

## Appeal decision

Appeal No. 2019-7923

Appellant                      Koninklijke Philips N.V.

Patent Attorney              ITO, Tadashige

Patent Attorney              ITO, Tadahiko

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The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2016-528423, entitled "STEAM IRON" (International Publication No. WO2015/010969 published on January 29, 2015, National Publication of International Patent Application No. 2016-527016 published on September 8, 2016) has resulted in the following appeal decision.

### Conclusion

The appeal of the case was groundless.

### Reason

#### No. 1 History of the procedures

The present application was originally filed on July 16, 2014 as an International Patent Application (priority claim under the Paris Convention: July 25, 2013 received by the foreign receiving office, European Patent Office, and June 30, 2014, US). A written amendment was submitted on January 26, 2016, a written opinion and a written amendment were submitted on July 24, 2018 in response to a notice of reasons for refusal dated May 24, 2018, and a written opinion and a written amendment were submitted on January 30, 2019 in response to a notice of reasons for refusal dated December 12, 2018. An examiner's decision of refusal was issued on March 15, 2019 based on the reasons for refusal noticed on December 12, 2019. Against this, an appeal against the examiner's decision of refusal was made on June 13, 2019.

#### No. 2 The Invention

The invention according to the claim of this application is acknowledged as

being specified by the matters recited in Claims 1 to 14 of the scope of claims amended by the written amendment submitted on January 30, 2019. The invention according to Claim 1 (hereinafter referred to as "the Invention") is as follows.

"A steam iron comprising:

a soleplate including a steam generating surface having a scale collection area and a fabric contact surface; and

a fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section, wherein

the steam generating surface includes an inclined part extended at a certain angle with respect to the fabric contact surface so as to guide scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use."

No. 3 Reasons for refusal stated in the examiner's decision

The outline, based on Cited Document 3, of the reasons for refusal (Notice of reasons for refusal dated December 12, 2018) stated in the examiner's decision (Examiner's decision of refusal dated March 15, 2019) regarding the Invention (invention according to Claim 1) is as follows.

1. (Novelty) The invention according to Claim 1 of the application is an invention described in the following Cited Document 3 distributed or made publicly available through an electric telecommunication line in Japan or a foreign country, prior to the date of priority (hereinafter referred to as "the priority date") of the application. Thus, the Appellant should not be granted a patent for the invention under the provisions of Article 29(1)(iii) of the Patent Act.

2. (Inventive step) The invention according to Claim 1 of the application could have been easily made by a person ordinarily skilled in the art of the invention (hereinafter referred to as "a person skilled in the art") before the priority date, on the basis of the invention described in the following Cited Document 3 that was distributed or made publicly available through an electric telecommunication line in Japan or a foreign country prior to the priority date. Thus, the Appellant should not be granted a patent for the invention under the provisions of Article 29(2) of the Patent Act.

Cited Document 3: United States Patent No. 05345704

#### No. 4 Description in the Cited Document and Cited Invention

##### 1. Description in Cited Document 3

Cited Document 3, which is a publication distributed before the priority date of the application, cited in the reasons for refusal stated in the examiner's decision includes the following descriptions with drawings. (The underlines were added by the body, the same applies hereinafter.)

##### (1) "BACKGROUND OF THE INVENTION

In known devices of this type, the closure means is constituted by a plug and the de-scaling opening is adapted to permit the introduction of a tool within the vaporization chamber. The user can thus, with the aid of, for example, a screwdriver, scrape the walls of the vaporization chamber so as to achieve mechanical de-scaling. The drawback of these devices resides in that the user, not seeing the calcified deposit within the chamber, scrapes hard and randomly and so does not cover all the surface of the chamber, and particularly the forward portion of said chamber which is the least accessible. Scaling is therefore incomplete. Moreover, he scores the internal surface of the chamber which is generally provided with a cemented coating to improve vaporization, thus destroying the coating. On the other hand, between each de-scaling operation and during the different thermal cycles, the small calcified scales come loose and pass into the distribution chamber, eventually blocking the distribution openings." (Column 1, lines 21 to 40)

(2) "The electric steam iron shown in FIGS.1 and 2 comprises a casing 1 whose rear forms a heel 2 and a sole 3 heated by an electric resistance 4. The iron can thus have two positions, either an ironing position in which it rests on the sole 3, or a rest position (not shown) in which it rests on the heel 2. The sole 3 has a partition 5 forming with a closure plate 6 a vaporization chamber 7 which is supplied with water from a reservoir 8 and which, on the one hand, is in communication with a steam distribution chamber 9 having steam distribution openings 10 that open to the outside, and, on the other hand, comprises a so-called de-scaling opening 11 opening into a rear position of the iron and plugged by removably mounted closure means.

According to the invention, the closure means comprises a removable receptacle 12 for recovery of the calcified deposit, this removable receptacle communicates by a weir 13 with the vaporization chamber 7, so that the calcified deposit present in the vaporization chamber 7 will fall into the receptacle 12 particularly when the iron occupies its rest position.

Thus, each time the user rests the iron on its heel 2, the scale of calcified deposit present in the vaporization chamber 7 will fall into the receptacle 12 in which it is retained. Moreover, thanks to the weir, the calcified scale can also if desired enter into the receptacle 12 in the ironing position, thanks to the to-and-fro movement given to the iron by the user. Thus, this movement gives rise in the vaporization chamber 7 to waves which override the weir 13." (Column 2, lines 20 to 49)

(3) According to the described matter (2), the sole 3 is heated by an electric resistance 4. The sole 3, which has a partition 5 forming a vaporization chamber 7 with a closure plate 6, thus the sole 3 is considered to form the vaporization chamber 7 with the closure plate 6. The vaporization chamber 7 is supplied with water from a reservoir 8 and is in communication with a steam distribution chamber 9 having steam distribution openings 10 that open to the outside. Accordingly, it can be said that the sole 3 forms a vaporization chamber 7 with a closure plate 6 ,which is supplied with water from a reservoir 8 and which is in communication with a steam distribution chamber 9 having steam distribution openings 10 that open to the outside, and is heated by an electric resistance 4.

(4) According to the described matter (2), it can be said that the electric steam iron is configured so that scale of calcified deposit present in the vaporization chamber 7 enters into the receptacle 12 due to waves generated in the vaporization chamber 7 by to-and-fro movement given to the iron in the ironing position.

(5) According to the contents shown in FIG. 1, it can be said that in one cross section of the sole 3 in the ironing position, an upper end portion of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron.

## 2. Cited Invention

Summarizing the described matters (1) to (5) and the contents shown in the figure of Cited Document 3, it is acknowledged that Cited Document 3 describes the following invention (hereinafter referred to as "the Cited Invention").

"An electric steam iron including

a sole 3 which forms a vaporization chamber 7 with a closure plate 6 ,which is supplied with water from a reservoir 8 and which is in communication with a steam

distribution chamber 9 having steam distribution openings 10 that open to the outside, and is heated by an electric resistance 4, and

configured so that scale of calcified deposit present in the vaporization chamber 7 enters into a receptacle 12 due to waves generated in the vaporization chamber 7 by to-and-fro movement given to the iron in an ironing position, wherein

in one cross section of the sole 3 in the ironing position, a portion of an upper end of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron."

#### No. 5 Comparison

The Invention and the Cited Invention are compared below.

The "sole 3" in the Cited Invention corresponds to the "soleplate" in the Invention. Considering the facts that a top surface of the "sole 3" in the Cited invention in the ironing position is a surface facing the vaporization chamber 7 which is supplied with water from a reservoir 8 and which is in communication with a steam distribution chamber 9, and that the sole 3 is heated by an electric resistance 4, it can be said that the top surface is a surface which generates steam, and corresponds to the "steam generating surface" in the Invention. A lower surface of the "sole 3" in the Cited Invention in the ironing position is considered as a surface which is in contact with a fabric, or the like, to be ironed, and corresponds to the "fabric contact surface" in the Invention. Accordingly, the "sole 3 which forms a vaporization chamber 7 with a closure plate 6 ,which is supplied with water from a reservoir 8 and which is in communication with a steam distribution chamber 9 having steam distribution openings 10 that open to the outside, and is heated by an electric resistance 4" in the Cited Invention and the "soleplate including a steam generating surface having a scale collection area and a fabric contact surface" are identical in the point of "a soleplate including a steam generating surface and a fabric contact surface".

The "scale of calcified deposit " and the "receptacle 12" in the Cited Invention correspond to the "scale" and the "discharge section" in the Invention, respectively. It can be said that the matter in the Cited Invention, "scale of calcified deposit present in the vaporization chamber 7 enters into a receptacle 12", means that scale of calcified deposit in the vaporization chamber 7; i.e., on a surface of the sole 3 which generates steam (top surface in the ironing position), moves into the receptacle 12. Thus, the matter in the Cited Invention is identical with the matter in the Invention, "transporting scale from the scale collection area to a discharge section", in the point of "transporting scale from the steam generating surface to a discharge section". The effect in the Cited

Invention, "scale of calcified deposit present in the vaporization chamber 7 enters into a receptacle 12 due to waves generated in the vaporization chamber 7 by to-and-fro movement given to the iron in an ironing position", is caused by waves, or a flow of fluid, generated in the vaporization chamber 7, due to to-and-fro movement given to the iron, thereby applying a force to the scale. Accordingly, it can be said that the electric steam iron in the Cited invention is configured to form the vaporization chamber 7 with a shape and size so as to generate a flow of fluid by to-and-fro movement given to the iron and that the electric steam iron includes a weir allowing for communication between the vaporization chamber 7 and the receptacle 12. Thus, the electric steam iron in the Cited Invention is considered to include a configuration for generating a flow of fluid to transport scale of calcified deposit from the vaporization chamber 7 to the receptacle 12. In light of the above, the matter in the Cited Invention, "scale of calcified deposit present in the vaporization chamber 7 enters into a receptacle 12 due to waves generated in the vaporization chamber 7 by to-and-fro movement given to the iron in an ironing position", and the matter in the Invention, "comprising a fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section", are identical in the point of "comprising a fluid flow arrangement configured to cause fluid flow for transporting scale from the steam generating surface to a discharge section".

Regarding the matter in the Cited Invention, "in one cross section of the sole 3 in the ironing position, a portion of an upper end of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron", considering that the portion of the upper end of the sole 3 in the ironing position which faces the vaporization chamber 7 is a part of a surface that generates steam and that the lower end of the sole 3 in the ironing position is a part of a surface that is in contact with a fabric, or the like, it can be said that in one cross section of the sole 3, at least a part of a surface which generates steam includes a section which is inclined with respect at least a part of a surface that is in contact with a fabric, or the like. Thus, the above matter in the Cited Invention is identical with the matter in the Invention, "the steam generating surface includes an inclined part extended at a certain angle with respect to the fabric contact surface so as to guide scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use", in the following point, "at least in one cross section of a soleplate, at least a part of the steam generating surface includes an inclined part extended at a certain angle with respect to at least a part of the fabric contact surface".

The "electric steam iron" in the Cited Invention corresponds to the "steam iron"

in the Invention.

Therefore, the Invention and the Cited Invention are identical in the following point:

"A steam iron comprising:

a soleplate including a steam generating surface and a fabric contact surface; and  
a fluid flow arrangement configured to cause fluid flow for transporting scale from the steam generating surface to a discharge section, wherein

at least in one cross section of the soleplate, at least a part of the steam generating surface includes an inclined part extended at a certain angle with respect to at least a part of the fabric contact surface."

The Invention and the Cited Invention are different in the following point.

[Different Feature]

Regarding the steam generating surface, the Invention "has a scale collection area" and transports scale from "the scale collection area" to the discharge section, and "includes an inclined part extended at a certain angle with respect to the fabric contact surface so as to guide scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use", while the Cited Invention does not clearly specify whether the top surface of the sole 3 includes an inclined part extended at a certain angle with respect to a lower end of the sole 3 even though, in one cross section of the sole 3 in the ironing position, a portion of an upper end of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron, and does not clearly specify effect or function of the inclination.

No. 6 Judgment

(1) Regarding Different Feature

The [Different Feature] is examined below.

Regarding the shape of the top surface of the sole 3 in the ironing position in the Cited Invention, FIG. 1 of Cited Document 3 shows, as indicated in the described matter (5) in "No. 4 1.", that "in one cross section of the sole 3 in the ironing position, an upper end portion of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron". Cited Document 3 does not include any other description about a special shape of the top surface of the sole 3 in the ironing position. Considering the matter described in Cited Document 3, as

background of the Cited Invention, that de-scaling is performed with a tool from the rear of the vaporization chamber (see "No. 4 1." (1)) and the description, "Said boss 27 slopes downwards towards the rear end of the iron", in the United States Patent No. 4240217 (see especially the fourth column l. 43-l. 49, the fifth column l. 31- l. 38, l. 61-l. 63, the sixth column l. 7-l. 11, and FIGS. 1 and 4) which is a publication distributed before the priority date of the application and describes the same matter as above, which indicates that inclining a top surface of a soleplate in the ironing position close to a lower surface of the soleplate as it goes toward a rear position of the iron, it is not special in the technical field of steam iron that the top surface of the soleplate in the ironing position is formed as inclined surface as described above. Thus, it is natural to understand that the matter in the Cited Invention, "in one cross section of the sole 3 in the ironing position, a portion of an upper end of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron", means that not only one cross section of the sole 3 but also a part of a top surface of the sole 3 facing the vaporization chamber 7 is inclined close to a lower surface of the sole 3 as it goes toward a rear position of the iron.

Next, effect of this inclined surface is examined. In FIG. 1 of Cited Document 3, there are two dashed-dotted lines extended from the reservoir 8 horizontally and vertically in the casing 1 in parallel. The dashed-dotted lines obviously represent water passages for supplying water from the reservoir 8 to the vaporization chamber 7 according to the fact that the Cited Invention includes the "vaporization chamber 7" "supplied with water from a reservoir 8". Accordingly, the water from the reservoir 8 is supplied to an upper part of the inclination of the sole 3 in the matter in the Cited Invention, "in one cross section of the sole 3 in the ironing position, a portion of an upper end of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron", and steam is generated first in the upper part, and as a result, it is understood that a large quantity of scale of calcified deposit is generated in the upper part. (The upper part of the inclination of the sole 3 where water is supplied from the reservoir 8 is hereinafter referred to as "water supply point".)

The Cited Invention is configured so that "scale of calcified deposit present in the vaporization chamber 7 enters into a receptacle 12 due to waves generated in the vaporization chamber 7 by to-and-fro movement given to the iron in an ironing position". According to the described matter B. in "No. 4 1. (1)" and FIG. 1 of the Cited Document 3, the de-scaling opening 11 and the weir 13 where the vaporization chamber 7 communicates with the receptacle 12 and scale of calcified deposit passes are



located at the rear of the iron, and separated in the longitudinal direction of the iron from the water supply point where the large quantity of scale of calcified deposit is generated. Even if the large quantity of scale of calcified deposit generated in the water supply point stays at the water supply point, the effect of the Cited Invention, "scale of calcified deposit present in the vaporization chamber 7 enters into a receptacle 12 due to waves generated in the vaporization chamber 7 by to-and-fro movement given to the iron in an ironing position", may not be produced because the water supply point is separated from the de-scaling opening 11 and the weir 13. Thus, it is natural to understand that at least part of many scale generated in the water supply point is moving toward the rear part where the de-scaling opening 11 and the weir 13 are located even in the ironing position when the iron is in use, as long as the above effect is produced, in the Cited Invention.

The said document United States Patent No. 4240217 describes as follows: "The water then flows downwards drop by drop and falls onto the milled cavity 28 of the boss 27, then immediately begins to vaporize. But the fraction which is not immediately vaporized flows down the slope of the boss 27 to the rear portion of the vaporization chamber 11 and the vaporization process continues along the entire flow path and therefore on all the walls of the chamber." (Column 5, lines 31 to 38), "As a result of the large dimensions of the vaporization chamber 11, the scale deposit is distributed over a large surface and is consequently of very small thickness." (Column 5, lines 61 to 63) On the basis of the well-known effect in the technical field of steam iron, that water falling on an upper part of an inclined part formed in a top surface of a soleplate in the ironing position and not immediately vaporized flows through the inclined part to the rear part of the vaporization chamber, the vaporization process continues throughout the vaporization chamber, and scale is distributed widely, it is natural to understand that the matter in the Cited Invention, "in one cross section of the sole 3 in the ironing position, a portion of an upper end of the sole 3 facing the vaporization chamber 7 is inclined close to a lower end of the sole 3 as it goes toward a rear position of the iron", which also produces the same effect as long as it is an inclined part, contributes to moving of at least of part of the large quantity of scale generated in the water supply point toward the rear part where the de-scaling opening 11 and the weir 13 are located and that the scale moved to the rear is deposited also in an area near the de-scaling opening 11 and the weir 13 located in a lower end of the inclination.

Accordingly, in light of the matter commonly used in the technical field of steam iron as described in the United States Patent No. 4240217, it can be said that the top surface of the sole 3 in the ironing position in the Cited Invention includes an inclined

part extended at a certain angle with respect to a lower surface of the sole 3 so as to guide scale of calcified deposit to an area located at a lower end of the top surface of the sole 3 to deposit and collect scale, and that it includes an area to deposit and collect scale, thereby transporting the scale from the area to deposit and collect scale to the receptacle 12. Therefore, the above different feature is not a substantial different feature.

Even if the above different feature is a substantial different feature, a person skilled in the art could easily conceive of inclining the top surface of the sole 3 in the ironing position in the Cited Invention, based on the above matter commonly used in the technical field of steam iron, close to a lower surface of the sole 3 as it goes toward a rear position of the iron to guide scale of calcified deposit to an area to deposit and collect scale located in a lower end of the top surface of the sole 3, as matters specifying the invention related to the above different feature of the Invention. The effect of the Invention falls within the scope which can be predicted by a person skilled in the art from the Cited Invention.

## (2) Appellant's allegation

A. The Appellant alleges in the written appeal as follows: "As stated in the written opinion in response to the previous notice of reasons for refusal, Cited Document 3 does not clearly describe that the "steam generating surface (upper surface of vaporization chamber 7)" includes a "scale collection area" (Different Feature 4). In addition, Cited Document 3 does not clearly describe that the "inclined part", which is only illustrated in FIG. 1, is arranged for "guiding scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use" as indicated in the invention regarding Claim 1 (Different Feature 5)."

However, even though Cited Document 3 does not clearly describe that the "scale collection area" is included and that the "inclined part" illustrated in FIG. 1 is arranged for "guiding scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use", as examined in (1), it can be said that the top surface of the sole 3 in the ironing position in the Cited Invention includes the "scale collection area" based on the matter commonly used in the technical field of steam iron and "guides scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use". Besides, a person skilled in the art could easily conceive of the idea that the top surface of the sole 3 in the ironing position in the Cited Invention includes the "scale collection area" based on the

matter commonly used in the technical field of steam iron to "guide scale to the scale collection area located at a lower end of the steam generating surface when the steam iron is in use".

Thus, the above Appellant's allegation cannot be accepted.

B. The Appellant alleges in the written appeal as follows: "In the invention described in Cited Document 3, the "waves" acknowledged by the examiner, or the fluid flow is caused not by the configuration of the iron but by the user action, "the to-and-fro movement give to the iron by the user". Therefore, as described above, Cited Document 3 does not disclose or indicate the configuration, "a fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section".

However, regarding the "fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section" in the Invention, the following descriptions are included in the detailed description of the invention of the application: "[0055] The fluid flow arrangement 56 is configured to provide a liquid to the scale collection area 21 to remove scale which has been transported to the scale collection area 21. The fluid flow arrangement 56 guides the fluid-scale mixture away from the scale collection area 21 of the steam generating surface 16 and into the removable scale collector 35. In the present embodiment, the fluid flow arrangement 56 comprises a pump 57. However, it will be understood that the fluid flow arrangement 56 may have alternative configurations. [0056] The pump 57 is configured to introduce a fluid onto the steam generating surface 16 of the soleplate 3. The fluid is water from the water reservoir (not shown). The pump 57 comprises a mechanical pump (not shown). The mechanical pump comprises a plunger (not shown). The plunger is manually operated by the user to introduce water onto the steam generating surface 16. The mechanical pump is able to dose larger amounts of water onto the steam generating surface 16 at a time than can the drip feed arrangement (not shown) that feeds water onto the water dosing area 18 of the steam generating surface 16. The pump 57 also comprises a fluid delivery pipe 58. The fluid delivery pipe 58 fluidly connects the mechanical pump (not shown) with the steam chamber 15 and delivers the water onto the steam generating surface 16. The fluid delivery pipe 58 enters the steam chamber 15 through the housing 2, which acts as the top wall of the steam chamber 15." The above description indicates that the fluid flow arrangement includes a mechanical pump including a plunger which is manually operated by a user. Based on the description of the detailed description of the

invention, it is not recognized that the "fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section" excludes a configuration causing fluid flow due to user action (manual operation). Further in Claim 3, which is indirectly dependent on Claim 1 of the application, described as follows, "the fluid flow arrangement comprises a pump configured to introduce liquid to the steam generating surface", and the point is also supported by the fact that the Invention does not exclude using a pump which is not considered as being integrated with a steam iron that is manually operated by a user, as a fluid flow arrangement.

Accordingly, the Appellant's allegation that Cited Document 3 does not describe or indicate the configuration, "a fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section", because a fluid flow is caused not by the configuration of the iron but by the user action, is not supported by the scope of claims and the detailed description of the invention of the application. As indicated in "No. 5", the electric steam iron in the Cited Invention is configured to form the vaporization chamber 7 with a shape and size so as to generate a flow of fluid by to-and-fro movement given to the iron, and the electric steam iron includes a weir, or the like, allowing for communication between the vaporization chamber 7 and the receptacle 12. Thus, the electric steam iron in the Cited Invention is considered to include a configuration for generating a flow of fluid to transport scale of calcified deposit from the vaporization chamber 7 to the receptacle 12. Therefore, based on the above matters commonly used in the technical field of steam iron, the Cited Invention includes a configuration, "a fluid flow arrangement configured to cause fluid flow for transporting scale from the scale collection area to a discharge section".

Accordingly, the Appellant's allegation cannot be accepted.

#### No. 7 Closing

The Invention (invention according to Claim 1) is described in Cited Document 3, falls under Article 29(1)(iii) of the Patent Act. Thus, the Appellant should not be granted a patent for the invention. Alternatively, the Invention (invention according to Claim 1) could have been easily made by a person skilled in the art on the basis of the Cited Invention. Thus, the Appellant should not be granted a patent for the Invention under the provisions of Article 29(2) of the Patent Act.

Thus, this application which encompasses the invention for which the Appellant should not be granted a patent, should be rejected without examining inventions according to other claims of the application.

Therefore, the appeal decision shall be made as described in the conclusion.

July 22, 2020

Chief administrative judge: HORIKAWA, Ichiro

Administrative judge: KAKIZAKI, Hiraki

Administrative judge: NAGAMA, Nozomi