

EUROPEAN QUALIFYING EXAMINATION 2019

Paper C

This paper comprises:

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| * Form 2300: Notice of opposition to a European patent | |



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5 Mr Strijker
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10

20 February 2019

15 Dear Mr Strijker,

We would like you to file an opposition on behalf of our company Domonia Ltd against European patent EP 3 020 234 (Annex 1). We trust that the enclosed Annexes 2 to 6 are of use to you in this regard.

20

Annex 1 claims the priority of NL 2013806. The application as filed is identical to the priority document, except for claims 6 and 7 and paragraphs [0017] and [0018] of the description, which were added when filing Annex 1.

25 We note that claim 1 as originally filed read: "Ironing device comprising an aluminium soleplate (1) coated on its ironing side with a Kera type layer, the Kera type layer being a KeraMa layer or a KeraSi layer."

No further amendments were made during examination.

30

Best regards,
Joyce K. Oats



Enclosures:

Annex 1: EP 3 020 234

Annex 2: FR 2 775 570

Annex 3: US 2015/0042569

Annex 4: Properties of coated metallic baseplates of dry irons

Annex 5: EP 2 003 547

Annex 6: EP 1 568 600



(19)



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(11) **EP 3 020 234 B1**

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Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European Patent Convention).



[0001] Ironing devices are used both at home and in laundries to remove creases from fabrics. Such devices may be for example in the form of a press or a hand iron. A major element of a hand iron, also commonly termed iron, is the soleplate or baseplate, which is moved with its ironing side over the surface to be ironed.

5

[0002] Irons may be dry irons or steam irons. A steam iron always comprises a means of containing water, i.e. a tank, a means of generating steam from this water, and a means of dispensing the steam to the fabric to be ironed. The steam is normally dispensed through outlets located in the soleplate, these outlets being suitably connected to the means for generating steam.

10

[0003] As ironing is a burden for most users, there is a need to make ironing easier and more efficient.

15

[0004] In particular the gliding properties of the soleplate have a major impact on ironing. Gliding properties for ironing devices can be assessed either by measuring the force necessary to move the iron over fabrics such as cotton or silk, or by asking professional users to rank the gliding performance.

20

[0005] The soleplate may be made of metal, such as aluminium or steel, which is polished to a high quality to obtain a smooth surface. Aluminium is a low density metal, hence allowing the production of lightweight ironing devices. However aluminium is not a very hard metal so the bottom surface of the aluminium soleplate can be scratched by e.g. zip fasteners during ironing. A scratched surface cannot glide that easily over fabric.

25

In addition reactions between aluminium and steam may modify the structure of the aluminium surface and create stains, which can also impede gliding.



[0006] Therefore in a first aspect of the invention we have developed a coating on the ironing side of an aluminium soleplate with the aim of protecting it against deterioration. A particular type of ceramic coating, the Kera type coating, e.g. KeraTix, KeraSi or KeraMa, has been found to be particularly suitable for that purpose. In addition we have
5 found that this coating, or layer, can be easily applied to an aluminium soleplate, optionally on top of an intermediate coating. The intermediate coating provides good adhesion between the aluminium soleplate and the Kera type coating. Furthermore our tests show that a KeraMa coating improves gliding.

10 [0007] For steam irons, we apply KeraMa to an intermediate coating of Yur56. In addition, in a preferred embodiment of the first aspect of the invention, the iron has grooves in the soleplate to distribute the steam to the fabric.

15 [0008] Figure 1 represents the soleplate 1 of a steam iron in accordance with this preferred embodiment of the first aspect of the invention.

[0009] Steam is released from steam outlets 2, also called steam nozzles, formed in the soleplate. As the iron is pressed onto the fabric, the released steam flows mostly to the area of the fabric directly below the outlets 2, and then through the fabric. Hence
20 there is a risk that some areas of the fabric receive too much steam, while other areas do not receive enough steam. Thus there is a need to improve steam distribution to the fabric. Grooves 3, i.e. open channels, in the form of shallow, elongated recesses starting at the steam outlets 2 address this problem by allowing the steam to be distributed over the surface of the soleplate beyond the area of the outlets 2 to a bigger surface area of
25 the fabric.



[0010] The grooves can be made by various processes, such as cold working of the metallic soleplate, or casting the molten metal in a permanent mould having the required shape for obtaining a soleplate with grooves and using forced-air cooling. Among the available processes of casting in a permanent mould, low-pressure die casting, which means filling the mould by means of an overpressure of 0.5 bar, is preferred because it can easily be implemented. Coatings are subsequently deposited onto the grooved soleplate.

[0011] In a second aspect of the invention we have developed a steam iron with an internal water tank having a specific distribution of steam outlets which allows for a more efficient use of steam. A steam iron with an internal water tank is designed for domestic use. The tank has a small capacity, thus a more efficient use of steam will reduce the frequency with which the water tank has to be refilled.

[0012] The iron according to the second aspect of the invention is provided with a region at the tip of the soleplate with a high density of steam outlets together with a region at the back of the soleplate without steam outlets. This distribution of steam outlets has proved effective in preventing waste of steam. In the technical field of ironing devices, a high density corresponds to at least five outlets per ten square centimetres of surface.

[0013] Figure 2 represents the soleplate 11 of an iron according to the second aspect of the invention. The soleplate 11 has a longitudinal axis (XX'), a tip region 14 with a high density of steam outlets 12 and a back region 15 without outlets.

[0014] With region 14 at the tip of the soleplate 11 and region 15 at the back of the soleplate 11, efficient use of steam is achieved. Therefore good ironing quality can be obtained with a low steam-flow rate.



[0015] In a preferred embodiment of the iron according to the second aspect of the invention, the steam dispensing system is designed to avoid damaging delicate fabrics. In known steam irons, the steam outlets are formed as part of ducts running through the soleplate. Such ducts are generally oriented perpendicularly to the ironing surface of the soleplate, thus at an angle of 90° with respect to the ironing surface. In that configuration, the direction and pressure of the steam flow force the steam to go through the fabric, which increases the risk of damaging delicate fabrics.

[0016] To overcome this problem, the present embodiment provides tilted ducts, each having a longitudinal axis inclined at an angle of between 25° and 35° with respect to the ironing surface of the soleplate. The steam thus partly flows along the surface of the fabric instead of being forced through the fabric. The integrity of delicate fabrics is maintained. Choosing a smaller angle, and thus longer ducts, would make it more difficult to manufacture the ducts. A much bigger angle would not sufficiently reduce the risk of damaging delicate fabrics. An angle of between 25° and 35° has been found to give the best results.

[0017] In the iron according to the second aspect of this invention, an unexpected effect is obtained when the region devoid of steam outlets extends at least 4 cm along the longitudinal axis (XX') of the soleplate. Where this is the case, a large hot surface at the back of the soleplate is brought into contact with the fabric, which speeds up the ironing process to a surprising degree.

[0018] This iron also preferably comprises an opening in the back of the iron. The water tank can be filled through this opening. There is more space for the opening in the back than on the top of the iron, which is usually narrow and cluttered with temperature and steam control buttons. Hence an opening in the back can be made bigger to allow for easier refilling of the water tank. Appropriate design and orientation of the opening or suitable caps prevent water from spilling when the iron is moved.



Claims:

1. Ironing device comprising an aluminium soleplate (1) coated on its ironing side with a Kera type layer, the Kera type layer being a KeraMa layer and/or a KeraSi layer.
2. Ironing device according to claim 1 being a steam iron wherein the coating on the ironing side of the soleplate (1) comprises, starting from the soleplate (1) in this order, a Yur56 layer and a KeraMa layer as the Kera type layer.
3. Ironing device according to claim 2, wherein the soleplate (1) comprises steam outlets (2) and grooves (3) starting from the steam outlets (2) to distribute the steam, and wherein the grooves (3) are obtainable by low-pressure die casting and forced-air cooling.
4. Steam iron with an internal water tank and a soleplate (11) with steam outlets (12), wherein the soleplate (11) comprises a region (14) at the tip of the soleplate (11) with a high density of steam outlets (12) and a region (15) at the back of the soleplate (11) devoid of steam outlets.
5. Steam iron according to claim 4, wherein the steam outlets (12) are part of steam dispensing ducts each having a longitudinal axis inclined at an angle of between 25° and 35° with respect to the ironing surface of the soleplate (11).
6. Steam iron according to claim 4, wherein the region (15) at the back of the soleplate (11) extends at least 4 cm along the longitudinal axis (XX') of the soleplate (11).
7. Steam iron according to claim 6 with an opening in the back of the iron through which the water tank can be filled.



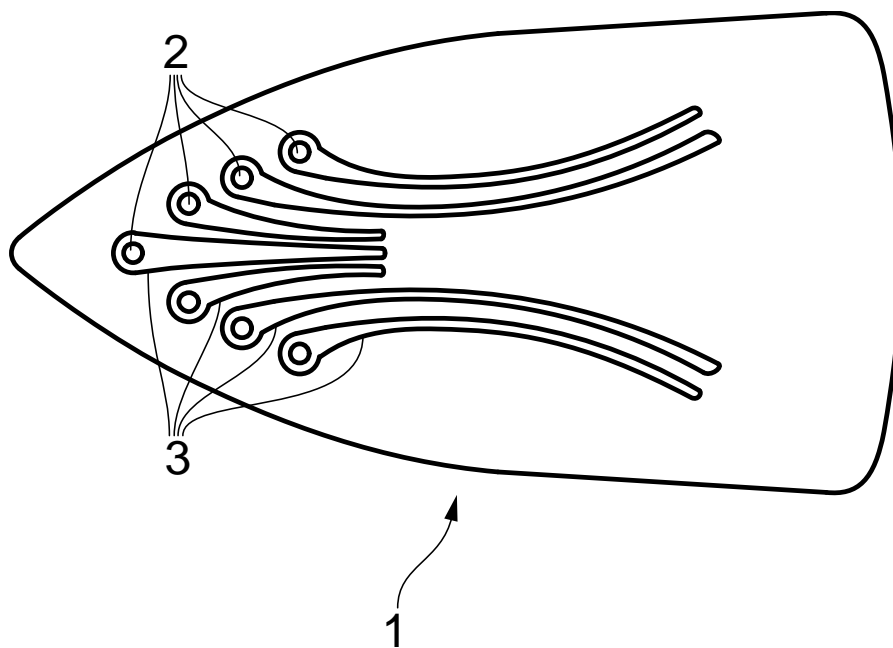


FIG. 1

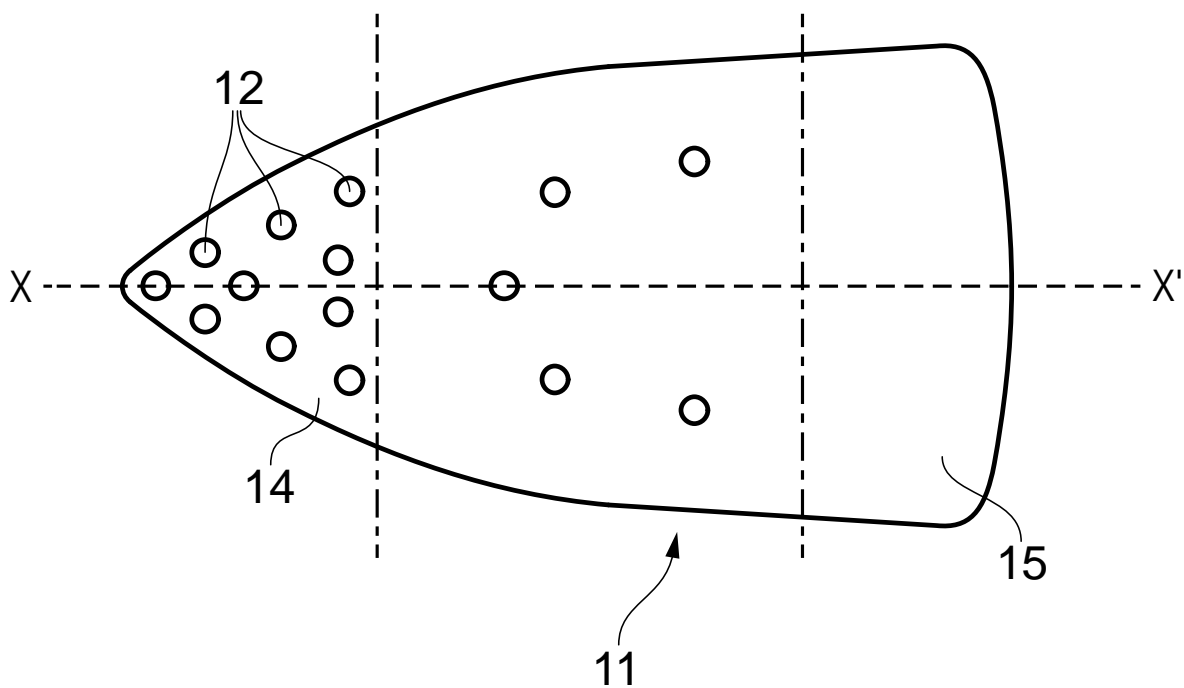


FIG. 2



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(51) Int. Cl.: **D06F75/12**
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(43) Date of Publication: **21 July 2000**
(71) Applicant: **Depliss SA**
(72) Inventor: **de Querangal, Maylis**

10

Steam iron

[0001] The present invention relates to steam irons with external water containers.

15

[0002] In steam irons with external water containers, the container is outside the main body of the iron carried and moved by the user over the clothes. The size of the container is thus chosen to provide a large quantity of steam for a long time between refilling, which makes such irons particularly suitable for professional use. Professional users also wish to be relieved of the burden of moving a heavy body over the clothes.

20

The external container already removes weight from the body of the iron. The objective of the present invention is to make an even lighter body that allows intensive use without tiring the user.

25

[0003] To achieve this objective, it is essential that the main body of the iron according to the present invention comprises only a soleplate, a heating element for the soleplate, a device for feeding steam to steam outlets and a handle. The soleplate is made of a low density metal. The main body is thus thin and light. The external water container is connected to a device for producing steam, which is then fed to the previously described main body via a hose. The combination of external water container and light main body
30 means that the iron can be used for a long time without excessive effort.



[0004] An iron according to the invention is illustrated in figure 1. It shows a main body with a handle 21 and a soleplate 22. An external water container 23 is connected to the main body of the iron by a flexible hose 24. Steam is fed via the hose 24 to the main body and then to steam outlets.

5

[0005] Furthermore it is desirable to reduce use of water and yet obtain good ironing quality. The preferred embodiments of the present invention have been developed to achieve this aim.

10 **[0006]** In a first preferred embodiment, steam outlets have a non-homogeneous distribution across the soleplate. Regions of the soleplate which are intended mainly to moisten the fabric have a higher density of steam outlets. Regions of the soleplate which are intended mainly to dry the fabric have a lower density of steam outlets. The regions of higher and lower density can be arranged according to needs.

15

[0007] It has been observed that it is more efficient to first moisten and then dry the fabric to be ironed. Thus a higher density of outlets is preferably positioned at the tip of the soleplate. This ensures that the fabric is impregnated with sufficient steam before it is pressed and dried. As an example a surface of five square centimetres at the tip may
20 comprise three or four outlets.

[0008] The drying region is preferably at the back of the soleplate. Preferably this region has no steam outlets.

25 **[0009]** Consequently with the iron according to the first preferred embodiment, the fabric is moistened with the tip of the soleplate and dried with the back of the soleplate. Therefore only a small quantity of steam is necessary to obtain good ironing quality. Savings in terms of energy and water are hereby achieved.



[0010] In a second preferred embodiment of the invention, the soleplate surface is structured in the vicinity of the steam outlets. It has been noted that when steam is released from an outlet in the bottom of a soleplate without such structuring, steam cannot escape on the sides and is forced to flow through the fabric to the ironing table and surrounding atmosphere. The localised high steam pressure at high temperature may damage delicate fabrics. In addition the steam may condensate into water drops which remain visible on delicate fabrics even after ironing.

[0011] Therefore the soleplate of the second embodiment comprises open channels, preferably with a depth of 0.5 mm to 1 mm. The channels extend from the outlets along a length of from about 2 cm to about 8 cm and guide the steam further away from the outlets, so that the steam is more evenly distributed over the surface of the fabric. Hence the risk of damaging or staining delicate fabrics is reduced. Furthermore as steam is guided along a channel to a large region of the fabric extending beyond the outlet region, a high proportion of the steam is used to moisten the fabric effectively. Thus less steam needs to be produced.

[0012] The soleplate with the open channels is made by counterpressure die casting at a pressure of 4 bars, followed by forced-air cooling. In the casting step, molten metal is poured into a permanent mould having protrusions corresponding to the open channels.

[0013] In the soleplate of the second preferred embodiment represented in figure 2, the channels 26 start from the steam outlets 25 positioned at the tip and they extend backwards. The soleplate comprises additional steam outlets (not depicted).

[0014] For the above embodiments we have found it advantageous to apply to the metallic soleplate first a layer of Yur56 and then a layer of KeraTix. KeraTix has an aesthetically appealing glossy finish. Furthermore these Yur56 and Kera type layers can be applied to planar metal surfaces as well as to structured metal surfaces, such as those of the present invention.



Claim:

1. Steam iron with an external liquid container (23) and a main body, wherein the main body consists of a soleplate (22), a heating element for the soleplate (22), a
5 device for feeding steam from the external container (23) to steam outlets (25) in the soleplate (22), and a handle (21).



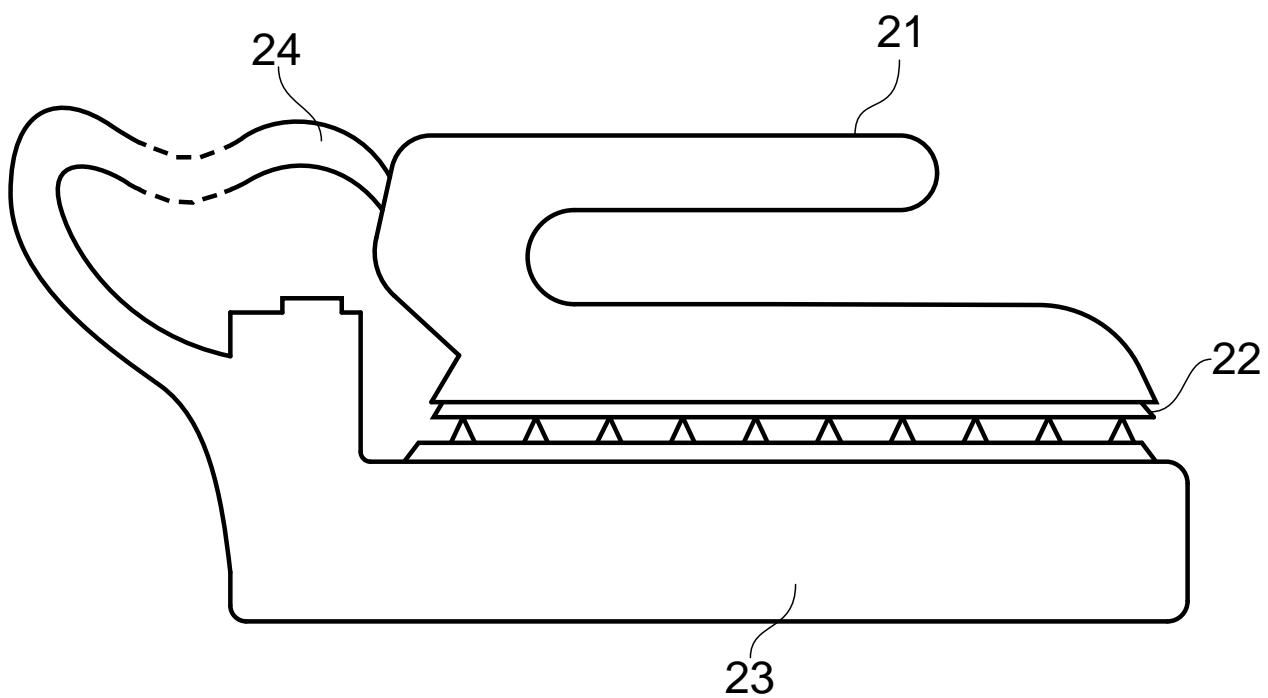


FIG. 1

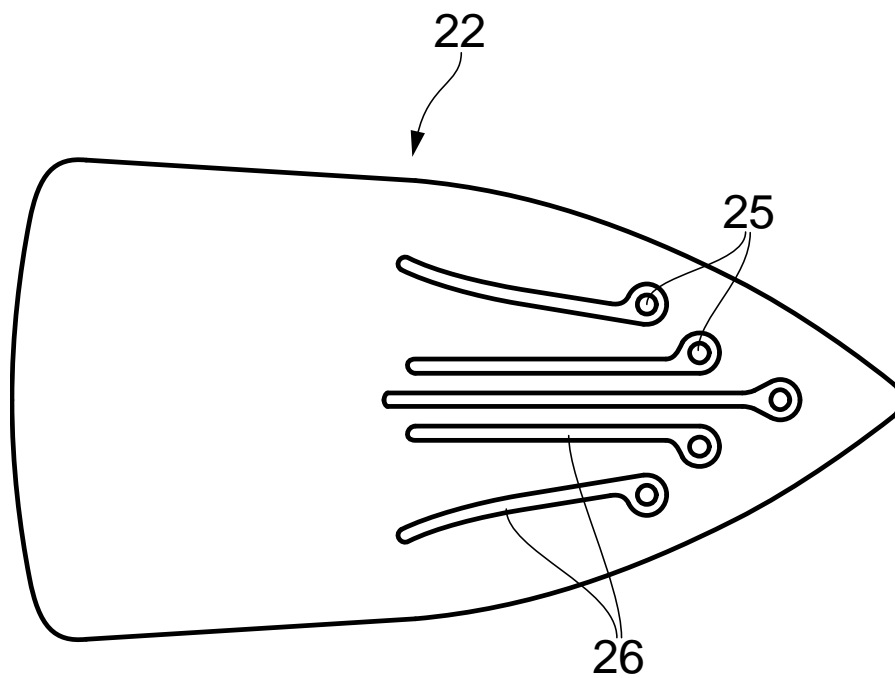


FIG. 2



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13/964,145

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(71) Applicant:

Elecx, Columbus, GA (US)

(72) Inventor:

Casischke, Laura

10

Steam iron

[0001] The present invention relates to a steam iron with an internal water container. Such a device is easy to use, although its limited steam flow rate may make it
15 cumbersome and time-consuming to iron heavy fabrics like denim.

15

[0002] It is highly desirable to be able to iron with ease all types of fabrics, including denim, a fabric used ever more widely for clothes. Hence we have developed a steam iron with an internal water container with the aim of efficiently ironing all types of fabrics,
20 in particular fabrics which are heavy and difficult to iron.

20

[0003] The iron of the present invention comprises a combination of useful features: first the tip of the baseplate has a high density of steam nozzles while the back of the baseplate has no steam nozzles. Hence steam is dispensed where it is really needed.

25

[0004] In addition at least one rib protruding from the ironing side of the baseplate further improves the ironing efficiency for heavy fabrics.

[0005] A reason for this effect may be that the ribs apply more pressure to the fabric
30 being ironed than the rest of the baseplate, thereby fully relaxing tensions in the fabric.

30



[0006] The height of the ribs is such that additional pressure is applied to the fabric. However if the ribs are too high, large areas of the baseplate will no longer be in contact with the fabric, and the ironing quality will be lowered. In addition as it should also be possible to use the iron for delicate fabrics like silk or synthetic fibres, the ribs preferably have a rounded shape.

[0007] The ribs may be formed using any of the methods which have been available for some years to provide the metallic baseplate with structures such as protrusions, e.g. the ribs in the present case, or recesses in the baseplate. These methods include for example counterpressure die casting at a pressure of up to 10 bar or low-pressure die casting in order to fill the mould with the metal. Each of these casting processes is followed by forced-air cooling. The microstructure of the metal and thereby its properties are exclusively determined by the forced-air cooling.

[0008] The baseplate of a preferred embodiment of the present invention is shown in the figure, which is a scale drawing. The baseplate 31 comprises a high density of steam nozzles 32 at the tip, which results in a better moistening of heavy fabrics.

[0009] In the baseplate 31 of the figure, there are three ribs 33 extending along the longitudinal axis (XX') of the baseplate. Each of these ribs 33 has a length (L) of 5 cm.

[0010] Furthermore in the embodiment shown in the figure, there are no steam nozzles in the region beyond the ribs 33. This iron is outstandingly effective on denim. However according to our tests, ribs with a length of 3 cm may be sufficient depending on their number, position and orientation.

[0011] The features of the baseplate of the present invention have been developed for steam irons with internal water containers. However, as stated in the Handbook of Domestic Science of 2001, structures on the ironing side of a baseplate as well as the distribution of steam nozzles can be readily adapted to other types of ironing devices.



Claim:

1. Steam iron with internal water container comprising a baseplate (31) with steam
nozzles (32), wherein the tip of the baseplate (31) has a high density of steam
5 nozzles (32) and the back of the baseplate (31) does not comprise steam
nozzles, and wherein the baseplate (31) further comprises at least one rib (33) for
pressing the fabric to be ironed.



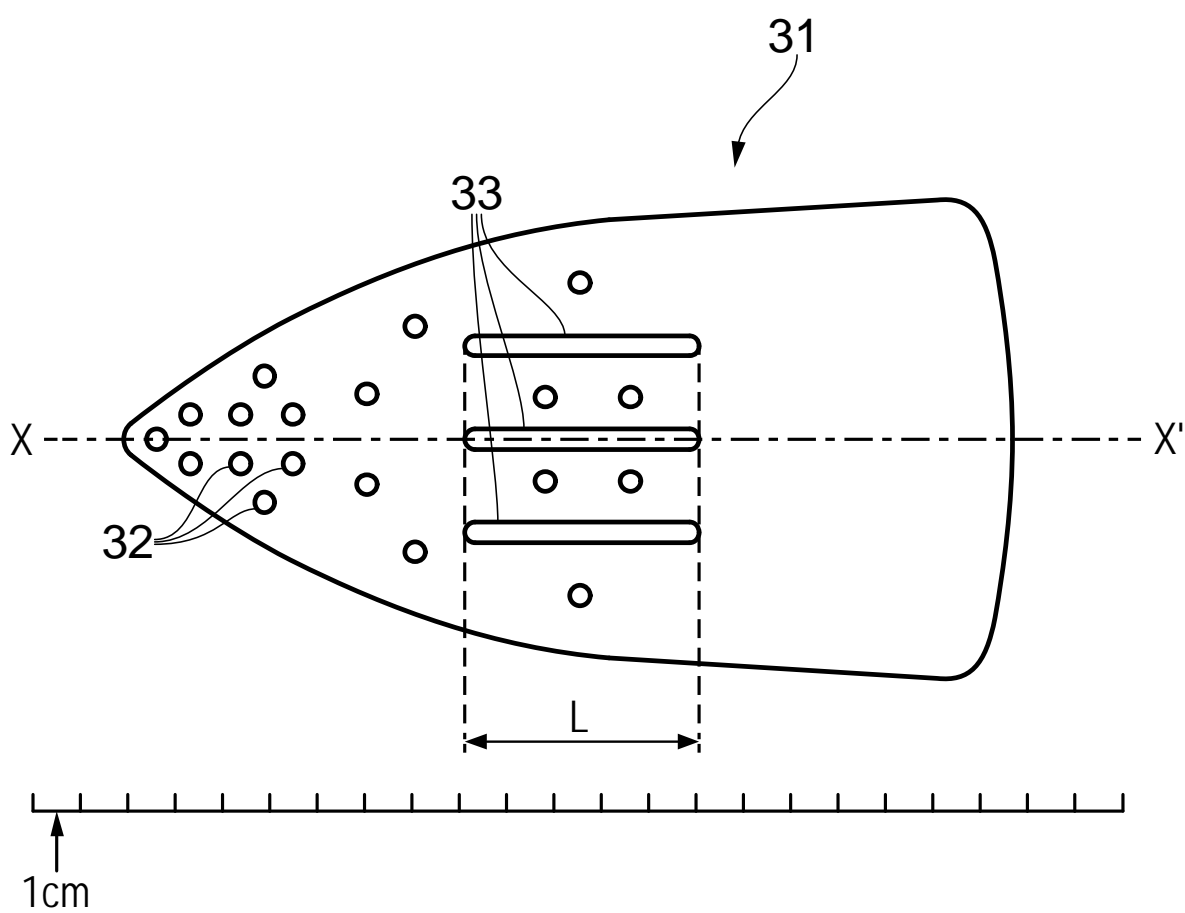


FIG.



Properties of coated metallic baseplates of dry irons

Wonderful Household 1994, vol.3, p.14-16

Kevin Fabullon, Ph.D, Technical University of Eindhoven

5

Summary

[0001] Coated baseplates have recently attracted interest from manufacturers of ironing devices. We have measured the impact of different types of coatings on the ironing performance of dry irons. Very encouraging results have been obtained.

10

Introduction

[0002] Baseplates of irons can be made e.g. of metals or alloys. The bottom side of the baseplate, which comes into contact with the garment to be ironed, must be able to glide well on the garment in order to ease ironing. However, metallic baseplates may be scratched or damaged, which impairs the baseplate gliding. This has prompted manufacturers to look for baseplates that retain their gliding properties for longer, or that have better gliding properties from the outset.

15

Selection of materials

[0003] Our approach is to coat the bottom side of the baseplate with a material that protects the metal, and preferably enhances gliding. When selecting appropriate materials, we have in particular considered the following aspects: resistance to high temperatures (at least 250°C), availability and cost, as well as compatibility with the metallic baseplate. Suitable coating materials include ceramics, enamels and certain polymers.

20

25



Results

[0004] In a first test series we tested a polymer, namely PTFE, and two ceramic coatings, namely KeraTix and KeraMa. In the tests presented here, the coatings were applied to the baseplate of a prototype dry ironing device. This very simplified device
5 comprises a heating element covering the whole top surface of the baseplate and a handle. The baseplate is made of aluminium, which is a low density metal. The results were compared to those of a reference experiment where no coating was applied.

[0005] An intermediate coating chosen from among Yur52, Yur54, Yur56 and Yur58
10 was added to promote adhesion of the polymer or ceramic coating to the aluminium baseplate. These versatile intermediate coatings are compatible with aluminium, most ceramic coatings, in particular the Kera type coatings, and with certain polymers like PTFE. Other intermediate coatings may be suitable. For example Yur74 can be used as an intermediate coating on various metals. However in this first test series Yur74 should
15 be avoided because it does not adhere to aluminium.

[0006] The force needed to move the ironing device over various fabrics was measured and translated into index values. The results (from 0 for poor gliding to 4 for excellent gliding) are provided in the table below both for cotton and silk. As the type of
20 intermediate coating does not significantly affect the gliding properties, results are given only for the ironing devices with Yur56.



Table 1:

	Cotton	Silk
Without coating	2	2
PTFE	3	4
KeraTix	2	3
KeraMa	3	4

[0007] In a second test series we tested a similar prototype ironing device with a baseplate made of Medur alloy. This alloy provides an outstanding compromise between strength, ease of shaping and cost. Starting from this essential element of the ironing device, we applied Yur74 as the intermediate coating and KeraSi as the outer coating.

Table 2:

	Cotton	Silk
Without coating	2	2
KeraSi	3	3

Conclusions

[0008] Particularly good gliding properties were obtained with PTFE and KeraMa.

Tests on other types of coatings are ongoing. We intend to investigate the gliding properties of coated baseplates that could be used in steam irons at a later stage. However care must be taken to choose coatings that can withstand steam. For example, KeraSi is not compatible with steam because it rapidly corrodes.



(19) European Patent Office**(12) European Patent Application**

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 (11) Publication number: **EP 2 003 547 A1**
 5 (22) Date of filing: **27 May 2008**
 (30) Priority:
 (43) Date of Publication: **17 December 2009**
 (51) Int. Cl.: **D06F69/00**
 (71) Applicant: **SFF**
 10 (72) Inventor: **Resa, Yasmina**
 (74) Representative: **Morisonn, Tony**
 (84) Designated Contracting States: **BE, DE, FR, IE**

15 **Steam ironing machine for delicate fabrics**

[0001] The present invention relates to a steam ironing machine, such as an ironing press, for handling delicate fabrics without damaging them. While the invention has been developed primarily for professional ironing machines of large size, it may also be
 20 applied with equivalent advantages to all types of non-professional ironing devices.

[0002] Steam is used in ironing machines to moisten the fabric to be ironed, in order to ease removal of creases. Steam is led from a steam generator through ducts in a soleplate to openings in the ironing surface of the soleplate, and then to the fabric. The
 25 general direction of these passages in the soleplate, and hence the general direction of the outgoing steam, is usually perpendicular to the ironing surface. The steam is thus induced to pass directly through the fabric, the force of which may damage delicate fabrics.

30 [0003] Therefore there is a need to further develop steam ironing machines, such as presses, to allow for proper ironing of delicate fabrics while reducing the risk of damaging them.



[0004] This aim is achieved with an ironing machine as defined in claim 1. The machine comprises a soleplate with steam outlets and passages extending through the soleplate. The steam generator and its connection to the passages are well known and will not be further described. Instead of being perpendicularly oriented with respect to the ironing surface of the soleplate, the generally straight passages according to the present invention are tilted so that an angle well below 90° is formed between their main direction (i.e., longitudinal axis) and the ironing surface. As a consequence, steam is guided along the angled passages so that it flows from the outlets mostly along the surface of the fabric. Thus even when high steam pressure is used, the delicate textiles are not damaged or prematurely worn.

[0005] In the ironing machine of the invention, the angle is between 15° and 45° , preferably from 20° to 30° . Different angles may be chosen for different areas of the ironing surface of the soleplate, for instance the periphery and the centre. However, when designing the passages at the periphery, care must be taken to orient the passages such that the user could not be burnt by steam. Thus these passages should be angled towards the central region of the ironing surface of the soleplate.

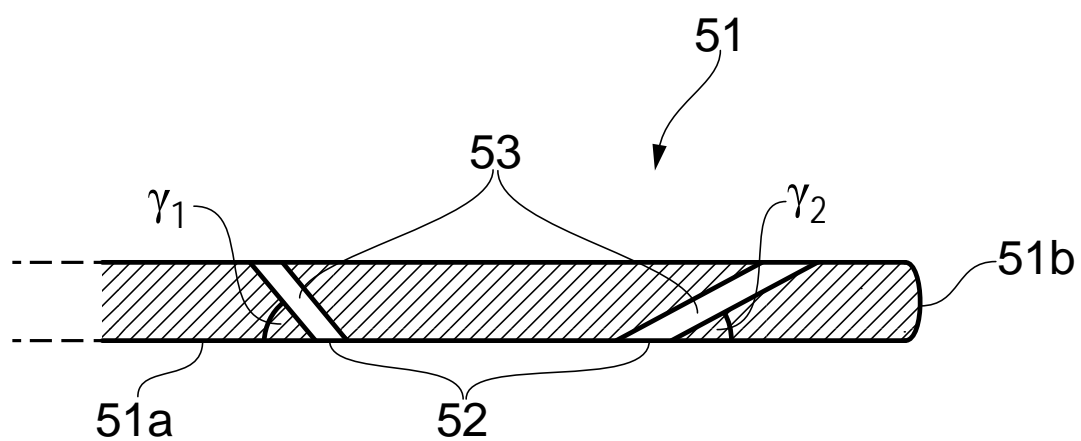
[0006] The figure represents the details of the cross section of a soleplate 51 of a machine according to the present invention. The soleplate 51 comprises an ironing surface 51a and sides 51b. The steam outlets 52 on the ironing surface 51a are at the exit of the passages 53 extending through the soleplate. The figure shows two different angles γ_1 and γ_2 . It can be seen that the passage 53 close to the side 51b is oriented towards the central region of the ironing surface 51a. Thus the risk of releasing hot steam in the direction of the user's body is reduced.



Claims:

1. Steam ironing machine comprising a soleplate (51) with steam outlets (52) and steam passages (53) extending through the soleplate (51) to an ironing surface (51a), characterised in that the steam passages (53) have a main direction forming an angle of between 15° and 45° with respect to the ironing surface (51a).
2. Steam ironing machine according to claim 1, wherein the steam passages (53) located close to the sides (51b) of the soleplate (51) are angled towards the centre of the ironing surface (51a).





(19) European Patent Office

(12) European Patent Application

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	(11) Publication number:	EP 1 568 600 A1
5	(22) Date of filing:	14 April 2005
	(30) Priority:	16 April 2004 GB 0408333
	(43) Date of Publication:	19 October 2005
	(51) Int. Cl.:	D06F75/14
	(71) Applicant:	HomeClean SA
10	(72) Inventor:	Lury, Alison
	(74) Representative:	Hasse, Ella
	(84) Designated Contracting States:	BE DE FR GB

Steam iron with internal water reservoir

15

[0001] Use of steam has been a major improvement in ironing devices. Dry irons are of simple design but are not very efficient. Steam irons are of a different and much more sophisticated design. Additional functions relating to steam production and distribution as well as constraints linked to the combination of steam and high temperature

20 necessarily result in an entirely new type of iron.

[0002] The present invention relates to steam irons for domestic use, comprising an internal reservoir for containing the water which is transformed into steam by heating. A drawback of such irons is the frequent need to fill the reservoir.



[0003] In known steam irons with an internal reservoir, the opening used to fill the reservoir is positioned at the front of the iron so that the liquid does not flow out when the iron is in its resting position on its back. The opening is usually provided with closing means to prevent the liquid from splashing out when the iron is moved. However as the front of the iron is V-shaped, there is little space for the opening and its closing means. As a consequence the size of the opening is small. The user must fill the reservoir slowly and with great care to avoid spilling water.

[0004] The present invention aims to make it easier to fill an internal reservoir so that it is not a burden for the user even if it needs to be done frequently.

[0005] This aim is achieved by providing an opening at the back of the iron, the opening being connected to the water reservoir. As the back is wider than the front, the opening can be made bigger than if it were at the front. Thus the risk of spilling water on the user or on the already ironed clothes is reduced.

[0006] In this invention, the soleplate of the iron is made of Prex2000, a composite material which is extremely resistant to abrasion and corrosion and cannot be coated.

[0007] The figure represents a steam iron according to the invention. The iron 61 comprises a soleplate 62 with steam outlets (not depicted) and a water reservoir 63. The soleplate 62 is heated by a resistor positioned above the soleplate. The iron further comprises a system for producing steam and directing it to the outlets, which is not depicted here. For better understanding, the water reservoir 63 is shown in the figure although in reality it may not be visible if the body of the iron is opaque. The large opening 64 at the back 65 of the iron 61 may be covered with a closing means 66.



[0008] The type of closing means is freely determinable, as long as it sufficiently blocks the passage to the water reservoir and is easy to open and close. It is preferable to have a closing means which remains attached to the iron even in its open position, as removable caps can be easily lost. A lid hinged to the body of the iron is therefore
5 preferred. It can be made of hard plastic, which is cheap and robust.

Claims:

10

1. Iron (61) comprising a soleplate (62) with steam outlets, an internal water reservoir (63), an opening (64) with a closing means (66) at the back (65) of the iron (61), wherein the opening (64) is connected to the water reservoir (63).

15

2. Iron (61) according to claim 1, wherein the closing means (66) is a lid hinged to the back (65) of the iron.



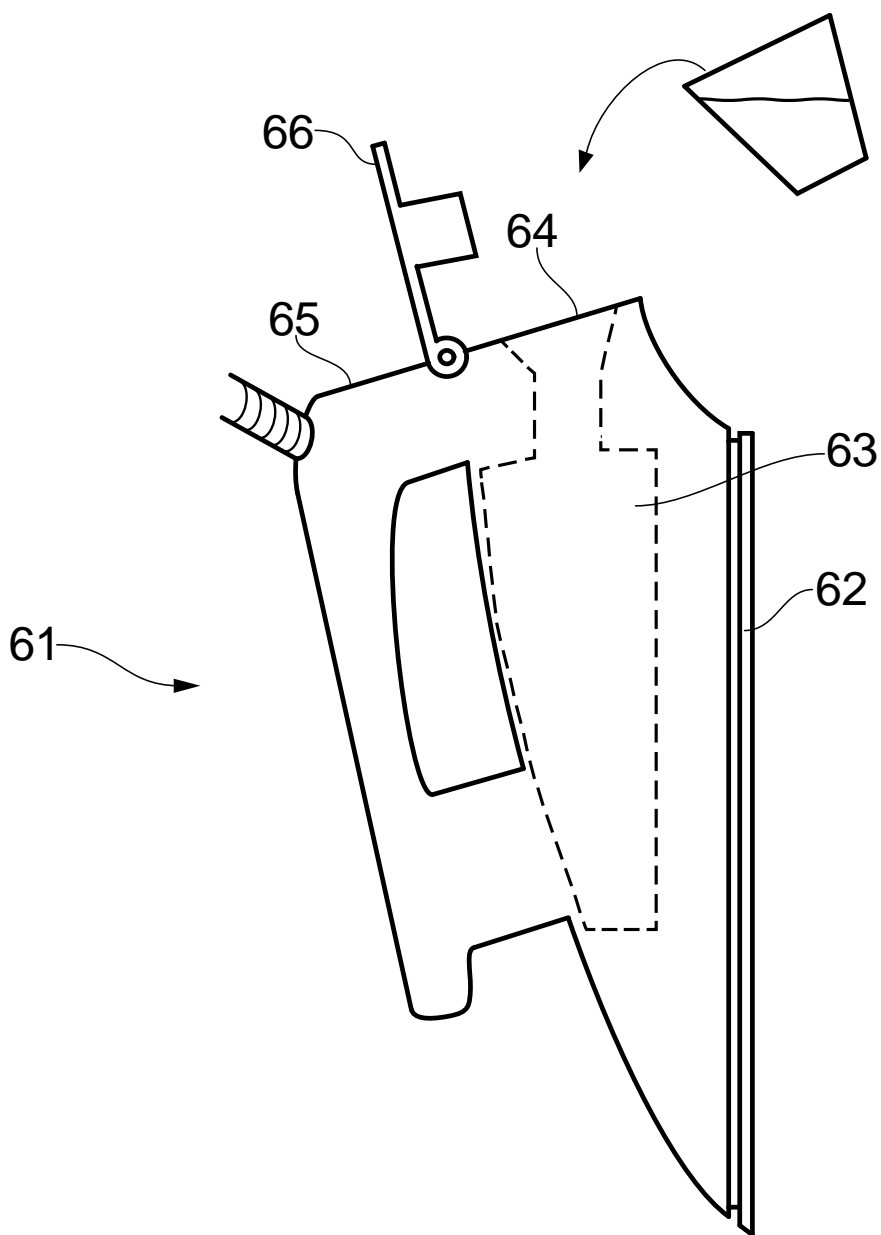


FIG.



Notes to the notice of opposition (EPO Form 2300)

Although the opposition form is **not mandatory** for the purpose of filing a notice of opposition, it specifies all the information required for such a notice to be admissible and hence facilitates the formulation and processing of the opposition. In stating and explaining the **grounds for opposition**, the opponent is free to comment as he wishes.

Explanatory notes to the various sections:

I. Patent opposed

Under **Patent No.** the number of the European patent against which opposition is filed (Rule 76(2)(b) EPC) must be given.

If known, the **application number and the date on which the Patent Bulletin mentions the grant** (Art. 97(3) EPC) should also be given. The latter makes it easier to monitor compliance with the opposition period.

The **title of the invention** must be given (Rule 76(2)(b) EPC); it should be indicated **as shown on the cover page of the printed patent specification** under item 54.

II. Proprietor of the patent

Where there are **several** patent proprietors, it is sufficient for the proprietor first named in the patent specification (under item 73) to be given.

III. Opponent

The **name, address and nationality** of the opponent and the **state** in which his residence or principal place of business is located must be given, in accordance with Rule 41(2)(c) EPC (Rule 76(2)(a) EPC). If the identity of the opponent has not been established by expiry of the opposition period, such deficiency can no longer be remedied (decision of the Technical Board of Appeal T 25/85, OJ EPO 1986, 81). An opponent may give an address for correspondence (see OJ EPO 2014, A99).

IV. Authorisation

If the opponent has appointed a **representative**, his name and the address of his place of business must be given, in accordance with Rule 41(2)(c) EPC (Rule 76(2)(d) EPC). If **several** professional representatives are appointed, only one representative to whom notification is to be made

should be named. Any further representatives must be named in an annex (please put a cross in the appropriate box). In the case of an association of representatives, only the name and address of the association must be entered (see Rule 143(1)(h)).

An opponent who has neither a residence nor his principal place of business within the territory of one of the EPC contracting states must be represented and act through his representative (Art. 133(2) EPC). Professional representation before the EPO may only be undertaken by professional representatives (Art. 134(1) EPC) or legal practitioners entitled to act as professional representatives (Art. 134(8) EPC).

Natural or legal persons having their residence or principal place of business within the territory of one of the EPC Contracting States may also be represented in opposition proceedings by an **employee**, who must, however, be authorised (Art. 133(3), first sentence, EPC). In this case notification will be made to the opponent (not the employee) unless a professional representative has also been authorised.

To avoid delaying the proceedings, any authorisation which has to be filed should if possible be enclosed with the opposition. Under Rule 152(1) EPC in conjunction with the decision of the President of the EPO dated 12 July 2007, listed professional representatives identifying themselves as such normally no longer need to file signed authorisations (cf. Special edition No. 3, OJ EPO 2007, L.1.). These are, however, required from legal practitioners and employees who are not professional representatives and are acting for the opponent under Articles 134(8) and 133(3), first sentence, EPC respectively. If they do not file an authorisation, the EPO will ask them to do so within a specified period. Failure to comply will result in any procedural steps performed by the practitioner or employee being deemed not to have been taken (Rule 152(6) EPC) – which means that the notice of opposition will be considered not to have been filed.

V. Statement of the extent to which the patent is opposed

The notice of opposition must contain a statement of the extent to which the European patent is opposed (Rule 76(2)(c) EPC). If the opposition is

not filed against the patent as a whole (place a cross in the appropriate box), the number(s) of the claims (as in the patent specification) which the opponent considers to be affected by one or more of the grounds for opposition must be given.

VI. Grounds for opposition

The alleged grounds for opposition (Art. 100 EPC) must be indicated by a cross in the appropriate box(es).

Under the heading of non-patentability (Art. 100(a) EPC) the most frequently cited grounds for opposition are lack of novelty and lack of inventive step, for which separate boxes are provided. The form otherwise gives the opponent ample scope for indicating other possible grounds for opposition. Under the heading "other grounds" the following Articles may be cited in the box provided: 52(1) and 57; 52(2); 53(a); 53(b); 53(c) EPC.

A full list of grounds for opposition is given in Article 100 EPC. The following in particular are not admissible grounds: lack of unity of invention (Art. 82 EPC), lack of clarity in the claims (Art. 84 EPC) and prior national rights (Art. 139(2) EPC).

For general information on grounds for opposition see Guidelines for Examination in the EPO, D-III, 5.

VII. Facts and arguments presented in support of the opposition

The notice of opposition must contain an indication of the facts and evidence presented in support of the opposition (Rule 76(2)(c) EPC) and, where documents are cited, an indication of the relevant part(s) (Guidelines D-IV, 1.2.2.1).

The **facts**, with the relevant arguments and evidence, in support of the opposition must be presented on a **separate sheet** enclosed as an annex to the Form (indicated by a pre-printed cross in the box).

The fact that the **evidence** is listed separately in Section IX does not anticipate the presentation of facts, evidence and arguments but merely makes for greater clarity and simplifies processing of the dossier. Section IX of the Form (Evidence presented) may of course always be referred to in this presentation.

Where documents **are cited** in shortened form, the rules set out in the Guidelines B-X, 9.1 should be followed.

VIII. Other requests

This section may be used for example to request oral proceedings or a file inspection.

IX. Evidence

Published documents cited as evidence (e.g. patent specifications) must be entered under "Publications" in the spaces provided – preferably in order of importance. They should be cited in the manner described in Guidelines B-X, 9.1.

Opponents should also indicate the **parts** of the document on which the opposition is based (this information has to be given anyway in the statement of facts and arguments – see notes to Section VII above).

Other **evidence** (e.g. witnesses, affidavits, company brochures, test or expert reports) must be cited under "Other evidence" (for public prior use: place, time, nature – see Guidelines G-IV, 7.2; D-IV, 1.2.2.1(v); for witnesses: first name and last name, full address, relationship to opponent, etc.). If there is not enough room, the evidence can simply be listed, with an indication of where in the statement of grounds the relevant particulars appear (e.g. "Witness ..., page 5").

Documents cited by a party to opposition proceedings must be filed (including publications already cited in the European patent specification) with the notice of opposition or other written submission. This will avoid an invitation from the EPO for subsequent filing thereof. If they are neither enclosed nor filed in due time on invitation, the EPO may ignore any arguments based on them (Rule 83 EPC).

X. Payment of opposition fee

The opposition fee can be paid in a number of different ways, i.e. by debiting a deposit account, by credit card or by bank transfer. For more information, see "[Making payments](#)" on the EPO website.

Debiting a deposit account

The procedure for paying by debiting a deposit account is set out in detail in the Arrangements for deposit accounts (ADA) published in the supplementary publication to the EPO's Official Journal.

Careful attention should be paid to the conditions applicable to the filing of debit orders.

Payment by credit card

Payment by credit card must be made via the EPO's credit card fee payment service available

on the EPO website, using a credit card accepted by the EPO (as at December 2017: Master Card and VISA). The procedure is set out in detail in the Notice from the European Patent Office concerning the payment of fees by credit card published in the EPO's Official Journal.

Bank transfers

Payment by bank transfer should be made to the following account with the Commerzbank in Germany:

Account No. 3 338 800 00 / Sort code 700 800 00

IBAN DE20 7008 0000 0333 8800 00

BIC DRESDEFF700

Commerzbank AG
Leopoldstrasse 230
80807 Munich
Germany

For the fee amount, see the publication "Schedule of fees and expenses" or the "Interactive schedule of fees" available on the EPO website "[European \(EPC\) fees](#)".

XI. List of documents enclosed

Please indicate which documents are enclosed by crossing the relevant box.

XII. Signature

If the opponent is a legal person and the notice of opposition is not signed by the representative, it must be signed:

- (a) either by a person entitled to sign under the law or the opponent's statute, articles of association or the like, with an **indication of the capacity of the person doing so**, e.g. Geschäftsführer, Prokurist, Handlungsbevollmächtigter; chairman, director, company secretary; directeur, fondé de pouvoir (Art. 133(1) EPC), in which case no authorisation need be filed;
- (b) or by another employee of the opponent, provided the latter's principal place of business is in a contracting state (Art. 133(3), first sentence; Rule 152(1) EPC), in which case an authorisation must be filed.

Notice of opposition to a European patent

I. Patent opposed

Patent No.

Application No.

Date of mention of the grant in the European Patent Bulletin (Art. 97(3), Art. 99(1) EPC)

Title of the invention

II. Proprietor of the patent

first named in the patent specification

Opponent's or representative's reference
(max. 15 keystrokes)

III. Opponent

Name

Address

Address for correspondence

State of residence or of principal place of business

Nationality

Telephone/Fax

<input type="text"/>	<input type="text"/>
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Multiple opponents
(see additional sheet)

☐

IV. Authorisation

1. Representative

(name only one representative or name of association of representatives to whom notification is to be made)

Opponent's reference



Address of place of business

Telephone/Fax

Additional representative(s)
on additional sheet/see authorisation

☐

2. Name(s) of employee(s) of the opponent
authorised to act in these opposition
proceedings under Art. 133(3) EPC

Authorisation(s) to 1./2. not considered necessary

☐

has/have been registered
under No.

☐

is/are enclosed

☐

V. Opposition is filed against

• the patent as a whole

☐

• claim(s) No(s).

VI. Grounds for opposition:

Opposition is based on the following grounds:

(a) the subject-matter of the European patent opposed
is not patentable (Art. 100(a) EPC) because:

• it is not new (Art. 52(1); Art. 54 EPC)

☐

• it does not involve an inventive step (Art. 52(1);
Art. 56 EPC)

☐

• patentability is excluded on other grounds,
i.e. Article

☐

Art.

(b) the patent opposed does not disclose the invention
in a manner sufficiently clear and complete for it
to be carried out by a person skilled in the art
(Art. 100(b) EPC; see Art. 83 EPC).

☐

(c) the subject-matter of the patent opposed extends be-
yond the content of the application/of the earlier appli-
cation as filed (Art. 100(c) EPC, see Art. 123(2) EPC).

☐

VII. Facts (Rule 76(2)(c) EPC)

presented in support of the opposition are submitted
herewith on a separate sheet (annex 1)

☒

VIII. Other requests:

Opponent's reference



IX. Evidence presented

Evidence

is enclosed

☐

will be filed at a later date

☐

A. Publications:

1

Particular relevance (page, column, line, fig.):

2

Particular relevance (page, column, line, fig.):

3

Particular relevance (page, column, line, fig.):

4

Particular relevance (page, column, line, fig.):

5

Particular relevance (page, column, line, fig.):

6

Particular relevance (page, column, line, fig.):

Continued on additional sheet

☐

B. Other evidence

Continued on additional sheet

☐

Opponent's reference

X. Payment of opposition fee

With regard to the payment of fees, in particular via deposit account, reference is made to point X of the Notes to the notice of opposition (Form EPO 2300).

XI. List of documents

Enclosure No.

0 Form for notice of opposition

☒

1 Facts (see VII.)

☒

2 Copies of documents presented as evidence (see IX.)

a Publications

☐

b Other documents

☐

3 Signed authorisation(s) (see IV.)

☐

4 Additional sheet(s)

☐

Number
of sheets

5 Other

☐

Please specify here:

XII. Signature of opponent or representative

Place

Date

Signature

Name (block capitals)

In case of legal persons, signatory's position
within company

Opponent's reference