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(54) Device and method for refreshing clothes

(57) The invention relates to a device and method for refreshing clothes, especially a device for household use that refreshes different kinds of clothes with the use of steam. The device for refreshing clothes comprises a housing (10) comprising a slot (3), where the clothes to be refreshed is arranged during use, the housing (10) also comprises a steam blade (31) for sending steam to the part of the clothes arranged in the slot.

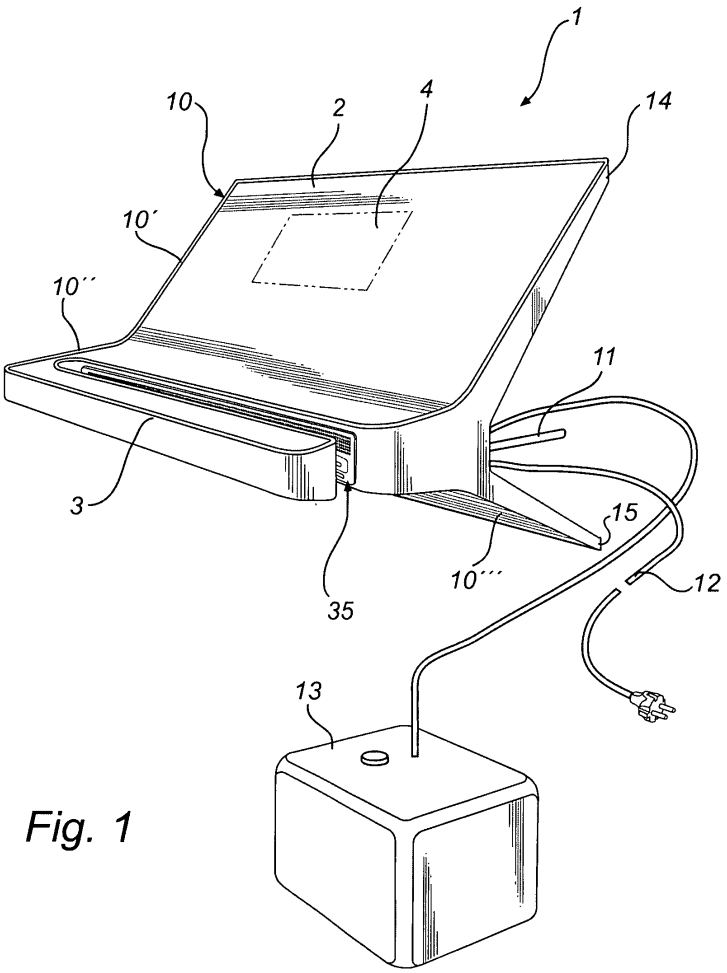


Fig. 1

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Description

FIELD OF INVENTION

[0001] The invention relates to a device and method for refreshing clothes, especially a device for household use that refreshes different kinds of clothes with the use of steam.

TECHNICAL BACKGROUND

[0002] Today clothes are often washed in a washing machine or at a dry-cleaner when they do not feel fresh. Sometime this is unnecessary because the clothes are not really dirty they only need to be refreshed. This is sometimes solved be hanging the clothes outside for some time, which could help to get ride of some smells etc. Another solution is to hang the clothes in the bathroom and turn on the shower to create a lot of steam, which could help to get ride of wrinkles on the clothes.

SUMMARY OF THE INVENTION

[0003] In view if the above, there is need for a device for refreshing clothes that could be used in a household, and that quickly and effectively refreshes clothes.

[0004] The invention discloses such a device for refreshing clothes that could be used in a household. The device comprises a housing comprising a slot, where the clothes, preferably one garment, to be refreshed is arranged during use, the housing also comprises a steam blade for sending steam to the part of the clothes/garment arranged in the slot.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] The invention will be better understood through the following illustrative and nonlimiting detailed description of preferred embodiment of the present invention, with reference to the appended Figures where the same reference numerals will be used for identical elements through out the Figures.

Fig. 1	shows a device for refreshing clothes
Fig. 2	shows a part of the device for refreshing clothes
Fig. 3 a-d	shows the use of the device for refreshing clothes
Fig. 4	shows a freestanding embodiment of the device
Fig. 5	shows a another embodiment of the device

DETAILED DESCRIPTION OF THE INVENTION

[0006] Figure 1 discloses a device for refreshing clothes (1) according to the invention. The device comprises a housing (10) comprising a slot (3) where the clothes to be refreshed is entered, preferably one garment at a time. The device also comprises a steam blade (31), a steam catcher (33), a scanner (32), an air stream device (34) and a control panel (4).

[0007] The slot (3) which is preferably open on one side (35) for allowing easy insert of clothes, and closed at the other side. In the slot (3) the steam blade (31) is arranged along the major part of the slot (3). The steam blade (31) comprises means for projecting steam towards the part of the clothes located in the slot during use. The device could have one steam blade, but preferably two steam blades located on the opposite sides of the slot. In this way the part of the clothes located in the slot is refreshed from both sides at the same time.

[0008] In the slot (3) a separate air stream device (34) is arranged to project an air stream on to the part of the clothes located in the slot during use. This is done from both sides of the slots so that the part of the clothes located in the slot is pushed form the steam blade by the air jet, and is kept approximately in the middle of the slot. As an alternative the air stream device could be integrated in the steam blade (not shown).

[0009] The device also comprises a power connection (12) and a pluming connection (11) to the standard water system of the household or to a reservoir (13) inside or next to the device. In this way the steam blade (including a steam generation device) uses a standard water pluming connection (11) or a separate water tank (13), and power connection (12) via a standard wall plug.

[0010] When a pluming connection to the water system is used a filter system or water treatment system is preferably also used if the water quality requires that. With a reservoir pre-treated water is preferably used, to avoid problem with e.g. lime, iron or dirt.

[0011] The scanner (32) is arranged to scan the clothes for information about material etc. The scanner is also used as a safety device and turns of the steam blade if an alien object (e.g. hand or object) is detected, in or close to the slot (3). The scanner is an infra-red scanner, but could also be other types of scanners or different types of scanners, e.g. proximity scanner for safety and RF-ID scanner for information about the clothes (requires that the clothes are fitted with suitable RF-ID tags). The RF-ID receiver could also be arranged to gather information about the clothes before it enters the slot, e.g. by having the clothes near the device.

[0012] The steam catcher (33) uses vacuum to catch the extra steam that moves along the clothes. The steam catcher (33) is located above the steam blade (31), and on both sides of the slot (3) if two steam blades (31,31') are used. The steam catcher prevents steam from moving outside the slot and potentially disturb the user.

[0013] In figure 1 the device is shown attached to a wall. The device comprises mounting means (14) for mounting the device to a wall. The housing (10) comprises three parts, a first part (10') comprising the control panel and first mounting means (14), a second part (10") comprising the slot (3), and a third part (10"') comprising a support (15) and/or second mounting means (not

shown). The three parts (10', 10", 10"') attached together has a shape similar to a Y.

[0014] The control panel comprises a touch screen, e.g. an OLED touch screen. The screen allows the user to interact with the device, e.g. on/off, set type of clothes, type of material, level of steam/refreshment. The device is connected to a network by Wi-Fi or by network cable, and preferably to the Internet. In this way the device could be up-dated with new programs for refreshing the clothes and also instructions from different clothes manufacturer how to best treat there clothes. It is also possible to have advertisement, on-line shopping, news etc on the screen.

[0015] Fig 3a-d shows the uses of the device. In Figure 3a a user looks at his clothes (5), here a shirt and see that is all wrinkled form folding or a short time use. The clothes is not dirty but it needs to be refreshed. In Fig 3b the user has placed the clothes (5) in the slot (3) of the device (1) for refreshing cloth. The user turns on the device, instructs the device through the control panel or lets the device scan the clothes and propose a refreshment program. In Fig. 3c the device is working and steam and air is projected onto the clothes (5) and the wrinkles disappear. The user raises the clothes so that all parts of the garment are treated by the steam in the slot. It is only the part of the clothes that are in the slot that is influenced by the steam and air from the device, the part of the clothes outside the slot is not influenced. In Fig. 3d the skirt is raised above the slot and the device is turned of, by the user or automatically when the scanner detects that no clothes is in the slot. The shirt is now read to be used.

[0016] In figure 4 a device for refreshing clothes as shown in figure 1 is attached to a stand (50). This makes it possible to move the device and more flexible to arrange it. In this freestanding embodiment it is preferred to have a reservoir for water (13), e.g. in the foot of the stand and an ordinary power connection (12).

[0017] In Figure 4-5 the device for refreshing clothes comprises an arm (60) with a hanger for holding the clothes/garment to be refreshed. The arm (60) is movable and moves the hanger up and down so that the different part of the clothes/garment is refreshed. In this way the relative movement between the slot (3) and the clothes is controlled, a sensor could also be used to check the result and if not approved the arm goes back and that part of the clothes is treated once more. In an alternative embodiment the hanger and clothes is fixed in relation and the device with the slot is moved along the clothes.

[0018] The invention discloses such a device for refreshing clothes that could be used in a household. The device comprises a housing comprising a slot (3), where the clothes/garment to be refreshed is arranged during use, the housing (10) also comprises a steam blade for sending steam to the part of the clothes arranged in the slot. The steam blade (31) is arranged in the slot (3). The device comprises a scanner (32), for gathering information about the clothes. The device also comprises a scanner (32), for detecting foreign object in and/or close to the slot (3). The device comprises a vacuum catcher (33) arranged in or close to the slot (3) for catching steam. The vacuum catcher (33) is arranged above the steam blade (31) in the slot (3).The device comprises a pluming connection (11) to the standard water system. The device also or alternatively comprises a water reservoir (13). The slot (3) has an opening (36) in one end for insertion of the clothes. Alternatively the slot (3) is closed during use, and open for insertion of clothes when not in use. The device is mounted to a wall and the slot is arranged in the horizontal plane. Alternatively the device is mounted to a stand (50) and the slot is arranged in the horizontal plane. In one embodiment the device comprises an arm (60) with a hanger for the clothes, the arm (60) is movable up and down and arranged to move the clothes hanging on the hanger and arranged in the slot (3) up and/or down during operation of the device. The device comprises a housing (10) comprising a first part (10'), a second part (10") and a third part (10"'), attached in the shape of a Y. The first part (10') comprises mounting means (14) for mounting the device to a wall or a stand (50) and a control panel (4), the second part (10") comprises the slot (3).

[0019] The invention also shows a method for refreshing clothes with the device for refreshing clothes comprising the steps of: arranging a part of the clothes in the slot; starting the steam blade; creating a relative movement between the clothes and the slot so that the steam blade is adapted to steam substantially all the clothes during the movement. This relative movement is created either by moving the clothes or by moving the steam blade.

[0020] The invention relates to a device for refreshing clothes by steam, the embodiments disclosed in the figures are only examples and it is also possible to have a device with a slot in the shape of an elongated hole and a possibility to open the slot to enter clothes before use. This kind of solution would be suitable both for wall mounting as in Fig 6 and also for attaching to a stand as in Fig 5.

Claims

1. Device for refreshing clothes, for household use, comprising a housing (10) comprising a slot (3), where the clothes to be refreshed is arranged during use, the housing (10) also comprises a steam blade (31) for sending steam to the part of the clothes arranged in the slot.

2. Device for refreshing clothes according to claim 1, wherein the steam blade (31) is arranged in the slot (3)

3. Device for refreshing clothes according to any of the claims 1-2, wherein the device comprises a scanner (32), for detecting foreign object in and/or close to the slot (3), and/or for gathering information about

the clothes

4. Device for refreshing clothes, according to any of the claims 1-3, wherein the device comprises a vacuum catcher (33) arranged in or close to the slot (3) for catching steam.

5. Device for refreshing cloth, according to claim 4, wherein the vacuum catcher (33) is arranged above the steam blade (31) in the slot (3).

6. Device for refreshing cloth, according to any of the claims 1-5, wherein the device comprises a pluming connection (11) to the standard water system.

7. Device for refreshing cloth, according to any of the claims 1-6, wherein the device comprises a water reservoir (13).

8. Device for refreshing cloth, according to any of the claims 1-7, wherein the slot (3) has an opening (36) in one end for insertion of the clothes.

9. Device for refreshing cloth, according to any of the claims 1-7, wherein the slot (3) is closed during use, and open for insertion of clothes when not in use.

10. Device for refreshing clothes according to any of the claims 1-9, wherein the device is mounted to a wall and the slot is arranged in the horizontal plane.

11. Device for refreshing clothes according to any of the claims 1-9, wherein the device is mounted to a stand (50) and the slot is arranged in the horizontal plane.

12. Device for refreshing clothes according to any of the claims 1-11, wherein the device comprises an arm (60) with a hanger for the clothes, the arm (60) is movable up and down and arranged to move the clothes hanging on the hanger and arranged in the slot (3) up and/or down during operation of the device.

13. Device for refreshing clothes according to any of the claims 1-12, wherein the device comprises a housing (10) comprising a first part (10'), a second part (10") and a third part (10"'), attached in the shape of a Y.

14. Device for refreshing clothes according to claim 13, wherein the first part (10') comprises mounting means (14) for mounting the device to a wall or a stand (50) and a control panel (4), the second part (10") comprises the slot (3).

15. Method for refreshing clothes with a device according to claim 1-14, comprising the steps of:

- arranging a part of the clothes in the slot;
- starting the steam blade;
- creating a relative movement between the clothes and the slot so that the steam blade is adapted to steam substantially all the clothes during the movement.

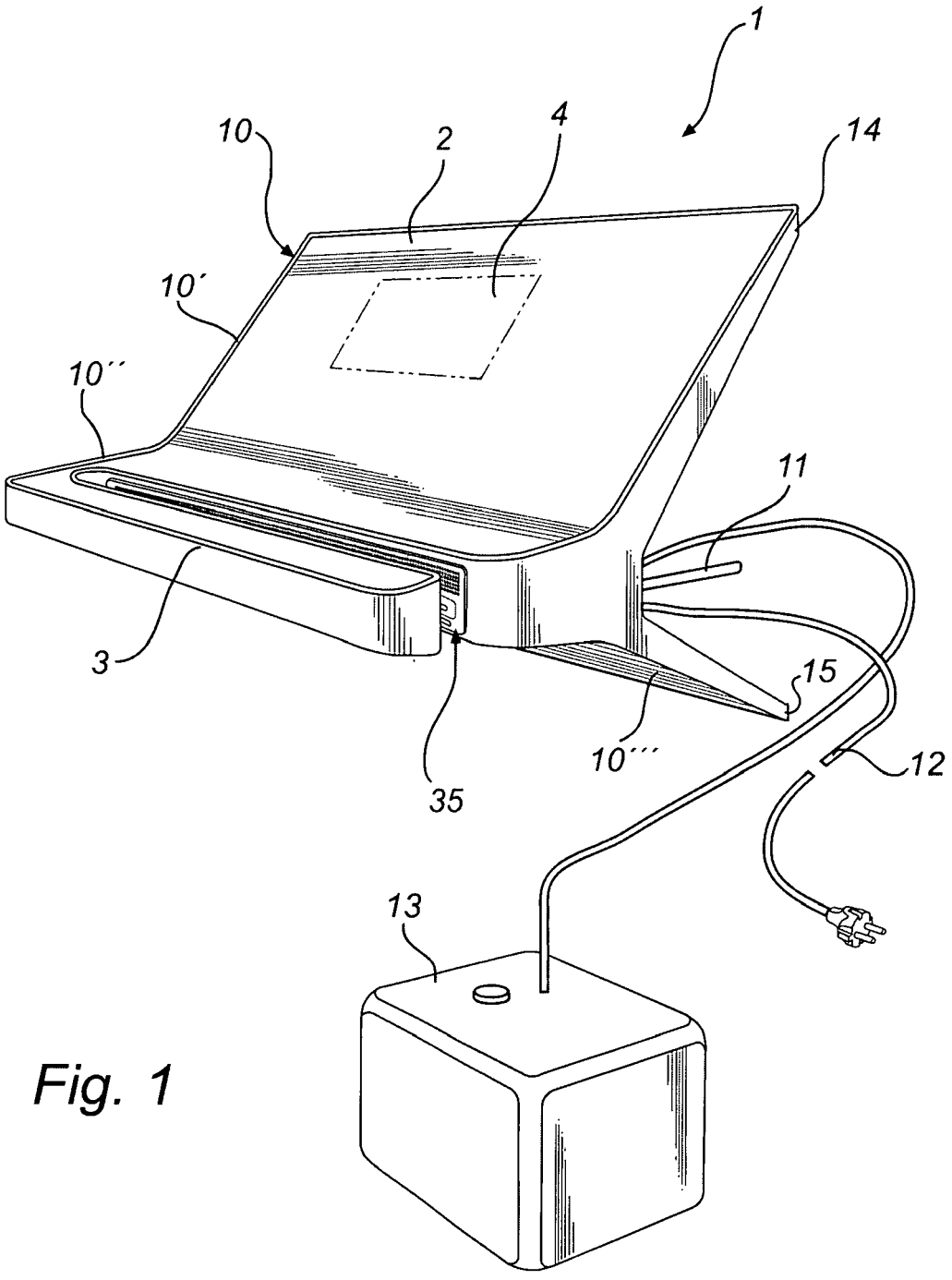


Fig. 1

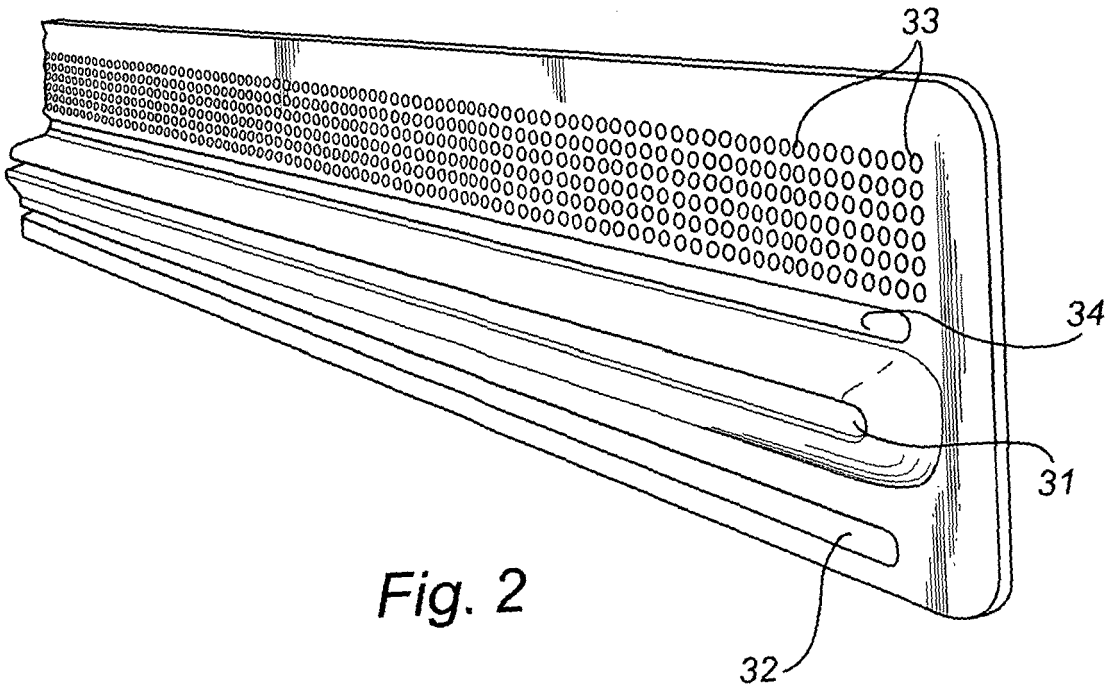


Fig. 2

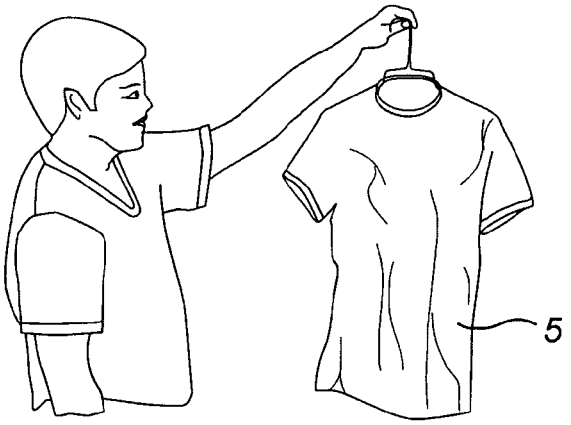


Fig. 3a

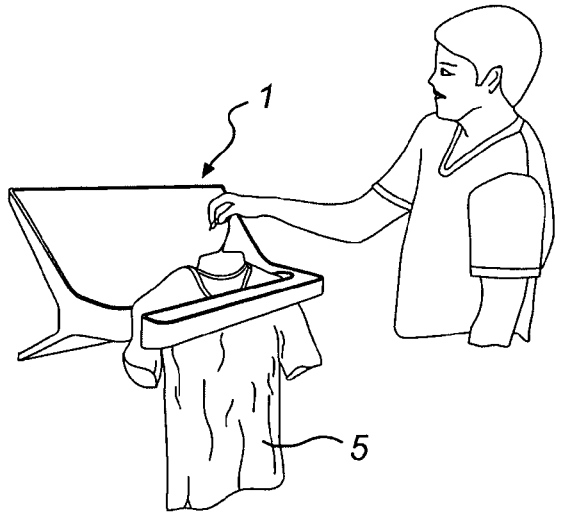


Fig. 3b

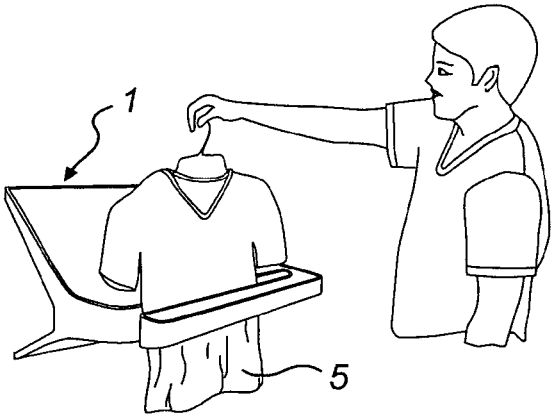


Fig. 3c

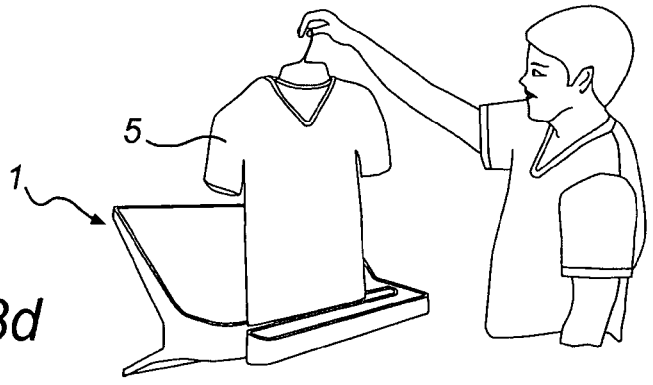


Fig. 3d

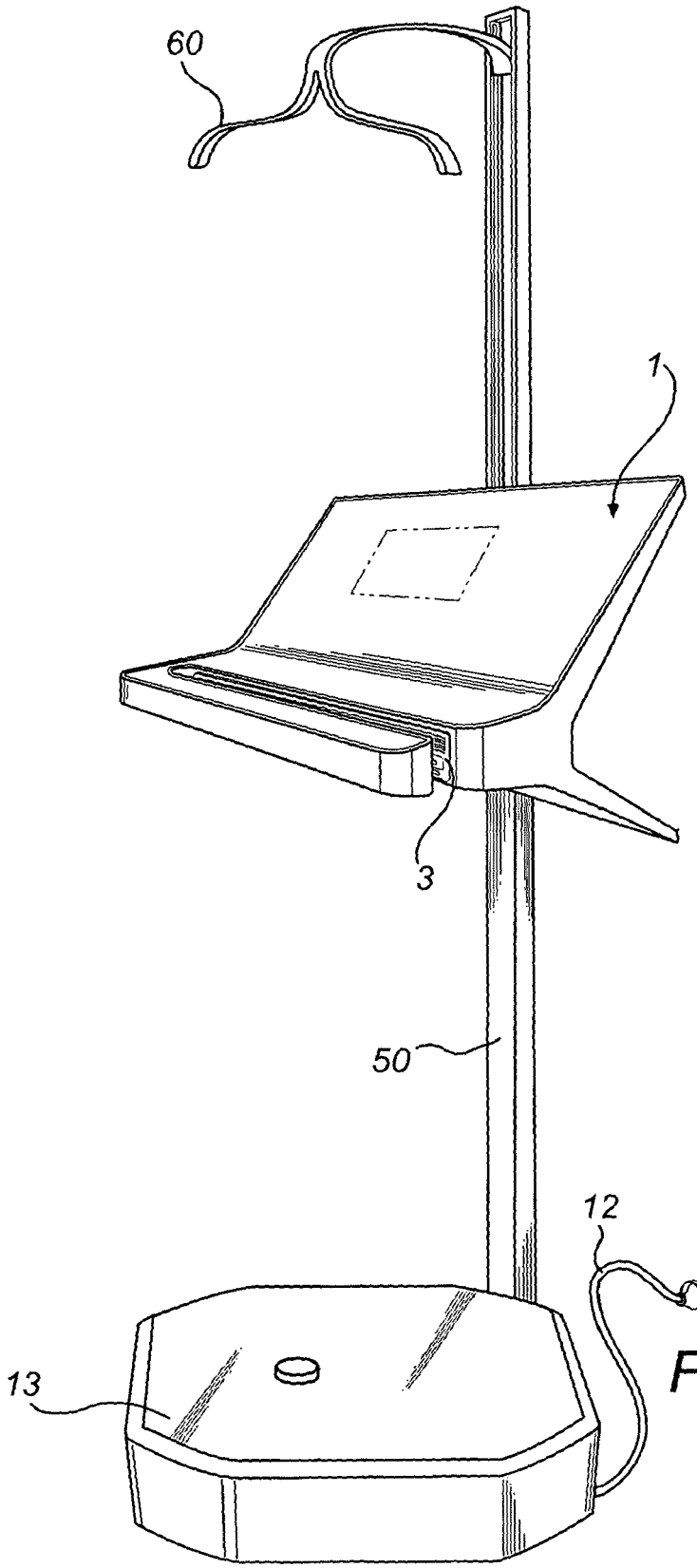


Fig. 4

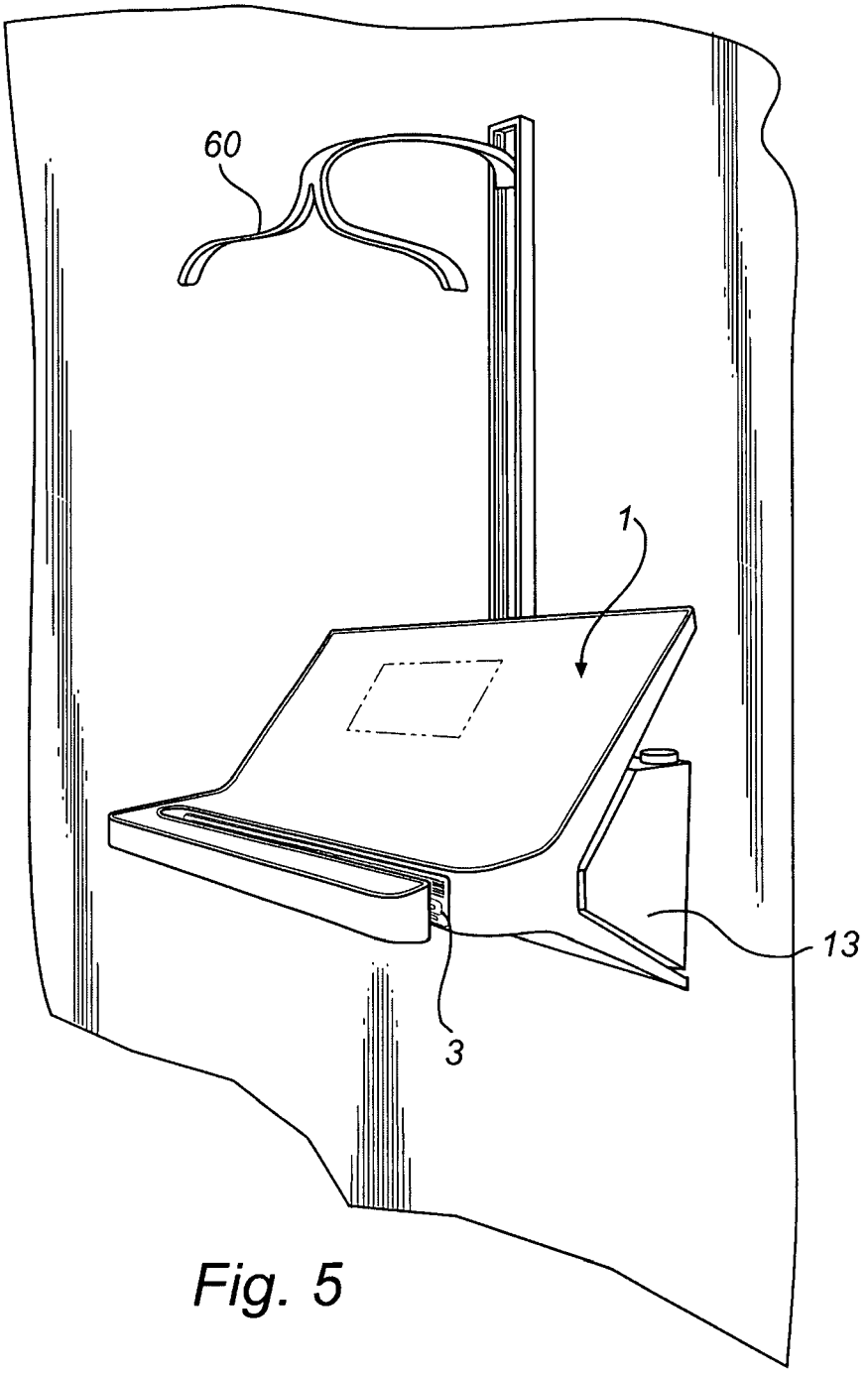


Fig. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 10 00 6571

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 00/75413 A1 (PROCTER & GAMBLE [US]; HAUWERMEIREN TIM JORIS MARIA V [BE]; BETTIOL JE) 14 December 2000 (2000-12-14) * Example 1figure 1 *	1-15	INV. D06F73/00
A	EP 2 071 071 A1 (ELECTROLUX HOME PROD CORP [BE]) 17 June 2009 (2009-06-17) * paragraph [0031] - paragraph [0034]; figure 1 *	1-15	
A	DE 20 2004 014412 U1 (KAERCHER GMBH & CO KG ALFRED [DE]) 25 November 2004 (2004-11-25) * paragraph [0029] - paragraph [0034]; figures 1,2 *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	9 August 2010	Hannam, Martin

CATEGORY OF CITED DOCUMENTS

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09-08-2010

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0075413 A1	14-12-2000	AU 5306100 A	28-12-2000
EP 2071071 A1	17-06-2009	NONE	
DE 202004014412 U1	25-11-2004	NONE	

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