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(54) **Hood ventilation system**

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Installation de hotte de ventilation

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Description

[0001] The present invention relates to a hood ventilation system, and more particularly, to a hood ventilation system comprising the features of the preamble of claim 1, that is capable of more effectively exhausting air containing cooking by-products generated during cooking to the outside in order to maintain comfortable indoor environments.

[0002] In general, a hood ventilation system is installed over cooking appliances, heat sources, such as a microwave range, an electric oven and the like such that air containing pollutants generated during cooking of the foods in household kitchens or in restaurants can be exhausted to an external environment.

[0003] Figure 1 is a perspective view showing the conventional hood ventilation system, and Figure 2 is a longitudinal sectional view showing an installation structure of the conventional hood ventilation system and its state of use.

[0004] As shown therein, the conventional hood ventilation system includes: a hood 10 installed at a support 15 such as a mounting wall so as to be placed over a cooking source 40, separating from the cooking source 40 such as a gas stove or a cooktop by a certain space; a grease filter 32 mounted at an intake opening 31 formed at an opening of the hood 10 which is opposed to an upper surface of the cooking source 40 and removing grease particles and aerosol particles generated during cooking; a blower means 22 mounted at an upper side in the hood 10 for generating intake airstreams; and an exhaust duct 21 connected at an upper portion in the hood 10 and guiding air having passed the hood 10 so that the air can be exhausted to the outside.

[0005] The hood 10 includes: an air collecting chamber 30 having a canopy shape that its lower area is large, its upper area is small and its inside is penetratingly formed so as to collect air; and a machinery chamber 20 extending from and communicating with an upper portion of the air collecting chamber 30, and having the blower means 22 therein communicated with the exhaust duct 21.

[0006] The intake opening 31 is formed at a lower surface of the air collecting chamber 30 opposed to the cooking appliance, and the grease filter 32 is mounted to stop up the entire intake opening 31.

[0007] Since the grease filter 32 is constructed to allow air to be ventilated, air generated from the cooking appliance, the heat source, is sucked into the air collecting chamber 30, and grease, aerosol cooking by-products which are included in the air are filtered by the grease filter 32.

[0008] The blower means 22 includes a motor (not shown) and a fan 23 connected to a rotary axis of the motor, and rotating by rotation force of the motor and generating airstreams. A concentric fan is used as the fan 23.

[0009] An operation of the conventional hood ventilation system will be described as follows.

[0010] Firstly, the hood ventilation system is operated simultaneously with when cooking foods in the cooking source 40.

[0011] When the power is supplied to the motor constituting the blower means 22, the motor operates to thereby rotate the fan 23 to generate airstreams by suction force.

[0012] At the same time, air including cooking by-products produced during cooking by the cooking source 40 is carried upward by natural convection, passes the grease filter 32 by the suction force produced by the fan 23 and then is sucked into the air collecting chamber 30. Air sucked into the air collecting chamber 30 is exhausted to the outside through the fan 23 and the exhaust duct 21. In addition, when air passes the grease filter 32, the grease particles, the aerosol particles and the like are filtered through the grease filter 32.

[0013] However, in the conventional hood ventilation system, as shown in Figure 2, when air containing the cooking by-products during cooking flows upward by the convection and then is sucked into the air collecting chamber of the hood, the air is smoothly sucked into a suction region of the lower surface of the air collecting chamber having the grease filter and is discharged to the outside through the exhaust duct, but the efficiency for capturing hot and pollutant air from the cooking source rapidly drops off.

[0014] In particular, when the suction force of the fan is low, such a phenomenon becomes worse. Even though the suction force of the fan is increased to enhance the air collecting efficiency, suction speed of air which rises towards the region distant from the suction region of the grease filter is lowered due to the flow resistance factor by the grease filter and finally polluted air spreads toward a user along an outer circumference of the lower surface of the air collecting chamber of the hood.

[0015] In addition, since the suction force by the fan is lowered in inverse proportion to the square of a distance from a suction surface of the air collecting chamber of the hood, even though the suction force acts greatly on the suction surface, air generated from the heat source cannot be effectively collected in the hood if the distance toward the heat source gets far away.

[0016] The air containing the cooking by-products which are not collected within the hood flows in the room, contaminating indoor air.

[0017] Accordingly, the user feels unpleasant considerably, and it becomes hard to maintain comfortable indoor environments.

[0018] A further conventional hood ventilation system is disclosed in DE-A-4 114 329 which requires improvements.

[0019] Therefore, the object of the present invention is to provide a hood ventilation system capable of more efficiently exhausting air containing cooking by-products generated during cooking in order to maintain comfortable indoor environments.

[0020] To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, there is provided a hood ventilation system comprising the features of claim 1. Further features and improvements are subject matter of the claims dependent from claim 1. In particular, the invention provides a hood installed over a cooking source and having an intake opening at a surface of the hood opposed to the cooking source in order that air including cooking by-products generated from the cooking source can be sucked into the intake opening; a first air suction means installed in the hood and generating suction force for sucking air through the intake opening and exhausting air through an exhaust duct communicated with the first air suction means to the outside; and a second air suction means installed at the hood and generating suction force in order that air escaping from the intake opening can be introduced into the intake opening, wherein a circular hollow airflow guide having a curve shaped surface is provided.

[0021] The foregoing and other objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of the present invention when taken in conjunction with the accompanying drawings.

[0022] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this specification, illustrate embodiments of the invention and together with the description serve to explain the principles of the invention.

[0023] In the drawings:

Figure 1 is a perspective view showing the conventional hood ventilation system;

Figure 2 is a longitudinal sectional view showing an installation structure of the conventional hood ventilation system and its state of use;

Figure 3 is a longitudinal sectional view showing a structure of a hood ventilation system in accordance with a first embodiment of the present invention;

Figure 4 is an enlarged view showing an important part of the hood ventilation system in accordance with the first embodiment of the present invention;

Figure 5 shows a hood ventilation system of the present invention in accordance with the second embodiment;

Figure 6 is a CFD result showing a velocity field of airflow through the second air suction means of the present invention;

Figure 7 is a CFD result showing a pressure field of airflow through the second air suction means of the present invention; and

Figure 8 is a CFD result showing an airflow locus by the second air suction means of the present invention.

[0024] As shown therein, a hood ventilation system in accordance with the first embodiment of the present invention includes: a hood 110 installed over and apart from a cooking source 140 and having an intake opening 131 at a lower surface of the hood opposed to the cooking source 140 in order that air including cooking by-products generated from the cooking source 140 can be sucked into the intake opening 131; a first air suction means 124 installed in the hood 110 and generating suction force for sucking air through the intake opening 131 and exhausting air through an exhaust duct 121 communicated with the first air suction means 124 to the outside; and a second air suction means 160 installed at the hood 110 and generating suction force in order that air escaping from the intake opening 131 can be introduced into the intake opening 131.

[0025] The hood 110 includes: an air collecting chamber 130 having a canopy shape that its lower part is large, its upper part is small and the inside is penetratingly formed to collect air; and a machinery chamber 120 extending from and communicating with an upper portion of the air collecting chamber 130, and having the first air suction means 124 therein communicated with the exhaust duct 121.

[0026] The intake opening 131 is formed at a lower surface of the air collecting chamber 130 opposed to the cooking source 140, and a filter device 132 is mounted at the intake opening 131 of the hood 110 for filtering air so as to stop up the entire intake opening 131. In general, a grease filter is mounted as the filter device 132.

[0027] Since the grease filter is constructed to allow air to be ventilated, air generated from the cooking source passes through the grease filter and then is sucked into the air collecting chamber 130, and grease, aerosol cooking by-products included in the air are filtered by the grease filter.

[0028] The first air suction means 124 includes a motor (not shown) and a fan connected to a rotary axis of the motor, and rotating by rotation force of the motor and generating airstreams. In general, a sirocco fan of a double suction type is used as the fan.

[0029] As for the second air suction means 160, when air, including heat, cooking by-products and the like generated during cooking, which has risen toward the intake opening 131 of the hood 110 by the action of natural convection is not sucked to the intake opening 131, and so passes a lower circumferential edge of the air collecting chamber 130 and spreads out into the room, in order to introduce the spreading air into the intake opening 131, the second air suction means 160 forms negative pressure field around an outer circumference of the intake opening 131 and thus supplies suction force in a direction of the intake opening 131. This will be described as follows.

[0030] As shown in Figure 4, the second air suction means 160 includes: a walljet channel 151 having an air suction opening 122 at its one side and a blower fan 123 installed therein for allowing air outside the hood 110 to flow in through the air suction opening 122, and formed

at a wall surface of the hood in order that the air having flowed in can be sprayed through a slit 150 formed in the vicinity of the intake opening 131; and an airflow guide portion 152 extending from the slit 150 and protrudingly formed around the intake opening 131 for generating negative pressure around a surface of the airflow guide portion itself while the air sprayed from the slit 150 moves along the surface.

[0031] The walljet channel 151 is formed within the hood 110 along an inner wall surface of the hood by a channel forming member 154 separated from the inner wall of the hood 110 by a certain interval. The airflow guide portion 152 is formed of a circular hollow member so as to be integrally connected to the airflow forming member 154. In addition, in the airflow guide portion 152, a part of its outer circumferential surface predeterminedly protrudes downward with respect to the lower surface of the air collecting chamber 130 of the hood 110. That is, the protruding surface of the airflow guide portion is formed as a curved surface facing the intake opening. In addition, the walljet channel 151 adjacent to the slit 150 is bent towards the airflow guide portion 152 such that the air sprayed through the slit 150 can be easily introduced to the airflow guide portion 152.

[0032] Moreover, though not shown in the drawings, according to designs, the walljet channel 150 is preferably formed outside the hood 110 by installing the channel forming member separated from the outer wall of the hood 100 by a predetermined interval. In addition, it also can be formed through a separate walljet channel pipe.

[0033] In addition, the slit 150 and the airflow guide portion 152 formed at an outlet side of the walljet channel 151 are preferably formed to encompass a circumference of the intake opening 131.

[0034] Meanwhile, a light transmission window 161 is formed at the protruding surface of the airflow guide portion 152, which is provided with a lighting source 162, thereby making the surroundings of the hood bright and improving appearance.

[0035] Velocity of air which flows through the walljet channel 150 and is sprayed through the slit 150 is appropriately 3 to 5 m/s. This is due to following reasons. If the velocity is less than 3 m/s, negative pressure is not stably generated around a surface of the airflow guide portion 152 because of the weak coanda effect but there is a problem that the speed is low. If the velocity is more than 5 m/s, the negative pressure cannot be formed because separation of airstreams occurs at the surface of the airflow guide portion 152.

[0036] An operation of the hood ventilation system in accordance with the first embodiment of the present invention will be described as follows.

[0037] Firstly, the hood ventilation system in accordance with the present invention is operated simultaneously with when cooking foods in the cooking source 140.

[0038] When the power is supplied to the motor constituting the first air suction means 124, the motor operates to thereby rotate the fan to generate airstreams by suction force.

[0039] At this time, air including cooking by-products generated during cooking in the cooking source 140 is carried upward by convection, passes the grease filter mounted at the lower surface of the air collecting chamber 130 of the hood by the suction force produced by the first air suction means 124 to thereby filter the cooking by-products and then is sucked into the air collecting chamber 130. Air sucked into the air collecting chamber 130 is exhausted to the outside through the exhaust duct 121.

[0040] At the same time, the second air suction means 160 operates to improve air collection efficiency through the intake opening. That is, air outside the hood flows in by the blower fan 123 installed within the walljet channel 151, flows along the walljet channel 151 and is sprayed at the proper speed through the slit 150. The sprayed air flows along the protruding surface of the airflow guide portion 152, and at this time, the negative pressure is formed around the surface by the coanda effect. Accordingly, the air containing the cooking by-products which has not been sucked into the intake opening by the suction force of the first air suction means 124 but spread out becomes flowing in a direction of the intake opening 131 by the pressure difference generated because of the negative pressure produced around the airflow guide portion 152. The air having flowed towards the intake opening flows into the hood 110 through the intake opening 131 and then is exhausted to the outside through the exhaust duct 121.

[0041] Hereinafter, the second embodiment of the hood ventilation system of the present invention, especially the second air suction means, will be described in detail.

[0042] Figure 5 shows a hood ventilation system of the present invention in accordance with the second embodiment. Here, since other constituents except for the second air suction means of the hood ventilation system in accordance with the second embodiment of the present invention are the same as those of the first embodiment, a detailed description for them will be omitted.

[0043] As shown therein, a second air suction means 180 of the hood ventilation system in accordance with the second embodiment of the present invention includes: a walljet channel 171 having one side communicating with the exhaust duct 121 such that air can flow therein from the exhaust duct 121, and formed at a wall surface of the hood 110 in order that the air having flowed therein can be sprayed through a slit 170 formed in the vicinity of the intake opening 131; and an airflow guide portion 172 extending from the slit 170 and protrudingly formed around the intake opening 131 for generating negative pressure a surface of the airflow guide portion itself while the air sprayed from the slit 170 moves along the surface.

[0044] That is, by making one end of the walljet channel 171 communicate with the exhaust duct 121 without using a separate blower fan as a blower source which allows air to flow through the walljet channel 171, part of air

sucked through the intake opening 131 by the first air suction means 124 and exhausted through the exhaust duct 121 flows within the walljet channel 171.

[0045] Air flowing through the walljet channel 171 is sprayed through the slit 170 and flows towards the intake opening 131 along the protruding surface of the airflow guide portion 172. At this time, the negative pressure is formed on the surface of the airflow guide portion 172 and the ambient air is introduced to the intake opening 131 by the pressure difference.

[0046] As shown in Figure 5, a more detailed description on the airflow guide portion and the walljet channel of the second embodiment of the present invention is the same as that of the first embodiment, and thus the description will be omitted.

[0047] Firstly, the hood ventilation system of the present invention is operated simultaneously with when cooking foods in the cooking source 140.

[0048] When the power is supplied to the motor constituting the first air suction means 124, the motor operates to thereby rotate the fan to generate airstreams by suction force.

[0049] At this time, air including cooking by-products generated during cooking in the cooking source 140 is carried upward by convection, passes the grease filter 123 mounted at the lower surface of the air collecting chamber 130 of the hood by the suction force produced by the first air suction means 124 to thereby filter the cooking by-products and then is sucked into the air collecting chamber 130. Air sucked into the air collecting chamber 130 is exhausted to the outside through the exhaust duct 121.

[0050] At the same time, the second air suction means 180 operates to improve air collection efficiency through the intake opening. That is, part of air passing the exhaust duct 121 and exhausted to the outside is introduced within the walljet channel 171 communicating with the exhaust duct 21, and the introduced air passes the walljet channel 171 and then is sprayed at the proper speed through the slit 170. The air sprayed through the slit 170 flows in a direction of the intake opening 131 along the protruding surface of the airflow guide portion 172. At this time, negative pressure is formed around the airflow guide portion 172, which allows air which has not been sucked into the intake opening 131 by the first air suction means 124 but spread out to be introduced towards the intake opening 131 by the pressure difference of air. The introduced air flows into the hood 110 through the intake opening 131 and then is exhausted to the outside through the exhaust duct 121.

[0051] Figures 6 and 8 are graphs showing that performance of the hood ventilation system in accordance with the present invention is analyzed using computational fluid dynamics (CFD). Figure 6 is a graph showing a velocity vector field of airflow through the second air suction means of the present invention, Figure 7 is a graph showing a pressure field of airflow through the second air suction means of the present invention and Figure 8 is a graph showing an airflow locus by the second air suction means of the present invention.

[0052] As shown in Figures 6 and 7, it can be checked that as air sprayed through the walljet channel 151 and 171 is guided and flows by the airflow guide portion 152 and 172, negative pressure is generated around the airflow guide portions 152 and 157 toward the intake opening 131 by the coanda effect.

[0053] In addition, as shown in Figure 8, it also can be checked that air containing the cooking by-products which spreads toward a lower circumferential edge of the air collecting chamber 130 of the hood 110 is sucked into the intake opening 131 by suction force according to the fact that the negative pressure is formed around the airflow guide portions 152 and 157 toward the intake opening 131.

[0054] As so far described, the hood ventilation system in accordance with the present invention can improve efficiency in collecting contaminated air produced during cooking and maintain comfortable indoor environments by introducing part of air including cooking by-products, which has not been sucked into the intake opening around the and spread in the vicinity of the intake opening by the pressure difference caused by artificial generation of negative pressure, to the hood.

[0055] In addition, by additionally operating the second air suction means at a low suction velocity by the first air suction means, air containing cooking by-products can be exhausted through the hood at low power consumption and more efficiently.

[0056] In addition, by installing a lighting system in the airflow guide portion, appearance and diversity in a design method are improved.

Claims

1. Hood ventilation system, comprising

a hood (110) installed over a cooking source (140) and having an intake opening (131) at a surface of the hood (110) opposed to the cooking source (140) in order that air including cooking by-products generated from the cooking source (140) can be sucked into the intake opening (131);

a first air suction means (124) installed in the hood (110) and generating suction force for sucking air through the intake opening (131) and exhausting air through an exhaust duct (121) communicated with the first air suction means (124) to the outside; , and

a second air suction means (160; 180) installed at the hood (110) and generating suction force in order that air escaping from the intake opening (131) can be introduced into the intake opening (131), the second air suction means (160, 180) generating negative pressure in the vicinity of the outer circumference of the intake opening (131),

the second air suction means (160, 180) comprising

a walljet channel (151; 171) having an air suction opening (122) at its one side and a blower far (123) installed therein for allowing air outside the hood to flow in through the air suction opening (122) and formed at a wall surface of the hood in order that the air having flowed in can be sprayed through a slit (150; 170) formed around the intake opening (131) and
an airflow guide portion (152; 172) extending from the slit (150, 170) and protrudingly formed around the intake opening (131) for generating negative pressure around the surface of the airflow guide portion (152; 172) itself white the air sprayed from the slit (150, 170) moves along the surface,
characterized by
the airflow guide portion (152; 172) being a circular hollow member having a protruding curved surface and being provided in its protruding surface with a light transmission window (161), and has a lighting source (162) installed therein.

2. Ventilation system of claim 1, wherein the walljet channel (151; 171) is formed at an outer wall of the hood (110).

3. Ventilation system of claim 1 or 2, wherein the walljet channel (151; 171) is formed inside the hood (110).

4. Ventilation system of any one of claims 1 to 3, wherein the walljet channel (151; 171) around the slit (150; 170) is formed to be curved towards the airflow guide portion (152; 172) so that air sprayed through the slit can easily be introduced to the airflow guide portion.

5. Ventilation system of any one of claims 1 to 4, wherein the slit (150; 170) and the airflow guide portion (152; 172) are formed to encompass the circumference of the intake opening (131).

6. Ventilation system of any one of claims 1 to 5, wherein the velocity of air flowing through the walljet channel (151; 171) is 3 to 5 m/s.

Patentansprüche

1. Haubenbelüftungssystem, umfassend
eine Haube (110), die über einer Kochquelle (140) montiert ist und eine Einlassöffnung (131) an einer Oberfläche der Haube (110) gegenüber der Kochquelle (140) aufweist, damit Luft einschließlich von Kochnebenprodukten, die von der Kochquelle (140) erzeugt werden, in die Einlassöffnung (131) gesaugt werden können;
ein erstes Luftansaugmittel (124), das in der Haube (110) montiert ist und eine Saugkraft erzeugt, um Luft durch die Einlassöffnung (131) anzusaugen und Luft durch eine mit dem ersten Luftansaugmittel (124) in Verbindung stehenden Abluftleitung (121) auszublasen;
und
ein zweites Luftansaugmittel (160; 180), das an der Haube (110) montiert ist und eine Saugkraft erzeugt, damit der Einlassöffnung (131) entgehende Luft in die Einlassöffnung (131) eingeführt werden kann, wobei das zweite Luftansaugmittel (160; 180) einen Unterdruck in der Nähe des äußeren Umfangs der Einlassöffnung (131) erzeugt,
wobei das zweite Luftansaugmittel (160; 180) umfasst:

einen Wandstrahlkanal (151; 171), der eine Luftansaugöffnung (122) an seiner einen Seite und einen darin montierten Gebläseventilator (123) aufweist, um Luft außerhalb der Haube durch die Luftansaugöffnung (122) einströmen zu lassen, und der an einer Wandfläche der Haube montiert ist, damit die Luft, nachdem sie eingeströmt ist, durch einen um die Einlassöffnung (131) gebildeten Schlitz (150; 170) gesprüht werden kann; und
einen Luftstromführungsabschnitt (152; 172), der sich von dem Schlitz (150; 170) erstreckt und hervorspringend um die Einlassöffnung (131) herum gebildet ist, um Unterdruck um die Oberfläche des Luftstromführungsabschnitts (152; 172) selbst zu erzeugen, während die von dem Schlitz (150; 170) gesprühte Luft sich entlang der Oberfläche bewegt,

dadurch gekennzeichnet, dass der Luftstromführungsabschnitt (152; 172) ein kreisförmiges hohles Element ist, das eine hervorspringende gekrümmte Oberfläche aufweist und in seiner hervorspringenden Oberfläche mit einem Lichtdurchlassfenster (161) versehen ist, und das eine darin montierte Lichtquelle (162) aufweist.

2. Belüftungssystem nach Anspruch 1, wobei der Wandstrahlkanal (151; 171) an einer äußeren Wand der Haube (110) gebildet ist.

3. Belüftungssystem nach Anspruch 1 oder 2, wobei der Wandstrahlkanal (151; 171) innerhalb der Haube (110) gebildet ist.

4. Belüftungssystem nach irgendeinem der Ansprüche 1 bis 3, wobei der Wandstrahikanai (151; 171) um den Schlitz (150; 170) herum auf den Luftstromführungsabschnitt (152; 172) zu gekrümmt gebildet ist, so dass durch den Schlitz gesprühte Luft leicht in den Luftstromführungsabschnitt eingeführt werden kann.

5. Belüftungssystem nach irgendeinem der Ansprüche 1 bis 4, wobei der Schlitz (150; 170) und der Luft-

stromführungsabschnitt (152; 172) so gebildet sind, dass sie den Umfang der Einlassöffnung (131) umgeben.

6. Belüftungssystem nach irgendeinem der Ansprüche 1 bis 5, wobei die Geschwindigkeit der durch den Wandstrahlkanal (151; 171) strömenden Luft 3 bis 5 m/s beträgt.

Revendications

1. Système de ventilation à hotte, comprenant :

une hotte (110) installée au-dessus d'une source de cuisson (140) et ayant une ouverture d'admission (131) sur une surface de la hotte (110) opposée à la source de cuisson (140) de sorte que l'air contenant des sous-produits de cuisson générés par la source de cuisson (140) puisse être aspiré dans l'ouverture d'admission ;
un premier moyen d'aspiration d'air (124) installé dans la hotte (110) et générant une force d'aspiration pour aspirer l'air à travers l'ouverture d'admission (131) déchargeant l'air à travers un conduit d'échappement (121) en communication avec le premier moyen d'aspiration d'air (124) vers l'extérieur ; et
un second moyen d'aspiration d'air (160 ; 180) installé sur la hotte (110) et générant une force d'aspiration de sorte que de l'air s'échappant de l'ouverture d'admission (131) puisse être introduit dans l'ouverture d'admission (131), le second moyen d'aspiration d'air (160, 180) générant une pression négative à proximité de la circonférence externe de l'ouverture d'admission (131),
le second moyen d'aspiration d'air (160, 180) comprenant :

un canal de jet de paroi (151 ; 171) ayant une ouverture d'aspiration d'air (122) sur l'un de ses côtés et contenant un ventilateur de soufflerie (123) pour permettre à l'air se trouvant à l'extérieur de la hotte de s'y écouler à travers l'ouverture d'aspiration d'air (122) et formé sur une surface de paroi de la hotte de sorte que l'air qui s'y est écoulé puisse être pulvérisé à travers une fente (150 ; 170) formée autour de l'ouverture d'admission (131), et
une portion de guidage d'écoulement d'air (152 ; 172) s'étendant de la fente (150, 170) et formé en saillie autour de l'ouverture d'admission (131) pour générer une pression négative autour de la surface de la portion de guidage d'écoulement d'air (152, 172) elle-même, tandis que l'air pulvérisé issu de la fente (150, 170) se déplace le long de la surface,
caractérisé en ce que la portion de guidage d'écoulement d'air (152 ; 172) est un élément circulaire creux ayant une surface saillante incurvée et est pourvue, dans sa surface saillante, d'une fenêtre de transmission de lumière (161), à l'intérieur de laquelle est installée une source d'éclairage (162).

2. Système de ventilation selon la revendication 1, dans lequel le canal de jet de paroi (151 ; 171) est formé sur une paroi externe de la hotte (110).

3. Système de ventilation selon la revendication 1 ou 2, dans lequel le canal de jet de paroi (151 ; 171) est formé à l'intérieur de la hotte (110).

4. Système de ventilation selon l'une quelconque des revendications 1 à 3, dans lequel le canal de jet de paroi (151 ; 171) autour de la fente (150 ; 170) est formé pour s'incurver vers la portion de guidage d'écoulement d'air (152 ; 172) de sorte que l'air pulvérisé à travers la fente puisse être aisément introduit dans la portion de guidage d'écoulement d'air.

5. Système de ventilation selon l'une quelconque des revendications 1 à 4, dans lequel la fente (150 ; 170) et la portion de guidage d'écoulement d'air (152 ; 172) sont formées pour englober la circonférence de l'ouverture d'admission (131).

6. Système de ventilation selon l'une quelconque des revendications 1 à 5, dans lequel la vitesse de l'air s'écoulant à travers le canal de jet de paroi (151; 171) est de 3 à 5 m/s.

FIG. 1

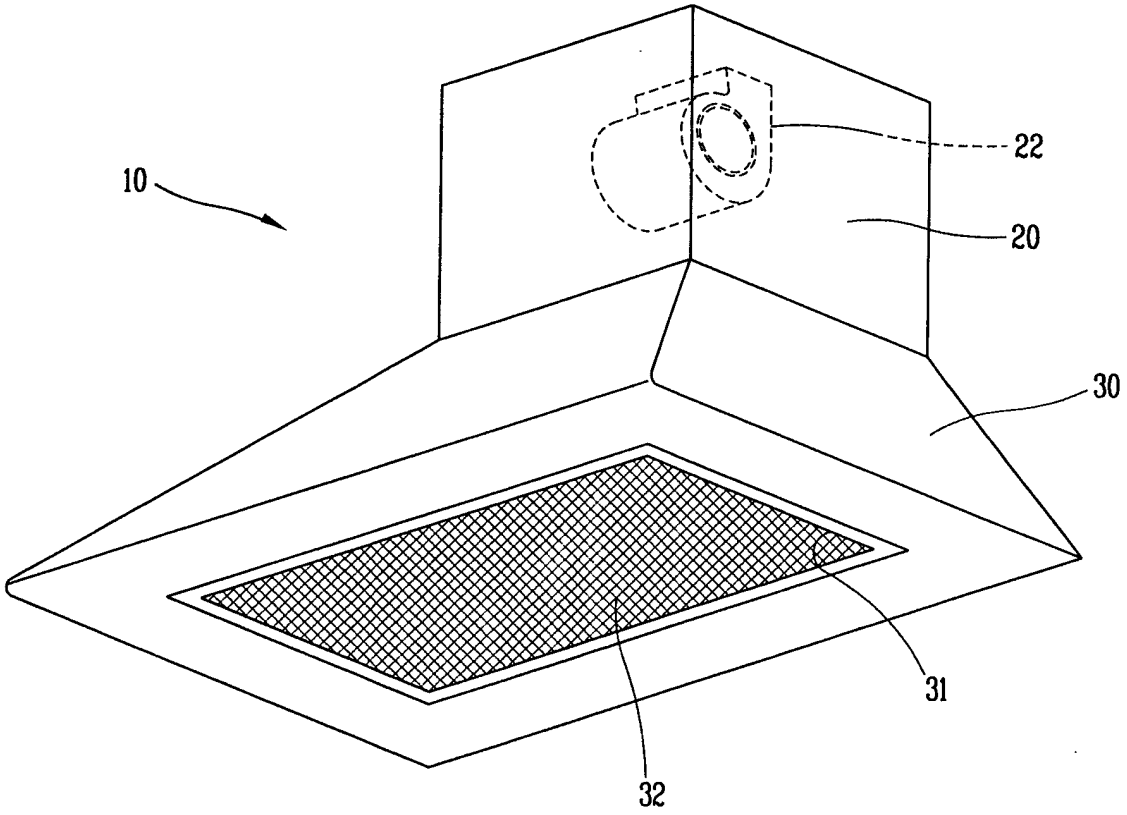


FIG. 2

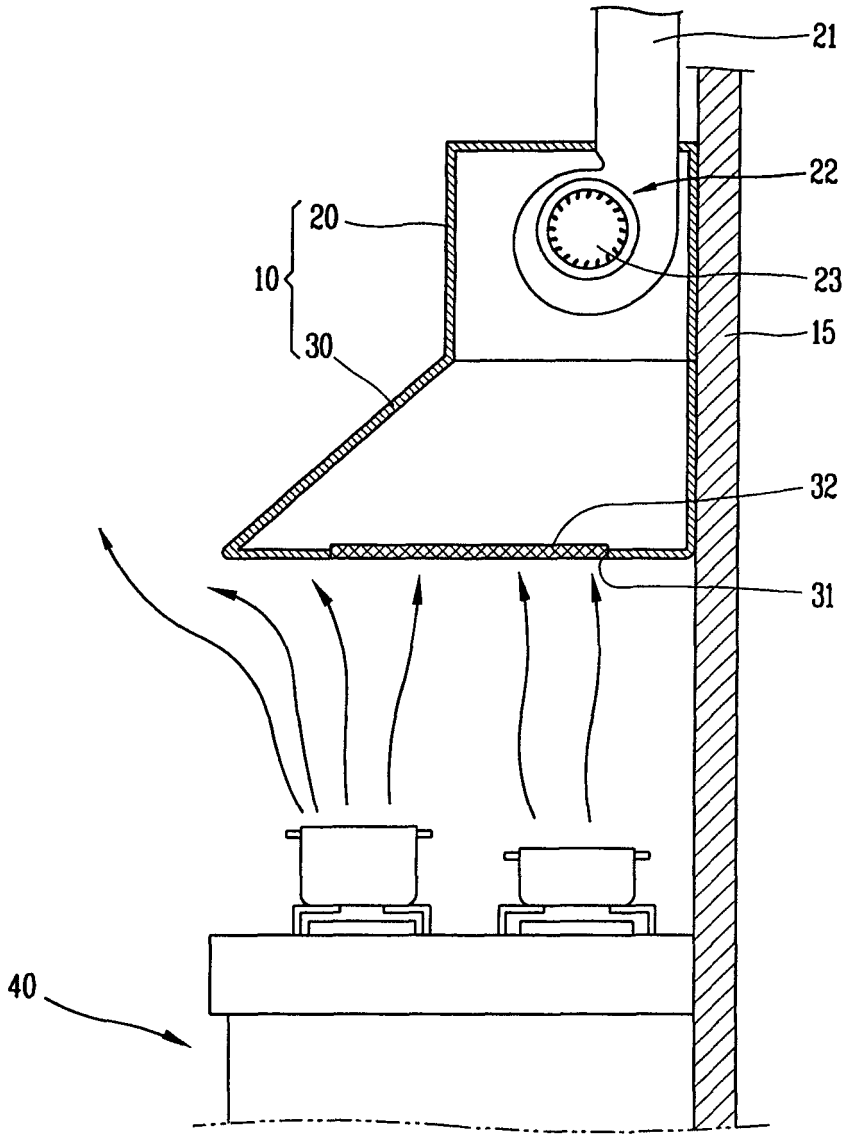


FIG. 3

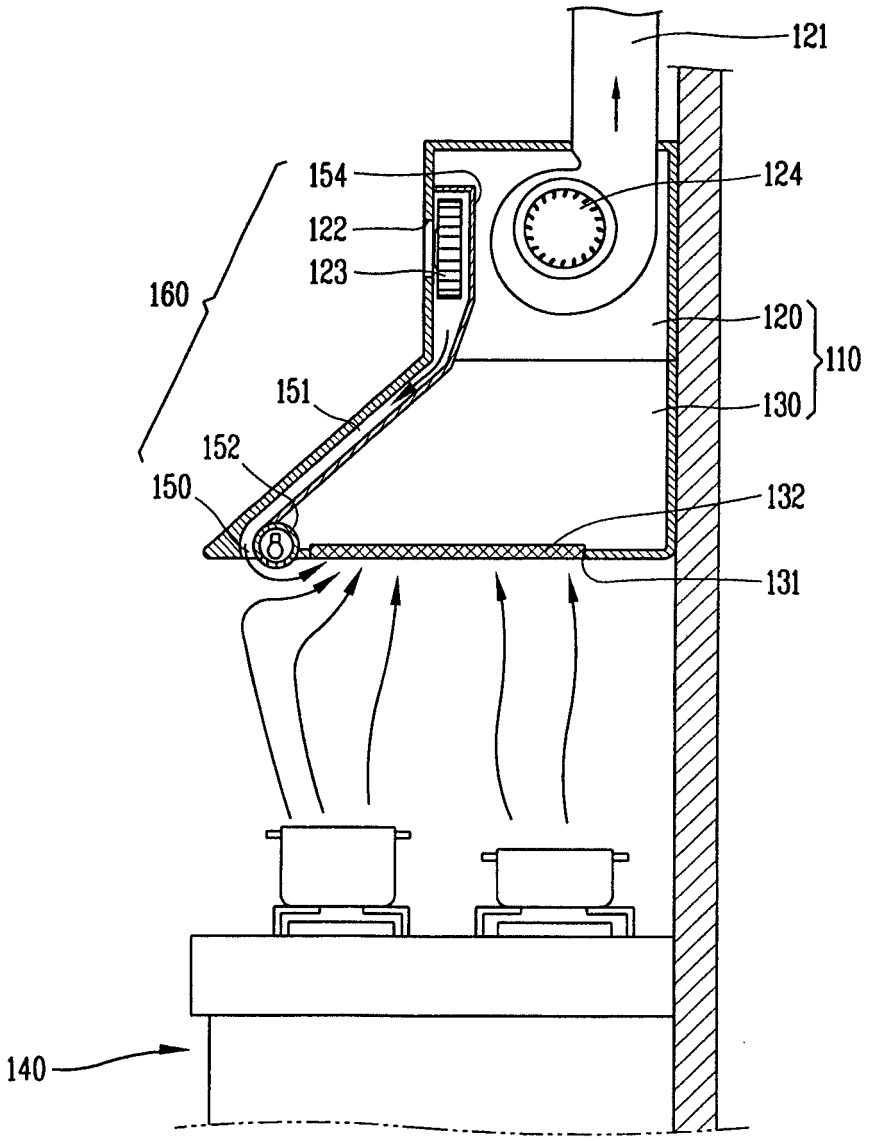


FIG. 4

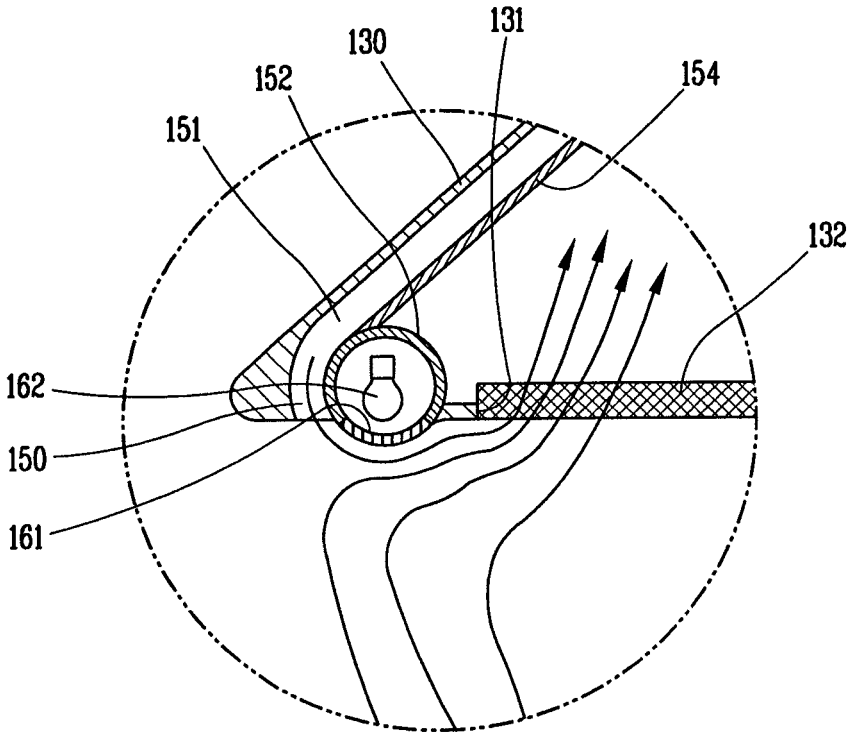


FIG. 5

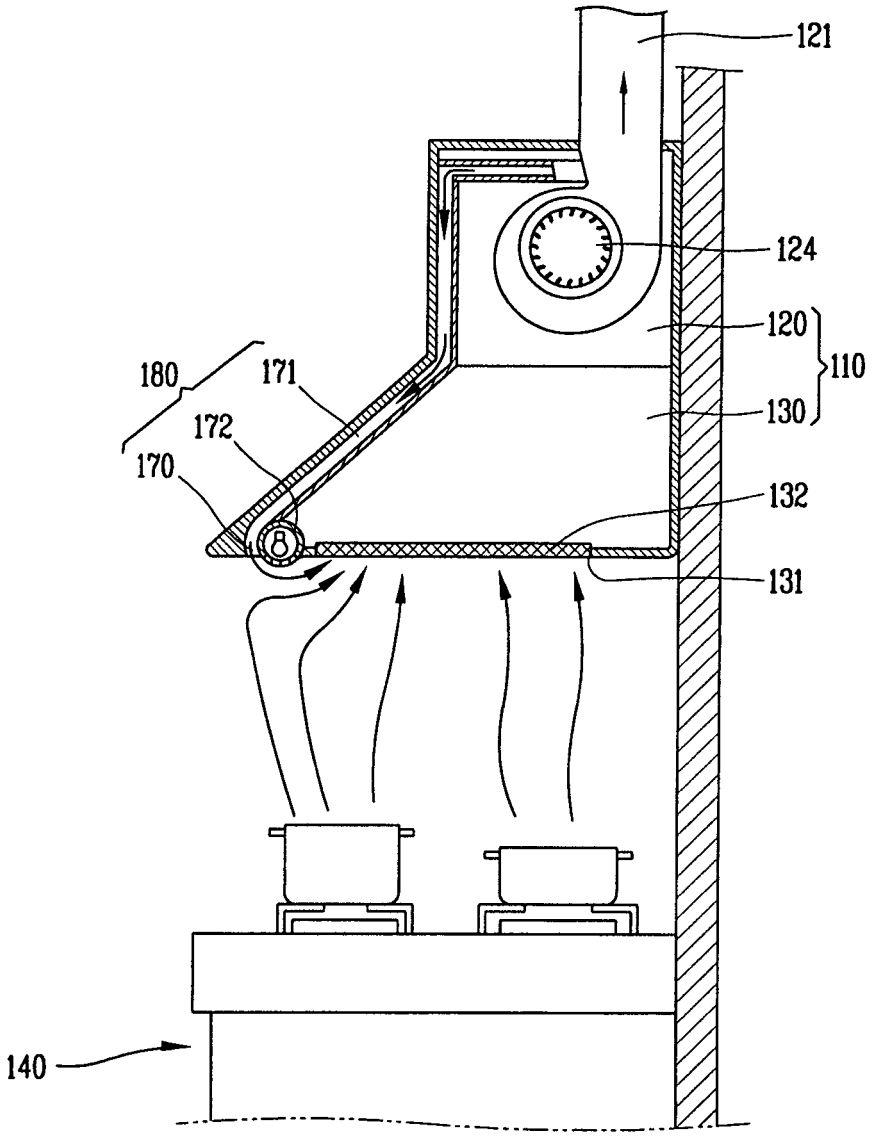
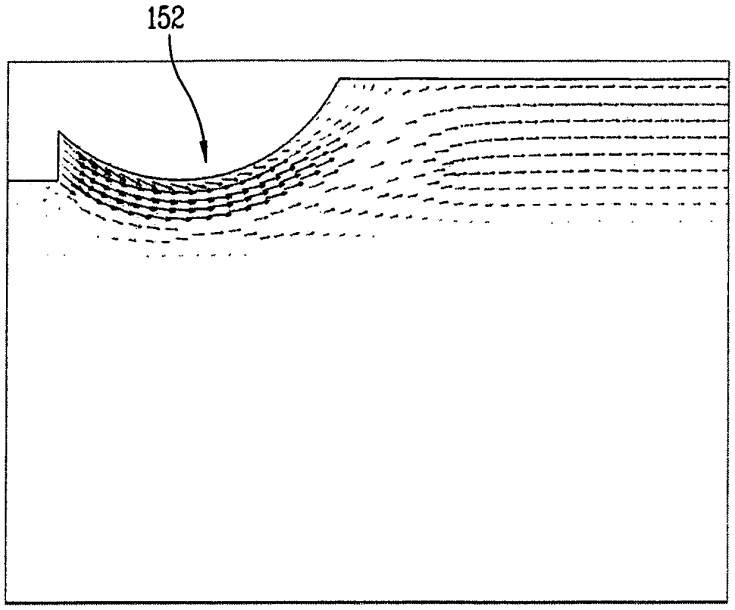
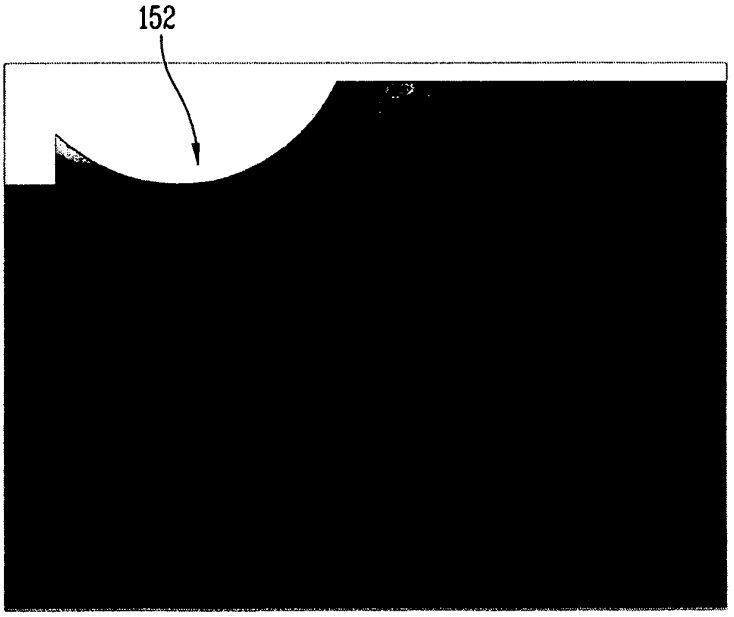


FIG. 6



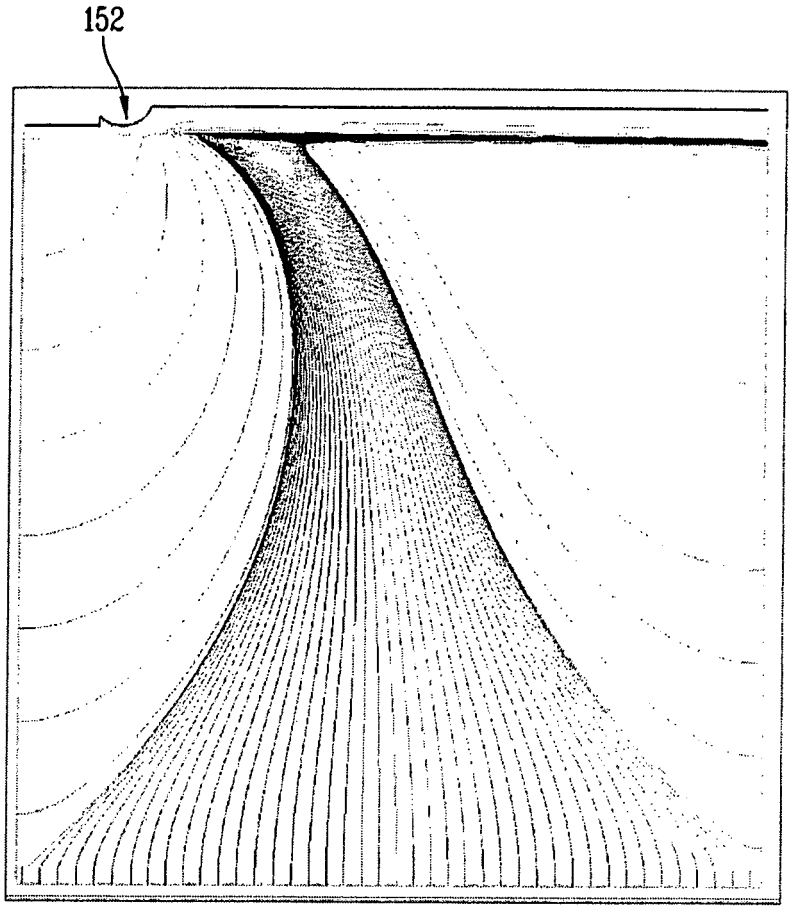
VELOCITY

FIG. 7



PRESSURE

FIG. 8



AIRFLOW LOCUS

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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