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(54) STEAM IRONING DEVICE

(57) The present invention relates to the technical field of hand-held household appliances and discloses a steam ironing device, which comprises a shell (100), a steam generation assembly (200) is arranged on the shell (100), the steam generation assembly (200) is connected with an ironing panel (300), and a steam outlet (301) is formed in the ironing panel (300); an air suction assembly (400) is arranged on the shell (100), an air suction opening (401) is formed in the air suction assembly (400), and the air suction opening (401) and the steam outlet (301) are located in the same side of the shell (100). The ironing device has the advantages of being capable of adsorbing clothes, high in ironing efficiency and convenient to operate.

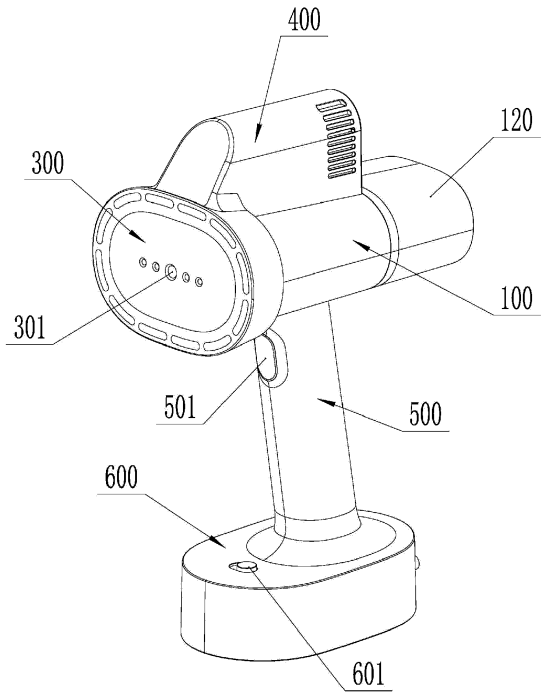

Fig.1

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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to the technical field of hand-held household appliances, particularly to a steam ironing device.

2. Description of the Related Art

[0002] Steam ironing device is one of the commonly used device for ironing clothes, at present, most of the ironing device on the market has the function of steam ironing, so as to meet people's needs for ironing clothes.

[0003] In the prior art, when the steam ironing device is actually used, steam is ejected by starting the steam ironing device to operate, so that the clothes are ironed. But, when some people iron clothes or iron some clothes, one hand is needed to hold the steam ironing device, and the other hand continuously pulls the clothes, so that the expected ironing effect is guaranteed as much as possible. Although the above-mentioned scheme can meet the demand of ironing to a certain extent, but in the process of use, it is easy to burn the hand corresponding to the clothes, there is certain inconvenience, and its ironing efficiency also needs to be further improved.

SUMMARY OF THE INVENTION

[0004] The invention provides a steam ironing device that can adsorb clothes, high ironing efficiency and convenient operation.

[0005] To achieve the above-mentioned purpose, the technical solution of the invention is listed as follows.

[0006] A steam ironing device, comprises a shell, wherein a steam generation assembly is arranged on the shell, the steam generation assembly is connected with an ironing panel, and a steam outlet is formed in the ironing panel; an air suction assembly is arranged on the shell, an air suction opening is formed in the air suction assembly, and the air suction opening and the steam outlet are located in the same side of the shell.

[0007] The principle and advantages of this solution are: by arranging the air suction assembly on the shell, the air suction assembly can be opened, the flowing air flow and suction can be generated, and by arranging the air suction opening and the steam outlet on the same side of the housing, in specific use, under the action of the flowing air flow and suction, the better adsorption function to the clothes can be realized, that is, it can realize the convenient ironing of clothes with one hand, avoid the improper operation of the hand burn; and the generated air flow can also make the steam produce a certain reflux phenomenon, that is, part of the steam will be sucked away by the air suction assembly in the reverse under the action of the air flow after ironing the clothes for the first time, namely in the process of reflux, the steam are passed through the clothes for the second time, so that the clothes can be ironed to a certain extent, and the ironing efficiency has been further effectively improved.

[0008] Preferably, as an improvement, the air suction outlet and the steam opening are located on the same plane.

[0009] Beneficial effect: the solution that the air suction opening and the steam outlet are located on the same plane can reduce the distance between the steam outlet and the clothes, avoid the temperature reduction of the steam in the transmission path, and realize that the clothes can be more stably fitted to the corresponding end face of the ironing panel under the action of the air suction assembly.

[0010] Preferably, as an improvement, the air suction assembly comprises an air suction hood, the air suction hood is sleeved on the shell, the air suction hood is provided with an air suction plate, and the air suction opening is located on the air suction plate; an air suction channel is provided in the air suction hood, and the air suction opening is communicated with the air suction channel; the air suction hood is provided with a transition portion, the transition portion is connected with an air outlet hood, an air outlet opening is formed in the air outlet hood, and an air suction piece is arranged between the transition portion and the air outlet hood.

[0011] Beneficial effect: by adopting the above-mentioned technical solution, it is convenient to form an air suction channel and facilitate the arrangement of the air suction opening, and the steam air flow that is convenient to be sucked back can be discharged from the air outlet opening in time, so as to ensure the smoothness of the operation of the air suction assembly.

[0012] Preferably, as an improvement, the number of air suction opening is plurality, and the steam outlets are located in an area surrounded by a plurality of air suction openings.

[0013] Beneficial effect: by using the above-mentioned technical solution, by setting up a plurality of air suction openings, clothes can be effectively adsorbed, and steam outlets are arranged in the area surrounded by a plurality of air suction openings, that is, the periphery of the ironing surface of the clothes are all adsorbed on the corresponding end face of the ironing panel, which not only can avoid the clothes falling off, but also further improve the ironing effect of the equipment as a whole.

[0014] Preferably, as an improvement, a separating deflector is arranged between the air suction piece and the air outlet hood, the separating deflector has a first arc-shaped inner concave surface and a second arc-shaped inner concave surface, a junction of the first arc-shaped inner concave surface and the second arc-shaped inner concave surface forms a separating portion, and the separating portion is arranged to orient toward the air suction hood; a separating cavity is formed between the first arc-shaped inner concave surface and the second arc-shaped inner concave surface, and a distance be-

tween the first arc-shaped inner concave surface and the second arc-shaped inner concave surface gradually increases along the direction from the separating portion to the separating cavity.

[0015] Beneficial effect: by using the above-mentioned technical solution, it is convenient that under operation, the separating deflector can divide the steam air flow sucked back by the air suction assembly into two directions, so that the steam air flow sucked back by the air suction assembly can be discharged from the air outlet opening relatively quickly, which helps to improve the work efficiency of the air suction assembly.

[0016] Preferably, as an improvement, the number of the air outlet opening is plurality, and the plurality of air outlet openings are distributed on two sides of the air outlet hood, and the plurality of air outlet openings on two sides of the air outlet hood correspond to the first arc-shaped inner concave surface or the second arc-shaped inner concave surface respectively.

[0017] Beneficial effect: by using the above-mentioned technical solution, the air outlet openings in the opposite two directions correspond to the first arc-shaped inner concave surface or the second arc-shaped inner concave surface, so that the steam air flow sucked back by the air suction assembly can be discharged from the air outlet openings on both sides relatively quickly, and the work efficiency of the air suction assembly is further improved.

[0018] Preferably, as an improvement, the ironing panel is detachably connected with the steam generation assembly.

[0019] Beneficial effect: by using the above-mentioned technical solution, the disassembly of the ironing panel is facilitated, and the assembly between the ironing panel and the steam generating assembly is facilitated.

[0020] Preferably, as an improvement, one end of the shell is provided with an end cover, the steam generation assembly is detachably connected with the end cover, the ironing panel is clamped on another end of the shell; the end cover is provided with a water tank, and the water tank is used for adding water to the steam generation assembly.

[0021] Beneficial effect: by using the above-mentioned technical solution, the two directions of the steam generating assembly can be stably installed on the end cover and the ironing panel, so as to avoid unnecessary shaking or displacement of the steam generating assembly in the process of use.

[0022] Preferably, as an improvement, the steam generation assembly is provided with a supporting portion, and the supporting portion is abutted against an inner wall of the shell.

[0023] Beneficial effect: the steam generation assembly can be installed in the shell more stably by setting up the supporting portion, which further improves the stability of the connection of the steam generating assembly.

[0024] Preferably, as an improvement, a hand-held portion is connected with the shell, a water pump is connected with a water tank, the water pump is installed in the hand-held portion, and the water pump is communicated with the steam generation assembly; a base is connected with the hand-held part, a circuit board is installed in the base, the circuit board is electrically connected with a steam switch and an air suction switch; the steam switch is used for controlling the operation state of the steam generation assembly, and the air suction switch is used for controlling the opening and closing of the air suction assembly.

[0025] Beneficial effect: by setting the steam switch and the air suction switch, it is convenient to control the corresponding operating state through the steam switch and air suction switch according to the demand.

[0026] The invention may also utilize the following technical solution:

a steam ironing device comprising a shell, wherein:

the shell has a working area, the working area comprises a first area, and a second area that is surrounded outside the first area and is annular; the shell is provided with a steam generation assembly, and the steam generation assembly is used for providing gas and/or vaporized liquid outward from the first area; the shell is provided with an air suction assembly, and the air suction assembly is used for sucking gas and/or vaporized liquid inward from the second area.

[0027] Preferably, as an improvement, the air suction assembly continuously provides an adsorption force to an object to be ironed, so that the object to be ironed is attached to the second area; the area where the object to be ironed is attached to the second area is annular.

[0028] Preferably, as an improvement, the air suction assembly has an air suction channel that is connected with the second area; the air suction channel is annular, and the cross-sectional area of the air suction channel gradually reduces from the front end of the air suction assembly to the rear end of the air suction assembly.

[0029] Preferably, as an improvement, the air suction assembly has an air collection channel that is connected with the air suction channel; the air collection channel is linear, the air suction channel has an air suction direction, the air collection channel is arranged so that the air collection channel is parallel to the air suction direction, and the air collection channel is located on one side of the air suction channel.

[0030] Preferably, as an improvement, the air suction assembly comprises an air suction hood, the air suction hood is sleeved on the shell, the air suction hood is provided with an air suction plate, the air suction plate is annular, the air suction plate defines the second area, and an air suction opening is located on the air suction plate; an air suction channel is provided in the air suction hood, and the air suction opening is communicated with the air suction channel.

[0031] Preferably, as an improvement, the air suction hood is provided with a transition portion, the transition portion is connected with an air outlet hood, an air outlet opening is formed in the air outlet hood, and an air suction

piece is arranged between the transition portion and the air outlet hood; the air collection channel is arranged in the transition portion and the air outlet hood.

[0032] Preferably, as an improvement, the steam generation assembly and the air suction assembly operates synchronously, when the steam generation assembly provides gas and/or vaporized liquid outward, the air suction assembly sucks in gas and/or vaporized liquid inward.

[0033] Preferably, as an improvement, the steam generation assembly provides gas and/or vaporized liquid to an object to be ironed in the first area, so that the object to be ironed in the first area is bulged with respect to the second area, and the object to be ironed is stretched while heating the object to be ironed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034]

Fig. 1 is a schematic diagram of a steam ironing device provided in embodiment one of the present invention.

Fig. 2 is a schematic diagram of the air suction assembly in embodiment one of the present invention.

Fig. 3 is a schematic diagram of the structural explosion of the air suction assembly in embodiment one of the present invention.

Fig. 4 is a schematic diagram of the air suction hood in embodiment one of the present invention.

Fig. 5 is a schematic diagram of the air outlet hood in embodiment one of the present invention.

Fig. 6 is a schematic diagram of the separating deflector in embodiment one of the present invention.

Fig. 7 is a schematic diagram of another angle of view of the separating deflector in embodiment one of the present invention.

Fig. 8 is a schematic diagram of the steam generating assembly in embodiment one of the present invention.

Fig. 9 is a schematic diagram of the structural explosion of the steam generating assembly in embodiment one of the present invention.

FIG. 10 is a schematic diagram of the shell in embodiment one of the present invention.

Fig. 11 is a schematic diagram of another angle of view of the shell in embodiment one of the present invention.

Fig. 12 is a schematic diagram of the structural explosion of the hand-held part in embodiment one of the present invention.

Fig. 13 is a schematic diagram of the structural explosion of the base in embodiment one of the present invention.

Reference Numbers:

[0035] 100 shell; 101 plug-in hole; 110 end cover; 111 snap joint; 112 clamping portion; 120 water tank; 130 water pump; 200 steam generation assembly; 210 connecting plate; 211 fastener; 220 supporting portion; 221 inner concave part; 300 ironing panel; 301 steam outlet; 400 air suction assembly; 401 air suction opening; 402 air suction channel; 410 air suction hood; 411 transition portion; 412 buckle protrusion; 420 air suction plate; 430 air outlet hood; 431 air outlet opening; 432 buckle groove; 440 air suction piece; 450 separating deflector; 451 first arc-shaped inner concave surface; 452 second arc-shaped inner concave surface; 453 separating portion; 454 separating cavity; 500 hand-held portion; 501 steam switch; 502 plug-in piece; 600 base; 601 air suction switch; 610 circuit board.

DETAILED DESCRIPTION

[0036] The present invention is further described in detail through the following embodiments.

Embodiment One

[0037] A steam ironing device, comprises a shell 100, wherein the shell 100 has a working area, the working area comprises a first area, and a second area that is surrounded outside the first area and is annular; the shell 100 is provided with a steam generation assembly 200, and the steam generation assembly 200 is used for providing gas and/or vaporized liquid outward from the first area; the shell 100 is provided with an air suction assembly 400, and the air suction assembly 400 is used for sucking gas and/or vaporized liquid inward from the second area.

[0038] Specifically, the device comprises an ironing panel 300, the ironing panel 300 is provided with the above-mentioned first area, a steam outlet 301 is formed in the ironing panel 300. A steam generation assembly 200 is arranged on the shell 100, the steam generation assembly 200 is connected with an ironing panel 300, the steam generation assembly 200 is used for providing gas and/or vaporized liquid to the ironing panel 300.

[0039] Specifically, the device comprises an air suction assembly 400, the air suction assembly 400 comprises an air suction hood 410, the air suction hood 410 is sleeved on the shell 100, the air suction hood 410 is provided with an air suction plate 420, the air suction plate 420 is provided with the above-mentioned second area, the air suction opening 401 is located on the air suction plate 420. An air suction channel 402 is provided in the air suction hood 410, and the air suction opening 401 is communicated with the air suction channel 402. The air suction hood 410 is provided with a transition portion 411, the transition portion 411 is connected with an air outlet hood 430, an air outlet opening 431 is formed in the air outlet hood 430, and an air suction piece 440 is

arranged between the transition portion 411 and the air outlet hood 430, the air suction piece 440 sucks in the gas and/or vaporized liquid from the air suction plate 420.

[0040] Specifically, the steam generation assembly 200 is used for providing a working fluid, and the working fluid is preferably a steam, or a mixture of steam and air, and the steam generation assembly 200 provides a working fluid in the left direction (see Fig. 1) through a steam outlet 301 for ironing the object to be ironed.

[0041] Specifically, the working fluid provided by the steam generation assembly 200 passes through the object to be ironed, and/or the working fluid provided by the steam generation assembly 200 moves in a way around the gap between the object to be ironed and the ironing panel 300.

[0042] Specifically, the air suction assembly 400 is used for forming an annular adsorption area, and the adsorption area is the above-mentioned second area, and the adsorption area is arranged around the first area, and the adsorption area also defines the position of the first area.

[0043] Specifically, the gas that the air suction assembly 400 sucks from the air suction plate 420 through the air suction piece 440 can be the gas which penetrates the object to be ironed from the other side of the object to be ironed relative to the steam ironing device, or it can be a scattered working fluid provided by the steam generation assembly 200.

[0044] Furthermore, in the first area, the object to be ironed can be operationally attached to or separated from the ironing panel 300.

[0045] Furthermore, the air suction assembly 400 continuously provides adsorption force to the object to be ironed, and the adsorption area also moves on the surface of the object to be ironed during the movement of the steam ironing device relative to the object to be ironed, while maintaining the sucking without detachment.

[0046] Furthermore, the steam generation assembly 200 works synchronously with the air suction assembly 400, and while the steam generation assembly 200 provides the working fluid to the outside, the air suction assembly 400 sucks in the external fluid inward.

[0047] Furthermore, the steam generation assembly 200 provides a working fluid to the object to be ironed in the first area, so that the object to be ironed in the first area is bulged with respect to the second area, and the object to be ironed is stretched while heating the object to be ironed.

[0048] Furthermore, the air suction channel 402 is annular, and the cross-sectional area of the air suction channel 402 is gradually reduced from the front end of the air suction assembly 400 to the rear end of the air suction assembly. As shown in Fig. 3, the air suction channel 402 is defined by a first annular plate located on the inner side and a second annular plate sleeved on the outside of the first annular plate, wherein the second annular plate is gradually reduced from the left side to the right side, as seen in Fig. 3, to form an air suction channel 402 with a gradually decreasing cross-sectional area.

[0049] The design increases the flow rate of the fluid in the air suction channel 402 to provide greater adsorption.

[0050] Furthermore, the air suction assembly 400 is provided with an air collection channel that is connected to the air suction channel 402; the air collection channel is linear, and the air suction channel has an air suction direction, that is, the right direction in Figure 3, the air collection channel is arranged such that the air collection channel is parallel to the air suction direction, and the air collection channel is located on one side of the air suction channel 402.

[0051] In this embodiment, the air collection channel is located on the upper side of the air suction channel 402. Specifically, the fluid enters the annular air suction channel 402 from the air suction opening 401, towards the air suction channel in the air collection channel 402, enters the air collection channel, and is further discharged through the air outlet opening 431.

Embodiment Two

[0052] This embodiment is substantially shown as Fig. 1 to Fig. 13:

A steam ironing device, comprises a shell 100, wherein a steam generation assembly 200 is arranged on the shell 100, the steam generation assembly 200 is connected with an ironing panel 300, and a steam outlet 301 is formed in the ironing panel 300; an air suction assembly 400 is arranged on the shell 100, an air suction opening 401 is formed in the air suction assembly 400, and the air suction opening 401 and the steam outlet 301 are located in the same side of the shell 100.

[0053] In this embodiment, the shell 100 is a cylinder with an internal hollow and two ends open, and the shell 100 is horizontally arranged.

[0054] In order to reduce the distance between the steam outlet 301 and the clothes, avoid the temperature of the steam from decreasing on the transmission path, thereby affecting the ironing effect, under the effect of the air suction assembly 400, the clothes can be stably attached to the end face corresponding to the ironing panel 300. In this embodiment, the air suction port 401 and the steam outlet 301 are located on the same plane.

[0055] Specifically, in the above-mentioned solution, the air suction assembly 400 comprises an air suction hood 410, the air suction hood 410 is sleeved on the shell 100, the air suction hood 410 is provided with an air suction plate 420, and the air suction opening 401 is located on the air suction plate 420; an air suction channel 402 is provided in the air suction hood 410, and the air suction opening 401 is communicated with the air suction channel 402; the air suction hood 410 is provided with a transition portion 411, the transition portion 411 is connected with an air outlet hood 430, an air outlet opening 431 is formed in the air outlet hood 430, and an air suction piece 440 is arranged between the transition portion 411 and the air outlet hood 430.

[0056] The above solution is convenient for forming an air suction channel 402, and is convenient for the arrangement of the air suction opening 401, and the steam flow that is sucked back can be discharged from the air outlet opening 431 in time, and the unobstructed operation of the air suction assembly 400 is guaranteed. Preferably, the air suction piece 440 is a suction motor.

[0057] Furthermore, the air outlet hood 430 is detachably connected to the transition portion 411. Specifically, the air outlet hood 430 is provided with a buckle groove 432, the transition section 411 is provided with a buckle protrusion 412, and the buckle protrusion 412 is matched with the buckle groove 432.

[0058] Specifically, the transition section 411 and the air outlet hood 430 utilize the structure of front part and rear part, and the suction motor inside the air outlet hood 430 can be maintained after dismantling, and the entire air suction assembly 400 does not need to be removed from the steam ironing device.

[0059] In order to effectively adsorb clothes, that is, the periphery of the ironing surface of the clothes is adsorbed on the corresponding end face of the ironing panel 300, so as to avoid the clothes from falling off and improve the ironing effect of the device as a whole, in the above-mentioned solution, the number of the air suction openings 401 is plurality, and the steam outlets 301 are located in the area surrounded by a plurality of air suction openings 401. Specifically, in this embodiment, the number of air suction openings 401 is twelve, and each of the air suction openings 401 is a waist-shaped hole.

[0060] In another embodiment, the air suction opening 401 may also be a round hole, a rectangular hole or a hole of other shapes, and the air suction opening 401 may also be configured as a grid.

[0061] In another embodiment, the air suction opening 401 may also be configured as an annular and integral air suction opening.

[0062] In the above-mentioned technical solution, a separating deflector 450 is arranged between the air suction piece 440 and the air outlet hood 430, the separating deflector 450 has a first arc-shaped inner concave surface 451 and a second arc-shaped inner concave surface 452, a junction of the first arc-shaped inner concave surface 451 and the second arc-shaped inner concave surface 452 forms a separating portion 453, and the separating portion 453 is arranged to orient toward the air suction hood 410; a separating cavity 454 is formed between the first arc-shaped inner concave surface 451 and the second arc-shaped inner concave surface 452, and a distance between the first arc-shaped inner concave surface 451 and the second arc-shaped inner concave surface 452 gradually increases along the direction from the separating portion 453 to the separating cavity 454. It is convenient that under the operation of the device, the separating deflector 450 can divide the steam airflow that the air suction assembly 400 sucks back into two directions, so that the steam airflow that the air suction assembly 400 sucks back can be discharged from the air outlet 431 relatively quickly, and the work efficiency of the air suction assembly 400 is improved.

[0063] In another embodiment, the first arc-shaped inner concave surface 451 and the second arc-shaped inner concave surface 452 may be replaced with a planar surface.

[0064] Typically, the user is located behind the ironing device. Thus, the above-mentioned fluid of allowing to be sucked in by the air suction piece 440 is exhausted to the sides rather than to the rear, thus avoiding the impact on the user. On the other hand, due to the arrangement of the first arc-shaped inner concave surface 451 and the second arc-shaped inner concave surface 452, it absorbs a part of the fluid energy, so that the fluid discharged laterally is more gentle.

[0065] Furthermore, in order to improve the work efficiency of the air suction assembly 400, the number of air outlet opening 431 is plurality and the air outlet openings are distributed on two sides of the air outlet hood 430; the air outlet openings 431 on the two sides of the air outlet hood 430 correspond to the first arc-shaped inner concave surface 451 or the second arc-shaped inner concave surface 452 respectively, that is, the air outlet openings 431 are divided into two groups, one group of the air outlet openings 431 corresponds to the first arc-shaped inner concave surface 451, and the other group of air outlet openings 431 corresponds to the second arc-shaped inner concave surface 452.

[0066] Furthermore, the ironing panel 300 is detachably connected with the steam generation assembly 200. Specifically, one end of the steam generating assembly 200 is provided with a connecting plate 210, a mounting hole (marked in the drawings) is formed in the connecting plate 210, the ironing panel 300 is provided with a threaded hole corresponding to the mounting hole (marked in the drawings), the threaded hole is connected with a fastener 211, and preferably, the fastener 211 is a screw.

[0067] Furthermore, one end of the shell 100 is provided with an end cover 110, the steam generation assembly 200 is detachably connected with the end cover 110, the ironing panel 300 is clamped on another end of the shell 100; the end cover 110 is provided with a water tank 120, and the water tank 120 is used for adding water to the steam generation assembly 200. In this embodiment, the end cover 110 is detachably connected to the shell 100, specifically, the end cover 110 is provided with a plurality of snap joints 111, and a plurality of clamping portions 112 matched with the corresponding snap joints 111 are arranged in the shell 100. The two directions of the steam generation assembly 200 can be stably installed on the end cover 110 and the ironing panel 300, so as to avoid unnecessary shaking or displacement of the steam generation assembly 200 in the process of use.

[0068] In the above-mentioned technical solution, the steam generation assembly 200 is provided with a supporting portion 220, and the supporting portion 220 is abutted against an inner wall of the shell 100. The steam

generation assembly 200 can be installed in the shell 100 more stably by setting up the supporting portion, which further improves the stability of the connection of the steam generation assembly 200.

[0069] A hand-held portion 500 is connected with the shell 100, a water pump 130 is connected with a water tank 120, the water pump 130 is installed in the hand-held portion 500, and the water pump 130 is communicated with the steam generation assembly 200. A base 600 is connected with the hand-held part 500, a circuit board 610 is installed in the base 600, the circuit board 610 is electrically connected with a steam switch 501 and an air suction switch 601, the steam switch 501 is used for controlling the operation state of the steam generation assembly 200, and the air suction switch 601 is used for controlling the opening and closing of the air suction assembly 400.

[0070] Specifically, the hand-held part 500 is integrally cylindrical, the upper end of the hand-held part 500 is provided with a plug-in piece 502. Preferably, the number of the plug-in piece 502 is four, the shell 100 is provided with a plug-in hole 101 matched with the plug-in piece 502, because the supporting portion 220 needs to be supported on the inner wall of the shell 100, an inner concave part 221 is formed in the supporting portion 220, and a space for accommodating the corresponding plug-in piece 502 is formed between the inner concave part 221 and the inner wall of the shell 100.

[0071] It should be noted that, in the solution of the embodiment, the main structure of the steam generation assembly 200 is the prior art, and the other internal structures are the prior art, and the specific structure of the circuit board 610, the steam switch 501 and the air suction switch 601 are also the prior art, and the detailed structure and principle are not explained here.

[0072] It is noted that: by arranging the air suction assembly 400 on the shell 100, the air suction assembly 400 can be opened, the flowing air flow and suction can be generated, and by arranging the air suction opening 401 and the steam outlet 301 on the same side of the shell 100. In specific use, under the action of the flowing air flow and suction, the better adsorption function to the clothes can be realized, that is, it can realize the convenient ironing of clothes with one hand, avoid the improper operation of the hand burn; and the generated air flow can also make the steam produce a certain reflux phenomenon, that is, part of the steam will be sucked away by the air suction assembly 400 in the reverse under the action of the air flow after ironing the clothes for the first time, namely in the process of reflux, the steam are passed through the clothes for the second time, so that the clothes can be ironed to a certain extent, and the ironing efficiency has been further effectively improved.

Embodiment Three

[0073] The embodiment is different from the embodiment two in that the air suction opening is located on the ironing panel, that is, the air suction opening is located at the periphery of the ironing panel, and the air suction assembly is connected with the air suction opening.

[0074] In this embodiment, the air suction assembly is not a detachable part, but is integrated into a steam ironing device. The air suction opening and steam outlet are located on the same panel.

[0075] The above is only an embodiment of the present invention, and the common sense such as the specific technical solution and/or characteristics that are well known in the solution is not described much here. It should be pointed out that for those skilled in the art, on the premise of not departing from the technical solution of the present invention, a number of deformations and improvements can also be made, which should also be regarded as the scope of protection of the present invention, and none of these will affect the effect of the implementation of the present invention and the applicability of the patent. The scope of the present application shall be subject to the content of its claims, and the specific embodiments in the description may be used to interpret the content of the claims.

Claims

1. A steam ironing device comprising a shell (100), wherein:

   the shell (100) has a working area, the working area comprises a first area, and a second area that is surrounded outside the first area and is annular;
   the shell (100) is provided with a steam generation assembly (200), and the steam generation assembly (200) is used for providing gas and/or vaporized liquid outward from the first area;
   the shell (100) is provided with an air suction assembly (400), and the air suction assembly (400) is used for sucking gas and/or vaporized liquid inward from the second area.

2. The steam ironing device of claim 1, wherein the air suction assembly (400) continuously provides an adsorption force to an object to be ironed, so that the object to be ironed is attached to the second area; the area where the object to be ironed is attached to the second area is annular.

3. The steam ironing device of claim 2, wherein the air suction assembly (400) has an air suction channel (402) that is connected with the second area;
   the air suction channel (402) is annular, and the cross-sectional area of the air suction channel (402) gradually reduces from the front end of the air suction assembly (400) to the rear end of the air suction assembly (400).

4. The steam ironing device of claim 3, wherein the air suction assembly (400) has an air collection channel that is connected with the air suction channel (402); the air collection channel is linear, the air suction channel (402) has an air suction direction, the air collection channel is arranged so that the air collection channel is parallel to the air suction direction, and the air collection channel is located on one side of the air suction channel (402).

5. The steam ironing device of claim 4, wherein the air suction assembly (400) comprises an air suction hood (410), the air suction hood (410) is sleeved on the shell (100), the air suction hood (410) is provided with an air suction plate (420), the air suction plate (420) is annular, the air suction plate (420) defines the second area, and an air suction opening (401) is located on the air suction plate (420);
an air suction channel (402) is provided in the air suction hood (410), and the air suction opening (401) is communicated with the air suction channel (402).

6. The steam ironing device of claim 5, wherein the air suction hood (410) is provided with a transition portion (411), the transition portion (411) is connected with an air outlet hood (430), an air outlet opening (431) is formed in the air outlet hood (430), and an air suction piece (440) is arranged between the transition portion (411) and the air outlet hood (430);
the air collection channel is arranged in the transition portion (411) and the air outlet hood (430).

7. The steam ironing device of claim 1, wherein the steam generation assembly (200) and the air suction assembly (400) operates synchronously, when the steam generation assembly (200) provides gas and/or vaporized liquid outward, the air suction assembly (400) sucks in gas and/or vaporized liquid inward.

8. The steam ironing device of claim 1, wherein the steam generation assembly (200) provides gas and/or vaporized liquid to an object to be ironed in the first area, so that the object to be ironed in the first area is bulged with respect to the second area, and the object to be ironed is stretched while heating the object to be ironed.

9. A steam ironing device, comprises a shell (100), wherein

a steam generation assembly (200) is arranged on the shell (100), the steam generation assembly (200) is connected with an ironing panel (300), and a steam outlet (301) is formed in the ironing panel (300);
an air suction assembly (400) is arranged on the shell (100), an air suction opening (401) is formed in the air suction assembly (400), and the air suction opening (401) and the steam outlet (301) are located in the same side of the shell (100).

10. The steam ironing device of claim 9, wherein the air suction opening (401) and the steam outlet (301) are located on the same plane, the number of air suction opening (401) is plurality, and the steam outlets (301) are located in an area surrounded by a plurality of air suction openings (401).

11. The steam ironing device of claim 9, wherein the air suction assembly (400) comprises an air suction hood (410), the air suction hood (410) is sleeved on the shell (100), the air suction hood (410) is provided with an air suction plate (420), and the air suction opening (401) is located on the air suction plate (420);

an air suction channel (402) is provided in the air suction hood (410), and the air suction opening (401) is communicated with the air suction channel (402);
the air suction hood (410) is provided with a transition portion (411), the transition portion (411) is connected with an air outlet hood (430), an air outlet opening (431) is formed in the air outlet hood (430), and an air suction piece (440) is arranged between the transition portion (411) and the air outlet hood (430).

12. The steam ironing device of claim 11, wherein a separating deflector (450) is arranged between the air suction piece (440) and the air outlet hood (430), the separating deflector (450) has a first arc-shaped inner concave surface (451) and a second arc-shaped inner concave surface (452), a junction of the first arc-shaped inner concave surface (451) and the second arc-shaped inner concave surface (452) forms a separating portion (453), and the separating portion (453) is arranged to orient toward the air suction hood (410);

a separating cavity (454) is formed between the first arc-shaped inner concave surface (451) and the second arc-shaped inner concave surface (452), and a distance between the first arc-shaped inner concave surface (451) and the second arc-shaped inner concave surface (452) gradually increases along the direction from the separating portion (453) to the separating cavity (454);
the number of the air outlet opening (431) is plurality, and the plurality of air outlet openings (431) are distributed on two sides of the air outlet hood (430), and the plurality of air outlet openings (431) on two sides of the air outlet hood (430) correspond to the first arc-shaped inner

concave surface (451) or the second arc-shaped inner concave surface (452) respectively.

13. The steam ironing device of claim 9, wherein one end of the shell (100) is provided with an end cover (110), the steam generation assembly (200) is detachably connected with the end cover (110), the ironing panel (300) is clamped on another end of the shell (100); the end cover (110) is provided with a water tank (120), and the water tank (120) is used for adding water to the steam generation assembly (200).

14. The steam ironing device of claim 13, wherein the steam generation assembly (200) is provided with a supporting portion (220), and the supporting portion (220) is abutted against an inner wall of the shell (100).

15. The steam ironing device of claim 14, wherein a hand-held portion (500) is connected with the shell (100), a water pump (130) is connected with a water tank (120), the water pump (130) is installed in the hand-held portion (500), and the water pump (130) is communicated with the steam generation assembly (200);
a base (600) is connected with the hand-held part (500), a circuit board (610) is installed in the base (600), the circuit board (610) is electrically connected with a steam switch (501) and an air suction switch (601), the steam switch (501) is used for controlling the operation state of the steam generation assembly (200), and the air suction switch (601) is used for controlling the opening and closing of the air suction assembly (400).

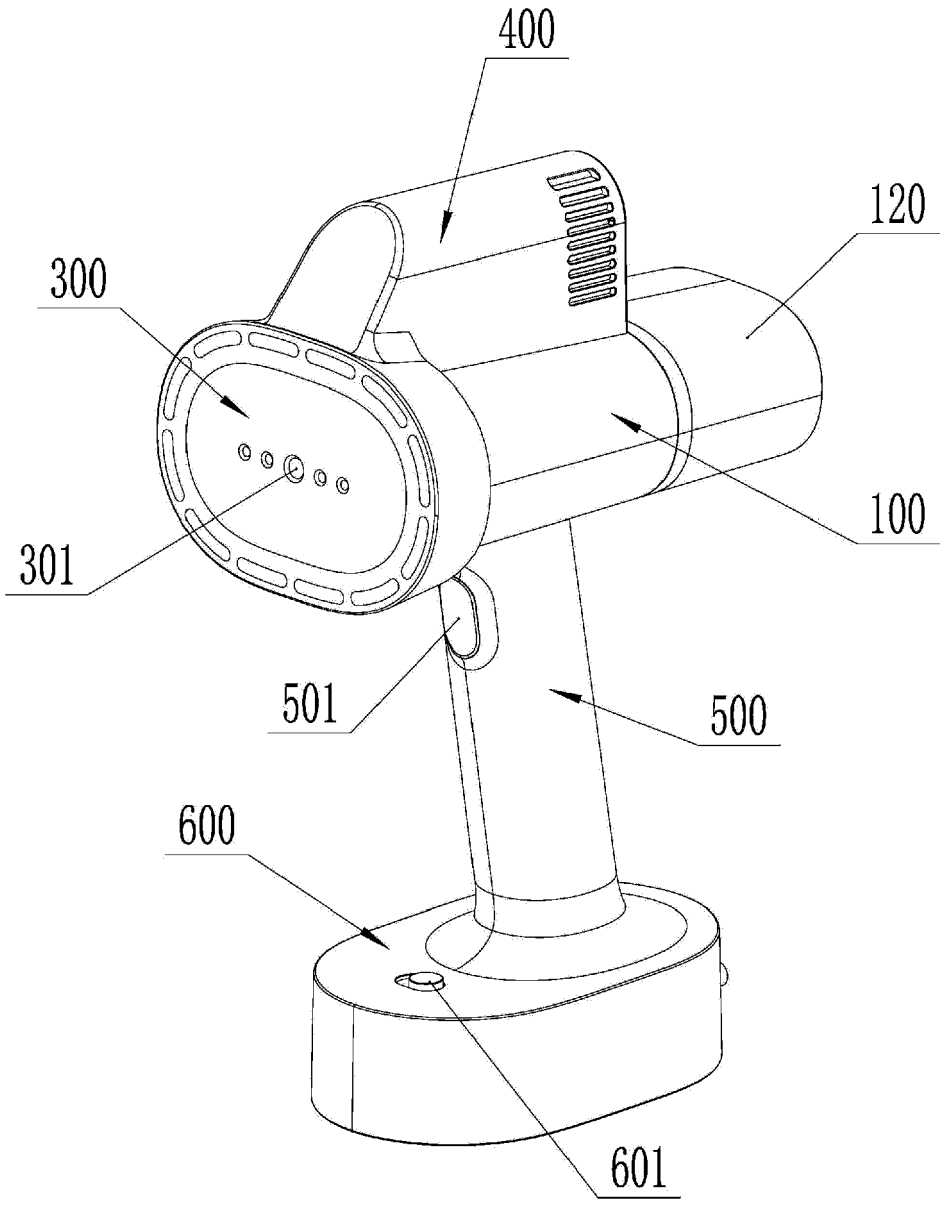

Fig.1

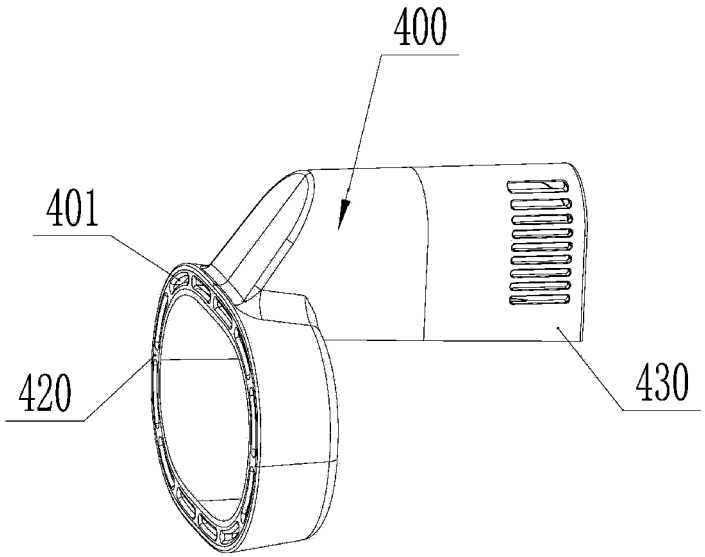

Fig. 2

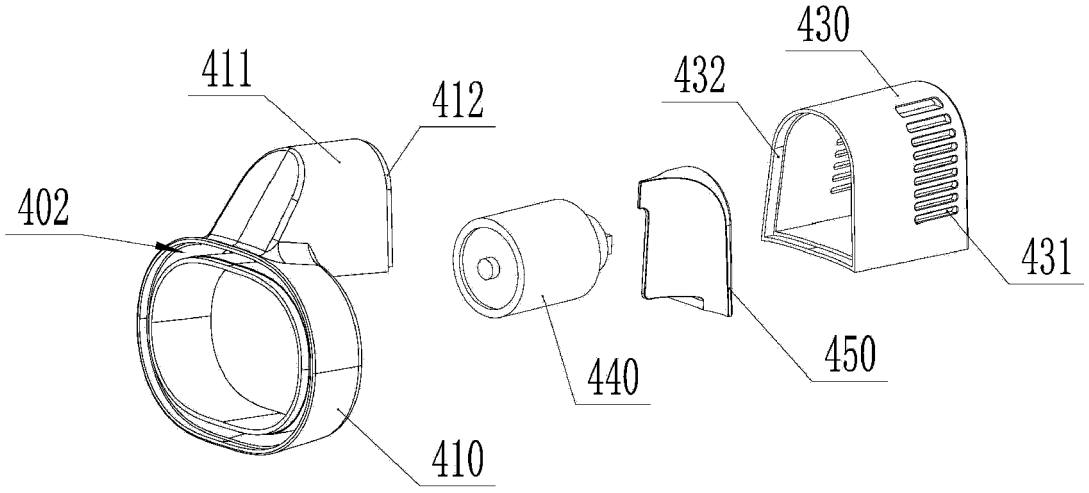

Fig. 3

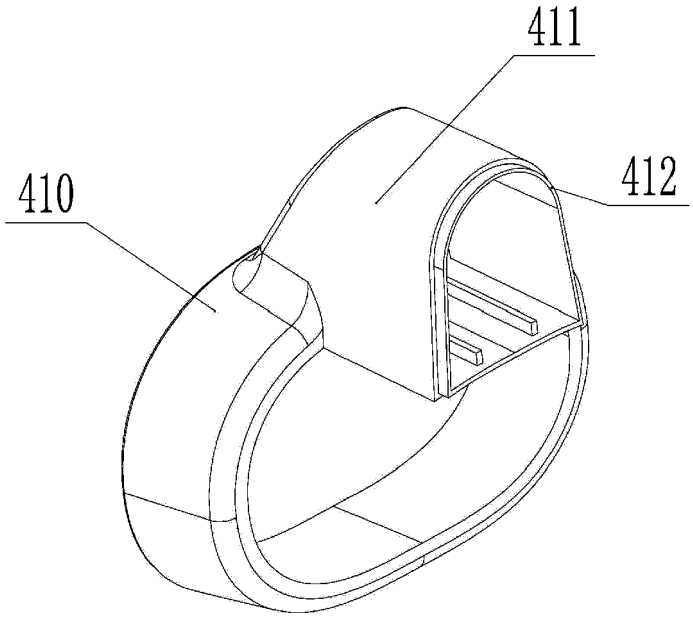

Fig. 4

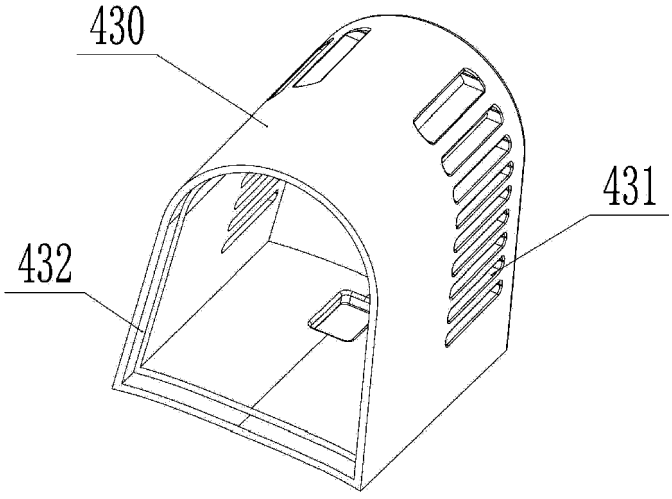

Fig. 5

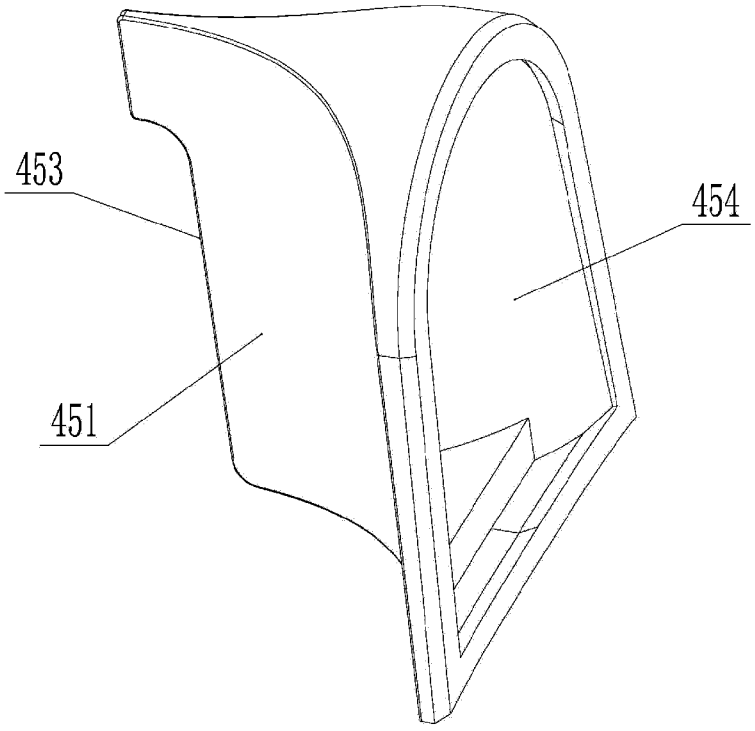

Fig. 6

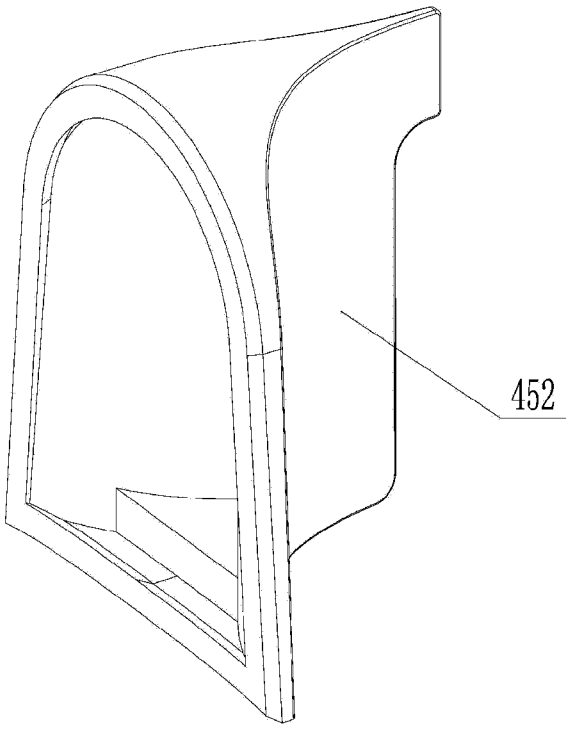

Fig. 7

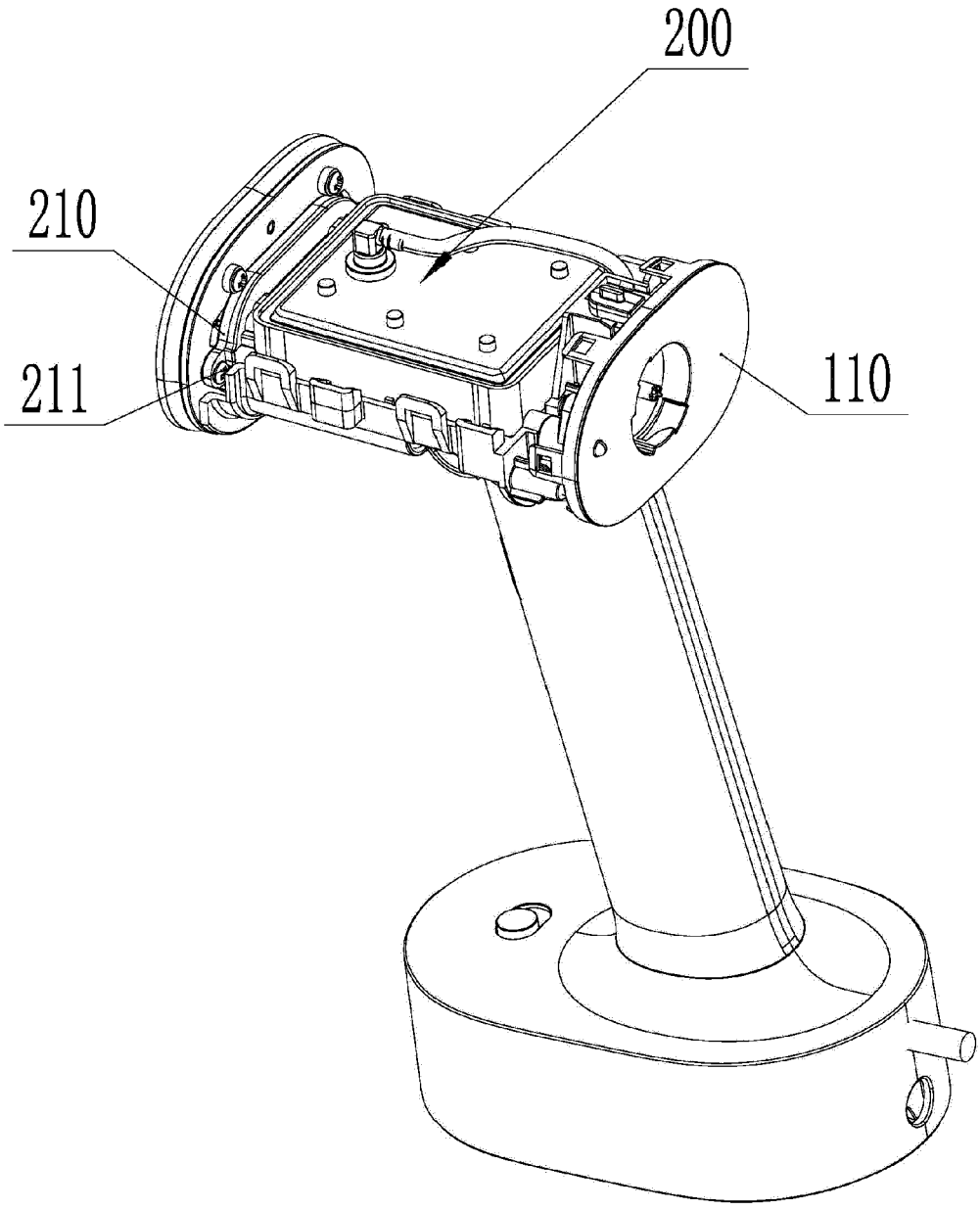

Fig. 8

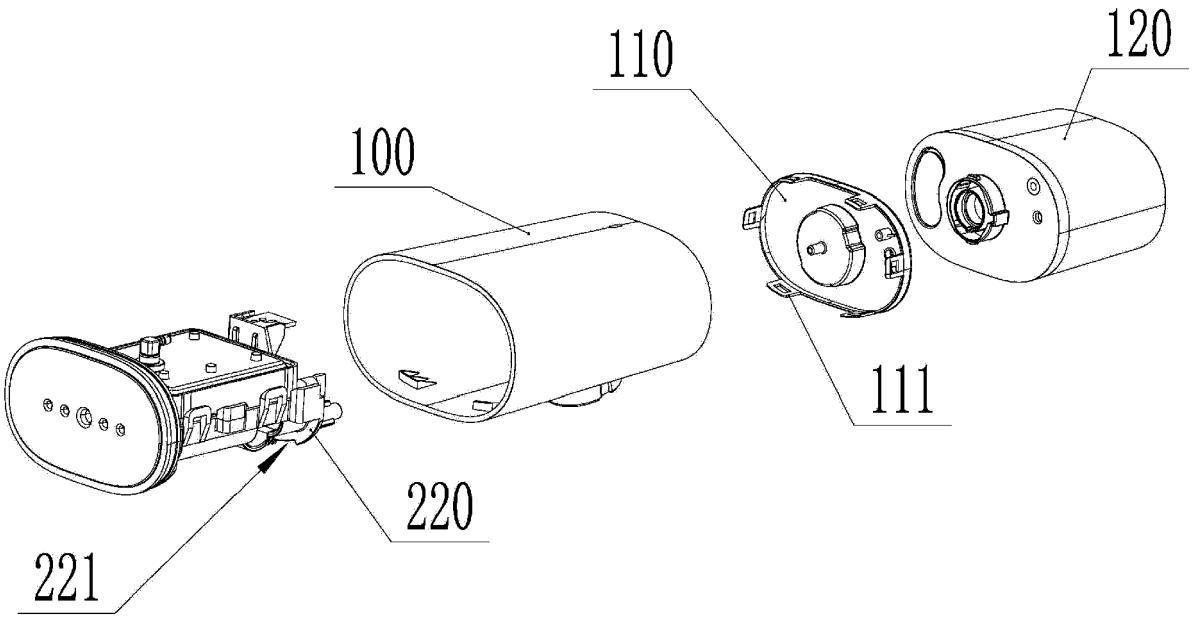

Fig. 9

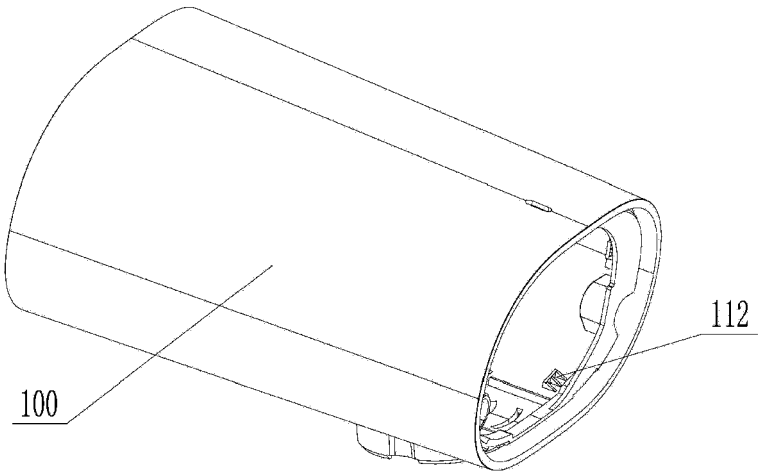

Fig. 10

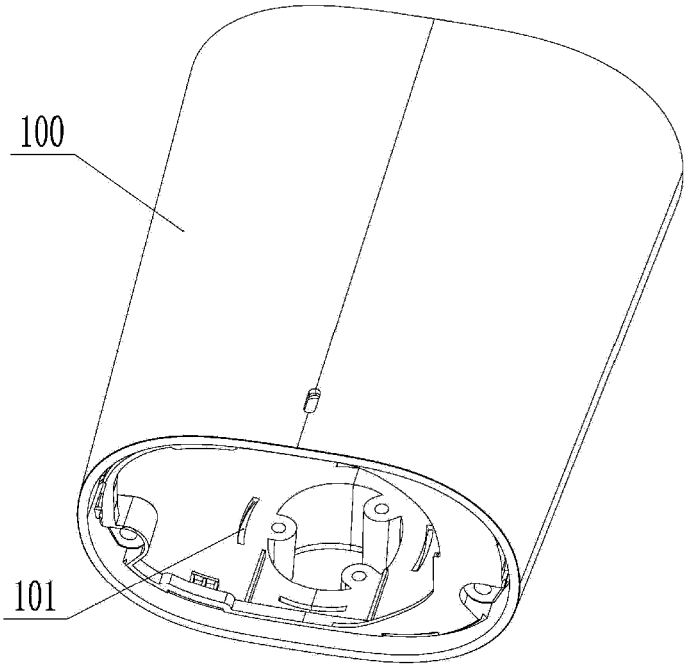

Fig. 11

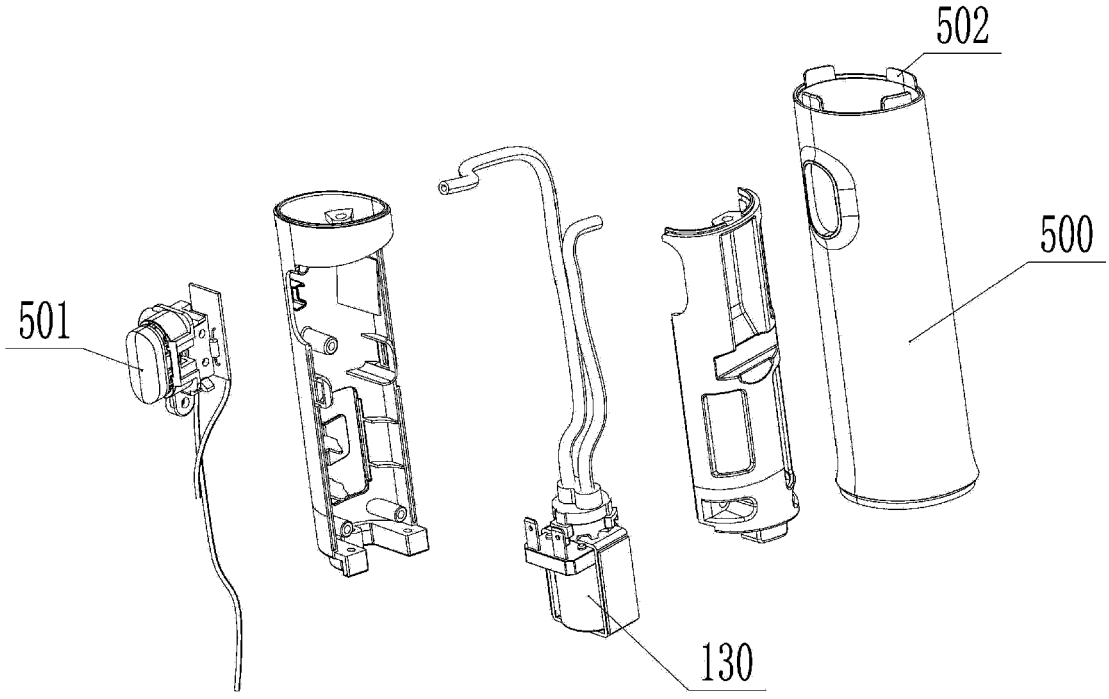

Fig. 12

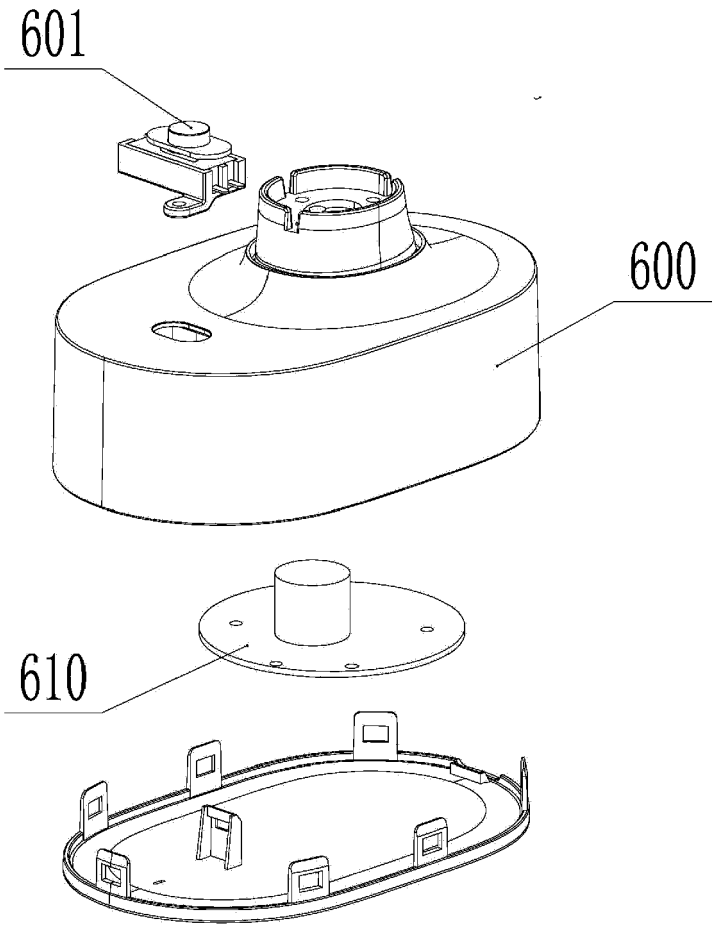

Fig. 13

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EUROPEAN SEARCH REPORT

Application Number
EP 24 16 7567

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D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	23 July 2024	Diaz y Diaz-Caneja

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