(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 850 149 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
13.11.2024 Bulletin 2024/46

(21) Application number: **19783739.6**

(22) Date of filing: **10.09.2019**

(51) International Patent Classification (IPC):
D06F 79/02 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
D06F 79/02; D06F 75/12; D06F 75/40; D06F 79/06

(86) International application number:
PCT/IT2019/050200

(87) International publication number:
WO 2020/053909 (19.03.2020 Gazette 2020/12)

(54) **SUPPORT BASE FOR AN IRON**

BASIS FÜR EIN BÜGELEISEN

SOCLE POUR UN FER À REPASSER

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

(30) Priority: **14.09.2018 IT 201800008627**

(43) Date of publication of application:
21.07.2021 Bulletin 2021/29

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Description

FIELD OF THE INVENTION

[0001] The present invention concerns a support base for an iron, for domestic or professional use, suitable to provide both a support for the iron during its phases of non-use, and also a support for it during the cleaning and removal of limescale operations.

[0002] The invention also concerns an ironing apparatus provided with the support base, as well as a method for cleaning and removing the limescale from the iron that partly uses the support base.

BACKGROUND OF THE INVENTION

[0003] Ironing apparatuses provided with an iron and a support base suitable to act as a support for the iron when it is not used are known. Known support bases normally have, integrated inside them, a tank for the water, or a boiler to generate steam, and an upper surface on which the lower plate of the iron is rested during its phases of non-use.

[0004] It is known that, with use, limescale formations tend to form in steam irons, in particular in correspondence with the steam generating device, or in general on the lower plate, which can compromise the functioning efficiency of the ironing apparatus.

[0005] Many steam irons provide a cleaning cycle, or function, in which the lower plate is heated to a high temperature and, subsequently, a large quantity of water is fed to it.

[0006] The water is transformed into steam in a short period of time, the steam being emitted by means of the holes provided in the plate. The generation of a high quantity of steam in a short time considerably increases the pressure in the steam chamber inside the iron, therefore the jets of steam that derive from it tend to draw with them the limescale particles deposited in the steam chamber and/or around the holes on the plate, making them exit from the heating plate removing possible obstructions.

[0007] One disadvantage of known ironing apparatuses is that, in order to perform the cleaning cycle as above, the user has to manually support the iron in a firm and secure manner in order to prevent the jets of steam which exit at high pressure from dirtying or damaging objects that are nearby, and at the same time avoid possible burns.

[0008] The cleaning operations are therefore inconvenient and not easy for the user, therefore they are often postponed with the consequence that the limescale becomes increasingly difficult to remove and the iron reduces its operating efficiency.

[0009] Another disadvantage is that, at the end of the cleaning and steam delivery cycle, it is often necessary to clean the surrounding area dirtied by the limescale particles and the steam that carries them.

[0010] Another disadvantage is that, during cleaning operations, the iron is at least partly surrounded by steam at high temperature, which can be uncomfortable for the user, who may risk getting burned while holding it. Furthermore, the steam causes condensation to form on the iron, which has to in turn be dried, increasing the time required to perform the cleaning and maintenance operations.

[0011] In order to try to at least in part solve these problems, from WO-A-2016/030299 an accessory is known for an ironing device comprising a tray suitable to support the lower plate of an iron during a cleaning cycle so that the steam, the water and possible limescale are directed to and contained in the tank.

[0012] The known tray comprises a base and a raised surface suitable to receive and support the ironing device above the base, so that the raised surface is located in complete contact with the entire circumference of a peripheral edge of the lower plate, creating a sort of airtight confinement that prevents the steam from exiting laterally and into the rear part. In the front part, where substantially the tip of the iron is positioned, the tray instead has an aperture that allows the steam to exit through a forced passage.

[0013] This known solution is not very practical for a user, since the tray is a distinct accessory separate from the ironing apparatus and requires its own storage space when it is not being used. Consequently, the user may not have it available whenever he/she performs a cleaning operation, and, depending on where it is stored, the user may forget it, not find it, or the tray may even be accidentally thrown away, or it can break or be damaged, therefore this can lead to a delay in performing the cleaning cycles.

[0014] Document EP-A-2.705.191 describes a support base for an iron comprising a base body and a support element removable from the base body, and suitable to support the iron on the base body, or on a surface separate from the base body. This support element has a single configuration of use and is not suitable to be used for cleaning operations.

[0015] US-A-1.738.845 and KR 2004 0072064 A describe a support element for an iron that can be upended in order to store the iron.

[0016] One purpose of the present invention is to provide a support base for an iron which overcomes at least some of the disadvantages of the state of the art.

[0017] In particular, one purpose of the present invention is to provide a multi-function support base for an iron, which can be used to support the iron both during normal phases of non-use, and also during cleaning and maintenance operations.

[0018] Another purpose of the present invention is to provide a support base which does not require any separate and distinct accessory in order to perform the cleaning and maintenance operations, therefore making the components necessary to perform these operations immediately obtainable and available.

[0019] Another purpose of the present invention is to provide an ironing apparatus which allows to perform the cleaning of the limescale from the iron effectively.

[0020] Another purpose of the present invention is to perfect a method for cleaning and removing limescale for an ironing apparatus which allows to easily and effectively remove possible limescale deposits, thus extending the useful life of the apparatus.

[0021] The Applicant has devised, tested and embodied the present invention to overcome the shortcomings of the state of the art and to obtain these and other purposes and advantages.

SUMMARY OF THE INVENTION

[0022] The present invention is set forth and characterized in the independent claims 1 and 12. The dependent claims describe other characteristics of the invention or variants to the main inventive idea.

[0023] Embodiments described here concern a support base for an iron comprising a base body suitable to be rested on a surface or a work plane, and a multi-function support element removably associated with the base body.

[0024] The support element has a first configuration of use, in which it is associated with the base body, and in which it is disposed with a first support surface facing upward and configured to provide a support for the iron during its phases of non-use, and a second configuration of use, in which it is removed from the base body and disposed upended with a second support surface, opposite the first, facing upward and configured to provide a support for the iron during the cleaning and removal of limescale operations.

[0025] The support element, therefore, is normally integrated with and forms part of the support base itself, and acts as a support element for the iron during all the phases in which the iron is used or not used.

[0026] When it is necessary to remove the limescale, the support element is removed from the base body, upended, and used as a support and containing base for the iron.

[0027] Therefore, as well as not needing a separate accessory to perform the cleaning operations, there is the additional advantage that the support element is always available to the user every time the iron is used.

[0028] With the term "associated" we mean that the support element is inserted, partly or completely inside the base body.

[0029] According to some embodiments, the support element is inserted completely into the base body and disposed substantially flush with it.

[0030] According to variant embodiments, the support element is inserted at least in part in the base body and protrudes above it for at least one segment.

[0031] According to some embodiments, the support element comprises a bottom wall and a lateral edge connected to the bottom wall, which extends for the entire periphery of the latter.

[0032] According to some embodiments, the base body comprises a housing compartment with a shape mating with that of the second support surface and configured to house the multi-function support element in the first configuration of use substantially recessed therein.

[0033] According to some embodiments, the bottom wall comprises a first external flat portion, connected to the lateral edge, a second internal flat portion, and intermediate connection portions between the first flat portion and the second flat portion, defining a concave portion on the first side and a convex portion of a mating shape on the second side.

[0034] According to some embodiments, the concave portion defines a first housing seating suitable to house the iron in the first configuration of use, in which first support elements are present which protrude from a bottom surface and extend substantially orthogonal to it, which define the first support surface. In this way, the lower plate of the iron is maintained distanced from the bottom wall, allowing the steam and/or condensation to exit during ironing operations.

[0035] According to some embodiments, the second support surface comprises second support elements which extend substantially orthogonal to an external top surface of the convex portion, and which define the second support surface.

[0036] According to some embodiments, the second support elements are disposed transverse with respect to a longitudinal median line of the support element, distanced one from the other. According to some embodiments, the second support elements have different heights than the external top surface, and in particular have a height progressively increasing from the front part toward the rear part of the support element.

[0037] In this way, positioning the support element in the second configuration of use on a plane, the rear part of the iron is raised with respect to the front part.

[0038] According to variant embodiments, the support element can be positioned in the housing compartment of the base body also in the second configuration of use. In this case, it can be provided that the base body and the second support elements have inclinations each opposite to the other so that, during use, the iron assumes a substantially horizontal position.

[0039] Embodiments described here also concern a method for cleaning and removing limescale from an iron, comprising:

- providing a support base according to the invention;
- removing the support element from its position associated with the base body;
- upending the support element from its position with its first support surface facing upward to a position with its second support surface facing upward;
- resting the iron on the second support surface and starting the operation to clean and remove limescale from the iron.

ILLUSTRATION OF THE DRAWINGS

[0040] These and other characteristics of the present invention will become apparent from the following description of some embodiments, given as a non-restrictive example with reference to the attached drawings wherein:

- fig. 1 is a schematic lateral view of a support base according to embodiments described here associated with an iron in a first configuration of use;
- fig. 2 is a section view of fig. 1;
- fig. 3 is an exploded view of the components of the support base according to embodiments of the present invention in a first configuration of use;
- fig. 3a is a perspective view of a component of the support base of fig. 3 in a second configuration of use;
- fig. 4 is a schematic lateral view of a component of the support base associated with an iron in the second configuration of use;
- fig. 5 is a partial section view of fig. 4.

[0041] To facilitate comprehension, the same reference numbers have been used, where possible, to identify identical common elements in the drawings. It is understood that elements and characteristics of one embodiment can conveniently be incorporated into other embodiments without further clarifications.

DESCRIPTION OF EMBODIMENTS

[0042] Embodiments described here with reference to the attached drawings concern a support base 10 for an iron 11.

[0043] According to some embodiments, the support base 10 and the iron 11 together define an ironing apparatus 12.

[0044] The iron 11 comprises, in a known manner, a containing body 14 and a plate 13 associated with heating means, the plate 13 defining the lower surface of the iron 11.

[0045] The plate 13 is provided at the lower part, and possibly also laterally, with a plurality of through holes 15 for the steam to exit.

[0046] According to some embodiments, the iron 11 comprises a control member 19 to generate steam selectively activatable by a user to command the delivery of steam during ironing operations.

[0047] According to some embodiments, the ironing apparatus 12 comprises a control and command unit, not shown, configured to control and command the functioning of the ironing apparatus 12. The control and command unit can be connected to a user interface by means of which a user can set the functioning parameters of the ironing apparatus 12, such as for example the temperature of the plate 13 and/or the type of steam delivery, or other.

[0048] According to some embodiments, the support base 10 comprises a base body 20, and a multi-function support element 21 removably associated with the base body.

[0049] According to some embodiments, the support element 21 can at least partly be inserted into the base body 20 and be removed from it.

[0050] According to some embodiments, the multi-function support element 21 has a first configuration of use, in which it is associated with the support body 20 and is suitable to support the iron 11 during the phases of non-use (figs. 1 - 3), and a second configuration of use, upended with respect to the first configuration of use, in which it is suitable to support the iron 11 during the cleaning and removal of limescale operations (figs 3a - 5).

[0051] According to some embodiments, the support element 21 in the first configuration of use is inserted at least in part in the support body 20 and in the second configuration of use it is removed from the support body 20.

[0052] With the expression "inserted at least in part" we mean that the support element 21 can be recessed in the support body 20 and therefore be flush with it, or it can have at least one portion protruding with respect to the support body 20.

[0053] According to some embodiments, the support base 10 also acts as a steam generating boiler and the base body 20 comprises a tank 16 suitable to contain water and a steam generating device 17 which is connected to the iron 11 by means of a feed pipe 18.

[0054] According to other embodiments, the tank 16 can be integrated into the iron 11 itself.

[0055] According to variant embodiments, the support base 10 can be provided with a tank 16 suitable to contain water and a pump, not shown, configured to remove water from the tank 16 and send it by means of the pipe 18 to a steam generating device 19 internal to the iron 11. According to these embodiments, the steam can be generated instantaneously by contact of the water with the heated plate 13 and delivered through the holes 15.

[0056] The base body 20 comprises a lower surface 22 suitable to be located resting on a support plane or surface and an upper surface 23, opposite the lower surface 22.

[0057] According to some embodiments, the upper surface 23 can be slightly inclined with respect to the lower surface 22, to allow an inclined positioning of the iron 11 during the phases of non-use.

[0058] The upper surface 23 defines the bottom wall of a housing compartment 24 configured to house the multi-function support element 21 in the first configuration of use.

[0059] The housing compartment 24 is laterally delimited by a lateral peripheral wall 25 which extends substantially in continuity with the side walls of the support element 21.

[0060] According to some embodiments, the housing

compartment 24 is configured to house the support element 21 in the first configuration of use substantially recessed therein, so that it does not protrude beyond the edge of the peripheral wall 25.

[0061] According to possible variants, the housing compartment 24 can be configured to house the support element 21 in the first configuration of use so that it protrudes beyond the edge of the peripheral wall 25.

[0062] According to some embodiments, the support element 21 comprises a bottom wall 26 and a lateral edge 27 connected to the bottom wall 26, which extends for the entire periphery of the latter.

[0063] The bottom wall 26 can have, in a plan view, a shape substantially corresponding to the shape of the base body 20.

[0064] According to some embodiments, the support element 21 can have a shape symmetrical with respect to a longitudinal median line M which extends from a front part, toward which, during use, the front part of the iron 11, that is, the tip, is facing, to a rear part.

[0065] According to some embodiments, the lateral edge 27 extends in a direction substantially orthogonal to the bottom wall 26.

[0066] According to some embodiments, the lateral edge 27 has two substantially rectilinear segments 27a connected to each other by respective curved segments 27b, 27c, of which a front curved segment 27b, toward which, during use, the front part of the iron 11 is facing, and a rear curved segment 27c opposite the front curved segment 27b.

[0067] The rectilinear segments 27a can be converging one with respect to the other from the rear curved segment 27c toward the front curved segment 27b.

[0068] According to some embodiments, the lateral edge 27 is configured to cooperate by interference with the peripheral wall 25 of the housing compartment 24 in the first configuration of use of the support element 21, to ensure a stable positioning thereof.

[0069] According to some embodiments, the bottom wall 26 comprises a first side 28 and a second side 29 which define respectively the side of use of the support element 21 in the first and in the second configuration.

[0070] According to some embodiments, the bottom wall 26 can have a substantially constant thickness along its entire development.

[0071] According to some embodiments, the bottom wall 26 comprises a first peripheral flat portion 26a, connected to the lateral edge 27, a second internal flat portion 26b, which lies on a plane parallel and offset with respect to the first flat portion 26a, and intermediate portions 26c connecting the first flat portion 26a and the second flat portion 26b so as to obtain a concave portion 30 on the first side 28, and a convex portion 36 mating in shape on the second side 29.

[0072] The intermediate portions 26c can have a slightly converging shape from the first flat portion 26a toward the second flat portion 26b so as to obtain respective slightly flared concave 30 and convex 36 portions.

[0073] According to some embodiments, the intermediate walls 26c can have a height substantially equal to that of the lateral edge 27, so that, in the first configuration of use, the support element 21 is positioned substantially flush with the top of the peripheral wall 25 of the support body 20.

[0074] The first side 28 defines a first support surface 28a suitable to provide a support for the iron 11 when it is stored in a condition of non-use, for example during breaks in ironing operations, or between one ironing operation and another.

[0075] According to some embodiments, the first side 28 comprises the concave portion 30 delimited by the bottom surfaces 31 and internal lateral surfaces 32 of the internal flat portion 26b and of the intermediate portion 26c respectively, which define a first housing seating 33 suitable to house the iron 11 in the first configuration of use.

[0076] The first housing seating 33 has a size suitable to contain the entire heating plate 13 of an iron 11 inside it.

[0077] According to some embodiments, first support elements 35 are disposed in the housing seating 33, which protrude from the bottom surface 31, and extend substantially orthogonal thereto.

[0078] The tops of the first support elements 35 define the first support surface 28a.

[0079] According to some embodiments, the first support elements 35 can be made in the form of ridges configured to define a first support surface 28a suitable to maintain the heating plate 13 raised with respect to the internal bottom surface 31, in order to allow the possible steam or condensation to exit through the through holes 15.

[0080] According to some embodiments, at least two first support elements 35 can be present, disposed parallel to each other, distanced along a median line of the support element 21, and transverse thereto.

[0081] According to some embodiments, the first support elements 35 all have the same height, preferably less than the height of the lateral surfaces 32, so that the first support surface 28a lies on a first support plane P1 substantially parallel to the internal bottom surface 31.

[0082] According to some embodiments, the first support elements 35 can have a height less than half the height of the internal lateral surfaces 32, for example less than a third, or a quarter of the height, so that the first support surface 28a is located at a height lower than the lateral edge 27. In this way, in the first configuration of use of the support body 21 the plate 13 can be positioned completely inside the first housing seating 33.

[0083] At the end of the ironing operations, or in any case when cleaning and maintenance operations need to be performed, it is sufficient to remove the support element 21 from the base body 20 and upend it, for example rotating it by 180°, in order to position it in the second configuration of use, in which the second side 29 faces upward (fig. 3a), and the first side 28 rests on a support plane or surface.

[0084] According to some embodiments, the second side 29 defines a second support surface 29a suitable to provide a support for the iron 11 during the cleaning and removal of limescale operations.

[0085] According to some embodiments, the second support surface 29a is provided on the convex portion 36, mating in shape with the concave portion 30 present on the first side 28.

[0086] The convex portion 36 is defined by an external top surface 37, opposite the internal bottom surface 31, and by an external lateral surface 38 opposite the internal lateral surface 32.

[0087] The second side 29 also comprises a collection seating 42 disposed around the convex portion 36, and configured to collect the possible steam, condensation, or limescale exiting from the through holes 15 of the iron 11 during cleaning operations.

[0088] The collection seating 42 is delimited by the external lateral surfaces 38 of the intermediate walls 26c and by the lateral edge 27

[0089] According to some embodiments, a second housing seating 39 is provided above the convex portion 36, suitable to house at least part of the heating plate 13 of the iron 11 in the second configuration of use.

[0090] The second housing seating 39 is delimited externally by a containing edge 40 which extends substantially orthogonal to the external top surface 37. In a top view, the containing edge 40 can have a shape substantially mating with the profile of the front part of an iron 11, that is, tapered from the rear part toward the front part.

[0091] According to some embodiments, the containing edge 40 has a front segment 40a with a possibly rounded tip, a substantially rectilinear rear segment 40b, and lateral segments 40c which connect the front edge 40a and rear edge 40b together.

[0092] According to some embodiments, the lateral segments 40c have a height lower than the front segment 40a and rear segment 40b.

[0093] According to some embodiments, the second housing seating 39 has a size smaller than the first housing seating 33 and is configured to house only a front portion of the heating plate 13.

[0094] According to some embodiments, the second side 29 comprises second support elements 41 which extend substantially orthogonal to the external top surface 37, the tops of which define a second support plane P2 on which the second support surface 29a lies.

[0095] According to some embodiments, the second support elements 41 are located internally to the containing edge 40.

[0096] According to some embodiments, at least two second support elements 41 are present, disposed parallel to each other, distanced along the median line M of the tray 21, and transverse thereto.

[0097] According to some embodiments, the second support elements 41 can extend substantially in continuity with the first support elements 35 provided on the first side 28, in the opposite direction thereto.

[0098] According to some embodiments, the second support elements 41 have different heights with respect to the external top surface 37 so as to define a second support plane P2 inclined with respect to the latter.

[0099] According to some embodiments, the second support elements 41 have progressively increasing heights from a front part to a rear part of the support body 21. For example, a first support element 41a located in proximity to the front segment 40a has a lower height than a second support element 41b located in proximity to the rear segment 40b, so that, during use, the iron 11 is positioned with its rear part raised with respect to the front part.

[0100] According to some embodiments, the tops of the support elements 41 and of the rear segment 40b lie on the same second support plane P2, and together define the second support surface 29a.

[0101] In the second configuration of use of the tray 21, therefore, the iron 11 is positioned with its heating plate 13 resting on the support elements 41a, 41b and the rear edge 40b, with a rear portion thereof which remains outside the second housing seating 39.

[0102] According to some embodiments, in the event the tray is positioned on a support plane, the rear portion of the heating plate 13 remains raised with respect to a front portion located in proximity to and inside the front edge 40a.

[0103] According to a possible variant, it can be provided to position the support body 21 in the housing compartment 24 also in the second configuration of use, with the lateral edge 27 in contact with the peripheral lateral wall 25, and the peripheral flat portion 26a in contact with the upper surface 23. In this case, it can be provided that the inclination of the second support plane P2 substantially corresponds to the inclination of the support body 23, so that, during use, the second support surface 29a is substantially horizontal.

[0104] When water is fed to the heating plate 13 to generate a high quantity of steam and to allow a removal of limescale residues, the steam delivered can rapidly exit from the second housing seating 39, in particular in the front and lateral direction, through the spaces present between the lateral segments 40c of the containing edge 40 and the heating plate 13, which is located in contact with the second support surface 29a only in correspondence with a central portion thereof.

[0105] The possible limescale and water removed, exiting from the through holes 15 can be collected inside the second housing seating 39, or possibly in the collection seating 42.

[0106] At the end of the ironing operations, the support body 21 can once again be rotated by 180° with respect to the median line M, and positioned, in the first configuration of use, in the housing compartment 24 of the base body 20.

[0107] According to some embodiments, the housing compartment 24 has a shape mating with that of the second side 29.

[0108] According to some embodiments, the housing compartment 24 comprises a concavity 43 having a shape substantially mating with that of the convex portion 36, and a flat surface 44 mating with the peripheral flat portion 26a of the bottom wall 26 of the support body 21.

[0109] According to some embodiments, recesses 45, 46 are provided in the flat surface 44 of the concavity 43, suitable to receive inside them the second support elements 41 and the containing edge 40 respectively which, in the first configuration of use of the support body 21, are therefore inserted in the base body 20.

[0110] The mating shape of the housing compartment 24 and of the second side 29 of the tray 21 allows to obtain a same-shape coupling between the two components, and therefore a stable support base 10 for the iron 11.

[0111] It is clear that modifications and/or additions of parts may be made to the support base 10 and to the ironing apparatus 12 as described heretofore, without departing from the field and scope of the present invention.

[0112] It is also clear that, although the present invention has been described with reference to some specific examples, a person of skill in the art shall certainly be able to achieve many other equivalent forms of support base 10 and ironing apparatus 12, having the characteristics as set forth in the claims and hence all coming within the field of protection defined thereby.

Claims

1. Support base for an iron (11) comprising a base body (20) suitable to be rested on a surface or a work plane and comprising a lower surface (22) suitable to be located resting on said surface or work plan and an upper surface (23) opposite the lower surface (22) and a multi-function support element (21) removably associated with said base body (20), **characterized in that** said multi-function support element (21) has a first configuration of use and a second configuration of use, wherein said upper surface (23) defines a bottom wall of a housing compartment (24) configured to house said multi-function support element (21) in said first configuration of use in which said multi-function support element (21) is disposed with a first support surface (28a) facing upward and configured to provide a support for said iron (11) during its phases of non-use during breaks in ironing operations, or between one ironing operation and another, and the at second configuration of use, in which said multi-function support element (21) is removed from said base body (20) and disposed upended with a second support surface (29a), opposite the first support surface (28a), facing upward and configured to provide a support and containing base for said iron (11) during the cleaning and removal of limescale operations.

2. Support base as in claim 1, **characterized in that** said multi-function support element (21) comprises a bottom wall (26) and a lateral edge (27) connected to said bottom wall (26) that extends for the entire periphery of the latter, wherein said bottom wall (26) comprises a first external flat portion (26a), connected to said lateral edge (27), a second internal flat portion (26b) that lies on a plane parallel and offset with respect to said first flat portion (26a) and a connection portion (26c) intermediate between the first flat portion (26a) and the second flat portion (26b), defining a concave portion (30) on a first side (28) and a convex portion (36) of a mating shape on a second side (29).

3. Support base as in claim 2, **characterized in that** said concave portion (30) defines a first housing seating (33) suitable to house the iron (11) in said first configuration of use, in which first support elements (35) are disposed that protrude from an internal bottom surface (31) of said concave portion (30), and extend substantially orthogonal to it, wherein said first support surface (28a) is defined by the top of said first support elements (35).

4. Support base as in claims 2 or 3, **characterized in that** said second side (29) comprises second support elements (41) which extend substantially orthogonal to an external top surface (37) of said convex portion (36), wherein said second support surface (29a) is defined by the top of said second support elements (41).

5. Support base as in claim 4, **characterized in that** said second side (29) comprises a containing edge (40) which extends substantially orthogonal to said external top surface (37), which delimits a second housing seating (39) and said second support elements (41) are located inside said containing edge (40), disposed transverse with respect to a median line (M) of said multi-function support body (21).

6. Support base as in claim 5, **characterized in that** said containing edge (40) has a front segment (40a), a substantially rectilinear rear segment (40b), and lateral segments (40c) which connect the front (40a) and rear (40b) edges to each other, wherein the top of said rear edge (40b) defines part of said second support surface (29a) and said lateral segments (40c) have a lower height than said front (40a) and rear (40b) segments, allowing the steam, in the second configuration of use, to exit from said second housing seating (39) in a lateral direction.

7. Support base as in any of the claims from 4 to 6, **characterized in that** said support elements (41) have different heights from one another, progressively increasing from a front portion of said multi-

function support element (21) toward which, during use, the front part of the iron (11) is positioned, to a rear portion.

8. Support base as in claim 3 and any of the claims from 4 to 7, **characterized in that** said second support elements (41) extend substantially in continuity with said first support elements (35), in the opposite direction to them.

9. Support base as in any claim hereinbefore, **characterized in that** said housing compartment (24) has a shape mating with that of a second side (29) of the multi-function support element (21) and is delimited by a lateral peripheral wall (25), said housing compartment (24) being configured to house said multi-function support element (21) in the first configuration of use substantially recessed therein, with a lateral edge (27) located in contact and flush with said lateral peripheral wall (25).

10. Support base as in claims 4 and 9, **characterized in that** said housing compartment (24) comprises a concavity (43) having a shape substantially mating with that of said convex portion (36), and a flat surface (44) mating with said peripheral flat portion (26a) of the bottom wall (26), wherein hollows (45, 46) are provided in said flat surface (44) suitable to receive inside them respectively said containing edge (40) and said second support elements (41).

11. Ironing apparatus comprising an iron (11) and a support base (10) as in any of the claims from 1 to 10.

12. Method to perform operations to clean and remove limescale from an iron (11), comprising:

- providing a support base (10) as in any of the claims from 1 to 10 with the support element (21) disposed in the housing compartment (24) of the upper surface (23) of the base body (20) with the first support surface (28a) facing upward and configured to provide a support for said iron (11) during its phases of non-use;
- removing the support element (21) from the housing compartment (24) of the base body (20);
- upending said support element (21) from its position with its first support surface (28a) facing upward to a position with its second support surface (29a) facing upward;
- resting the iron (11) on said second support surface (29a) and starting the operation to clean and remove limescale from the iron (11).

Patentansprüche

1. Sockel für ein Bügeleisen (11) umfassend einen Sockelkörper (20), der geeignet ist, auf einer Oberfläche oder einer Arbeitsebene aufzuliegen, und der eine untere Oberfläche (22), die aufliegend auf der Oberfläche oder Arbeitsebene platziert werden kann, und eine der unteren Oberfläche (22) gegenüber liegende obere Oberfläche (23) umfasst, und ein Multifunktions-Auflageelement (21), das abnehmbar mit dem Sockelkörper (20) verbunden ist, **dadurch gekennzeichnet, dass** das Multifunktions-Auflageelement (21) eine erste Gebrauchskonfiguration und eine zweite Gebrauchskonfiguration aufweist, wobei in der ersten Gebrauchskonfiguration die obere Oberfläche (23) eine Bodenwand eines zur Aufnahme des Multifunktions-Auflageelements (21) konfigurierten Aufnahmeraums (24) definiert und das Multifunktions-Auflageelement (21) so angeordnet ist, dass eine erste Auflagefläche (28a) nach oben weist und so konfiguriert ist, dass sie eine Auflage für das Bügeleisen (11) während seiner Nichtgebrauchsphasen während der Unterbrechung der Bügelvorgänge oder zwischen einem Bügelvorgang und einem anderen Bügelvorgang bereitstellt, und in der zweiten Gebrauchskonfiguration das Multifunktions-Auflageelement (21) von dem Sockelkörper (20) entfernt vorliegt und umgedreht angeordnet ist, so dass eine zweite Auflagefläche (29a), die der ersten Auflagefläche (28a) gegenüberliegt, nach oben weist und so konfiguriert ist, dass sie eine Auflage und Aufnahmebasis für das Bügeleisen (11) während der Reinigungs- und Kalkentfernungsvorgänge bereitstellt.

2. Sockel nach Anspruch 1, **dadurch gekennzeichnet, dass** das Multifunktions-Auflageelement (21) eine Bodenwand (26) und eine mit der Bodenwand (26) verbundene Seitenkante (27) aufweist, die sich über den gesamten Umfang der Bodenwand erstreckt, wobei die Bodenwand (26) einen ersten äußeren planen Abschnitt (26a), der mit der Seitenkante (27) verbunden ist, einen zweiten inneren planen Abschnitt (26b), der auf einer Ebene parallel und versetzt zu dem ersten planen Abschnitt (26a) liegt, und einen Verbindungsabschnitt (26c), der zwischen dem ersten planen Abschnitt (26a) und dem zweiten planen Abschnitt (26b) gelegen ist und einen konkaven Abschnitt (30) auf einer ersten Seite (28) und einen konvexen Abschnitt (36) mit einer komplementären Form auf einer zweiten Seite (29) definiert, umfasst.

3. Sockel nach Anspruch 2, **dadurch gekennzeichnet, dass** der konkave Abschnitt (30) einen ersten Gehäusesitz (33) definiert, der geeignet ist, das Bügeleisen (11) in der ersten Gebrauchskonfiguration aufzunehmen, wobei erste Auflageelemente (35)

angeordnet sind, die von einer inneren Bodenfläche (31) des konkaven Abschnitts (30) vorstehen und sich im Wesentlichen orthogonal dazu erstrecken, wobei die erste Auflagefläche (28a) durch die Oberseite der ersten Auflageelemente (35) definiert wird.

4. Sockel nach Anspruch 2 oder 3, **dadurch gekennzeichnet, dass** die zweite Seite (29) zweite Auflageelemente (41) umfasst, die sich im Wesentlichen orthogonal zu einer äußeren oberen Fläche (37) des konvexen Abschnitts (36) erstrecken, wobei die zweite Auflagefläche (29a) durch die Oberseite der zweiten Auflageelemente (41) definiert wird.

5. Sockel nach Anspruch 4, **dadurch gekennzeichnet, dass** die zweite Seite (29) einen Aufnahmerand (40) aufweist, der sich im Wesentlichen orthogonal zu der äußeren oberen Fläche (37) erstreckt und einen zweiten Gehäusesitz (39) begrenzt, wobei die zweiten Auflageelemente (41) innerhalb des Aufnahmerandes (40) angeordnet sind und quer zu einer Mittellinie (M) des Multifunktions-Auflagekörpers (21) verlaufen.

6. Sockel nach Anspruch 5, **dadurch gekennzeichnet, dass** der Aufnahmerand (40) ein vorderes Segment (40a), ein im Wesentlichen geradliniges hinteres Segment (40b) und seitliche Segmente (40c), die den vorderen (40a) und hinteren (40b) Rand miteinander verbinden, aufweist, wobei die Oberseite des hinteren Randes (40b) einen Teil der zweiten Auflagefläche (29a) definiert, und die seitlichen Segmente (40c) eine geringere Höhe als die vorderen (40a) und hinteren (40b) Segmente aufweisen, wodurch der Dampf in der zweiten Gebrauchskonfiguration aus dem zweiten Gehäusesitz (39) in einer seitlichen Richtung austreten kann.

7. Sockel nach irgendeinem der Ansprüche 4 bis 6, **dadurch gekennzeichnet, dass** die Auflageelemente (41) jeweils unterschiedliche Längen haben, die von einem vorderen Abschnitt des Multifunktions-Auflageelements (21), zu dem hin während des Gebrauchs der vordere Teil des Bügeleisens (11) positioniert ist, zu einem hinteren Abschnitt progressiv zunehmen.

8. Sockel nach Anspruch 3 und irgendeinem der Ansprüche 4 bis 7, **dadurch gekennzeichnet, dass** sich die zweiten Auflageelemente (41) im Wesentlichen in Kontinuität mit den ersten Auflageelementen (35) in entgegengesetzter Richtung zu diesen erstrecken.

9. Sockel nach irgendeinem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der Aufnahmeraum (24) eine Form aufweist, die mit derjenigen der zweiten Seite (29) des Multifunktions-Auflageelements (21) übereinstimmt und durch eine seitliche Umfangswand (25) begrenzt wird, wobei der Aufnahmeraum (24) so konfiguriert ist, dass er das Multifunktions-Auflageelement (21) in der ersten Gebrauchskonfiguration im Wesentlichen darin versenkt aufnimmt, wobei der seitliche Rand (27) in Kontakt mit der seitlichen Umfangswand (25) steht und mit dieser bündig ist.

10. Sockel nach den Ansprüchen 4 und 9, **dadurch gekennzeichnet, dass** der Aufnahmeraum (24) eine Konkavität (43) mit einer Form, die im Wesentlichen mit der des konvexen Abschnitts (36) übereinstimmt, und eine plane Oberfläche (44), die mit dem planen Umfangsabschnitt (26a) der Bodenwand (26) übereinstimmt, umfasst, wobei in der planen Oberfläche (44) Vertiefungen (45, 46) vorgesehen sind, die geeignet sind, in ihrem Inneren jeweils die Aufnahmekante (40) und die zweiten Auflageelemente (41) aufzunehmen.

11. Bügelvorrichtung umfassend ein Bügeleisen (11) und einen Sockel (10) nach irgendeinem der Ansprüche 1 bis 10.

12. Verfahren zur Durchführung von Reinigungs- und Entkalkungsvorgängen an einem Bügeleisen (11), umfassend:

- Bereitstellen eines Sockels (10) nach irgendeinem der Ansprüche 1 bis 10, wobei das Auflageelement (21) in dem Aufnahmeraum (24) der oberen Oberfläche (23) des Sockelkörpers (20) so angeordnet ist, dass die erste Auflagefläche (28a) nach oben zeigt und so konfiguriert ist, dass sie eine Auflage für das Bügeleisen (11) während der Nichtgebrauchsphasen bereitstellt;
- Entfernen des Auflageelements (21) aus dem Aufnahmeraum (24) des Sockelkörpers (20);
- Umdrehen des Auflageelements (21) aus seiner Position, in der seine erste Auflagefläche (28a) nach oben zeigt, in eine Position, in der seine zweite Auflagefläche (29a) nach oben zeigt;
- Ablegen des Bügeleisens (11) auf der zweiten Auflagefläche (29a) und Starten des Vorgangs zum Reinigen und Entfernen von Kalkablagerungen aus dem Bügeleisen (11).

Revendications

1. Base de support pour un fer à repasser (11) comprenant un corps de base (20) approprié pour reposer sur une surface ou un plan de travail et comprenant une surface inférieure (22) appropriée pour être située reposant sur ladite surface ou ledit plan de

travail et une surface supérieure (23) opposée à la surface inférieure (22) et un élément de support multifonction (21) associé de manière amovible audit corps de base (20), **caractérisée en ce que** ledit élément de support multifonction (21) présente une première configuration d'utilisation et une seconde configuration d'utilisation, dans laquelle ladite surface supérieure (23) définit une paroi inférieure d'un compartiment de logement (24) configuré pour loger ledit élément de support multifonction (21) dans ladite première configuration d'utilisation dans laquelle ledit élément de support multifonction (21) est disposé avec une première surface de support (28a) tournée vers le haut et configurée pour fournir un support pour ledit fer à repasser (11) pendant ses phases de non-utilisation pendant des pauses lors d'opérations de repassage, ou entre une opération de repassage et une autre, et la seconde configuration d'utilisation, dans laquelle ledit élément de support multifonction (21) est retiré dudit corps de base (20) et disposé renversé avec une seconde surface de support (29a), opposée à la première surface de support (28a), tournée vers le haut et configurée pour fournir une base de support et de confinement pour ledit fer à repasser (11) pendant des opérations de nettoyage et d'élimination de calcaire.

2. Base de support selon la revendication 1, **caractérisée en ce que** ledit élément de support multifonction (21) comprend une paroi inférieure (26) et un bord latéral (27) connecté à ladite paroi inférieure (26) qui s'étend sur toute la périphérie de cette dernière, dans laquelle ladite paroi inférieure (26) comprend une première partie plate externe (26a), connectée audit bord latéral (27), une seconde partie plate interne (26b) qui se trouve sur un plan parallèle et décalé par rapport à ladite première partie plate (26a) et une partie de connexion (26c) intermédiaire entre la première partie plate (26a) et la seconde partie plate (26b), définissant une partie concave (30) sur un premier côté (28) et une partie convexe (36) d'une forme homologue sur un second côté (29).

3. Base de support selon la revendication 2, **caractérisée en ce que** ladite partie concave (30) définit un premier siège de logement (33) approprié pour loger le fer à repasser (11) dans ladite première configuration d'utilisation, dans laquelle des premiers éléments de support (35) sont disposés qui font saillie à partir d'une surface inférieure interne (31) de ladite partie concave (30), et s'étendent sensiblement orthogonalement à celle-ci, dans laquelle ladite première surface de support (28a) est définie par le sommet desdits premiers éléments de support (35).

4. Base de support selon les revendications 2 ou 3, **caractérisée en ce que** ledit second côté (29) comprend des seconds éléments de support (41) qui s'étendent sensiblement orthogonalement à une surface de sommet externe (37) de ladite partie convexe (36), dans laquelle ladite seconde surface de support (29a) est définie par le sommet desdits seconds éléments de support (41).

5. Base de support selon la revendication 4, **caractérisée en ce que** ledit second côté (29) comprend un bord de confinement (40) qui s'étend de manière sensiblement orthogonale à ladite surface de sommet externe (37), qui délimite un second siège de logement (39) et lesdits seconds éléments de support (41) sont situés à l'intérieur dudit bord de confinement (40), disposés de manière transversale par rapport à une ligne médiane (M) dudit corps de support multifonction (21).

6. Base de support selon la revendication 5, **caractérisée en ce que** ledit bord de confinement (40) présente un segment avant (40a), un segment arrière sensiblement rectiligne (40b), et des segments latéraux (40c) qui relient les bords avant (40a) et arrière (40b) l'un à l'autre, dans laquelle le sommet dudit bord arrière (40b) définit une partie de ladite seconde surface de support (29a) et lesdits segments latéraux (40c) présentent une hauteur inférieure auxdits segments avant (40a) et arrière (40b), permettant à de la vapeur, dans la seconde configuration d'utilisation, de sortir dudit second siège de logement (39) dans une direction latérale.

7. Base de support selon l'une quelconque des revendications 4 à 6, **caractérisée en ce que** lesdits éléments de support (41) ont des hauteurs différentes les uns des autres, en augmentant progressivement depuis une partie avant dudit élément de support multifonction (21) vers laquelle, en cours d'utilisation, la partie avant du fer à repasser (11) est positionnée, jusqu'à une partie arrière.

8. Base de support selon la revendication 3 et l'une quelconque des revendications 4 à 7, **caractérisée en ce que** lesdits seconds éléments de support (41) s'étendent sensiblement en continuité avec lesdits premiers éléments de support (35), dans la direction opposée à ceux-ci.

9. Base de support selon l'une quelconque des revendications précédentes, **caractérisée en ce que** ledit compartiment de logement (24) a une forme homologue à celle d'un second côté (29) de l'élément de support multifonction (21) et est délimité par une paroi périphérique latérale (25), ledit compartiment de logement (24) étant configuré pour loger ledit élément de support multifonction (21) dans la première configuration d'utilisation sensiblement en retrait dans celui-ci, avec un bord latéral (27) situé en contact avec ladite paroi périphérique latérale (25), et à

fleur de celle-ci.

10. Base de support selon les revendications 4 et 9, **caractérisée en ce que** ledit compartiment de logement (24) comprend une concavité (43) ayant une forme sensiblement homologue à celle de ladite partie convexe (36), et une surface plate (44) homologue à ladite partie plate périphérique (26a) de la paroi inférieure (26), dans laquelle des creux (45, 46) sont disposés dans ladite surface plate (44) appropriés pour recevoir à l'intérieur respectivement ledit bord de confinement (40) et lesdits seconds éléments de support (41).

11. Appareil de repassage comprenant un fer à repasser (11) et une base de support (10) selon l'une quelconque des revendications 1 à 10.

12. Procédé pour effectuer des opérations de nettoyage et d'élimination de calcaire d'un fer à repasser (11), comprenant les étapes consistant à :

- fournir une base de support (10) selon l'une quelconque des revendications 1 à 10, l'élément de support (21) étant disposé dans le compartiment de logement (24) de la surface supérieure (23) du corps de base (20), la première surface de support (28a) étant tournée vers le haut et configurée pour fournir un support pour ledit fer à repasser (11) pendant ses phases de non-utilisation ;
- retirer l'élément de support (21) du compartiment de logement (24) du corps de base (20) ;
- renverser ledit élément de support (21) de sa position avec sa première surface de support (28a) tournée vers le haut vers une position avec sa seconde surface de support (29a) tournée vers le haut ;
- reposer le fer à repasser (11) sur ladite seconde surface de support (29a) et commencer l'opération de nettoyage et d'élimination de calcaire du fer à repasser (11).

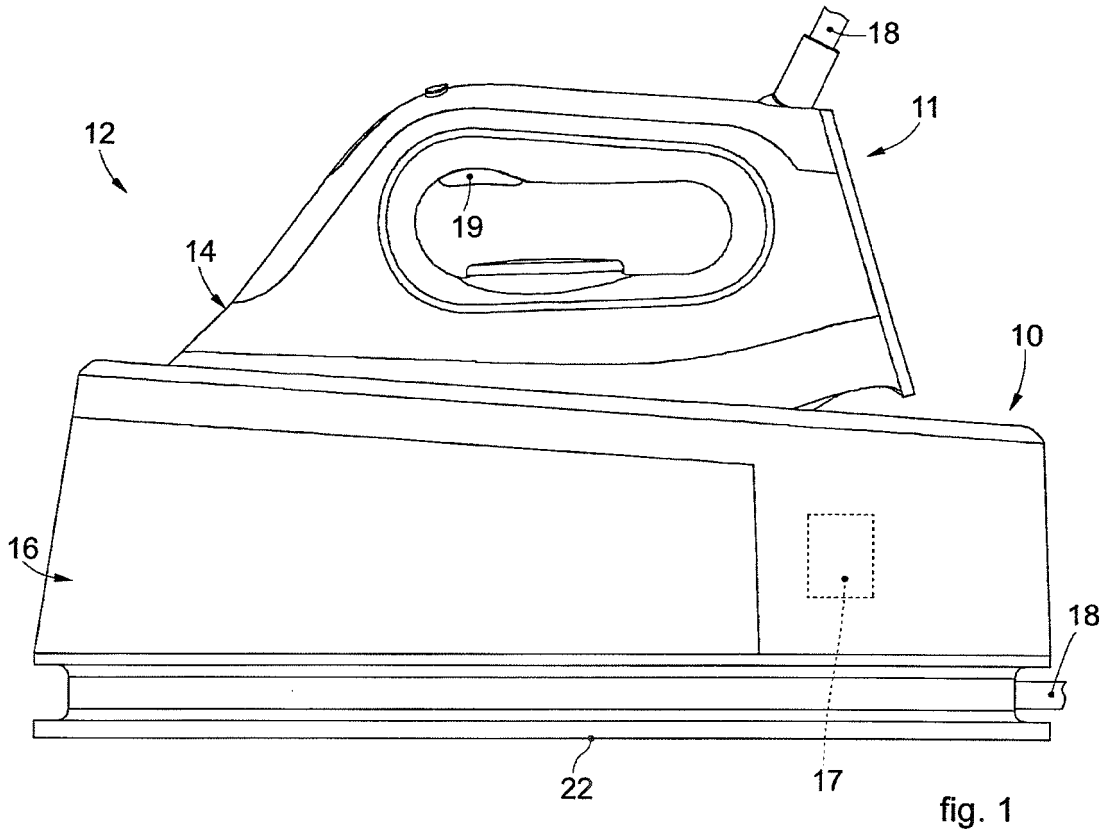
18
11
12
19
14
10
16
18
22
17

fig. 1

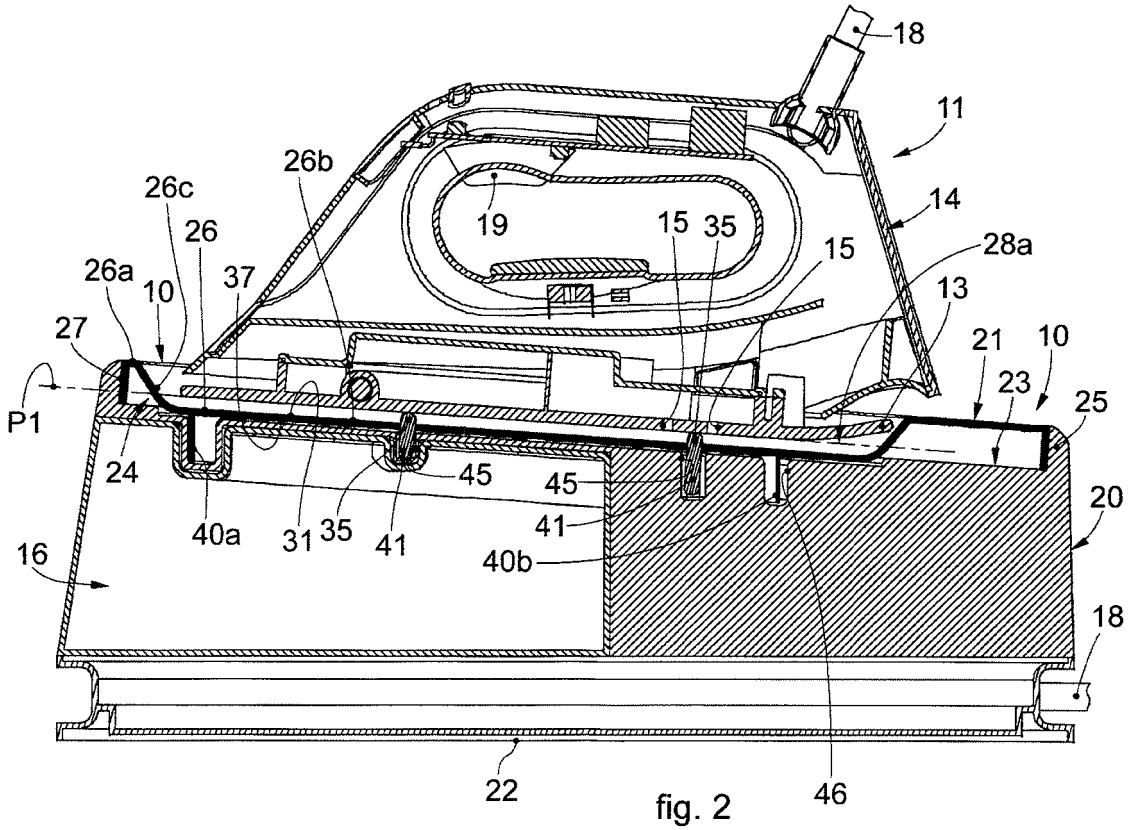
18
11
26b
26c
26
19
15
35
14
28a
26a
10
37
15
13
27
21
10
23
25
P1
24
45
45
20
40a
31
35
41
41
40b
16
18
22
46

fig. 2

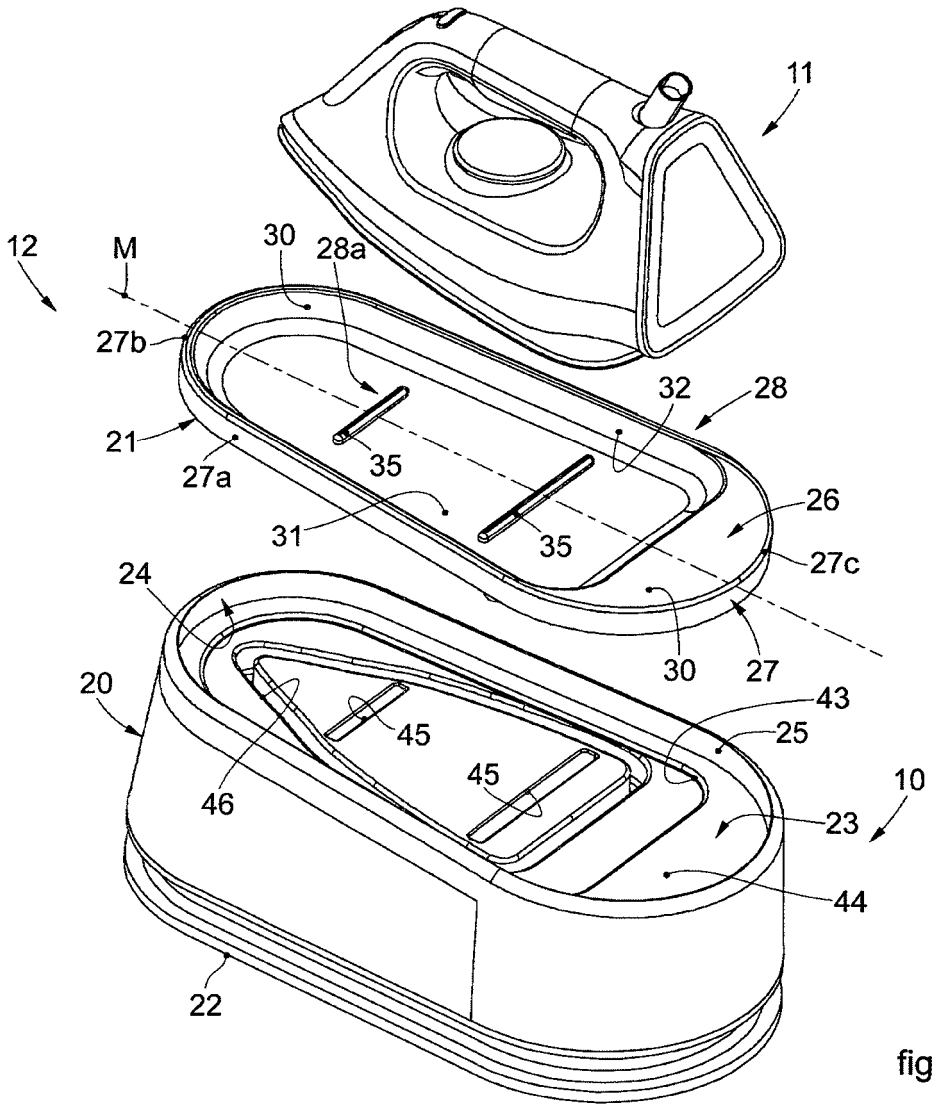
11
12
M
30
28a
27b
32
28
21
27a
35
26
31
35
27c
24
30
27
20
43
45
25
45
10
46
23
44
22

fig. 3

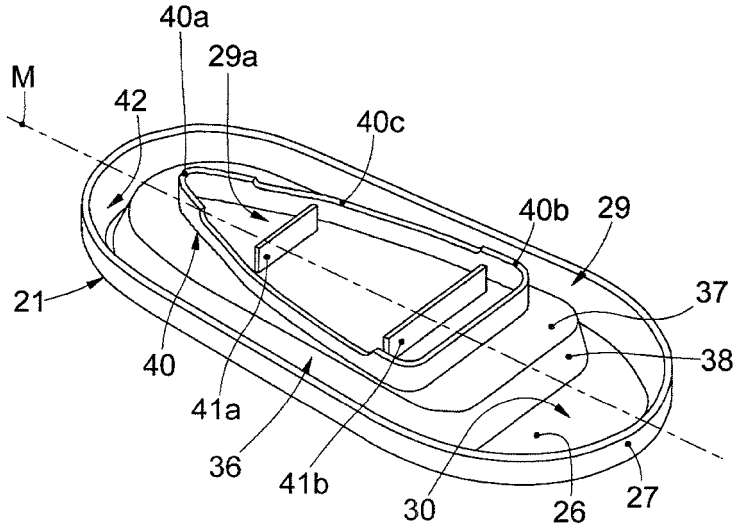
40a
29a
M
42
40c
40b
29
21
37
38
40
41a
36
41b
30
26
27

fig. 3a

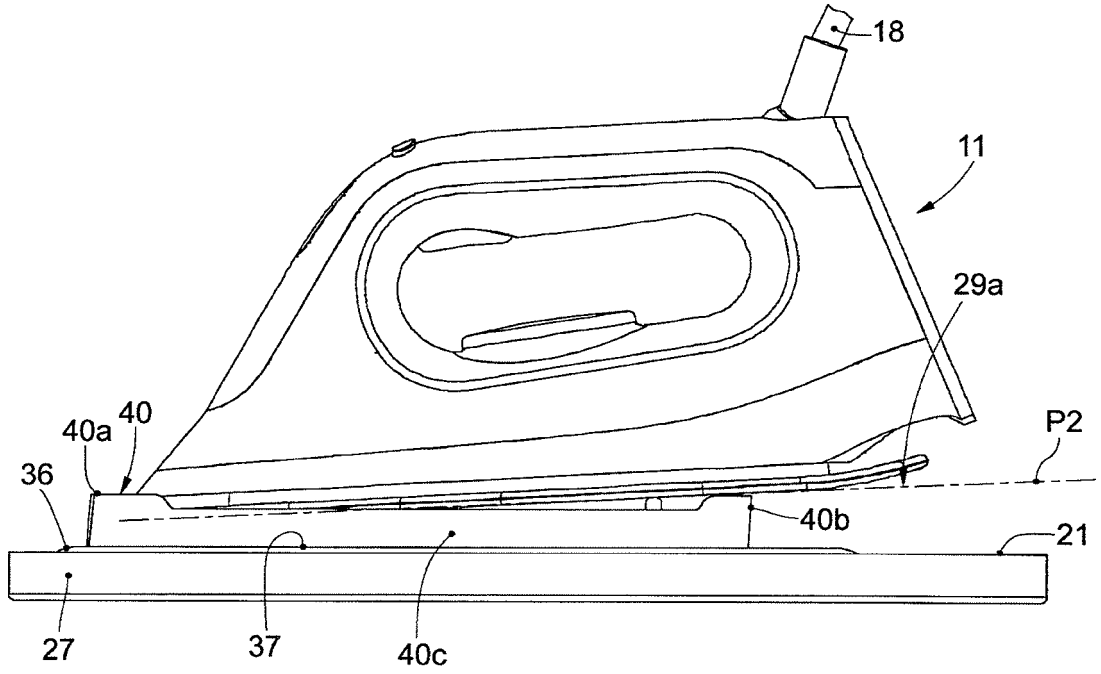
18
11
29a
40a
40
P2
36
40b
21
27
37
40c

fig. 4

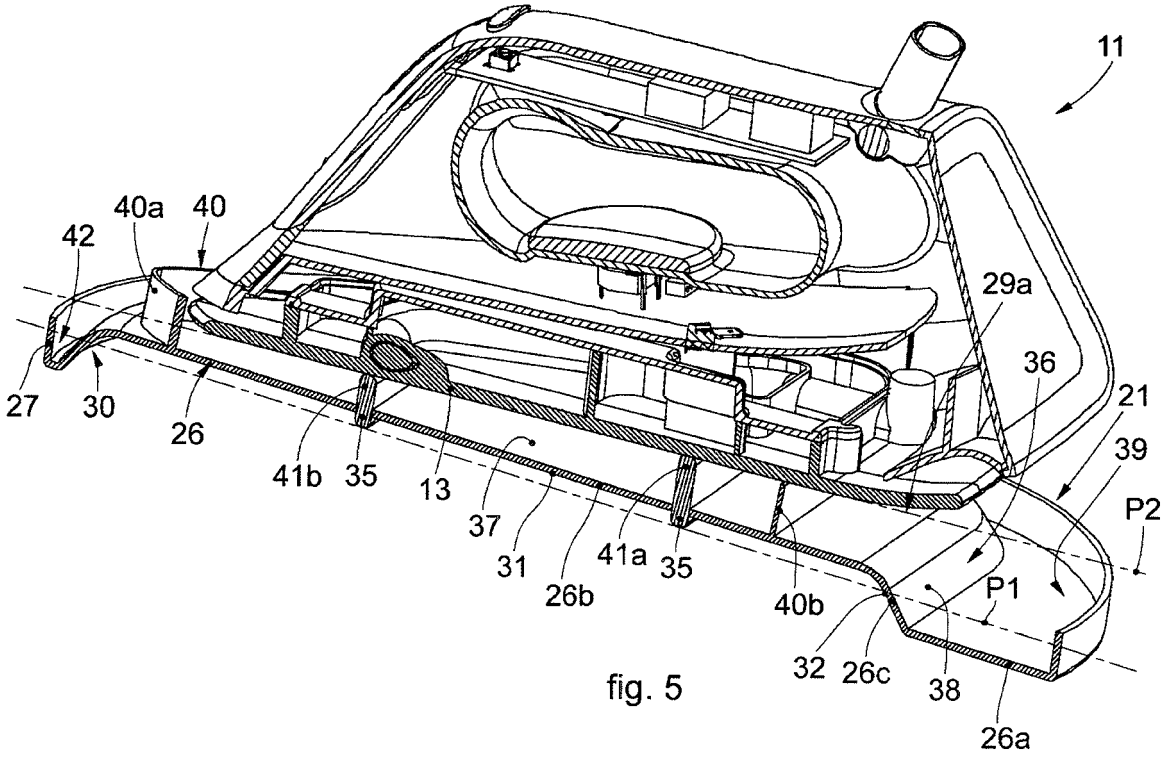
11
40a
40
42
29a
36
21
39
27
30
26
41b
35
13
37
31
26b
41a
35
40b
P2
P1
32
26c
38
26a

fig. 5

REFERENCES CITED IN THE DESCRIPTION

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