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(54) **IRON COMPRISING A STEP**

(57) The invention relates to an iron (100), in particular for household use, of the type comprising a main body (110) extending from a front portion (111) to a rear portion (112) and a sole plate (120) associated with the

bottom of the main body (110). According to the invention, the front portion (111) of the main body (110) of the iron (100) comprises a step (113).

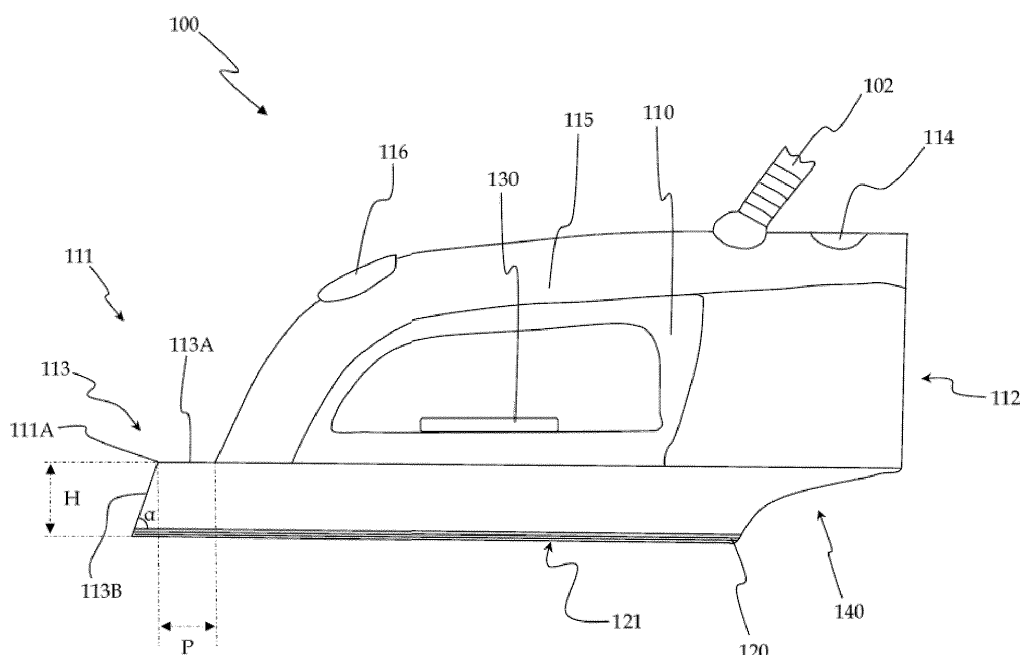


Fig. 5

Description

[0001] The present invention relates to an ironing appliance, in particular for household use, according to the preamble of claim 1.

[0002] The present invention also relates to an iron, in particular for household use.

[0003] The invention applies to traditional ironing, in particular of textile items, within a household environment.

[0004] As is known in the art, ironing appliances, in particular for household use, comprise a supporting structure and an iron, said supporting structure comprising a base adapted to provide a bearing surface for said iron.

[0005] Said supporting structure is usually so realized as to comprise a boiler adapted to contain a liquid, typically water, said boiler being provided with heating means for steam generation. In addition, the supporting structure is connected to the iron through connecting means comprising a duct for steam transportation and a cable for supplying electric power to the iron, both of which are enclosed in an external protection sheath.

[0006] Document EP1541746A1 discloses a steam iron having a carrying case which opens into a base box; document DE102009055165A1 discloses an ironing system provided with an iron and a portable base, wherein a fastening device is provided for the attachment of the iron at the base; document DE19802279A1 discloses an household iron with a safety device comprising an additional switch.

[0007] However, the solutions known in the art suffer from a few drawbacks.

[0008] In particular, a first type of solution known in the art provides a base realized for compactness and for reducing the volumes, which however requires an accurate, and hence more difficult, positioning of the iron, in particular during traditional ironing operations carried out on textile items.

[0009] As a consequence, laying the iron on a very small base inevitably implies the risk of the iron overturning and/or falling, especially during ironing operations.

[0010] It is clear that such overturning may be dangerous for the user, besides implying the risk of damage to the iron itself as well as to the whole ironing appliance.

[0011] Other solutions known in the art are so realized as to include a supporting structure with a bulky base adapted to provide a large bearing surface for an iron.

[0012] However, these solutions take a lot of room and may cause considerable problems as concerns the positioning of the ironing appliance, especially if the user does not have sufficient room at his/her disposal for ironing.

[0013] Furthermore, the solutions known in the art are so realized that the iron is not constrained to the base, in particular when the ironing appliance is not in use; this implies the possibility that the iron might free itself from the supporting structure and fall, e.g. upon accidental

contact with the user, and might thus suffer much damage. As is known in the art, an iron of a known type typically comprises:

- 5 - a main body extending from a front portion to a rear portion,
- a sole plate associated with the bottom of said main body.

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[0014] A known iron preferably comprises first heating means adapted to heat the sole plate and/or allow the generation of steam.

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[0015] Said known iron may then be associated with a supporting structure comprising a base adapted to provide a bearing surface for said iron. Usually, said supporting structure is so realized as to comprise a boiler adapted to contain a liquid, typically water, said boiler being provided with second heating means for steam generation. In addition, the supporting structure is connected to the iron through connecting means comprising a duct for steam transportation and a cable for supplying electric power to the iron, both of which are enclosed in an external protection sheath.

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[0016] The market demands an iron which can be used effortlessly and effectively on heavy and particularly creased fabrics; moreover, an iron must be so realized as to be able to optimally iron areas of the fabric item which are difficult to access and/or rigid and/or which have been added thereto (e.g. patch pockets, buttons, zip fasteners, and the like).

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[0017] As a consequence, irons are known in the art which are equipped with a sole plate which is very thick along substantially its whole extension, thus having high thermal mass and weight, which are suitable for ironing heavy and particularly creased textiles.

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[0018] However, such sole plates have excessive dimensions not allowing it to effectively reach hardly accessible fabric areas. In addition, the high thickness of the sole plate may give rise to problems concerning the comfort and ease of use of the iron, said problems being in particular related to the excessive weight of the sole plate.

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[0019] Irons are also known in the art which are equipped with a sole plate which is thin along substantially its whole extension, the edges of such a sole plate being separate from the main body of the iron; as a result, said sole plate is particularly suited to reaching said parts of a fabric item which are hardly accessible and/or rigid and/or which have been added thereto.

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[0020] However, such sole plates suffer from the drawback that they have reduced and inadequate weight and thermal mass; as a consequence, they do not allow to attain optimal ironing results on heavy and particularly creased textiles.

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[0021] In this frame, it is the main object of the present invention to provide an ironing appliance, in particular for household use, which is adapted to overcome the above-

mentioned drawbacks.

[0022] In particular, it is one object of the present invention to provide an ironing appliance, in particular for household use, which comprises a supporting structure fitted with a base so sized as to constitute a good bearing surface for an iron, particularly during traditional ironing operations on textile items. It is another object of the present invention to realize said supporting structure in such a way as to prevent any unbalance in the assembly consisting of the supporting structure itself and the iron, thereby minimizing the risk of said supporting structure and/or the iron overturning. As a consequence, it is one object of the present invention to realize said base in such a way as to keep the supporting structure and the iron in safe conditions, especially when the iron is on the base of the supporting structure, so as to avoid any danger for a user and any risk of damage to the whole ironing appliance, which might arise should said iron overturn.

[0023] It is another object of the present invention to realize said supporting structure in such a way that its base can provide a large bearing surface for the iron without however being bulky or causing problems in regard to the positioning of the whole ironing appliance.

[0024] It is a further object of the present invention to realize said supporting structure in such a way that it includes a base that prevents the iron from freeing itself from the supporting structure and fall, e.g. when the ironing appliance is not in use and upon accidental contact with the user, as a consequence of which it might suffer great damage.

[0025] It is another object of the present invention to provide an iron, in particular for household use, which is so realized as to allow the sole plate to effectively reach hardly accessible areas of the textile item.

[0026] At the same time, it is a further object of the present invention to provide an iron, in particular for household use, which allows attaining optimal ironing results on heavy and particularly creased textiles.

[0027] It is another object of the present invention to provide an iron, in particular for household use, which has a particularly advantageous shape and which can be manufactured easily and at adequate costs.

[0028] It is yet another object of the present invention to provide an iron, in particular for household use, which is so realized as to be comfortable and easy to use.

[0029] Said objects are achieved by the present invention through an ironing appliance, in particular for household use, and an associated iron, in particular for household use, incorporating the features set out in the appended claims, which are an integral part of the present description. Further objects, features and advantages of the present invention will become apparent from the following detailed description and from the annexed drawings, which are supplied by way of non-limiting example, wherein:

- Fig. 1 is a perspective view of an ironing appliance, in particular for household use, according to the

present invention;

- Figs. 2a and 2b are perspective views of a supporting structure of the ironing appliance according to the present invention, said supporting structure being shown in a first (Fig. 2a) and a second (Fig. 2b) operating conditions, respectively;
- Fig. 3a is a perspective side view of the supporting structure shown in Figs. 2a and 2b;
- Fig. 3b is a perspective view of an iron of the ironing appliance according to the present invention.
- Fig. 4 is a perspective view of a particular embodiment of an iron, in particular for household use, according to the present invention;
- Fig. 5 is a side view of the iron of Fig. 4;
- Fig. 6 is a top view of the iron shown in Figs. 4 and 5.

[0030] Referring now to the annexed drawings, in Fig. 1 reference numeral 1 designates as a whole an ironing appliance, in particular for household use, according to the present invention.

[0031] Said ironing appliance 1 comprises a supporting structure 10 and an iron 20, said supporting structure 10 comprising a base 11 adapted to provide a bearing surface for said iron 20.

[0032] The base 11 comprises at least one protrusion 11A made of heat-resistant material, in particular a plastic material; alternatively, the whole base 11 may be made of heat-resistant material, in particular a plastic material.

[0033] The supporting structure 20 is so realized as to comprise a boiler adapted to contain a liquid, typically water, said boiler being provided with heating means for steam generation. The boiler, the liquid and the heating means for steam generation are not shown in the annexed drawings.

[0034] In addition, the supporting structure 10 is connected to the iron 20 through connecting means 2, in particular comprising a duct for steam transportation, a cable for supplying electric power to the iron 20, and an external protection sheath adapted to contain said duct and said cable.

[0035] As can be seen in Figs. 2a to 3b, according to the present invention said ironing appliance 1 comprises an appendix 30 movably associated with the supporting structure 10, said appendix 30 being associated with said supporting structure 10 in such a way that it can switch:

- from a first operating condition (shown in Figs. 2a and 3 a), wherein a supporting surface 31 of said appendix 30 lies substantially on a same plane as the base 11, thus acting as an extension of said base 11 adapted to expand the bearing surface for the iron 20;

- to a second operating condition (shown in Figs. 1 and 2b), wherein said appendix 30 acts as a wall adapted to delimit the base 11, and vice versa.

[0036] Figures 2a and 2b show, by means of arrows and dashed outlines, the movement of the appendix 30 for switching from the first operating condition to the second operating condition, and vice versa.

[0037] In said second operating condition, the appendix 30 lies in a position substantially perpendicular to said base 11. More precisely, as can be seen in Figs. 1 and 2b, it is the supporting surface 31 of said appendix 30 that lies in a position substantially perpendicular to said base 11 when the appendix 30 is in said second operating condition.

[0038] Furthermore, in said second operating condition the appendix 30 lies in a position substantially parallel to a raised portion 12 of the supporting structure 10, the appendix 30 being associated with the supporting structure 10 on a side opposite to said raised portion 12 with respect to the base 11. In particular, in said second operating condition the appendix 30 cooperates with said raised portion 12 of the supporting structure 10 for the purpose of containing the iron 20 (as shown in Fig. 1). The particular provision of the appendix 30 according to the present invention allows to size the base 11 in such a way that it constitutes a good bearing surface for the iron 20, in particular during traditional ironing operations on textile items. In particular, when the appendix 30 is in the first operating condition shown in Figs. 2a and 3a, it acts as an extension of said base 11 adapted to expand the bearing surface for the iron 20, said extension being particularly useful for laying the iron 20 during ironing operations. In fact, in said first operating condition the bearing surface for the iron 20 is formed by the base 11 and the supporting surface 31 of the appendix 30.

[0039] The provision of the appendix 30 also allows to realize said supporting structure 10 in such a way that it comprises a base 11 adapted to prevent the iron 20 from getting out of balance, thereby minimizing the risk of said iron 20 overturning; in fact, the extension of the surface of said base 11, determined by the position taken by the appendix 30 in the first operation condition shown in Figs. 2a and 3a, necessarily leads to increased stability of the iron 20, in particular when said iron 20 is laid on the bearing surface formed by the base 11 of the supporting structure 10 and the supporting surface 31 of the appendix 30.

[0040] In addition, when the appendix 30 is in the second operating condition shown in Figs. 1 and 2b, it delimits the base 11 and constitutes a sort of protection element for the iron 20, which will thus be in a position protected, for example, against accidental shocks that might cause the iron 20 and/or the supporting structure 10 to overturn and fall.

[0041] It is therefore apparent that the provision of the appendix 30 allows to realize said base 11 in such a way as to keep the supporting structure 10 and the iron 20 in safe conditions, especially when the iron 20 is on the

base 11, so as to avoid any danger for a user and any risk of damage to the whole ironing appliance 1, which might arise should said supporting structure 10 and/or the iron 20 overturn.

[0042] The provision of the appendix 30 also allows to realize said supporting structure 10 in such a way that it provides a large bearing surface for the iron 20 (particularly during ironing operations), without however being bulky or causing problems in regard to the positioning of the whole ironing appliance 1 (particularly when said ironing appliance 1 is not in use and must be stored in a suitable place).

[0043] As can be seen in particular in Figs. 2a and 3a, the switching of the appendix 30 from said first operating condition to said second operating condition, and vice versa, is brought about by rotating said appendix 30 around a substantially horizontal axis of rotation A (indicated by a dashed-dotted line in said Figs. 2a and 3a), in particular said axis of rotation A being positioned substantially at the level of said base 11. Preferably, the ironing appliance 1 according to the present invention comprises a locking system (not shown in the drawings), which allows holding the appendix 30 in said first operating condition and/or in said second operating condition.

[0044] The locking system is associated with an actuating element 40 (visible in Figs. 2a and 2b), in particular of the manual type, which allows activating and/or deactivating said locking system.

[0045] Furthermore, also the supporting surface 31 preferably comprises a protrusion 11A made of heat-resistant material, in particular a plastic material.

[0046] In a preferred embodiment, the ironing appliance 1 according to the present invention comprises first coupling means 22, 32 adapted to hold the iron 20 on the base 11 when the appendix 30 is in said second operating condition and a plate 21 of the iron 20 is resting on said base 11.

[0047] In particular, said first coupling means comprise a tooth 32 associated with the supporting surface 31 of the appendix 30 and a cavity 22 (shown in Fig. 3b) present on a first portion 20A of the iron 20, said tooth 32 being adapted to fit into said cavity 22.

[0048] It is clear that, in an alternative embodiment (not shown in the annexed drawings), the first coupling means may comprise a cavity associated with the supporting surface 31 of the appendix 30 and a tooth present on the first portion 20 A of the iron 20.

[0049] Preferably, said first portion 20A is the rear portion of the iron 20; said first portion 20A comprises a substantially flat face 22A that allows the iron 20 to lie on said first portion 20 A, in particular said face 22 A surrounding the cavity 22.

[0050] The provision of the appendix 30 and of the first coupling means 22, 32 turns out to be particularly advantageous in that it allows the ironing appliance 1 to be so realized as to prevent the iron 20 from freeing itself from the supporting structure 10 and fall, e.g. when the ironing appliance 1 is not in use and/or upon accidental contact

with the user, as a consequence of which it might suffer great damage.

[0051] In a preferred embodiment, the ironing appliance 1 according to the present invention comprises second coupling means 13, 23 adapted to hold the iron 20 on the base 11 when the appendix 30 is in said second operating condition and a plate 21 of the iron 20 is resting on said base 11.

[0052] In particular, said second coupling means comprise a slit 13 present on the raised portion 12 of the supporting structure 10 and a protrusion 23 (shown in Fig. 3b) present on a second portion 20B of the iron 20, said protrusion 23 being adapted to fit into said slit 13.

[0053] It is clear that, in an alternative embodiment (not shown in the annexed drawings), the second coupling means may comprise a protrusion on the raised portion 12 of the supporting surface 10 and a slit on the second portion 20B of the iron 20.

[0054] Preferably, said second portion 20B is the front portion of the iron 20; in particular, said second portion 20B has a substantially tapered or pointed shape when said iron 20 is viewed from above.

[0055] Also the provision of the second coupling means 13, 21 allows the ironing appliance 1 to be so realized as to prevent the iron 20 from freeing itself from the supporting structure 10 and fall, e.g. when the ironing appliance 1 is not in use and/or upon accidental contact with the user, as a consequence of which it might suffer great damage.

[0056] The supporting structure 10 and/or the iron 20 further comprise selector means 50 adapted to select and/or set and/or display an ironing program and/or some operating parameters (e.g. relating to the temperature of the sole plate 21 of the iron 20) of the ironing appliance 1.

[0057] In the annexed Figures 4 to 6, reference numeral 100 designates as a whole an iron, in particular for household use, according to the present invention.

[0058] The iron 100 comprises a main body 110 extending from a front portion 111 to a rear portion 112.

[0059] In a preferred embodiment, said front portion 111 has a substantially tapered or pointed shape when said iron 100 is viewed from above (like the one shown in Fig. 6); also, said main body 110 is mostly made of plastic material.

[0060] The iron 100 further comprises a sole plate 120 associated with the bottom of said main body 110.

[0061] It must be pointed out that, in the present description, terms such as "bottom", "front", "rear", "associated with the bottom", "horizontal", and the like refer to an operating condition of the iron 100, i.e. a condition in which a bottom surface 121 of the sole plate 120 is facing towards a fabric to be ironed.

[0062] Preferably, said bottom surface 121 of the sole plate 120 is subjected to a treatment for promoting the sliding of the iron 100 on the fabric to be ironed.

[0063] In addition, the iron 100 comprises first heating means (not shown in the drawings) adapted to heat the sole plate 120 and/or allow the generation of steam, in

particular said bottom surface 121 of the sole plate 120 comprising holes (also not shown in Figures 4 to 6) allowing the steam to come out.

[0064] The iron 100 can then be associated with a supporting structure (also not shown in Figs. 4 to 6) comprising a base adapted to provide a bearing surface for said iron 100.

[0065] Usually said supporting structure is so realized as to comprise a boiler adapted to contain a liquid, generally water, said boiler being associated with second heating means for steam generation.

[0066] In addition, the iron 100 comprises a duct 102 for supplying electric power to said iron 100 and/or for transporting the steam from the supporting structure to the iron 100.

[0067] In accordance with the present invention, the front portion 111 of the main body 110 of said iron 100 comprises a step 113.

[0068] As is especially visible in Fig. 5, said step 113 comprises a tread 113A substantially parallel to the extension of the sole plate 120, i.e. substantially horizontal; in particular, said tread 113A is so realized as to have a depth P (shown in Fig. 5 by means of dashed-dotted lines) of at least 1 cm.

[0069] Preferably, said depth P of the tread 113A is in the range of 1 to 3 cm.

[0070] It should be noted that said depth P of the tread 113A is preferably measured from one end 111A of the front portion 111 of the main body 110, along an axis A (shown in Fig. 6 by means of a dashed-dotted line) of the iron 100.

[0071] In accordance with the present invention, said tread 113A of the step 113 is located at a height H of 3 to 4 cm from the bottom surface 121 of the sole plate 120; preferably, said height H is substantially equal to 3 cm.

[0072] The particular provision of the step 113 according to the present invention allows to realize the iron 100 in such a way as to allow the sole plate 120 to effectively reach any hardly accessible areas of the textile item; in fact, the peculiar shape of the first portion 111 of the main body 110 according to the present invention allows the fabric and any parts added thereto to climb over the step 113, so that the sole plate 120 can easily reach and iron any hardly accessible parts of said textile item.

[0073] At the same time, the provision of the step 113 on the front portion 111 of the main body 110 of the iron 100 allows to attain optimal ironing results on heavy and particularly creased textiles, in that the main body 110 on top of the sole plate 120 will have adequate thermal mass and weight, thanks to the shape of said main body 110 determined by the presence of the step 113.

[0074] As a result, the iron 100 according to the present invention turns out to be comfortable and easy to use, since the sole plate 120 does not have excessive dimensions and thickness, which would make the iron 100 too heavy and uncomfortable to handle.

[0075] Preferably, the step 113 according to the

present invention comprises a riser 113B which is so realized as to form an acute angle α (shown in Fig. 5) with the sole plate 120, in particular said riser 113B being so realized as to form a curvilinear wall.

[0076] The special shape of the riser 113B turns out to be particularly advantageous because it allows joining the sole plate 120 with the tread 113A, hence becoming a sort of draft for a textile portion (e.g. a pocket) and/or for rigid parts and/or for parts added to the fabric, which can thus climb over the step 113 to further facilitate the penetration of the end 111A of the front portion 111 of the main body 110 into hardly accessible parts of the textile item for the purpose of ironing them.

[0077] Preferably, the rear portion 112 of the iron 100 comprises a substantially flat face, which allows the iron 100 to lie on said rear portion 112 when said iron 100 is idle (i.e. when the sole plate 120 is not positioned on the fabric to be ironed).

[0078] The main body 110 comprises an aperture 114 for filling a tank (not shown in Figs. 4 to 6) with a liquid, said tank being associated with heating means (also not shown in Figs. 4 to 6) for steam generation.

[0079] The main body 110 further comprises a handle 115 that allows handling the iron 100; in addition, the main body 110 comprises actuating means 116 for spraying steam from the iron 100, said actuating means 116 being preferably associated with said handle 115.

[0080] The iron 100 also comprises selector means 130 adapted to select and/or set and/or display an ironing program and/or some operating parameters (e.g. relating to the temperature of the sole plate 120) of the iron 100.

[0081] The iron 100 further comprises a recess 140 that allows the duct 102 to be easily wound, in particular around the main body 110. Preferably, said recess 140 is located in the proximity of the rear portion 112 of the main body 110.

[0082] The advantages of an ironing appliance 1, in particular for household use, according to the present invention are apparent from the above description. The advantages of an iron 100, in particular for household use, according to the present invention are also apparent from the above description.

[0083] In particular, such advantages lie in the fact that the special provision of the appendix 30 according to the present invention allows to size the base 11 in such a way that it constitutes a good bearing surface for the iron 20, particularly during traditional ironing operations on textile items; in fact, when the appendix 30 is in the first operating condition (shown in Figs. 2a and 3a), it forms an expansion of the surface of said base 11, which is useful for laying the iron 20.

[0084] Furthermore, the provision of the appendix 30 also allows to realize said supporting structure 10 in such a way that it comprises a base 11 adapted to prevent the assembly consisting of the supporting structure 10 and the iron 20 from getting out of balance, thereby minimizing the risk of said supporting structure 10 and/or the iron 20 overturning; in fact, the extension of the supporting

surface of said base 11, determined by the position taken by the appendix 30 in the first operating condition shown in Figs. 2a and 3a, necessarily leads to increased stability of the assembly formed by the supporting structure 10 and the iron 20.

[0085] In addition, when the appendix 30 is in the second operating condition shown in Figs. 1 and 2b, it delimits the base 11 and constitutes a sort of protection element for the iron 20, which will thus be in a position protected, for example, against accidental shocks that might cause the iron 20 and/or the supporting structure 10 to overturn and fall.

[0086] It is therefore apparent that the provision of the appendix 30 allows to design said base 11 in such a way as to keep the supporting structure 10 and the iron 20 in safe conditions, especially when the iron is on the base, so as to avoid any danger for a user and any risk of damage to the whole ironing appliance 1, which might arise should said supporting structure 10 and/or the iron 20 overturn.

[0087] The peculiar realization of the appendix 30 then provides said supporting structure 10 with a large bearing surface (formed by the base 11 and the supporting surface 31) for the iron 20, without however being bulky or causing problems in regard to the positioning of the whole ironing appliance 1.

[0088] Another advantage of the ironing appliance 1, in particular for household use, according to the present invention lies in the provision of the first coupling means 22, 32 and/or the second coupling means 13, 23, which allow to realize the ironing appliance in such a way as to prevent the iron 20 from freeing itself from the supporting structure 10 and fall, e.g. when the ironing appliance 1 is not in use and/or upon accidental contact with the user, as a consequence of which it might suffer great damage.

[0089] It must also be pointed out that the particular provision of the step 113 according to the present invention allows to realize the iron 100 in such a way as to allow the sole plate 120 to effectively reach any hardly accessible areas of the textile item; in fact, the peculiar shape of the first portion 111 of the main body 110 according to the present invention allows the fabric and any parts added thereto to climb over the step 113, so that the sole plate 120 can easily reach and iron any hardly accessible parts of said textile item.

[0090] At the same time, the provision of the step 113 on the front portion 111 of the main body 110 of the iron 100 allows to attain optimal ironing results on heavy and particularly creased textiles, in that the main body 110 on top of the sole plate 120 will have adequate thermal mass and weight, thanks to the shape of said main body 110 determined by the presence of the step 113.

[0091] As a result, the iron 100 according to the present invention turns out to be comfortable and easy to use, since the sole plate 120 does not have excessive dimensions and thickness, which would make the iron 100 too heavy and uncomfortable to handle.

[0092] The particular shape of the riser 113B according

to the present invention further facilitates the penetration of the end 111A of the front portion 111 of the main body 110 into hardly accessible parts of the textile item for the purpose of ironing them. The ironing appliance and the iron, in particular for household use, described herein by way of example may be subject to many possible variations without departing from the novelty spirit of the inventive idea; it is also clear that in the practical implementation of the invention the illustrated details may have different shapes or be replaced with other technically equivalent elements.

[0093] It can therefore be easily understood that the present invention is not limited to the above-described ironing appliance and iron, in particular for household use, but may be subject to many modifications, improvements or replacements of equivalent parts and elements without departing from the inventive idea, as clearly specified in the following claims.

Claims

1. An iron (100), in particular for household use, of the type comprising:

- a main body (110) extending from a front portion (111) to a rear portion (112);
- a sole plate (120) associated with the bottom of said main body (110),

characterized in that

the front portion (111) of the main body (110) of said iron (100) comprises a step (113).

2. An iron (100) according to claim 1, **characterized in that** said step (113) comprises a tread (113A) substantially parallel to the extension of the sole plate (120).
3. An iron (100) according to one or more of the preceding claims, **characterized in that** said tread (113A) is so realized that its depth is at least 1 cm.
4. An iron (100) according to claim 3, **characterized in that** said depth (P) of the tread (113A) is in the range of 1 to 3 cm.
5. An iron (100) according to one or more of claims 3 and 4, **characterized in that** said depth (P) of the tread (113A) is measured from one end (111A) of the front portion (111) of the main body (110), along an axis (A) of the iron (100).
6. An iron (100) according to one or more of claims 2 to 5, **characterized in that** said tread (113A) of the step (113) is located at a height (H) of 3 to 4 cm from the bottom surface (121) of the sole plate (120).

7. An iron (100) according to claim 6, **characterized in that** said height (H) is substantially equal to 3 cm.

8. An iron (100) according to one or more of the preceding claims, **characterized in that** said step (113) comprises a riser (113B) which is so realized as to form an acute angle (α) with the soleplate (120).

9. An iron (100) according to claim 8, **characterized in that** said riser (113B) is so realized as to form a curvilinear wall.

10. An iron (100) according to one or more of the preceding claims, **characterized in that** said front portion (111) has a substantially tapered or pointed shape when said iron (100) is viewed from above.

11. An iron (100) according to one or more of the preceding claims, **characterized in that** the rear portion (112) of the iron (100) comprises a substantially flat face.

12. An iron (100) according to one or more of the preceding claims, **characterized in that** it comprises a recess (140) that allows winding the duct (102), in particular around the main body (110).

13. An iron (100) according to claim 12, **characterized in that** said recess (140) is located in the proximity of the rear portion (112) of the main body (110).

14. An iron (100) according to one or more of the preceding claims, **characterized in that** it comprises a bottom surface (121) of the sole plate (120) which is subjected to a treatment for promoting the sliding of the iron (100) on the fabric to be ironed.

15. An ironing appliance (1), in particular for household use, of the type comprising a supporting structure (10) and an iron (20), said supporting structure (10) comprising a base (11) adapted to provide a bearing surface for said iron (20), wherein said ironing appliance (1) comprises an appendix (30) movably associated with the supporting structure (10), said appendix (30) being associated with said supporting structure (11) in such a way that it can switch:

- from a first operating condition, wherein a supporting surface (31) of said appendix (30) lies substantially on a same plane as the base (11), thus acting as an extension of said base (11) adapted to expand the bearing surface for the iron (20);
- to a second operating condition, wherein said appendix (30) acts as a wall adapted to delimit the base (11), and vice versa,

said iron being according to any of the preceding

claims.

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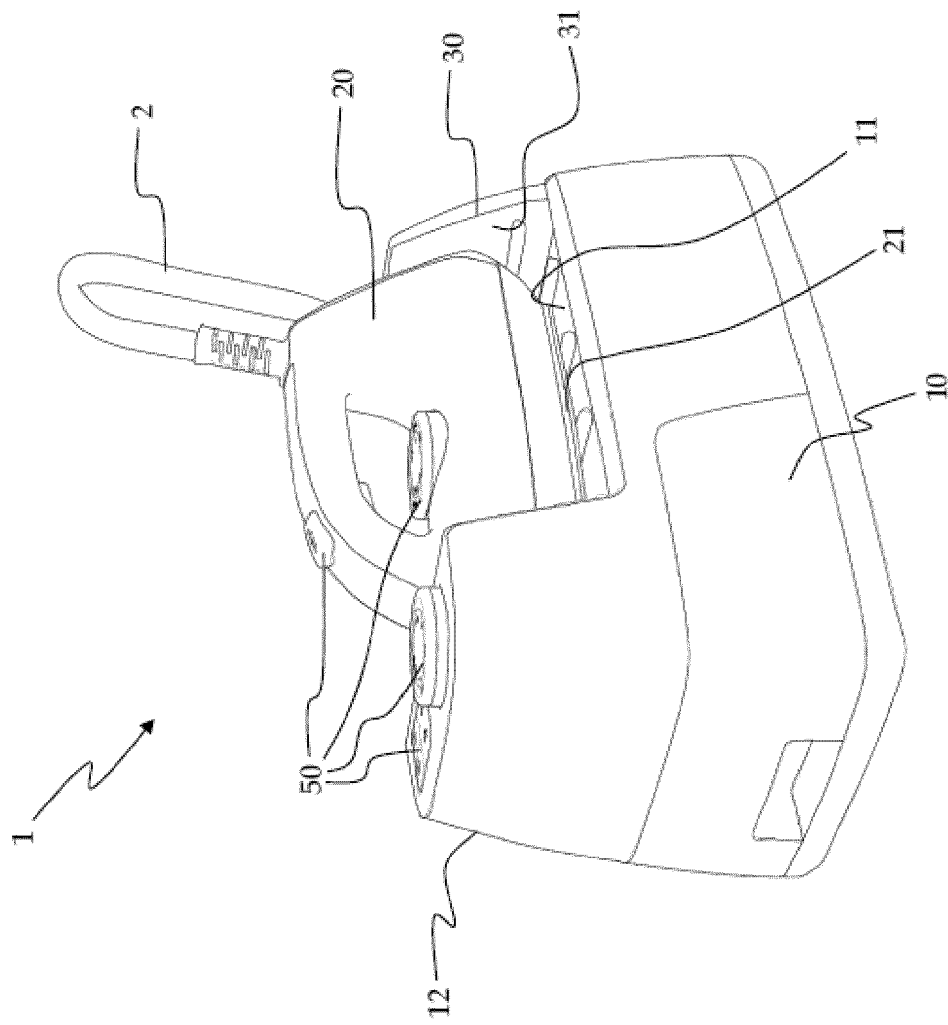


Fig. 1

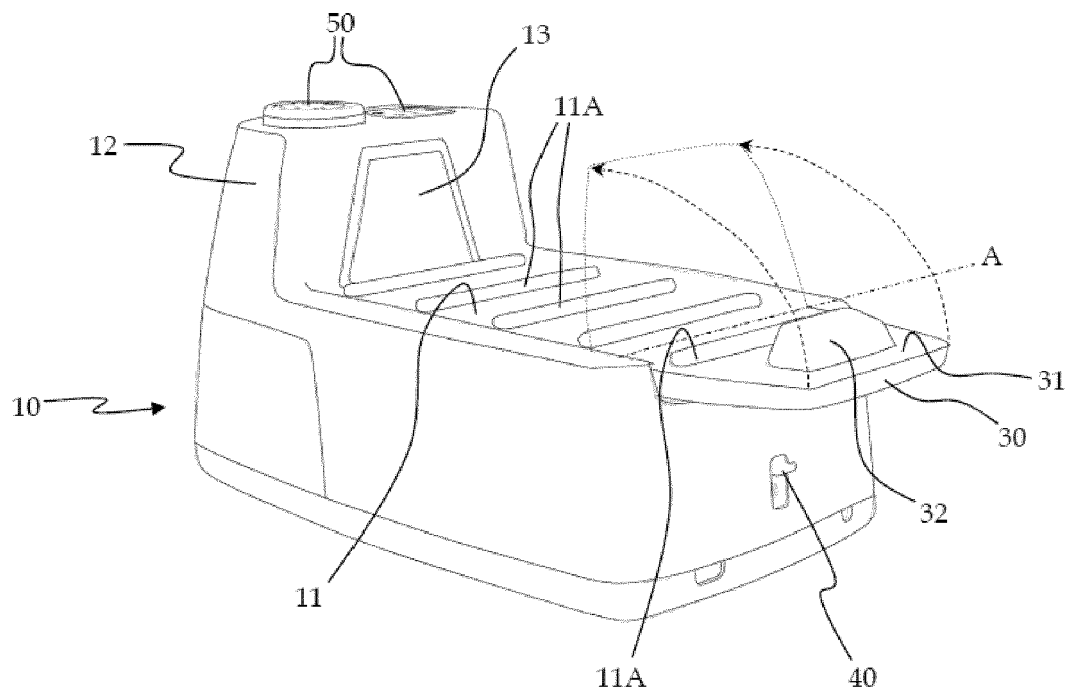


Fig. 2a

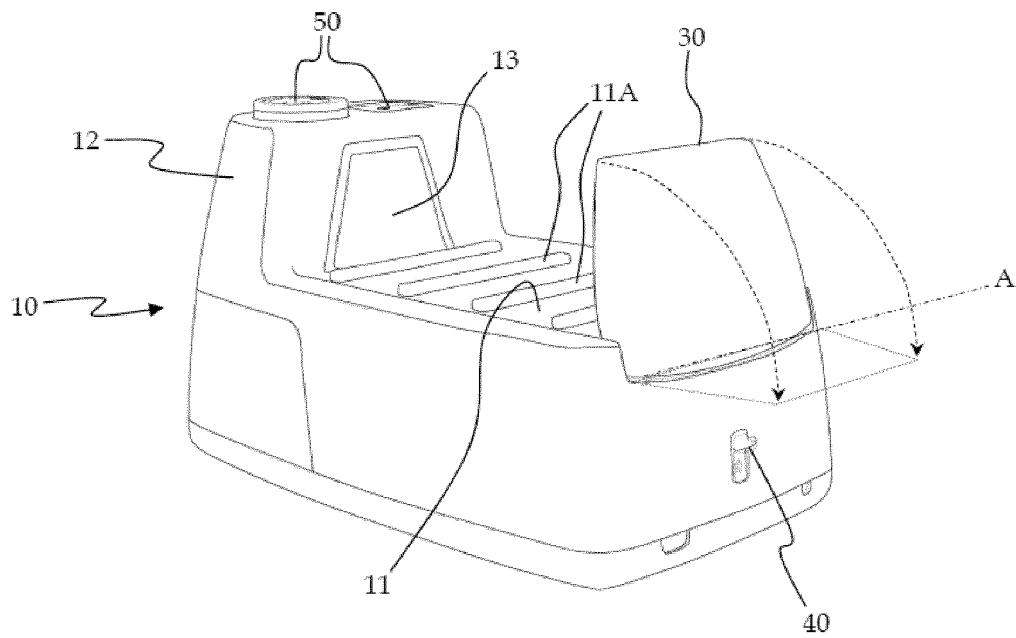


Fig. 2b

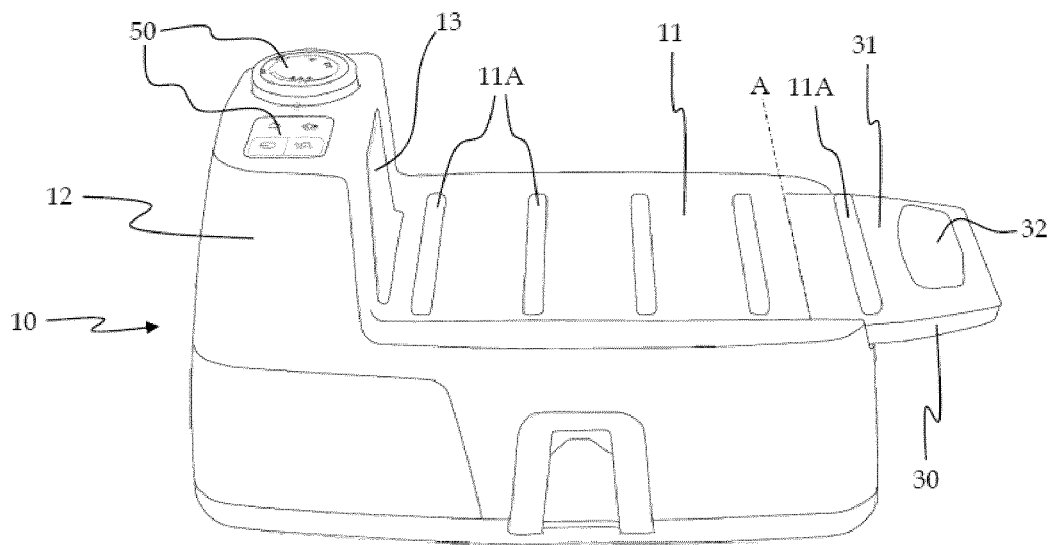


Fig. 3a

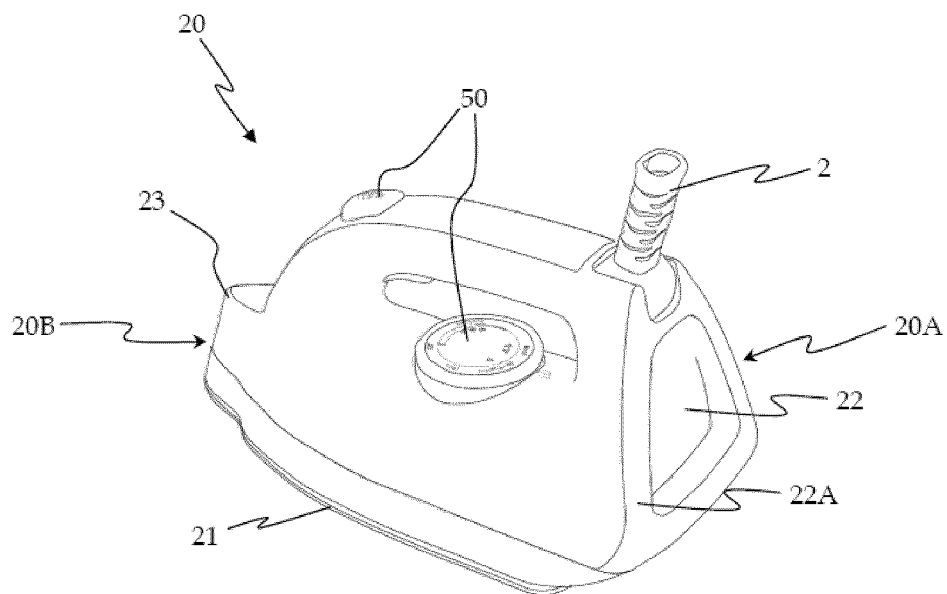


Fig. 3b

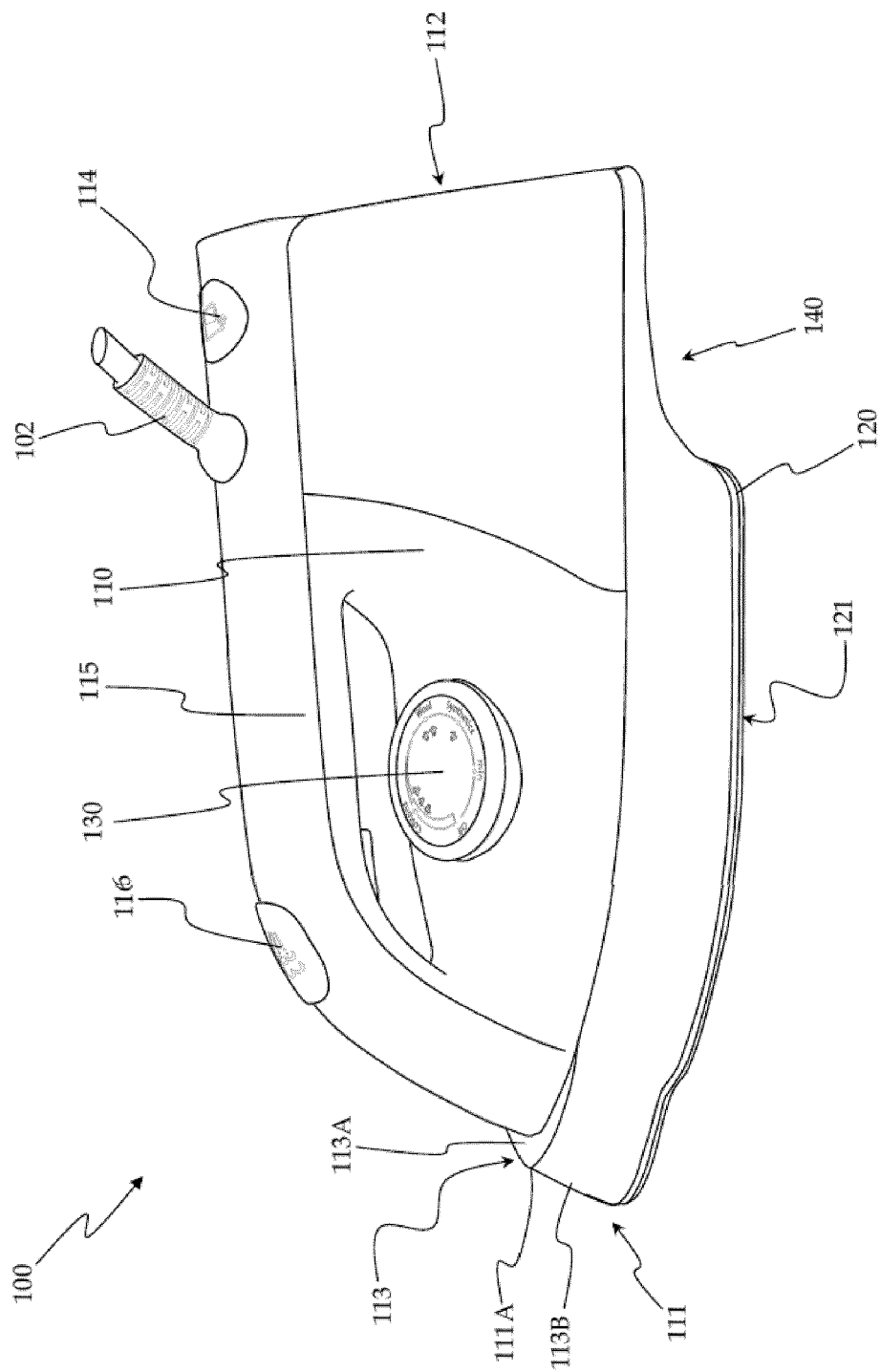


Fig. 4

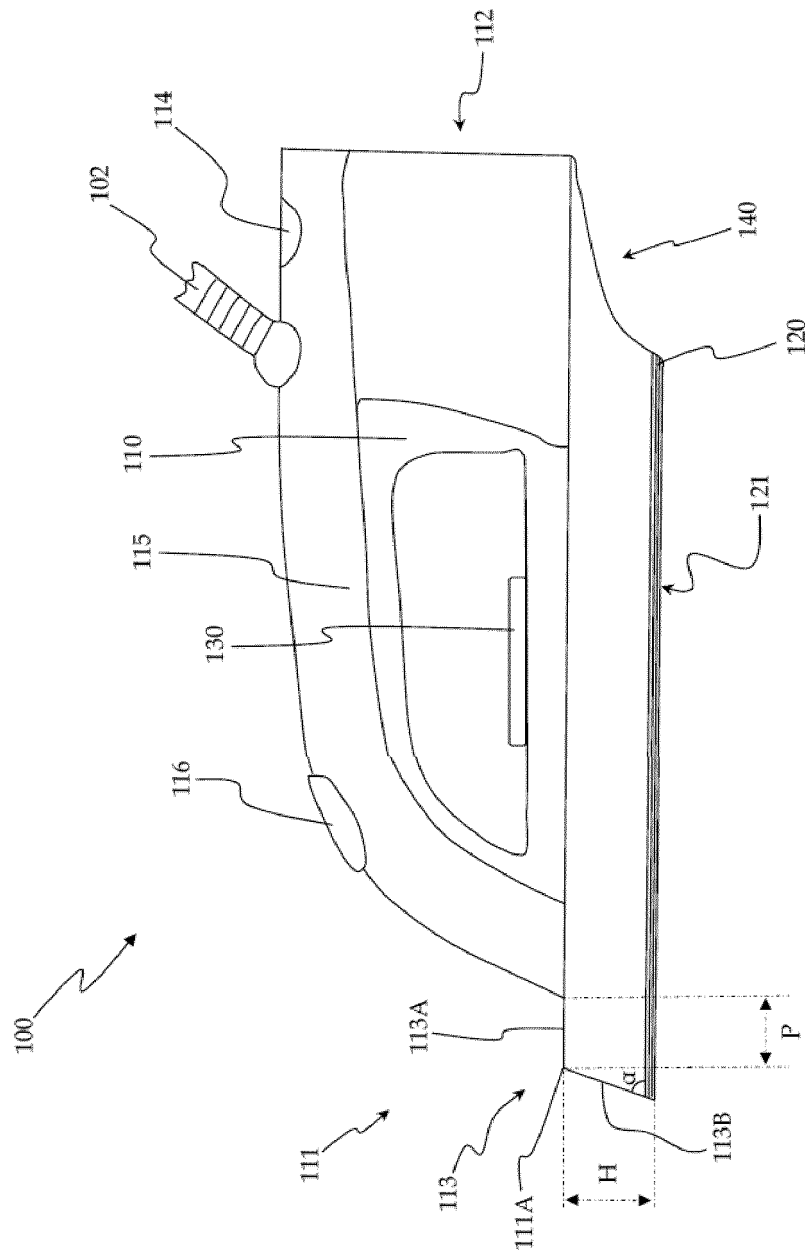


Fig. 5

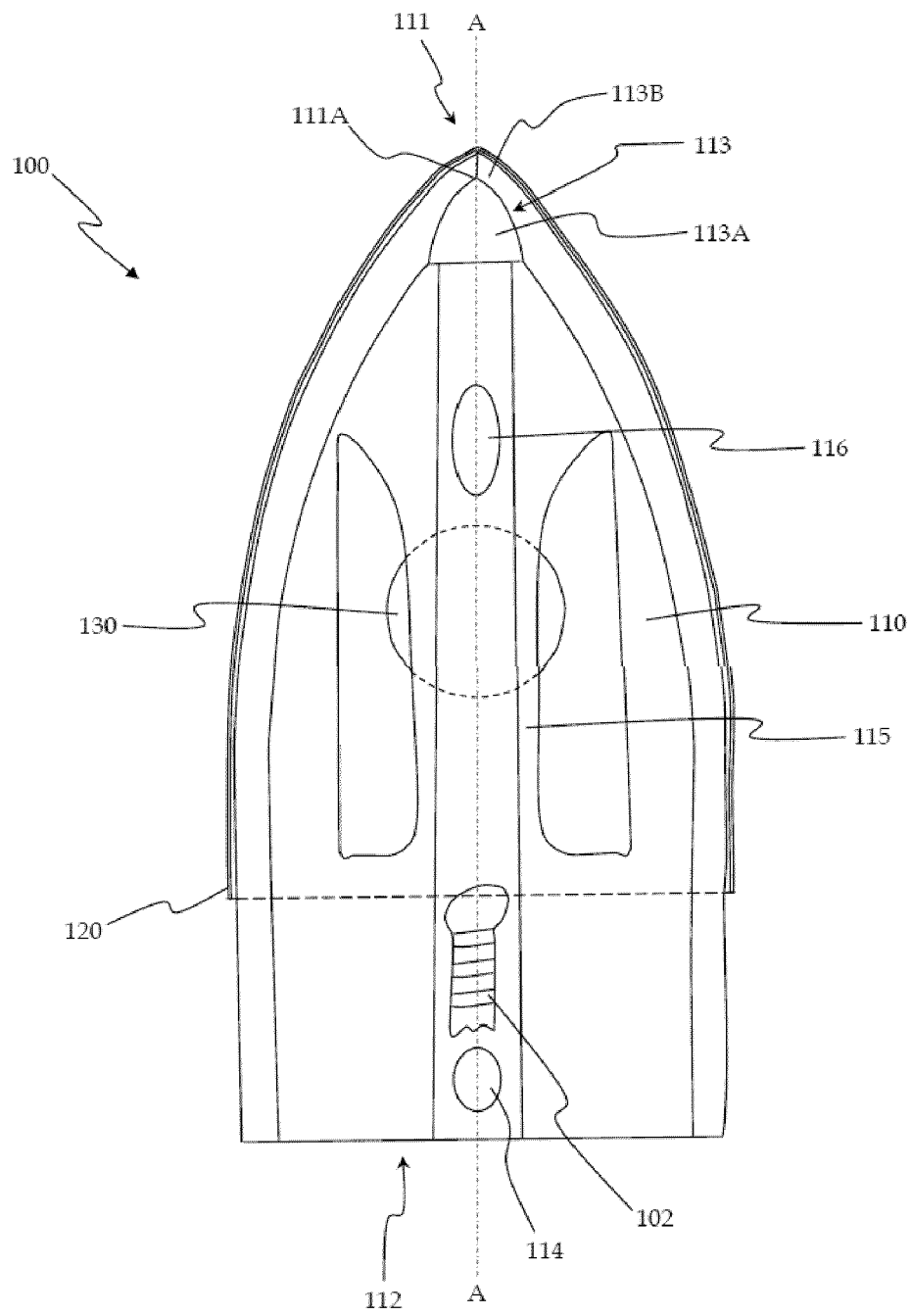


Fig. 6



EUROPEAN SEARCH REPORT

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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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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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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☒ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-15

ironing

1.1. claims: 1-14

iron having a step in the front

1.2. claim: 15

ironing appliance where the supporting structure has an
appendix to extend the supporting surface for the iron

Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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REFERENCES CITED IN THE DESCRIPTION

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