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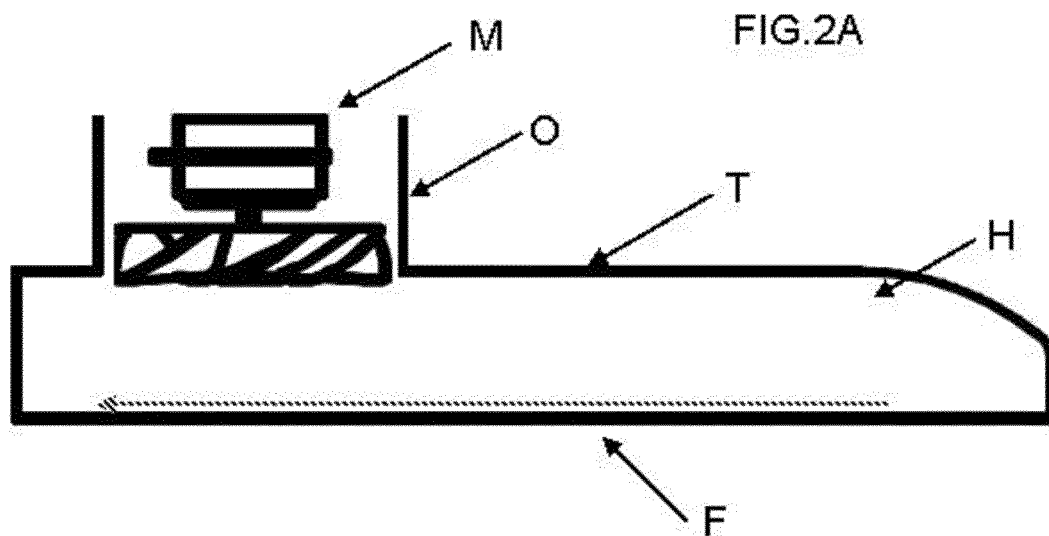
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BA ME(71) Applicant: **Ningbo Baoruima Kitchen Technique Co. Pte Ltd.****Ningbo Free Trade Area (CN)**(72) Inventor: **Choy, Chan Seng****Nongbo Free Trade Area (CN)**(74) Representative: **Hill, Richard****Hill-IP****The Warrant House****High Street****Altrincham****Cheshire WA14 1PZ (GB)**(54) **Direct drive ventilation cooker hood**

(57) A kitchen extractor hood which comprises an outlet that is located usually on the upper part of the hood shield casing. The outlet is connected to a centrifugal blower located inside the hood shield casing (H). The primary function of the hood is to expel cooking fumes from the household kitchen by the air pressure generated by the blower, via the outlet into an appropriate ducting system.

The invention eliminates the need for a centrifugal blower by mounting a motor driven propeller (M) in the

outlet. When the motor is running, the propeller creates air pressure that pushes cooking fumes collected by hood shield casing (H) through the outlet and into the duct system. The result is a reduction of components needed to manufacture the hood, higher efficiency due to the axially direct flow of the cooking fumes from the hood shield casing through the outlet and into the duct system. Without a centrifugal blower system inside, the hood shield casing (H) can have more designs possibilities than those limited by the dimensions of the centrifugal blower.

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Description

[0001] The present invention relates to a household extractor hood which has a functional component call the outlet connector which connects to the duct for the purpose of directing cooking fumes to be expelled out of the kitchen. The outlet connector is usually of flame-proof plastic or metallic material.

[0002] Present household kitchen extractors rely on a blower system, usually a centrifugal blower located in hood shield casing. When the blower is running, the low pressure generated in the hood shield casing generated attracts cooking fumes under hood. The cooking fumes travel past a grease condensing filter of a metallic or other suitable material. The blower then ejects the cooking fumes through the outlet connector to the duct system to be expelled out of the kitchen.

[0003] The object of the present invention is to create a kitchen extractor hood having the same function of expelling cooking fumes out of the kitchen without a centrifugal blower that is mounted within the hood shield casing.

[0004] The objective is achieved through mounting an electric motor driven propeller inside the outlet connector. When the motor is running, the propeller turns, creating a differential pressure that attracts cooking fumes into the hood shield casing. The cooking fumes passes through grease filters into the hood shield casing is further forced into the duct system by the propeller. (see fig.2)

[0005] As a result, the hood performs the function of expelling cooking fumes from the kitchen, eliminating the need for a centrifugal motor mounted inside the hood shield casing.

[0006] The propeller and the motor are located in the outlet in a position that could be higher or lower than the top panel of the hood shield casing (see fig.3) in order to achieve the best conditions for the particular design of hood it is equipped with.

[0007] The identifying feature of this novel system is the axis of the propeller & the motor spindle is inline with the tubular cross section centre point of the outlet connector. (see fig.4)

[0008] The motor is operated by electricity. The on or off switch and the power levels are controlled by means of a mechanical or electronic switch located on the hood itself.

[0009] The propeller can be made of plastic, metallic or any other suitable material.

[0010] The invention is explained in detail with support of illustration in which;

H refers to hood shield casing

T refers to top panel of hood shield casing

D refers to decorative funnel

O refers to outlet connector

C refers to centrifugal motor

M refers to motor & propeller

F refers to aluminum filter

FIG.1A, 1B, 1C, 2D are schematic perspective views of various typical kitchen extractor hoods showing the deployment of centrifugal blowers.

FIG.2A, 2B, 2C, 2D are schematic perspective views of various typical kitchen extractor hoods equipped with the invention.

FIG.3A, 3B, 3C, 3D illustrates the various alternative positions and locations of the fan and propeller combination in relation with the top panel of the hood

[0011] A variant of the invention will have the diameter of the propeller larger or smaller than the outlet connector. However, the identifying feature remains that the axial of the propeller, motor spindle and center of the cross section area of the outlet connector are inline, as illustrated in FIG 4A, 4B.

[0012] Another variant will see the tubular shape of the outlet connector angled, possibly to encompass the special design structure of a hood shield casing in FIG 5.

Claims

1. A household extractor hood having at least one functional component including an outlet that mounts a motor and propeller to generate pressure difference between the hood shield casing and the ducting system so that the hoods performs the function of expelling cooking fumes from the kitchen without the deployment of a centrifugal blower.
2. An extractor hood according to Claim 1 **characterised in that** the propeller, motor spindle and centre of the tubular shape of the outlet connector have a common axis.
3. An extractor hood according to Claim 1 or Claim 2 where in part or all of the motor and propeller is located in the outlet.
4. An extractor hood according to any one of Claims 1 to 3 in which a diameter of the propeller is larger or smaller than the outlet connection.
5. An extractor hood according to any one of Claims 1 to 4 wherein said outlet connector is angled relative to the alignment of the other components.

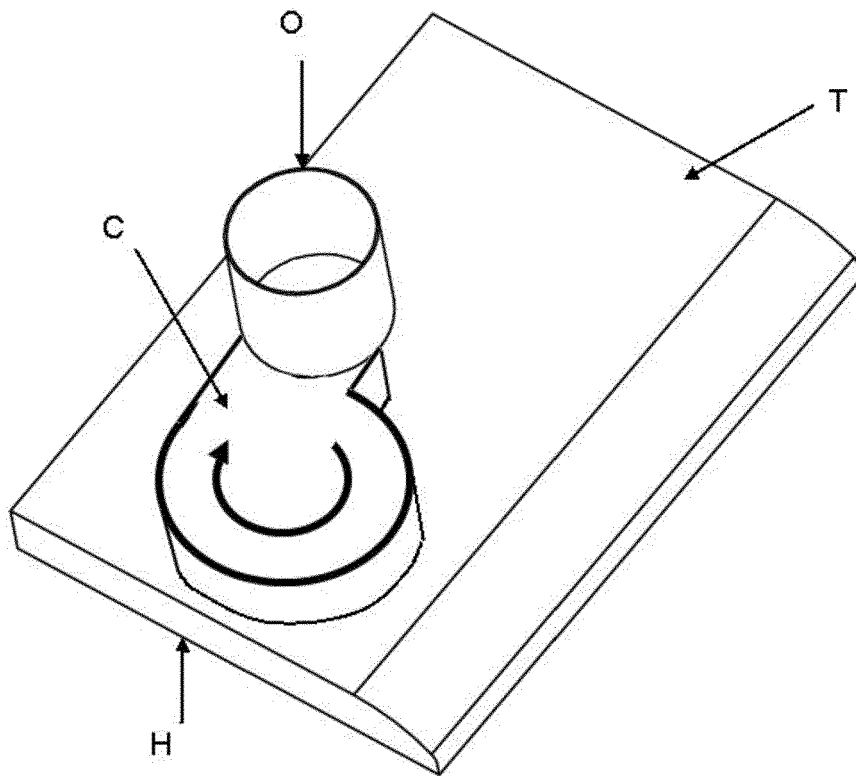
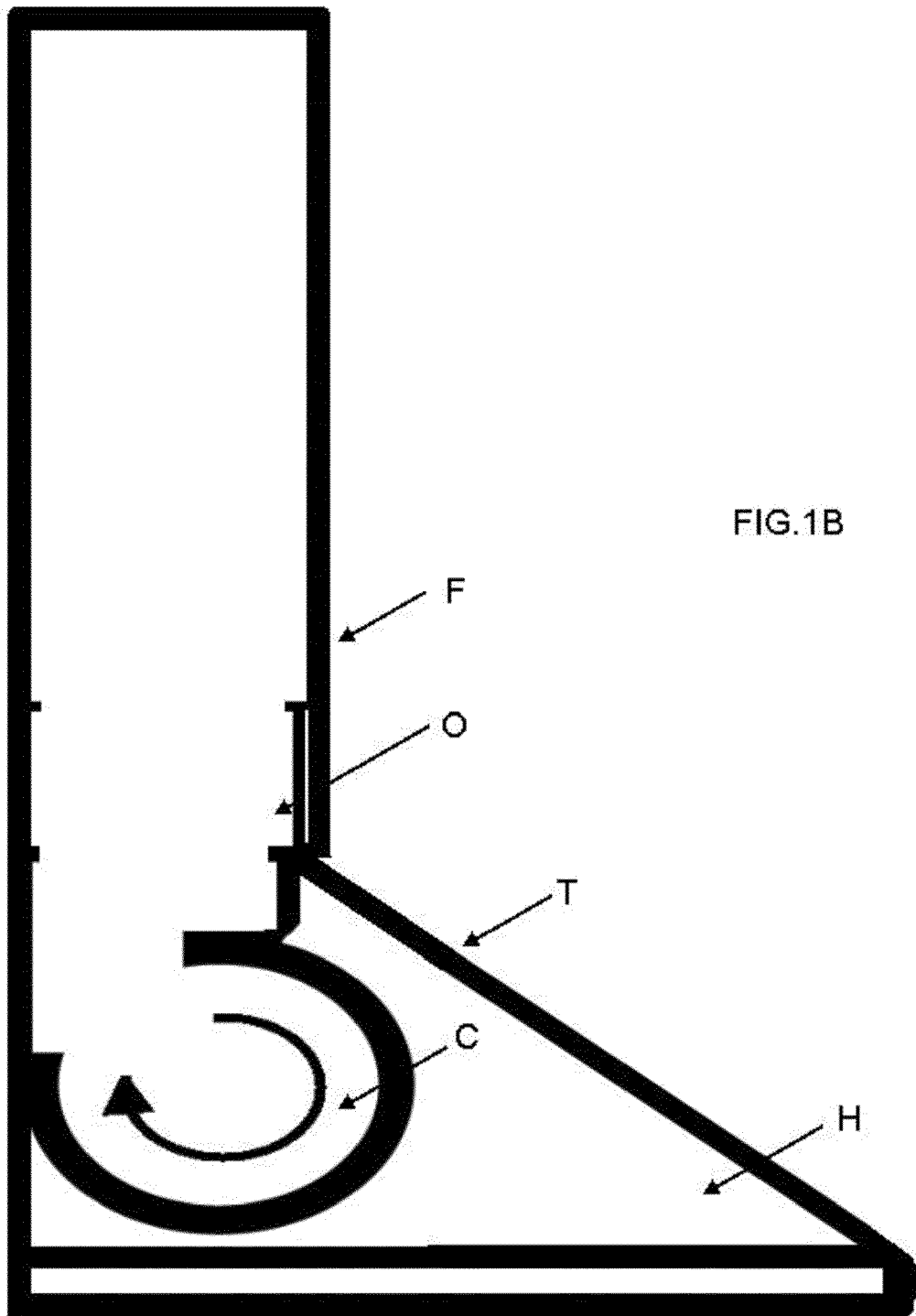
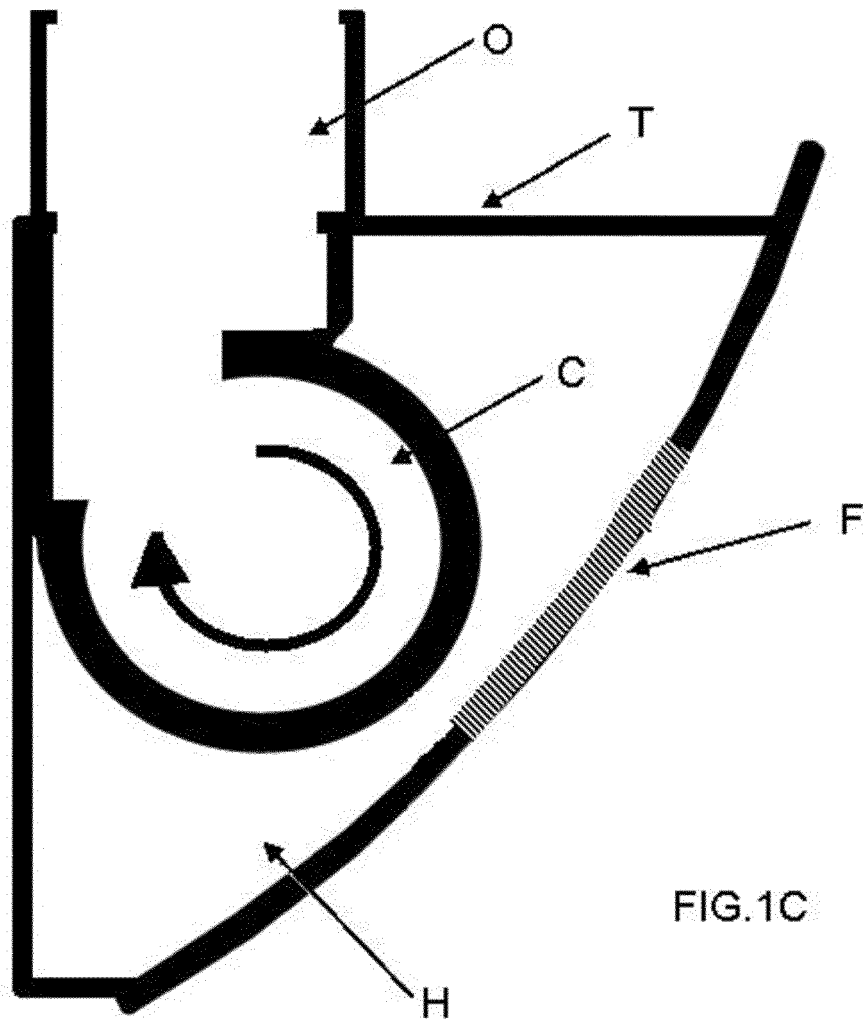
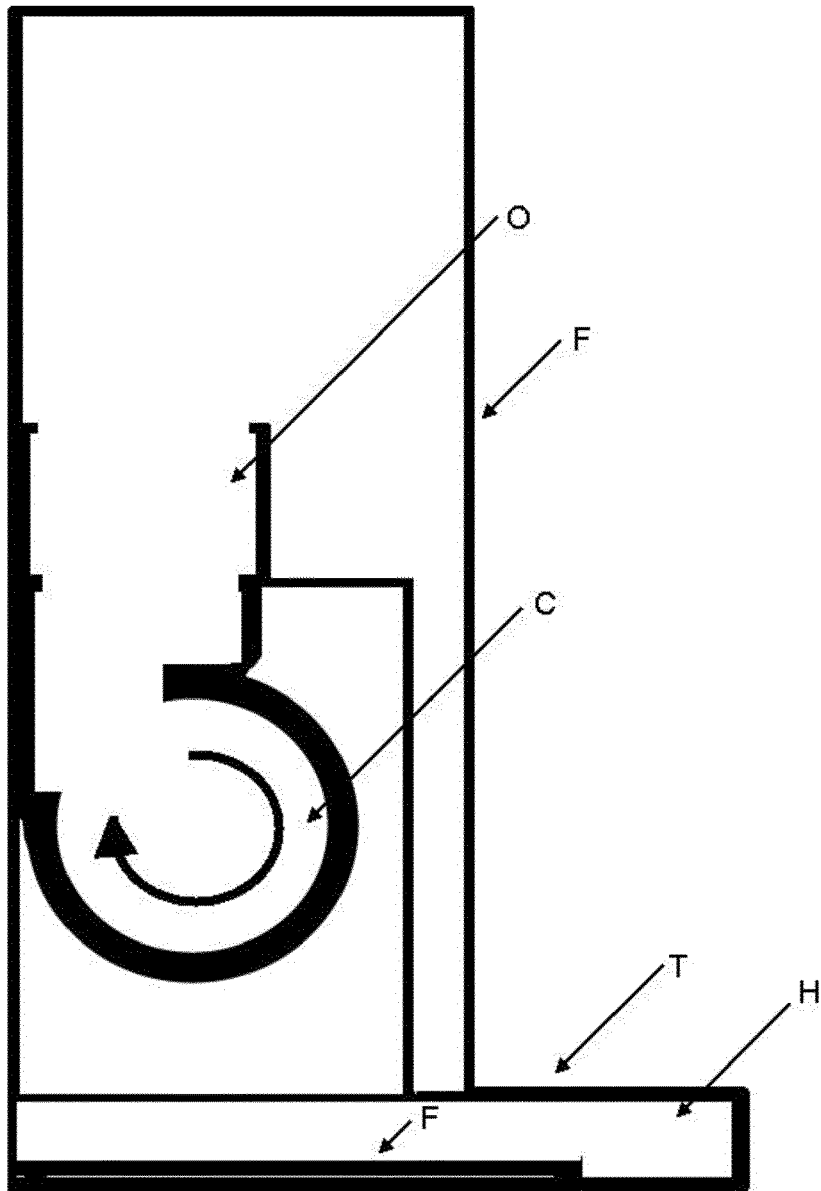
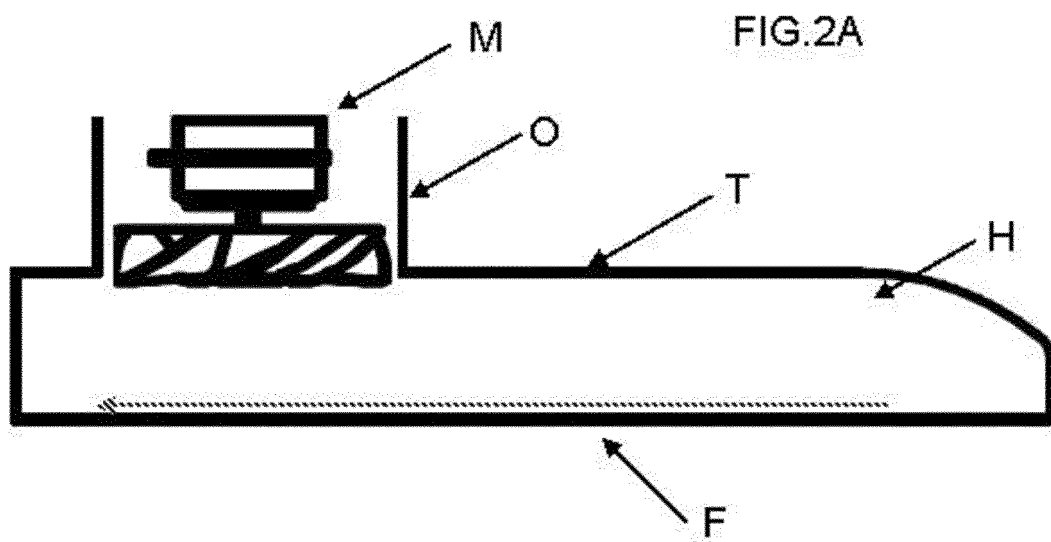


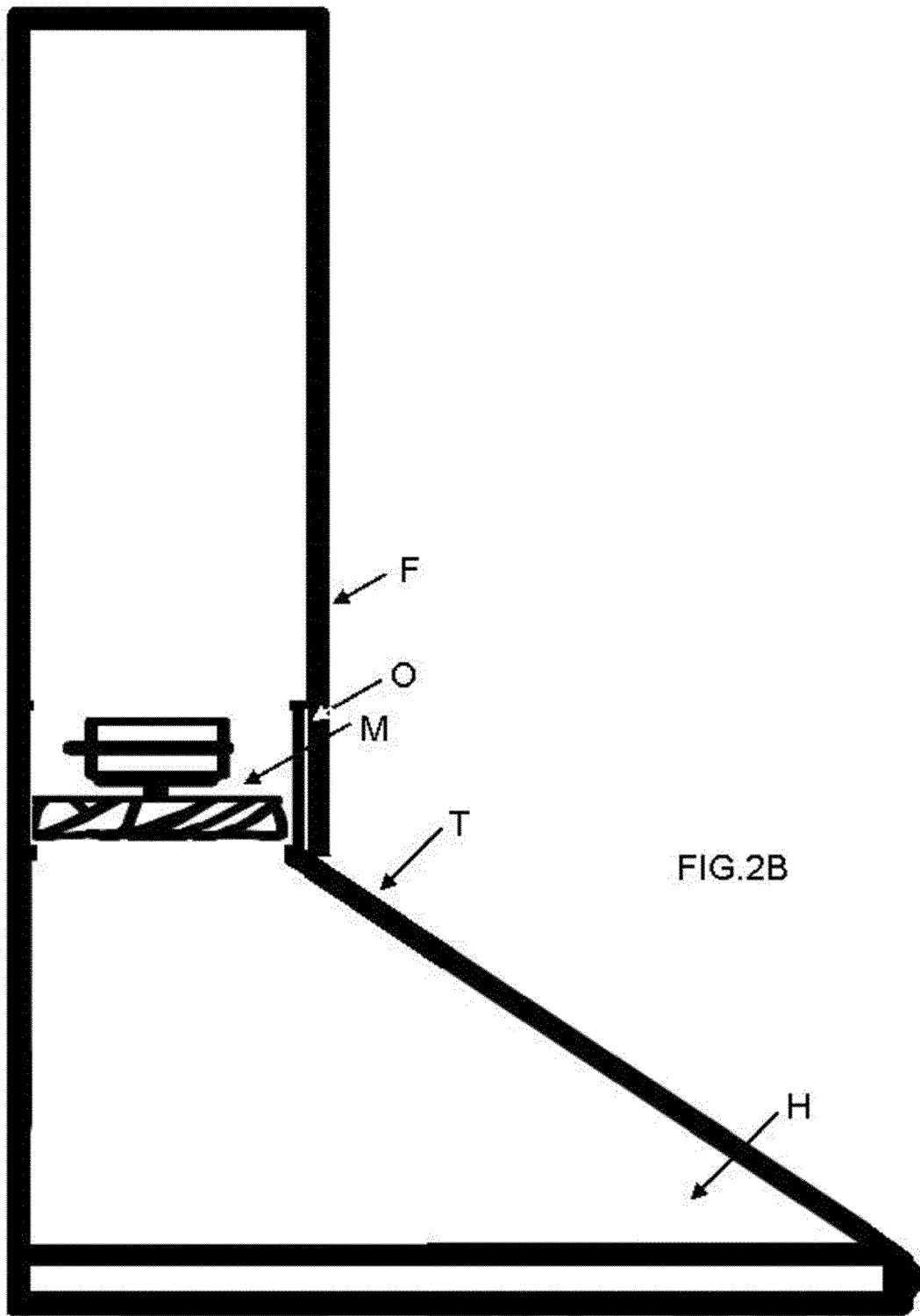
FIG. 1A

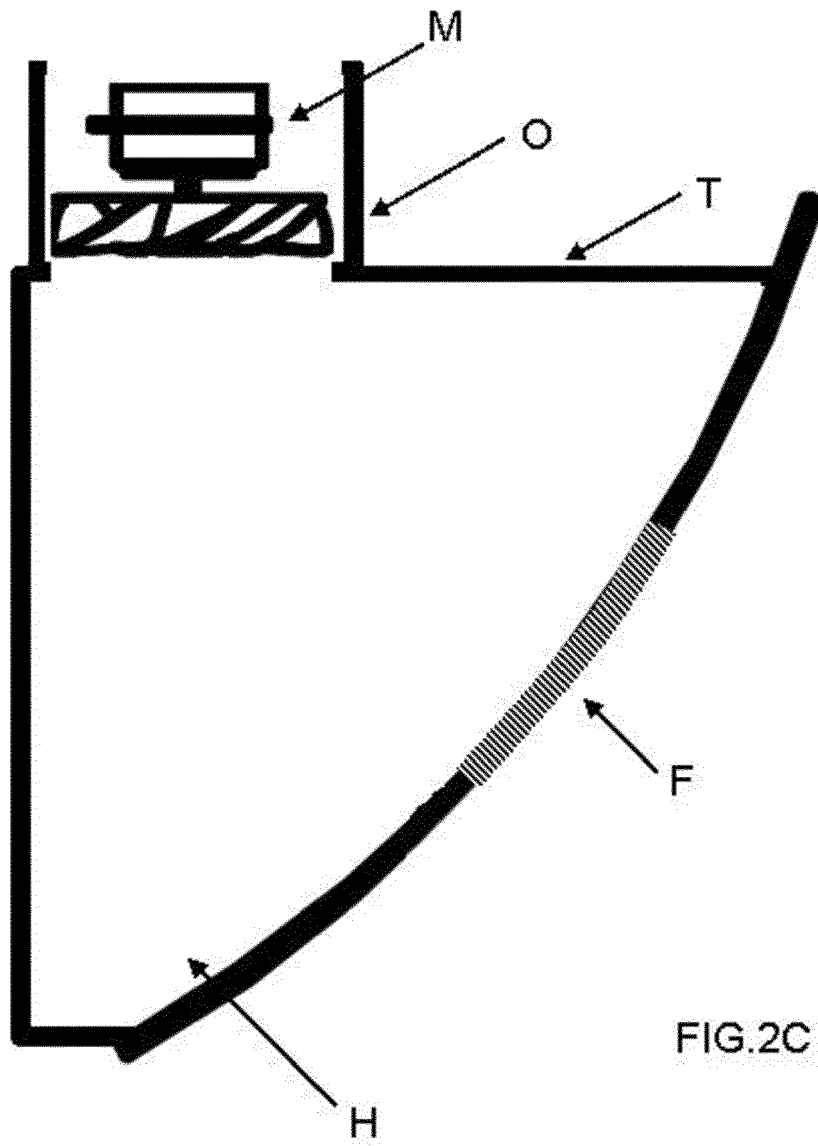


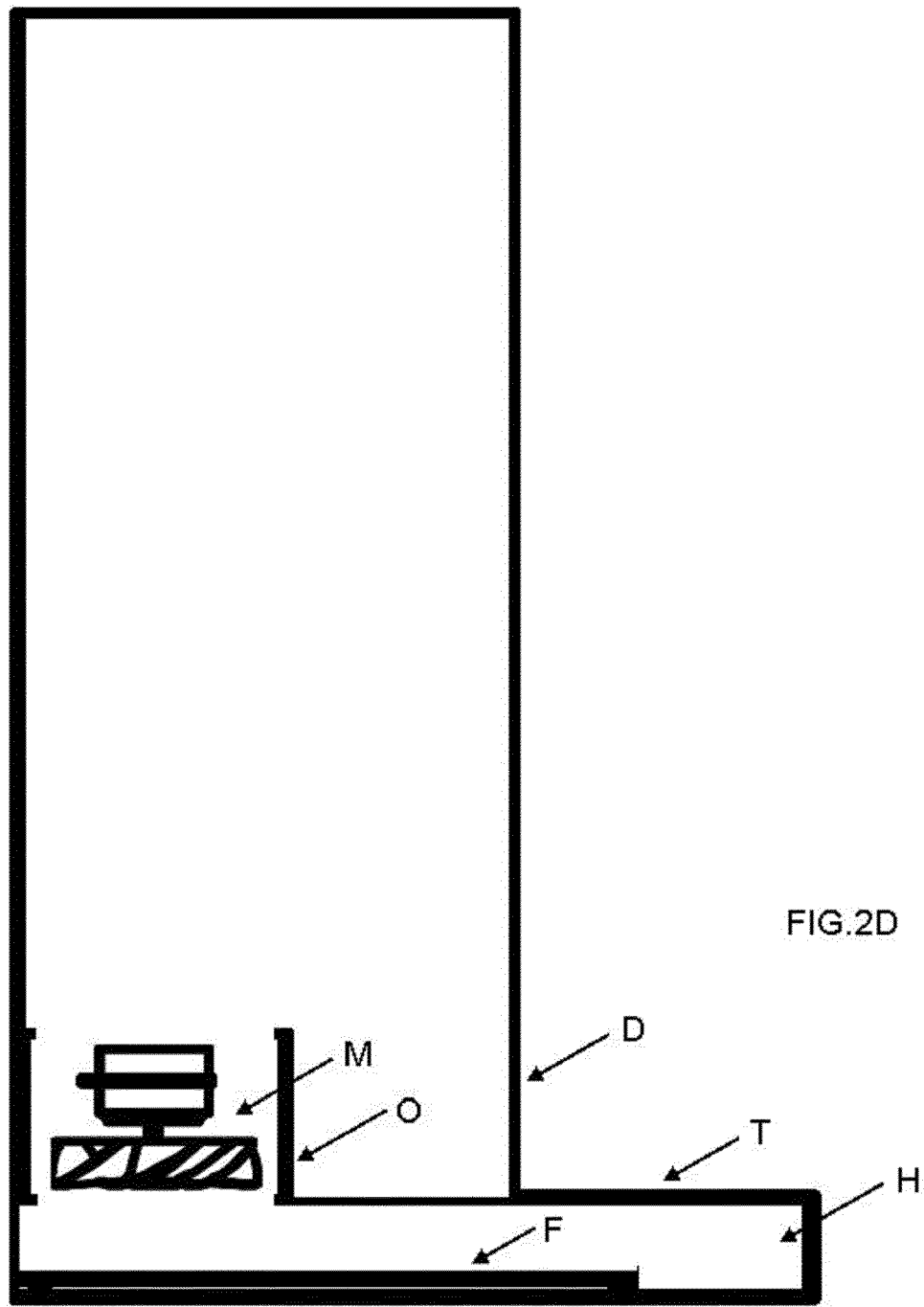


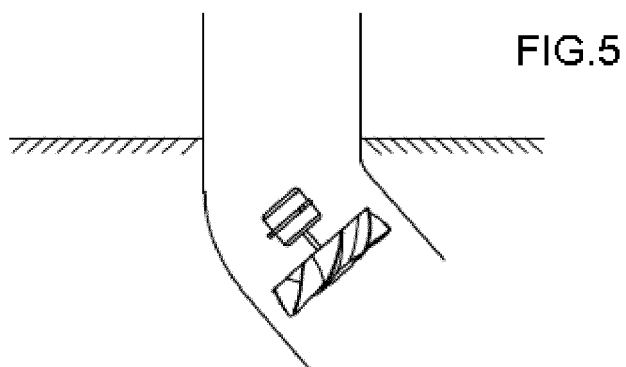
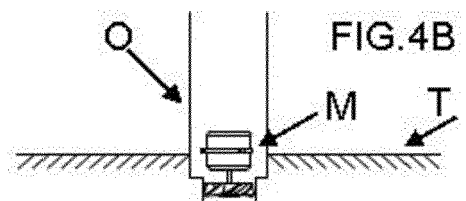
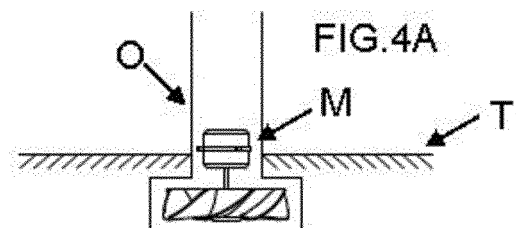
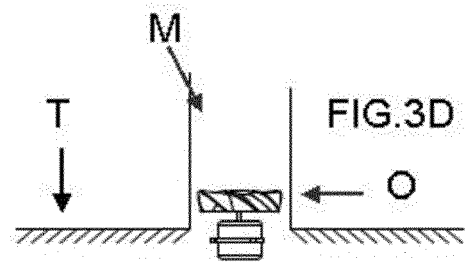
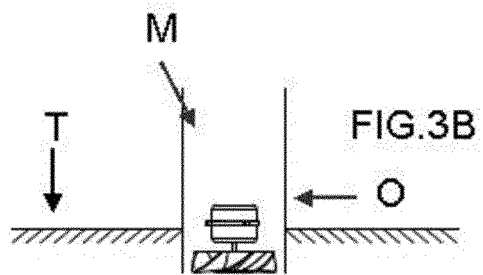
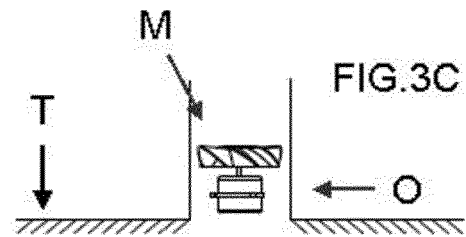
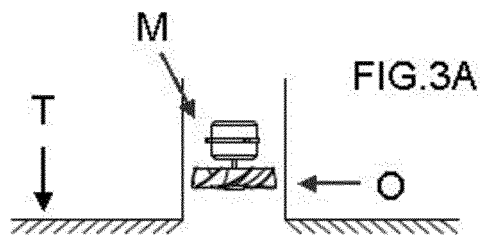














EUROPEAN SEARCH REPORT

Application Number
EP 11 19 5366

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 30 May 2012	Examiner Adant, Vincent
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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