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(54) A HANDLE FOR IRON AND A STEAM IRONING APPARATUS WITH THE SAME

(57) A handle for an iron is positioned on top of the casing of an iron. The handle comprises a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section. A portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is longer by one half than the hand-held section, so that the gravity center of the iron moves backwards greatly. During the course of ironing, a user may grasp the hand-held section and swing his hand in a larger range and iron a great deal of cloth without effort. The time and labor for ironing can be saved. Furthermore, the iron comprising the handle may be used with a base. Because a steam generator is provided in the base, the size and weight of the iron are reduced so that the iron may be used as a hung iron. The double-duty iron is convenient for use and low in cost.

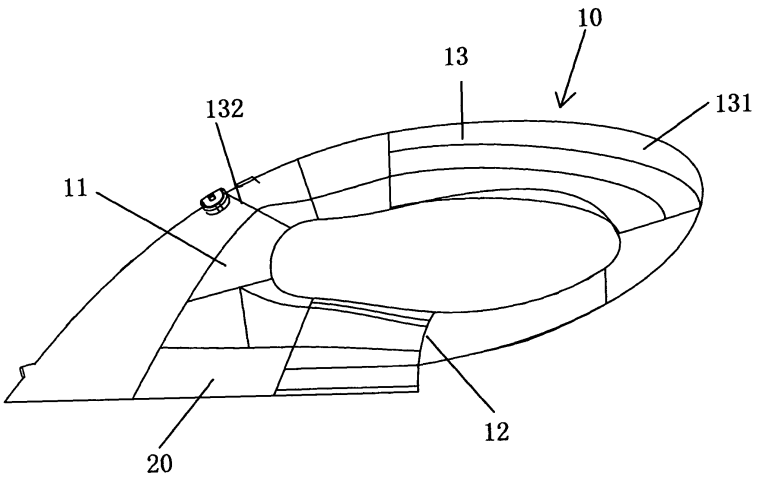

FIG. 1

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Description

Field of the invention

[0001] The present invention relates to the structure of ironing apparatus, especially relates to a handle for iron and a steam ironing apparatus with the same.

Background of the invention

[0002] In the existing technique, the handle for an iron is usually disposed on top of the iron casing, the front end of said handle is disposed on the front end of the iron casing, the rear end of the handle is disposed on the rear end of the iron casing, and the whole handle is positioned above the iron casing, When the handle has been grasped, the gravity center of the iron is usually positioned on the middle of the iron casing during the course of ironing, so the user cannot freely use the iron with enough swing range, the ironing area is restricted, the ironing may be time wasting and labor consuming.

[0003] Moreover, because some kinds of cloth cannot be pressed for ironing, they often need to be hung ironed: if the existing iron is applied for hung ironing, the user has to lift the iron, and this will be labor consuming and cannot be practical, and it would be wasteful to buy a new garment steamer for hung ironing.

Summary of the invention

[0004] The main object of the present invention is to overcome the shortages of the existing technique, and to provide a handle for iron and a steam ironing apparatus with the same, which can greatly promote the ironing range of the iron.

[0005] The technical solution applied by the present invention is:

[0006] Technical solution 1: a handle for an iron, which is positioned on top of the casing of an iron, said handle comprising a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section; a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is longer by one half than the hand-held section.

[0007] In said handle for iron, a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is shorter by two thirds than the hand-held section.

[0008] In said handle for iron, the rear end of said hand-held section is higher than its front end in the horizontal direction.

[0009] Technical solution 2: a handle for an iron, which is positioned on top of the casing of an iron, said handle comprising a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section; the distance from the joint of the front connecting section of the handle and the iron casing to the front end of the iron casing is greater than the distance from said joint to the rear end of the iron casing.

[0010] In said handle for iron, the rear end of said hand-held section is higher than its front end in the horizontal direction.

[0011] Technical solution 3: a steam ironing apparatus, which comprises a base, a iron, said base having a casing, a steam generator being positioned in said casing; said iron is detachably disposed on said casing and connected to said steam generator, and said iron has a iron casing and a handle for iron, said handle comprising a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section, a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, being longer by one half than the hand-held section.

[0012] In said steam ironing apparatus, a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is shorter by two thirds than the hand-held section.

[0013] In said steam ironing apparatus, the distance from the joint of the front connecting section of the handle and the iron casing to the front end of the iron casing is greater than the distance from said joint to the rear end of the iron casing.

[0014] In said steam ironing apparatus, the rear end of said hand-held section is higher than its front end in the horizontal direction.

[0015] In said steam ironing apparatus, the rear end of said hand-held section is an inclined enclosure in the vertical direction, so that the weight of the iron can be reduced.

[0016] Referred from the above description of the present invention and compared to the conventional technique, in the handle for iron of the present invention, wherein a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is designed longer by one half than the hand-held section, or the distance from the joint of the front connecting section of the handle and the iron casing to the front end of the iron casing is designed greater than the distance from said joint to the rear end of the iron casing, so that the gravity center of the iron moves backwards greatly, during the course of ironing, a user may grasp the hand-held section and swing his hand in a larger range and iron a great deal of cloth without effort. The time and labor for ironing can be saved.

[0017] Furthermore, when the handle is applied with a base, because the steam generator is provided in the base, the size and weight of the iron are reduced and the

iron may be used as a hung iron. The double-duty iron is convenient for use and low in cost.

[0018] Furthermore, the rear end of the hand-held section of the present invention is higher than its front end in the horizontal direction, and it is convenient for the user to exert force.

[0019] Finally, the appearance of the present invention is fashion and beautiful, is creative and the product grade is improved.

Brief description of the drawings

[0020] Fig.1 is the perspective structural view of the first embodiment of the present invention;

[0021] Fig.2 is the top view of the first embodiment of the present invention;

[0022] Fig.3 is another top view of the first embodiment of the present invention;

[0023] Fig.4 is the perspective structural view of the second embodiment of the present invention;

[0024] Fig.5 is the top view of the second embodiment of the present invention;

[0025] Fig.6 is the structural view of the third embodiment of the present invention.

Detailed description of the embodiments

[0026] The present invention will become apparent with reference to the detailed description of the embodiments.

[0027] Embodiment 1

[0028] Referring to fig.1 and fig.2, the handle 10 for iron of the present invention is positioned on top of the iron casing 20; said handle 10 comprises a front connecting section 11 attached to an upper surface of said casing 20, a rear connecting section 12 attached to a rear end of the upper surface of said casing 20, and a hand-held section 13 connected between the front connecting section 11 and the rear connecting section 12. A portion of the hand-held section 13 which protrudes from the rear end of the iron casing 20 in its lengthwise direction, is longer by one half and shorter by two thirds than the hand-held section 13, that is the distance a is greater than the distance b, and a = 2/3(a + b). The center of the hand-held section 13 is behind the center of the base of the iron, and the gravity center of the iron moves backward.

[0029] Referring to fig.3, during the course of ironing, the gravity center of the iron will move towards the rear portion of the iron casing 20 because of said structure: when the user grasps the hand-held section 13, his arm needs not move, the swing angle of his hand is not smaller than 60 degrees, the swing range is relatively large, and this will save labor and a large area of cloth can be ironed without effort.

[0030] Referring to fig.1, the rear end 131 of the hand-held section 13 is higher than the front end 132 in the horizontal direction: it is convenient for the user to exert a force during the course of ironing, and its streamlined design will reduce the air resistance and save labor. Meanwhile, the rear end 131 of the hand-held section 13 is an inclined curve structure in the vertical direction and connected to the rear connecting section 12: this will reduce the weight of the iron and will be convenient for operation.

[0031] Embodiment 2

[0032] Referring to fig.4 and fig.5, the handle 10 for iron of the present invention is positioned on top of the iron casing 20; said handle 10 comprises a front connecting section 11 attached to an upper surface of said casing 20, a rear connecting section 12 attached to a rear end of the upper surface of said casing 20, and a hand-held section 13 connected between the front connecting section 11 and the rear connecting section 12; the distance from the joint of said front connecting section 11 and said iron casing 20 to the front end of said iron casing 20 is greater than the distance from said joint to the rear end of said ironing casing 20, that is the distance c is greater than the distance d.

[0033] Referring to fig.4, the rear end 131 of the hand-held section 13 is higher than the front end 132; it is convenient for the user to exert a force during the course of ironing, and its streamlined design will reduce the air resistance and save labor.

[0034] Embodiment 3

[0035] Referring to fig.6, the steam ironing apparatus of the present invention applies the handle of the embodiment 1 or embodiment 2, which comprises a base 30 and a iron 40;

[0036] Referring to fig.1, the iron 40 comprises a handle 10 and a casing 20, and the handle 10 is positioned on top of the iron casing 20; said handle 10 comprises a front connecting section 11 attached to an upper surface of said casing 20, a rear connecting section 12 attached to a rear end of the upper surface of said casing 20, and a hand-held section 13 connected between the front connecting section 11 and the rear connecting section 12. A portion of the hand-held section 13 which protrudes from the rear end of the iron casing 20 in its lengthwise direction, is longer by one half and shorter by two thirds than the hand-held section 13, that is the distance a is greater than the distance b, and a = 2/3(a + b). The center of the hand-held section is behind the center of the base of the iron, so the gravity center of the iron moves backward. The rear end 131 of the hand-held section 13 is higher than the front end 132 in the horizontal direction: it is convenient for the user to exert force during the course of ironing, and its streamlined design will reduce the air resistance and save labor. Meanwhile, the rear end 131 of the hand-held section 13 is an inclined curve structure in the vertical direction and connected to the rear connecting section 12: this will reduce the weight of the iron and will be convenient for operation.

[0037] The base 30 has a casing 31, and a steam generator is disposed in said casing 31 (said steam generator is not shown in the accompanying drawings); said iron

40 is detachably disposed on said casing 31 and connected to said steam generator. Because the steam generator is disposed in the base 30, the size of the iron 40 can be designed as compact as possible, the weigh can be reduced, so the iron can be applied as hung iron, and the double-duty iron is convenient for use and low in cost.

[0038] Although the present invention has been described with reference to the preferred embodiments thereof for carrying out the invention, it is apparent to those skilled in the art that a variety of modifications and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims.

Industrial applicability

[0039] In a handle for iron of the present invention, because a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is longer by one half than the hand-held section, the gravity center of the iron moves backwards greatly. During the course of ironing, a user may grasp the hand-held section and swing his hand in a larger range and iron a great deal of cloth without effort. The time and labor for ironing can be saved; furthermore, the iron comprising the handle may be used with a base. Because a steam generator is provided in the base, the size and weight of the iron are reduced so that the iron may be used as a hung iron. The double-duty iron is convenient for use and low in cost. It has a good industrial applicability.

Claims

1. A handle for an iron, **characterized in that** the handle is positioned on top of the casing of an iron, said handle comprising a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section, a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, being longer by one half than the hand-held section.

2. The handle for iron according to claim 1, **characterized in that** a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is shorter by two thirds than the hand-held section.

3. The handle for iron according to claim 1, **characterized in that** the rear end of said hand-held section is higher than its front end in the horizontal direction.

4. A handle for an iron, **characterized in that** the handle is positioned on top of the casing of an iron, said handle comprising a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section, the distance from the joint of the front connecting section of the handle and the iron casing to the front end of the iron casing being greater than the distance from said joint to the rear end of the iron casing.

5. The handle for iron according to claim 4, **characterized in that** the rear end of said hand-held section is higher than its front end in the horizontal direction, and the rear end of said hand-held section is an inclined curve structure in the vertical direction, and connected to the rear connecting section.

6. A steam ironing apparatus, **characterized in that** it comprises a base, a iron, said base having a casing, a steam generator being positioned in said casing, said iron being detachably disposed on said casing and connected to said steam generator, said iron having a iron casing and a handle for iron, said handle comprising a front connecting section attached to an upper surface of said casing, a rear connecting section attached to a rear end of the upper surface of said casing, and a hand-held section connected between the front connecting section and the rear connecting section, a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, being longer by one half than the hand-held section.

7. The steam ironing apparatus according to claim 6, **characterized in that** a portion of the hand-held section which protrudes from the rear end of the iron casing in its lengthwise direction, is shorter by two thirds than the hand-held section.

8. The steam ironing apparatus according to claim 6, **characterized in that** the distance between the joint of the front connecting section of the handle and the iron casing to the front end of the iron casing is designed greater than the distance from said joint to the rear end of the iron casing.

9. The steam ironing apparatus according to claim 6 or claim 8, **characterized in that** the rear end of said hand-held section is higher than its front end in the horizontal direction.

10. The steam ironing apparatus according to claim 6 or claim 8, **characterized in that** the rear end of said hand-held section is an inclined curve structure in the vertical direction, and is connected to the rear connecting section.

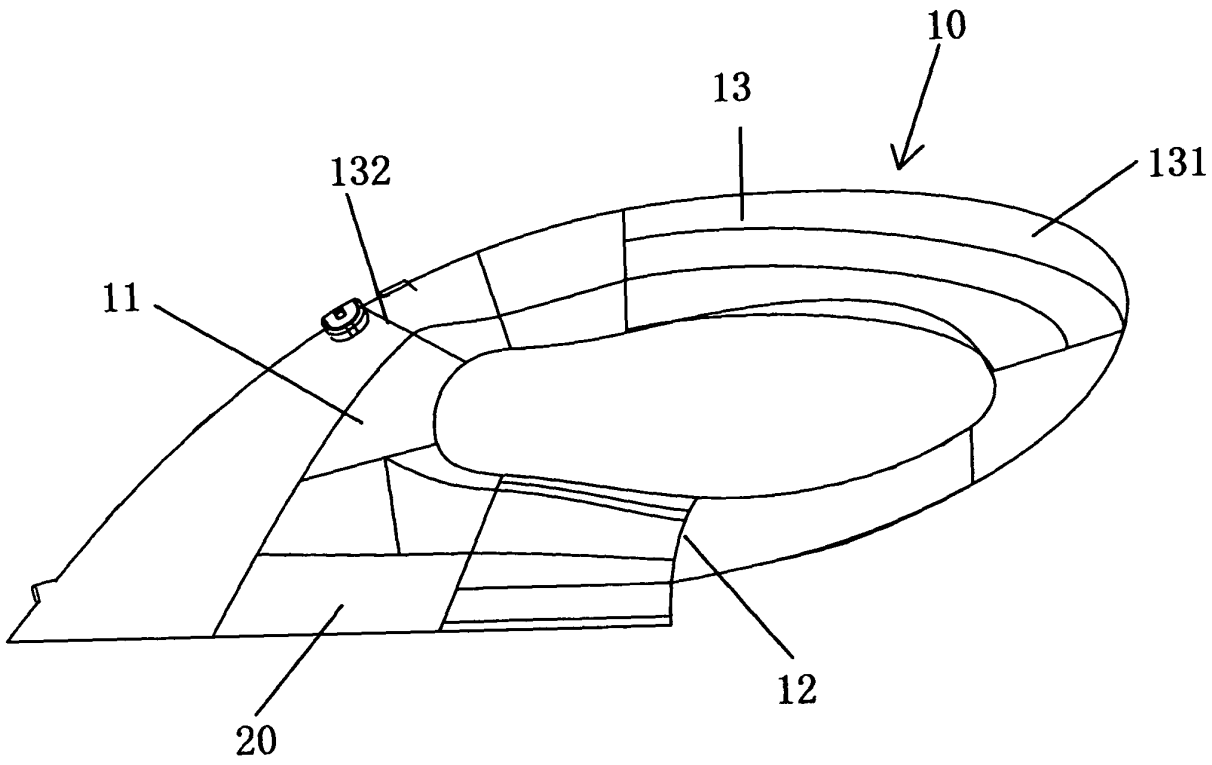

FIG. 1

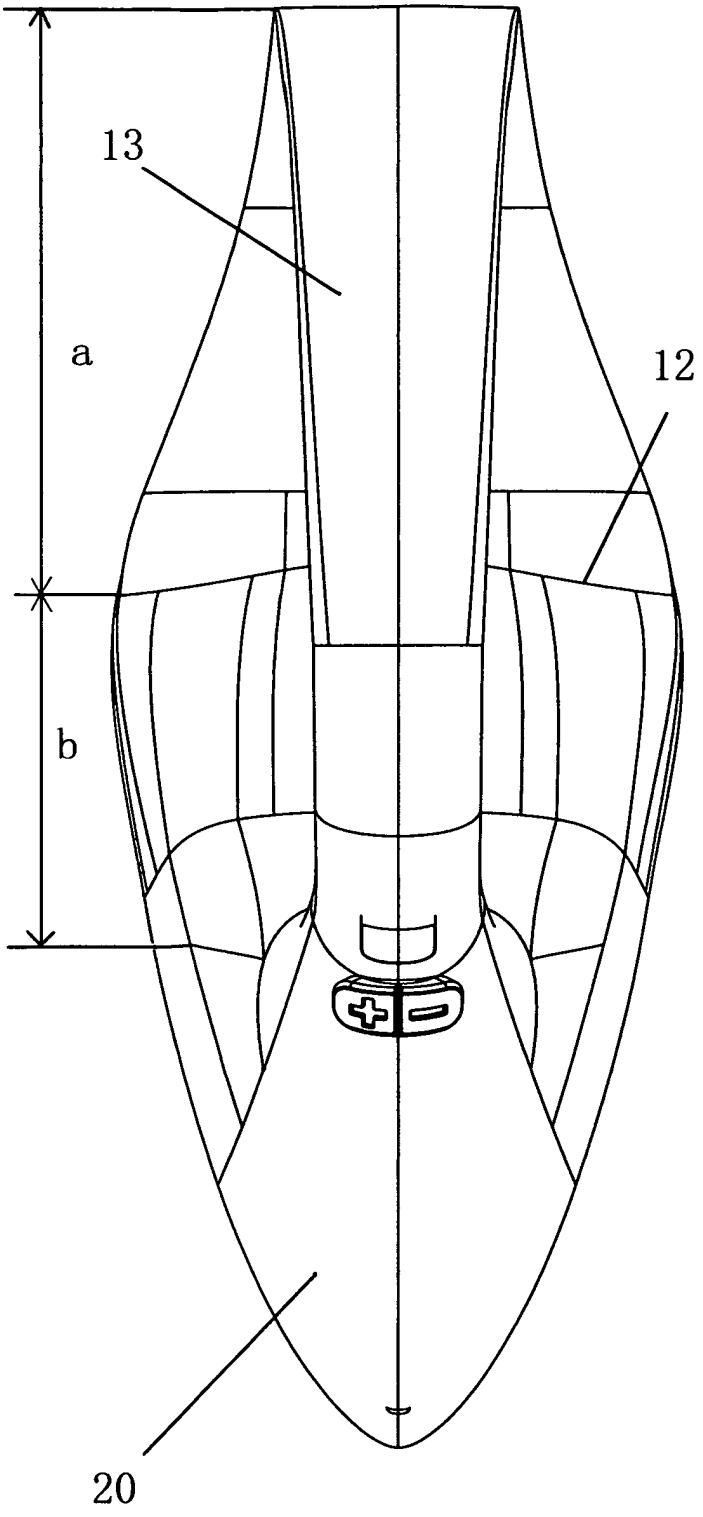

FIG. 2

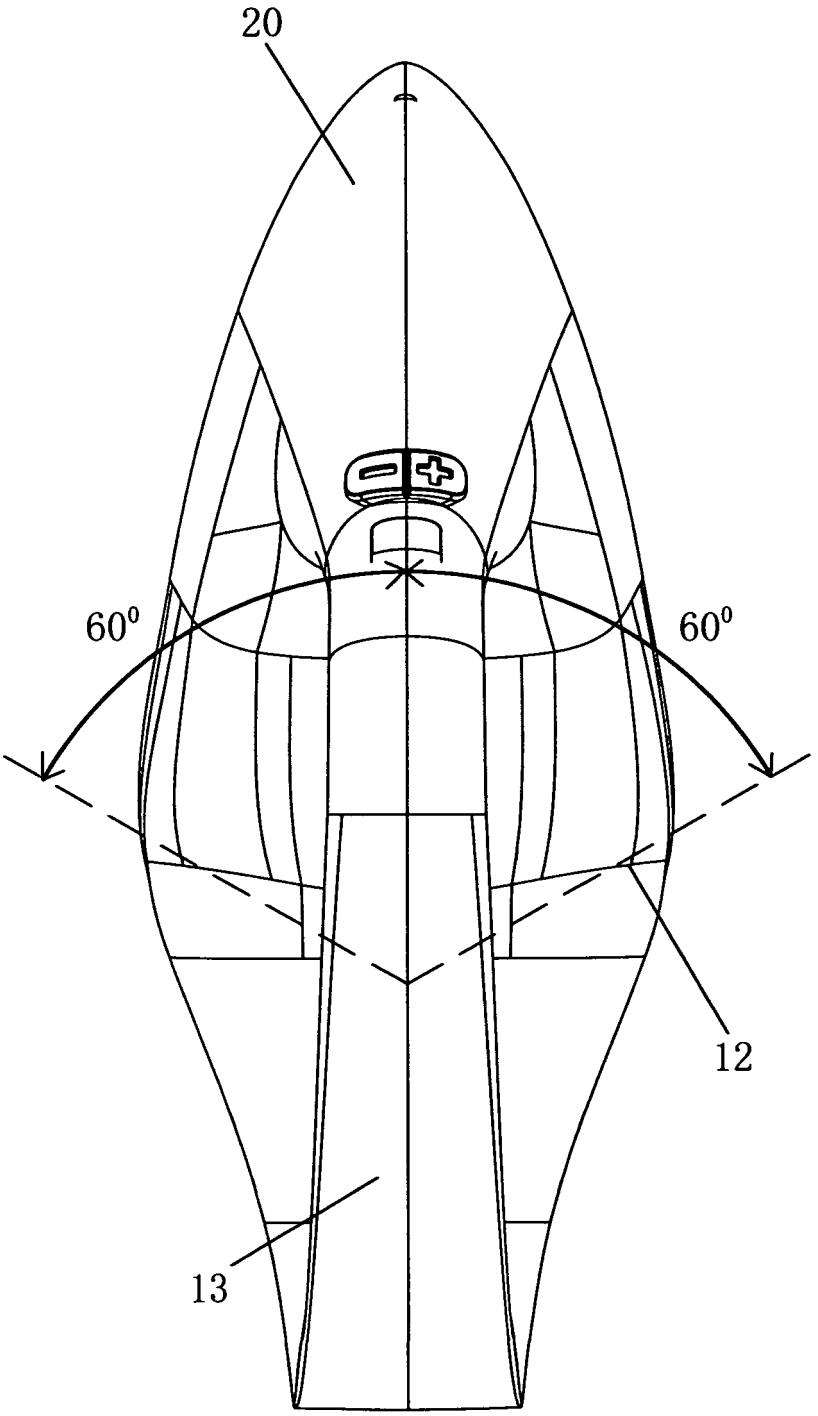

FIG. 3

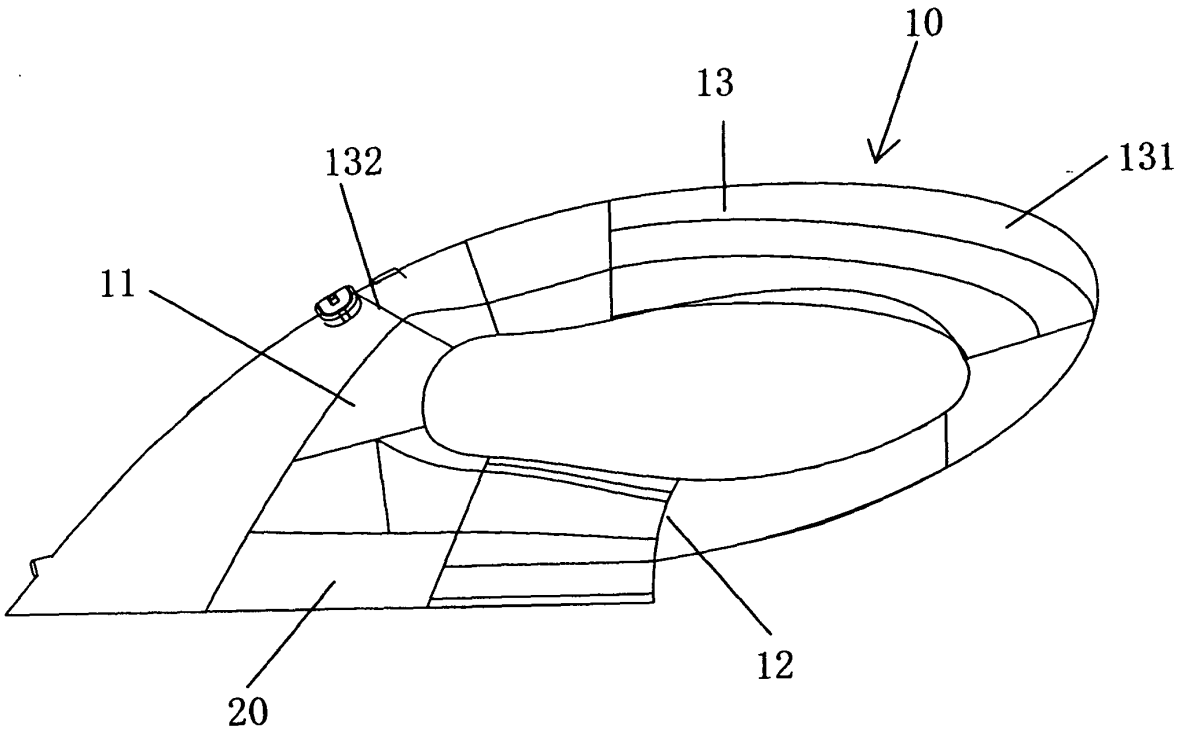

FIG. 4

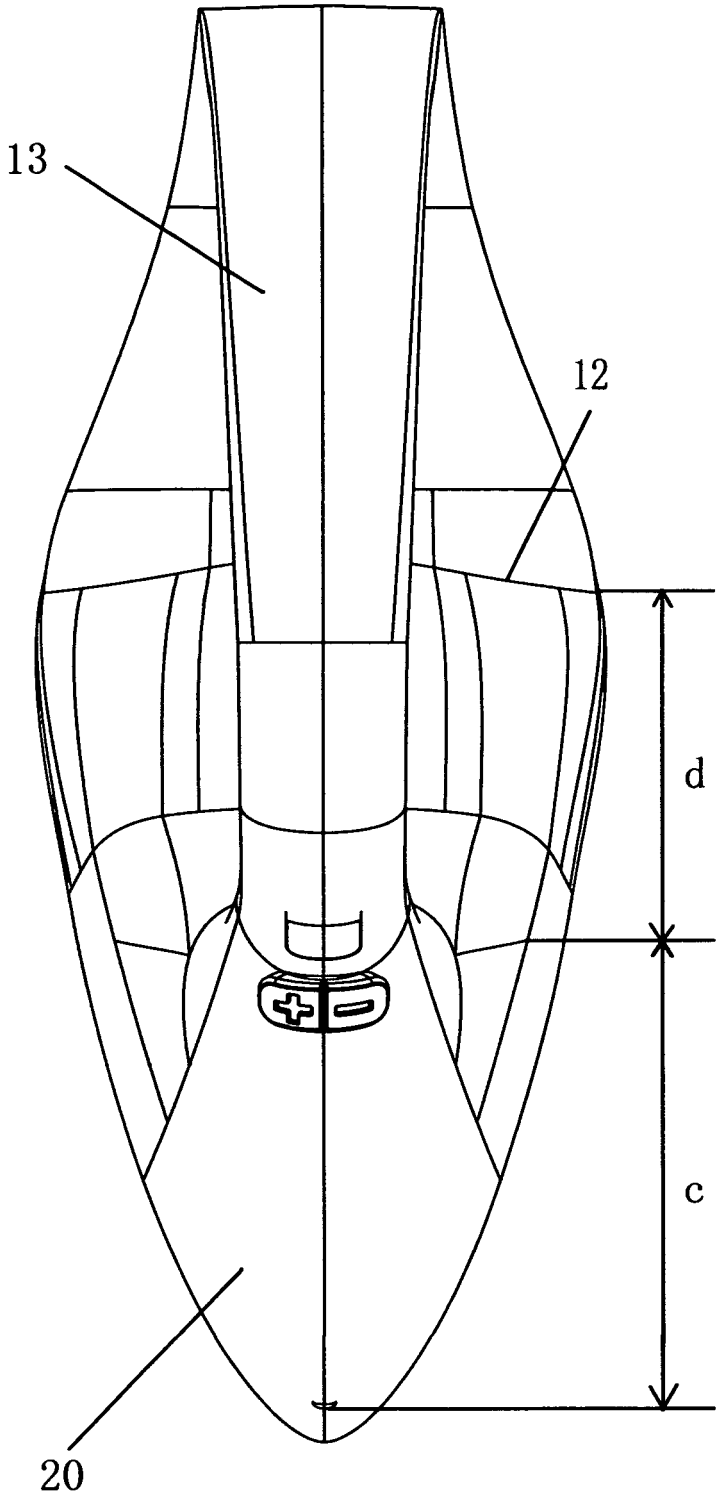

FIG. 5

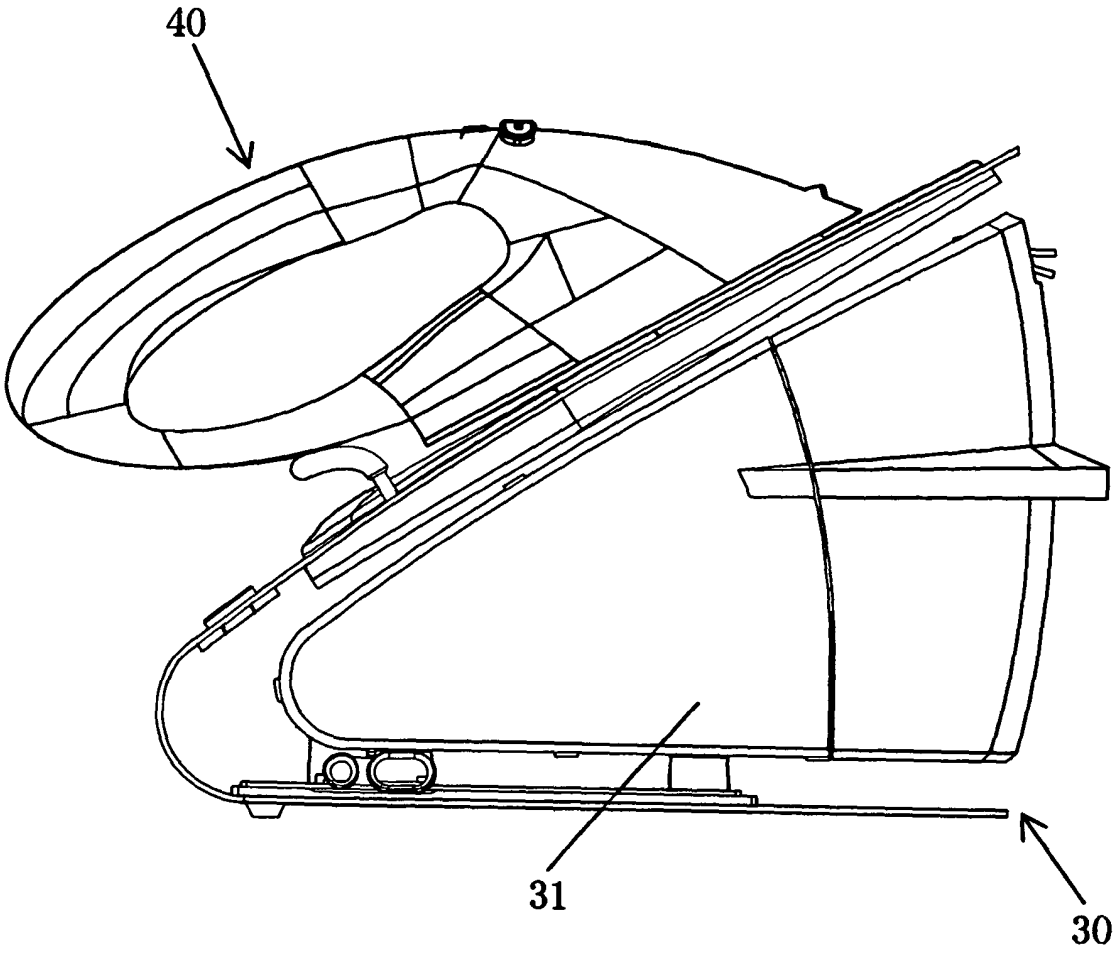

FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2009/072244

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: D06F75/-, D06F87/-, D06F73/-

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI,EPODOC,PAJ,CNPAT: HANDLE GRIP+ GRASP IRON+ REAR HEEL BACK CENTER FRONT LENGTH DISTANCE LONG+ HALF PROTRUD+ ARC+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN201245788Y(XIAMEN CANKUN IND CO LTD), 27 May 2009 (27.05.2009), Claims1-9, figures 1-6	1-10
X	JP2005152211A(NK GROUP HANBAI KK),16 Jun. 2005 (16.06.2005), paragraphs 0022-0024, figures 1,2	4-5
A		1-3,6-10
A	CN201056649Y(XIAMEN CANKUN IND CO LTD),07 May 2008 (07.05.2008), Page 5 paragraph1, figures2A-2D	6-10

☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

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"&"document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 Aug. 2009 (27.08.2009)	**24 Sep. 2009 (24.09.2009)**
Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Authorized officer Xu Yan Telephone No. (86-10)62084564

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2009/072244

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB2438619A(RICHARDS MORPHY N I LTD), 05 Dec. 2007(05.12.2007), the whole document	1-10
A	DE452559C(ANGER WILHELM), 14 Nov. 1927（14.11. 1927）, the whole document	1-10
A	DE202006003215U1（ARONSKI A）, 17 Aug. 2006（17.08.2006）, the whole document	1-10
A	CH674657A5(JURA ELEKTROAPPARATE FAB), 29 Jun.1990（29.06. 1990）, the whole document	1-10

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2009/072244

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN201245788Y	27.05.2009	None	
JP2005152211A	16.06.2005	None	
CN201056649Y	07.05.2008	WO2008098487A1	21. 08. 2008
GB2438619A	05.12.2007	None	
DE452559C	14.11. 1927	None	
DE202006003215U1	17.08.2006	None	
CH674657A5	29.06.1990	DE8803601U	28. 04. 1988

Form PCT/ISA/210 (patent family annex) (April 2007)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2009/072244

CLASSIFICATION OF SUBJECT MATTER:

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D06F75/10(2006.01)i

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