In some embodiments, when the flow guide panel 22 is located at the first position, the first panel 28 is parallel to the second panel 30; and when the flow guide panel 22 is located at the second position, the first panel 28 is inclined relative to the second panel 30. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[00108] In an exemplary embodiment of the present disclosure, referring to FIGS. 1 and 2, when the flow guide panel 22 is located at the first position, the first panel 28 is parallel to the second panel 30. The first panel 28 and the second panel 30 may be connected along a same plane, and adjacent sides of the first panel 28 and the second panel 30 are basically sealingly connected to each other, and an outer side of the flow guide panel 22, that is, the first panel 28 and the second panel 30, may be sealingly connected to the mounting portion 20. The second oil screen 26 is disposed on the second panel 30, and the second panel 30 is closer to the first oil screen 24 than the first panel 28. In some embodiments, when the flow guide panel 22 is located at the first position, the second panel 30 faces the first oil screen 24. When the flow guide panel 22 is located at the second position, the first panel 28 is inclined relative to the second panel 30, and the first panel 28 and the second panel 30 are inclined relative to the mounting portion 20 and both are inclined away from the accommodation chamber 12 to form an angle with an opening facing towards the accommodation chamber 12. This angle is not a zero angle or a 180° angle. It may be a right angle, an obtuse angle or other angles, which are not limited herein. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[00109] In some embodiments, when the flow guide panel 22 is located at the second position, the second oil screen 26 is located obliquely above the first oil screen 24. In this way, on the one hand, the first oil screen 24 and the second panel 30 may form an oil fume collection portion to facilitate oil fume collection. On the other hand, the second oil screen 26 is located

obliquely above the first oil screen 24 to facilitate collection of cooking oil fume gathered by the second panel 30.

[00110] In an exemplary embodiment of the present disclosure, referring to FIGS. 2 and 9, when the flow guide panel 22 is located at the second position, the second oil screen 26 is located obliquely above the first oil screen 24, and an angle α between the second panel 30 and a horizontal plane may fall within a range of $0^\circ < \alpha < 12^\circ$. In this way, on the one hand, the first oil screen 24 and the second panel 30 may form an oil fume collection portion to facilitate oil fume collection. On the other hand, the second oil screen 26 is located obliquely above the first oil screen 24, and the cooking oil fume gathered on the second panel 30 flows to a bottom end along the second panel 30 to easily collect the cooking oil fume gathered by the second panel 30. In some embodiments, an oil storage box 48 may be provided below the mounting portion 20 close to the first oil screen 24 for storing the cooking oil fume.

[00111] In some embodiments, the mounting portion 20 has a through hole 47. The baffle 46 passes through the through hole 47. In this way, the movement of the baffle 46 can be restricted to improve the stability of the baffle 46.

[00112] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 4, the through hole 47 is disposed at a path through which the baffle 46 of the mounting portion 20 moves from the first position to the second position. The through hole 47 may be of an elongated shape or other types, which are not limited herein. The through hole of the elongated shape can limit the baffle 46 to move in a direction in which the through hole 47 is opened. When the baffle 46 is subjected to a force in a left-right direction, the baffle 46 can relieve part of the force by being abutted against the through hole 47 to improve the stability of the baffle 46.

[00113] In some embodiments, the flow guide plate assembly 18 further includes a baffle 46. When the flow guide panel 22 is located at the first position, the first panel 28 and the second panel 30 are connected to form a flat plate, and the baffle 46 is accommodated in the accommodation chamber 12. When the flow guide panel 22 is located at the second position, the first panel 28 and the second panel 30 are connected to form a V shape, and the baffle 46 is located in a gap between the first panel 28 and the second panel 30. In this way, when the flow guide panel 22 is located at the second position, the baffle 46 is located in the gap between the

first panel 28 and the second panel 30. Therefore, a space area between the first panel 28 and the second panel 30 can be reduced. Thus, a negative impact that this space has on the oil fume suction effect can be reduced to ensure the oil fume suction effect.

[00114] In an exemplary embodiment of the present disclosure, referring to FIG. 3, the flow guide plate assembly 18 includes two baffles 46. The two baffles 46 are arranged on a surface of the first panel 28 close to the accommodation chamber 12 and located at a left side and a right side of the surface of the flow guide panel 28. Since the baffles 46 is fixedly connected to the first panel 28, the baffle 46 moves along with the first panel 28 when the flow guide panel 22 is switched from the first position to the second position.

[00115] When the flow guide panel 22 is located at the first position, the first panel 28 and the second panel 30 are connected to form a flat plate. The flow guide panel 22 of the flat plate shape may be attached to an edge of the mounting portion 20. A spacing between the flow guide panel 22 and the edge of the mounting portion 20 is small, which has basically no impact on the oil fume suction effect. The baffle 46 is accommodated in the accommodation chamber 12 to prevent the baffle 46 from being visible to the user on an exterior.

[00116] When the flow guide panel 22 is located at the second position, the first panel 28 and the second panel 30 are connected to form a V shape, and a gap with a triangular-shaped region is formed between the first panel 28 and the second panel 30. The gap with the triangular-shaped region is in communication with the interior and the exterior of the range hood 100, and the oil fume is likely to flow out from the gap with the triangular-shaped region, which affects the oil fume suction effect. By disposing the baffle 46 in the gap, on the one hand, negative pressure at an inner oil screen 50 inside the second oil screen 26 can be prevented from spreading through two sides of the second oil screen 26, preventing the negative pressure at the second oil screen 26 and thus the oil fume suction effect from being weakened. On the one hand, it can provide an aesthetic effect by shielding the internal mechanisms.

[00117] In some embodiments, the baffle 46 is connected to the first panel 28 and movable along with the first panel 28. In this way, there is no need to add an additional mechanism for driving the baffle 46, which can reduce cost and simplify the structure.

[00118] In an exemplary embodiment of the present disclosure, the movement mechanism 32 is configured to drive the first panel 28 to move. The baffle 46 can be driven to move while

the first panel 28 moves. As a result, when the flow guide panel 22 switches its position, the baffle 46 also moves synchronously along with the flow guide panel 22. Therefore, there is no need to add the additional mechanism for driving the baffle 46, which can reduce the cost and simplify the structure.

5 **[00119]** In some embodiments, the flow guide plate assembly 18 further includes an operation panel 23 located above the flow guide panel 22. The operation panel 23 may be connected to the movement mechanism 32 and is configured to control the movement mechanism 32. In this way, it is convenient for the flow guide panel 22 to switch between the first position and the second position. As a result, the switching between the single oil fume
10 suction inlet and the dual oil fume suction inlet can be realized.

[00120] In an exemplary embodiment of the present disclosure, referring to FIG. 1, the operation panel 23 is located above the flow guide panel 22. The operation panel 23 is provided with a built-in control member connected to the movement mechanism 32 and configured to control the movement mechanism 32 to switch the flow guide panel 22 between the first
15 position and the second position.

[00121] The range hood 100 mainly includes the following components of a chamber assembly 10, a fan system 16, a flow guide plate assembly 18, a first oil screen 24, and a second oil screen 26. The chamber assembly 10 mainly provides support and fixing on the fan system 16 and provides power. The fan system 16 is a power part of the entire range hood 100.

20 **[00122]** In addition, in the related art, in order to improve the problem that the fixed oil fume suction inlet of the range hood cannot be adapted to more oil fume suction scenarios, the range hood is provided with a movable flow guide panel, and the oil fume suction inlet distribution is changed by the movement of the flow guide panel to meet the corresponding usage scenarios. However, when the flow guide panel moves to a certain position, side space is formed, which
25 has a negative impact on the oil fume suction effect.

[00123] In embodiments of a third aspect of the present disclosure, a range hood 100 according to an embodiment of the present disclosure includes a chamber assembly 10 and a flow guide plate assembly 18. The chamber assembly 10 has an accommodation chamber 12 and a mounting opening 14. A fan system 16 is mounted in the accommodation chamber 12.
30 The flow guide plate assembly 18 is mounted at the mounting opening 14. The flow guide plate

assembly 18 includes a mounting portion 20 and a flow guide panel 22 movably mounted at the mounting portion 20. The flow guide includes a first panel 28 and a second panel 30 that are rotatably connected to each other. Each of two sides of one of the first panel 28 and the second panel 30 is connected to a baffle 46. When the flow guide panel 22 is flapped upwards and outwards, the baffle 46 is located in a gap between the first panel 28 and the second panel 30.

[00124] In the range hood 100 described above, when the flow guide panel 22 is flapped upwards and outwards, the baffle 46 is located in the gap between the first panel 28 and the second panel 30. Therefore, a space area between the first panel 28 and the second panel 30 can be reduced. Thus, the space has less negative impact on the oil fume suction effect. In this way, the oil fume suction effect is ensured.

[00125] In an exemplary embodiment of the present disclosure, referring to FIGS. 1 and 2, the chamber assembly 10 may specifically have a structure including two different parts. One part of the structure may have a shape of a triangular prism, and a side surface of the triangular prism has a mounting opening 14. An interior of the triangular prism is hollow and serves as a part of the accommodation chamber 12. The other part of the structure may have a shape of a quadrangular prism with a hollow interior and serves as a part of the accommodation chamber 12 configured for mounting of the fan system 16. The quadrangular prism is disposed above the triangular prism and in communication with the hollow interior of the triangular prism. It can be understood that in other embodiments, the chamber assembly 10 is not limited to the structure described above, but may also be of other structures, which are not specifically limited herein.

[00126] The flow guide plate assembly 18 is mounted at the mounting opening 14. The flow guide plate assembly 18 includes a mounting portion 20 and a flow guide panel 22 movably mounted at the mounting portion 20. The flow guide includes a first panel 28 and a second panel 30 that are rotatably connected to each other. Each of two sides of one of the first panel 28 and the second panel 30 is connected to a baffle 46. In an embodiment, the flow guide plate assembly 18 includes two baffles 46. The two baffles 46 are arranged on a surface of the first panel 28 close to the accommodation chamber 12 and located at a left side and a right side of the surface of the flow guide panel 28. When the flow guide panel 22 is flapped upwards and outwards, the baffle 46 is located in the gap between the first panel 28 and the second panel 30.

Therefore, a space area between the first panel 28 and the second panel 30 can be reduced. Thus, a negative impact that this space has on the oil fume suction effect can be reduced to ensure the oil fume suction effect.

[00127] It can be understood that in other embodiments, the baffle 46 may also be disposed on the second panel 30.

[00128] In some embodiments, the flow guide panel 22 is switchable between the first position and the second position; when the flow guide panel 22 is located at the first position, the first panel 28 and the second panel 30 are connected to form a flat plate, and the baffle 46 is accommodated in the accommodation chamber 12; and when the flow guide panel 22 is located at the second position, the first panel 28 and the second panel 30 are connected to form a V shape, and the second position is a position where the flow guide panel 22 is flapped upwards and outwards. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effect under the different scene requirements is ensured.

[00129] In an exemplary embodiment of the present disclosure, referring to FIGS. 2 and 3, when the flow guide panel 22 is located at the first position, the first panel 28 and the second panel 30 are connected to form a flat plate. The flow guide panel 22 of the flat plate shape may be attached to an edge of the mounting portion 20. A spacing between the flow guide panel 22 and the edge of the portion 20 is small, which has basically no impact on the oil fume suction effect. The baffle 46 is accommodated in the accommodation chamber 12 to prevent the baffle 46 from being visible to the user on an exterior. The first panel 28 may be parallel to the second panel 30, and the first panel 28 and the second panel 30 are connected along a same plane. When the flow guide panel 22 is located at the second position, that is, when the flow guide panel 22 is flapped upwards and outwards as described above, the first panel 28 and the second panel 30 are connected to form a V shape, and a gap with a triangular-shaped region is formed between the first panel 28 and the second panel 30. The gap with the triangular-shaped region is in communication with the interior and the exterior of the range hood 100, and the oil fume is likely to flow out from the gap with the triangular-shaped region, which affects the oil fume suction effect. By disposing the baffle 46 in the gap, on the one hand, negative pressure at an

inner oil screen 50 inside the second oil screen 26 can be prevented from spreading through two sides of the second oil screen 26, preventing the negative pressure at the second oil screen 26 and thus the oil fume suction effect from being weakened. On the one hand, it can provide an aesthetic effect by shielding the internal mechanisms.

5 **[00130]** In some embodiments, when the flow guide panel 22 is located at the first position, the second panel 30 faces the first oil screen 24. When the flow guide panel 22 is located at the second position, the first panel 28 is inclined relative to the second panel 30. The first panel 28 and the second panel 30 are inclined relative to the mounting portion 20. And, both are inclined away from the accommodation chamber 12 and connected to form a V shape to form an angle
10 with an opening facing towards the accommodation chamber 12. This angle is not a zero angle or a 180° angle. It may be a right angle, an obtuse angle, or other angles, which are not limited herein.

[00131] In some embodiments, the first oil screen 24 is fixed to the mounting portion 20, and the second oil screen 26 is disposed on the second panel 30; when the flow guide panel 22
15 is located at the first position, the first oil screen 24 and the second oil screen 26 are overlapped with each other; and when the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap. In this way, the range hood 100 can define the two oil fume suction inlets, including the first oil fume suction inlet defined by the first oil screen 24 and the second oil fume suction inlet defined by the
20 second oil screen 26. Thus, the range hood 100 is switchable between the single oil fume suction inlet arrangement and the dual oil fume suction inlet arrangement to meet the oil fume suction requirements and to ensure the oil fume suction effects under different scene requirements.

[00132] In an exemplary embodiment of the present disclosure, referring to FIGS. 2 and 3, the first oil screen 24 is fixed to the mounting portion 20, and the second oil screen 26 is
25 disposed on the second panel 30. The flow guide panel 22 is switchable between the first position and the second position. When the flow guide panel 22 is located at the first position, the first oil screen 24 and the second oil screen 26 are overlapped from each other. Therefore, the overlapping between the first oil screen 24 and the second oil screen 26 may define an oil fume suction inlet in a flow direction of the airflow. When the flow guide panel 22 is located at
30 the second position, the first oil screen 24 and the second oil screen 26 are offset from each

other without overlap. Therefore, the first oil screen 24 and the second oil screen 26 may define two oil fume suction inlets, including a first oil fume suction inlet defined by the first oil screen 24 and a second oil fume suction inlet defined by the second oil screen 26, respectively. Thus, the range hood 100 is switchable between the single oil fume suction inlet arrangement and a dual oil fume suction inlet arrangement to meet the requirements for sucking the oil fume, to improve a negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements can be ensured. In an operating state, airflow flows to the fan system 16 through meshes of the first oil screen 24 and meshes of the second oil screen 26. In this way, the effect of the range hood 100 on the oil fume suction can be improved with a reduction in escape of the oil fume. It can be understood that in other embodiments, the chamber assembly 10 is not limited to the structure described above, but may also be of other structures, which are not specifically limited herein.

[00133] In an embodiment illustrated in the figures, the first oil screen 24 has an area larger than an area of the second oil screen 26, and the flow guide panel 22 is closer to an outer side of the range hood 100 than the first oil screen 24. When the flow guide panel 22 is located at the first position, the second oil screen 26 covers a part of the first oil screen 24, and the flow guide panel 22 blocks the other parts of the first oil screen 24. From an appearance, basically only the second oil screen 26 is seen. It can be understood that in other embodiments, the first oil screen 24 may be closer to the outer side of the range hood 100 than the flow guide panel 22, which is not specifically limited herein.

[00134] In the process that the flow guide panel 22 is switchable between the first position and the second position, the first oil screen 24 does not move, and the flow guide panel 22 drives the second oil screen 26 to be offset without overlap from or overlapped with the first oil screen 24. It can be understood that a plurality of first positions may be provided, and in the flow direction of the airflow, when the first oil screen 24 and the second oil screen 26 are overlapped with each other, corresponding positions of the flow guide panel 22 may be the first position. A plurality of second positions may be provided, that is, in the direction of airflow, when the first oil screen 24 and the second oil screen 26 are offset from each other without overlap, corresponding positions of the flow guide panel 22 may be the second position.

[00135] In an embodiment illustrated in FIG. 1, the first oil screen 24 has an area larger than

an area of the second oil screen 26. When the flow guide panel 22 is located at the first position, an overlapping between the first oil screen 24 and the second oil screen 26 is the second oil screen 26, forming a single oil screen. In this way, a user's low air volume usage scenario can be met, or air inside a kitchen can be purified by this screen, serving as an air steward.

5 **[00136]** When the flow guide panel 22 is located at the second position, the first oil screen 24 and the second oil screen 26 are offset from each other without overlap to define two oil fume suction inlets, that is, when a large air volume or a high-height pot is required, the second oil screen 26 may be moved up and flapped outwards. A part of the oil fume that has not risen and diffused is quickly sucked away by the lower first oil screen 24, and remaining rising and
10 diffused oil fume is sucked away by the second oil screen 26 flapped outwards. In this way, the oil fume suction effect can be greatly improved through the dual suction.

[00137] In some embodiments, when the flow guide panel 22 is located at the second position, the second oil screen 26 is located obliquely above the first oil screen 24. In this way, on the one hand, the first oil screen 24 and the second panel 30 may form an oil fume collection
15 portion to facilitate oil fume collection. On the other hand, the second oil screen 26 is located obliquely above the first oil screen 24 to facilitate collection of cooking oil fume gathered by the second panel 30.

[00138] In an exemplary embodiment of the present disclosure, referring to FIGS. 2 and 9, when the flow guide panel 22 is located at the second position, the second oil screen 26 is
20 located obliquely above the first oil screen 24, and an angle α between the second panel 30 and a horizontal plane may fall within a range of $0^\circ < \alpha < 12^\circ$. In this way, on the one hand, the first oil screen 24 and the second panel 30 may form an oil fume collection portion to facilitate oil fume collection. On the other hand, the second oil screen 26 is located obliquely above the first oil screen 24, and the cooking oil fume gathered on the second panel 30 flows to a bottom end
25 along the second panel 30 to easily collect the cooking oil fume gathered by the second panel 30. In some embodiments, an oil storage box 48 may be provided below the mounting portion 20 close to the first oil screen 24 for storing the cooking oil fume.

[00139] In some embodiments, the mounting portion 20 has a through hole 47. The baffle 46 passes through the through hole 47. In this way, the movement position of the baffle 46 can be
30 limited to improve the stability of the baffle 46.

[00140] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 4, the through hole 47 is disposed at a path through which the baffle 46 of the mounting portion 20 moves from the first position to the second position. The through hole 47 may be of an elongated shape or other types, which are not limited herein. The through hole of the elongated shape can limit the baffle 46 to move in a direction in which the through hole 47 is opened. When the baffle 46 is subjected to a force in a left-right direction, the baffle 46 can relieve part of the force by being abutted against the through hole 47 to improve the stability of the baffle 46.

[00141] In some embodiments, the guide plate assembly 18 further includes a movement mechanism 32. The movement mechanism 32 is connected to at least one of the first panel 28 and the second panel 30 and is configured to drive the first panel 28 and/or the second panel 30 to move to switch the flow guide panel 22 between the first position and the second position. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[00142] In an exemplary embodiment of the present disclosure, referring to FIG. 3, the movement mechanism 32 may be mounted above the mounting portion 20 close to a side of the accommodation chamber 12 and connected to the first panel 28. In other embodiments, the movement mechanism 32 may be connected to the second panel 30, or connected to the first panel 28 and the second panel 30. The movement mechanism 32 is connected to at least one of the first panel 28 and the second panel 30 and is configured to drive the first panel 28 and/or the second panel 30 to move to switch the flow guide panel 22 between the first position and the second position. In this way, it is convenient to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[00143] In some embodiments, the movement mechanism 32 includes a motor 34 and a linkage assembly 36. The motor 34 is connected to the first panel 28 through the linkage assembly 36. The motor 34 is configured to drive the linkage assembly 36 to move, enabling

the linkage assembly 36 to drive the first panel 28 and the second panel 30 to flap upwards and outwards. In this way, the stability of the movement of the flow guide panel 22 can be ensured with the motor 34 driving the flow guide panel 22 to move through the linkage assembly 36. In addition, it is also convenient for the diversion panel 22 to switch between the first position and the second position. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[00144] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the linkage assembly 36 may include a first linkage group 361 and a second linkage group 362, and each linkage group may include a first bar 363 and a second bar 362 hinged to each other. The first bar 363 of the first linkage group 361 is connected to the motor 34, and the first bar 363 of the second linkage group 361 is rotatably connected to a fixing plate 54. The fixing plate 54 is fixed to the mounting portion 20. The second bar 364 of the first linkage group 361 and the second bar 364 of the second linkage group 362 are rotatably connected to the first panel 28. The first bar 363 of the first linkage group 361 is rotatably connected to a middle part of the second bar 364 of the second linkage group 362. An end of the first bar 363 of the first linkage group 361 is fixedly connected to an output shaft of the motor 34. In this way, the motor 34 can drive the first bar 363 to rotate to enable the linkage assembly 36 to drive the first panel 28 to flap upwards and outwards. Since the first panel 28 is rotatably connected to the second panel 30, the second panel 30 can be driven to flap upwards and outwards while the first panel 28 is flapped upwards and outwards. As such, the flow guide panel 22 can switch between the first position and the second position through the movement of the first panel 28 and the second panel 30. In this way, it is possible to switch between the single oil fume suction inlet and the dual oil fume suction inlet to meet the oil fume suction requirements, to improve the negative pressure distribution, and to enhance the oil fume suction effect. As a result, the oil fume suction effects under the different scene requirements are ensured.

[00145] In other embodiments, the movement mechanism 32 may be connected to the second panel 30, that is, the linkage assembly 36 is connected to the second panel 30. In an exemplary embodiment of the present disclosure, the second bar 364 of the linkage assembly 36 is

connected to the second panel 30. In this way, the motor 34 can drive the first bar 363 and the second bar 364 to rotate to enable the linkage assembly 36 to drive the second panel 30 to flap upwards and outwards. Since the first panel 28 is rotatably connected to the second panel 30, the first panel 28 is driven to flap upwards and outwards while the second panel 30 is flapped upwards and outwards. In addition, the movement mechanism 32 may also be connected to the first panel 28 and the second panel 30, that is, the linkage assembly 36 is connected to the first panel 28 and the second panel 30 simultaneously. In an exemplary embodiment of the present disclosure, the second bar 364 of the linkage assembly 36 is connected to the first panel 28 and the second panel 30. As such, the motor 34 can drive the first bar 363 and the second bar 364 to rotate to enable the linkage assembly 36 to drive the first panel 28 and the second panel 30 to flap upwards and outwards.

[00146] In some embodiments, the movement mechanism 32 includes a synchronizer 40 and two linkage assemblies 36. The synchronizer 40 is connected to the two linkage assemblies 36. The motor 34 is configured to drive one of the two linkage assemblies 36 to move, to enable the synchronizer 40 to drive the other one of the two linkage assemblies 36 to move. In this way, the two linkage assemblies 36 can rotate synchronously.

[00147] In an exemplary embodiment of the present disclosure, referring to FIGS. 3 and 5, the synchronizer 40 may be a long circular rod, and the two linkage assemblies 36 are located at a left side and a right side of the first panel 28, respectively. The first linkage group 361 and the second linkage group 362 are arranged at two ends of the synchronizer 40, respectively. The movement mechanism 32 may also include two fixing plates 54. Each of the two fixing plate 54 is disposed at outer side of the linkage assembly 36 relative to the synchronizer 40 and is rotatably connected to the synchronizer 40. The first bars 363 of the two second linkage groups 362 are fixedly connected to the two ends of the synchronizer 40, respectively. The motor 34 is mounted at an outer side of one of the two fixing plates 54. The output end of the motor 34 is connected to the first bar 363 of the first linkage group 361 and configured to drive the first linkage group 361 to rotate to drive the linkage assembly 36 at the side of the first panel 28 to move. Since the synchronizer 40 is fixedly connected to the first bar 363 of the second linkage group 362, the synchronizer 40 can transmit motion to enable the linkage assembly 36 at an opposite side of the movement mechanism 32 to rotate. The motor 34 drives the linkage

assembly 36 to move and the synchronizer 40 transmits the motion to enable the linkage assembly 36 to directly drive the first panel 28 to flap upwards and outwards, and therefore, the linkage assemblies 36 located at the two sides of the first panel 28 move synchronously. On the one hand, the two linkage assemblies 36 are arranged at the two sides of the first panel 28 respectively to ensure stability of the position switching of the flow guide panel 22. On the other hand, the synchronizer 40 is connected to the two linkage assemblies 36 to ensure the synchronicity of the movement of the two linkage assemblies 36. In an embodiment, a side of the second bar 364 is rotatably connected to a connection plate 52, and the connection plate 52 is fixed on the first panel 28.

[00148] In some embodiments, the mounting portion 20 has a slide rail 42; and the second panel 30 is provided with a roller 44. The roller 44 is connected to the slide rail 42. The slide rail 42 is configured to guide the second panel 30 to move by the roller 44. In this way, guidance may be performed during the movement of the second panel 30, ensuring the stability of the movement of the second panel 30.

[00149] In an exemplary embodiment of the present disclosure, referring to FIGS. 3, 6, and 7, the mounting portion 20 has a slide rail 42 at a left side and a right side of the mounting portion 20, respectively. A roller 44 is provided at each of the left side and the right side of the second panel 30. The roller 44 may be mounted on the second panel 30 by a support 45. The roller 44 may be accommodated in the slide rail 42 and is connected to an inner wall of the slide rail 42 in a rolling manner. The slide rail 42 is configured to guide the movement of the second panel 30 by the roller 44. A bottom of the slide rail 42 has a through hole of an elongated shape through which the slide rail 42 passes. The support 45 may extend into the slide rail through the through hole and is connect to the roller 44. The slide rail 42 has a rear opening. A slide rail cover 56 may be provided to cover the rear opening of the slide rail 42 to prevent the oil fume from flowing into the slide rail 42, and thus to ensure smooth rolling of the roller 44.

[00150] In some embodiments, the flow guide plate assembly 18 further includes an operation panel 23 located above the flow guide panel 22. The operation panel 23 may be connected to the movement mechanism 32 and is configured to control the movement mechanism 32. In this way, it is convenient for the flow guide panel 22 to switch between the first position and the second position. As a result, the switching between the single oil fume

suction inlet and the dual oil fume suction inlet can be realized.

[00151] In an exemplary embodiment of the present disclosure, referring to FIG. 1, the operation panel 23 is located above the flow guide panel 22. The operation panel 23 is provided with a built-in control member connected to the movement mechanism 32 and configured to control the movement mechanism 32 to switch the flow guide panel 22 between the first position and the second position.

[00152] The range hood 100 mainly includes the following components of a chamber assembly 10, a fan system 16, a flow guide plate assembly 18, a first oil screen 24, and a second oil screen 26. The chamber assembly 10 mainly provides support and fixing on the fan system 16 and provides power. The fan system 16 is a power part of the entire range hood 100.

[00153] In summary, the main technical solutions for the embodiments of the aspects of the present disclosure described above may be as follows.

[00154] 1. The single-suction air duct is switched into dual-suction air duct. When the flow guide panel 22 is located at the first position, the second oil screen 26 may serve as the single oil screen. In this way, the user's low air volume usage scenario can be met, or the air inside the kitchen can be purified by this screen, serving as the air steward. When the large air volume or the high-height pot is required, the flow guide panel 22 may be switched into the second position. The part of the oil fume that has not risen and diffused is quickly sucked away by the lower first oil screen 24, and the remaining rising and diffused oil fume is sucked away by the second oil screen 26 flapped outwards. In this way, the oil fume suction effect can be greatly improved through the dual suction.

[00155] 2. The oil screen movement mechanism 32 is flapped outwards and slides: The linkage assembly 36 and the synchronizer 40 can serve to provide the synchronization, the driving force, and the rotation on the entire mechanism. The lower part is the roller 44 to ensure the stability of the upward and downward movement of the oil screen.

[00156] 3. The baffle 46 is fixed on the first panel 28, in the one hand, the negative pressure at the inner oil screen 50 can be prevented from spreading through the two sides of the second oil screen 26, preventing the negative pressure at the second oil screen 26 and thus the oil fume suction effect from being weakened. On the one hand, it can provide the aesthetic effect by shielding the internal mechanisms.

[00157] Referring to FIGS. 8 and 9, when the flow guide panel 22 is located at the first position, the oil fume or the airflow in the kitchen may flow into the fan system 16 through the first oil screen 24 and the second oil screen 26 in sequence and discharged by the fan system 16. On the one hand, this operation condition is used in a scenario where there is little oil fume. On the other hand, it may serve as the air inlet of the air steward to regularly purify the air inside the kitchen and keep the air circulated. As illustrated in FIG. 9, when the movement mechanism 32 is flapped on, the flow guide panel 22 is switched from the first position to the second position, and the oil fume may flow into the fan system 16 through the first oil screen 24 and the second oil screen 26 and discharged by the fan system 16. The first oil screen 24 is closer to the pot, and the negative pressure moves downwards. After the oil fume explodes, it is directly sucked into the fan system 16. The remaining part of the rising oil fume is sucked into the fan system 16 through the second oil screen 26 and the inner oil screen 50. After the movement mechanism 32 is flapped on, wide-angle negative pressure is formed, and the oil fume suction effect can be greatly improved through the top-side dual-suction air intake layout. In addition, since the oil fume suction inlet moves upwards, the problem in which the traditional flapping plate structure touches the pot can be avoided.

[00158] In the description of this specification, descriptions with reference to the terms “an embodiment”, “some embodiments”, “an exemplary embodiment”, “an example”, “a specific example”, or “some examples” etc., mean that specific features, structure, materials or characteristics described in conjunction with the embodiment or example are included in at least one embodiment or example of the present disclosure. The appearances of the above phrases in various places throughout this specification are not necessarily referring to the same embodiment or example of the present disclosure. Furthermore, the particular features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples.

[00159] Although embodiments of present disclosure have been shown and described above, it should be understood that above embodiments are just explanatory, and cannot be construed to limit the present disclosure, for those skilled in the art, changes, alternatives, and modifications can be made to the embodiments without departing from spirit, principles and scope of the present disclosure.

CLAIMS

What is claimed is:

1. A range hood, comprising:

a chamber assembly having an accommodation chamber and a mounting opening, a fan system being mounted in the accommodation chamber;

a flow guide plate assembly mounted at the mounting opening, wherein the flow guide plate assembly comprises a mounting portion, a flow guide panel movably connected to the mounting portion, a first oil screen fixed to the mounting portion, and a second oil screen disposed on the flow guide panel, wherein:

the flow guide panel is switchable between a first position and a second position;

when the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other; and

when the flow guide panel is located at the second position, the first oil screen and the second oil screen are offset from each other without overlap.

2. The range hood according to claim 1, wherein the flow guide panel comprises a first panel and a second panel, the first panel being rotatably connected to the second panel, and the second oil screen being disposed on the second panel, wherein:

when the flow guide panel is located at the first position, the first panel is parallel to the second panel; and

when the flow guide panel is located at the second position, the first panel inclines with respect to the second panel.

3. The range hood according to claim 1, wherein:

the flow guide panel comprises a first panel and a second panel that are rotatably connected to each other, the second oil screen being disposed on the second panel; and

the flow guide plate assembly further comprises a movement mechanism connected to at least one of the first panel and the second panel, the movement mechanism being configured to drive the first panel and/or the second panel to move to switch the flow guide panel between the first position and the second position.

4. A range hood, comprising:

a chamber assembly having an accommodation chamber and a mounting opening, a fan system being mounted in the accommodation chamber; and

a flow guide plate assembly mounted at the mounting opening, wherein the flow guide plate

assembly comprises a flow guide panel and a movement mechanism connected to the flow guide panel, the movement mechanism comprising a motor and a linkage assembly, the motor being connected to the flow guide panel through the linkage assembly, and the motor being configured to drive the linkage assembly to move, enabling the linkage assembly to drive the flow guide panel to move.

5. The range hood according to claim 4, wherein:

the link assembly comprises a first linkage group and a second linkage group;

the movement mechanism further comprises a fixing plate, the first linkage group being rotatably connected to the flow guide panel and the fixing plate, the second linkage group being rotatably connected to the flow guide panel and the fixing plate, and the first linkage group being rotatably connected to the second linkage group; and

the motor is configured to drive the first linkage group to rotate to drive the second linkage group and the flow guide panel to move.

6. The range hood according to claim 4, wherein the movement mechanism comprises a synchronizer and two linkage assemblies, the synchronizer being connected to the two linkage assemblies, the two linkage assemblies being connected to two sides of the flow guide panel, respectively, and the motor being configured to drive one of the two linkage assemblies to move, to enable the synchronizer to drive the other one of the two linkage assemblies to move.

7. The range hood according to claim 4, wherein:

the linkage assembly is connected to an end of the flow guide panel;

the movement mechanism further comprises a roller disposed at another end of the flow guide panel; and

the flow guide plate assembly comprises a mounting portion having a slide rail, the roller being connected to the slide rail.

8. The range hood according to claim 7, wherein the flow guide panel comprises a first panel and a second panel that are rotatably connected to each other, the linkage assembly being connected to an end of the first panel, the other end of the first panel being rotatably connected to an end of the second panel, and the roller being disposed at the other end of the second panel.

9. The range hood according to claim 8, wherein:

a first oil screen is fixed on the mounting portion;

a second oil screen is disposed on the second panel;

the flow guide panel is switchable between a first position and a second position;

when the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other; and

when the flow guide panel is located at the second position, the first oil screen and the second oil

screen are offset from each other without overlap.

10. The range hood according to claim 9, wherein:

when the flow guide panel is located at the first position, the first panel is parallel to the second panel; and

when the flow guide panel is located at the second position, the first panel is inclined relative to the second panel.

11. The range hood according to claim 3 or 9, wherein the flow guide plate assembly further comprises a baffle, wherein:

when the flow guide panel is located at the first position, the first panel and the second panel are connected to form a flat plate, and the baffle is accommodated in the accommodation chamber;

when the flow guide panel is located at the second position, the first panel and the second panel are connected to form a V shape, and the baffle is located in a gap between the first panel and the second panel.

12. The range hood according to claim 11, wherein the baffle is connected to the first panel and movable along with the first panel.

13. A range hood, comprising:

a chamber assembly having an accommodation chamber and a mounting opening, a fan system being mounted in the accommodation chamber; and

a flow guide plate assembly mounted at the mounting opening, wherein the flow guide plate assembly comprises a mounting portion and a flow guide panel movably mounted at the mounting portion, the flow guide panel comprising a first panel and a second panel that are rotatably connected to each other, each of two sides of one of the first panel and the second panel being connected to a baffle, and when the flow guide panel is flapped upwards and outwards, the baffle being located in a gap between the first panel and the second panel.

14. The range hood according to claim 13, wherein:

the flow guide panel is switchable between a first position and a second position;

when the flow guide panel is located at the first position, the first panel and the second panel are connected to form a flat plate, and the baffle is accommodated in the accommodation chamber; and

when the flow guide panel is located at the second position, the first panel and the second panel are connected to form a V shape, and the second position is a position where the flow guide panel is flapped upwards and outwards.

15. The range hood according to claim 14, wherein:

a first oil screen is fixed on the mounting portion;

a second oil screen is disposed on the second panel;

when the flow guide panel is located at the first position, the first oil screen and the second oil screen are overlapped with each other; and

when the flow guide panel is located at the second position, the first oil screen and the second oil screen are offset from each other without overlap.

16. The range hood according to claim 13, wherein the mounting portion has a through hole, the baffle penetrating the through hole.

17. The range hood according to claim 14, wherein the flow guide plate assembly further comprises a movement mechanism connected to at least one of the first panel and the second panel, the movement mechanism being configured to drive the first panel and/or the second panel to move, enabling the flow guide panel to switch between the first position and the second position.

18. The range hood according to claim 13, wherein the flow guide plate assembly further comprises an operation panel located above the flow guide panel.

19. The range hood according to claim 2, 10, or 15, wherein the second oil screen is located obliquely above the first oil screen when the flow guide panel is located at the second position.

20. The range hood according to claim 3 or 17, wherein the movement mechanism comprises a motor and a linkage assembly, the motor being connected to the first panel through the linkage assembly, and the motor being configured to drive the linkage assembly to move, enabling the linkage assembly to drive the first panel and the second panel to flap upwards and outwards.

21. The range hood according to claim 20, wherein the linkage assembly comprises a multi-linkage assembly.

22. The range hood according to claim 20, wherein the movement mechanism comprises a synchronizer and two linkage assemblies, the synchronizer being connected to the two linkage assemblies, and the motor being configured to drive one of the two linkage assemblies to move, enabling the synchronizer to drive the other one of the two linkage assemblies to move.

23. The range hood according to claim 3 or 13, wherein:

the mounting portion has a slide rail; and

the second panel is provided with a roller, the roller being connected to the slide rail, and the slide rail being configured to guide the second panel to move by the roller.