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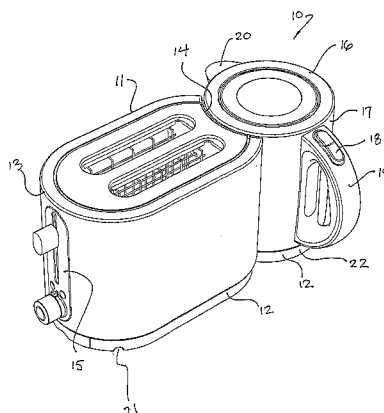
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(54) Title: KETTLE TOASTER COMBINATION



(57) Abstract: First and second electrical kitchen appliances are combined on a single base. The base supports a chassis for the first appliances and further includes an extension portion that features an electromechanical coupling portion. The extension portion and its coupling are adapted to receive a cordless kitchen appliance such as a cordless kettle.

WO 2007/128063 A1

Kettle Toaster Combination

Field of the Invention

The invention relates to kitchen appliances and more particularly to a
5 combination kettle and toaster.

Background of the Invention

In some kitchens, counter top space is limited. In other situations such
as in studio apartments, hotels, motels and camping vehicles, there is either
10 little or no formal kitchen space and kitchen appliances are sometimes
selected on the basis of their size. It is also known that the combining of
kitchen appliances can result in a saving in manufacturing costs. The present
invention seeks to combine first and second electrical kitchen appliances, such
as an electric kettle and a toaster in a way that reduces both the combined
15 footprint and the combined cost. The combination also reduces, by one, the
number of electrical cords required to operate the combination.

Objects and Summary of the Invention

Accordingly, it is an object of the invention to provide a combination of
20 electrical appliances.

Accordingly, there is provided a first kitchen appliance having an
external shell that is mounted on a base. The base includes an extension
portion that is adapted to receive a second electrical kitchen appliance.

In preferred embodiments, the extension portion features a central
25 coupling with electrical contacts. The coupling is received by a cooperating
opening formed into the bottom of a kettle.

In some embodiments, the extension portion features one or more
orientation fingers that extend upward from the base. The bottom of the
kettle features at least a like number of cooperating detents.

30 In other embodiments of the invention, an upper surface of the
extension portion forms an upright dam along the join between that upper
surface and the shell of the toaster that it is joined to.

In particularly preferred embodiments, the upright fingers further
comprise pilot ramps.

In other embodiments, the cooperating detents further comprise guide ramps.

Brief Description of the Drawing Figures

5 In order that the invention be better understood, reference is now made to the following drawing figures in which:

Figure 1 is a perspective view of a combination kettle and toaster;

Figure 2 is a perspective view of a combination kettle and toaster with the kettle removed;

10 Figure 3 is a perspective view of the toaster and base;

Figure 4 is a cross sectional detail through surface A-A of Figure 3

Figure 5 is a perspective view of another embodiment of the combination kettle and toaster;

15 Figure 6 is a partial schematic side elevation view showing a comparison between the concave ends of two different embodiments; and

Figure 7 is a perspective view of a further embodiment of the combination kettle and toaster.

20 Best Mode and Other Embodiments of the Invention

As shown in Figure 1 a combination cordless electric kettle and toaster 10 comprises, in this example, a first kitchen appliance, being a two slice toaster chassis with an external housing or shell 11 that is mounted on a supporting base 12. In other examples, the external shell 11 and the supporting base 12 may be integrally formed. In this example, the toaster shell 11 has one 25 conventional, or rounded convex end 13 and one concave end 14. The toaster controls 15 are mounted onto the conventional or convex end 13 but may be located elsewhere. In some embodiments, the toaster controls 15 are mounted onto the external shell at a location generally opposite to the concave end. In 30 this example, the base 12 also supports a second appliance, being a cordless kettle 16. The kettle body 17 is generally cylindrical, penetrates into and conforms closely with the concave end 14 of the toaster. In some embodiments, a profile of the kettle body 17 also closely conforms to a profile of at least a portion of the rounded end 13. with The cordless kettle controls 18

are mounted on the handle 19 of the kettle. A spout 20 is located opposite the handle 19. A single electrical cord is adapted to enter one or more gaps 21 that may be formed in the base 12 so that electrical power to both the kettle and toaster may be supplied by a single cord that is plugged into a power outlet. A
5 long axis or longitudinal axis passes through the centre of the first and second electrical appliances.

As shown in Figure 2, in this embodiment the base 12 that supports the toaster chassis further comprises an extension portion 22. The extension portion 22 extends beyond the concave face 14 and forms for example, a
10 circular platform having an upper surface 23 that is adapted to receive and support the cordless kettle 16. Power is supplied to the kettle 16 through an electromechanical coupling portion 24 located in the centre of the extension portion 22. The kettle has a cooperating opening 25 that receives the electrical coupling portion 24.

15 Without means for preventing excessive rotation of the round kettle 16 about the coupling 24, the handle 19 could inadvertently be positioned too close to the outer surface of the toaster. In order to prevent this inconvenience, the upper surface 23 of the extension portion 22 is provided with one or more locating details such as protrusions, bumps or fingers 26. In
20 this example, the locating details 26 are two in number and located along an axis that extends through the longitudinal axis of the toaster 11 and through the centre of the electromechanical coupling 24. Note that the locating details 26 in this example are in the shape of a pyramid, that is, having three sloped or ramp-like sides 27 that converge to a rounded point 28 that defines the
25 upper extremity of the locating details 26.

The underside or bottom surface of the kettle 16 thus comprises a pair of cooperating detents 29 that are adapted to receive the locating details 26. Note that the side edges 30 of each of the detents 29 are tapered to pilot or conform to the ramp angles of the side faces 27 of the locating details 26. The
30 gap between the side piloting edges 30 of each detent 29 is wide enough to allow the kettle to swivel somewhat along the horizontal plane. The degree of swivelling allowed can vary, provided that the swivel angle is safe. Here a safe swivel angle is one that does not allow the handle 19 to become so close to the toaster that the user can easily sustain burns or other heat related injuries

while operating the handle. In this embodiment the kettle can swivel by no more than about 20°. This locates the handle, when the kettle is on the coupling 24, to a position about 90° from the longitudinal axis of the device, preventing the handle from being located too close to the exterior of the toaster when the kettle is properly seated on its electromechanical coupling 24. The kettle is said to be disoriented if it is seated on the extension portion and has a rotational orientation not allowed by the locating fingers. Because the side edges of the locating details 26 and the side edges 30 of the detents 29 are tapered, the kettle tends to align itself into its seated position. Further, the tapered detents 29 and locating details 26 together serve as a safety feature. In the event that the kettle 16 is inadvertently rotated about the axis of the coupling 24, the kettle 16 will ride up along the sloped sides of the locating details and become lifted and eventually disconnected from the coupling 24. In this example two locating details and two detents 29 are depicted, however it will be understood that the same principles of orientation can be achieved with one or more locating details working in combination with a like number of detents.

It will also be appreciated from Figure 2 that the transverse width of the kettle and the toaster are approximately the same and that the maximum width of the base 12 is the same for both that portion below the toaster and that portion below the kettle. Also note that the base 12 comprises a neck portion 31 that is formed where the extension portion 22 meets the portion of the base that is below the toaster. In preferred embodiments, the radius of the kettle body is the same as the radius of the convex end 13 of the toaster.

In the above embodiments, the concave ends serve to provide a tactile guide or tactile feedback for users to orient the kettle. It is not required that each concavity formed into a concave end spans the entire height of the concave end (see Figures 5 and 6).

With reference to Figures 3 and 4, it will be appreciated that a mechanical parting line 41 is formed between the upper surface 23 of the extension portion 22 and that portion of the exterior shell of the toaster that it contacts and connects with. In order that water is prevented from passing through the parting line 41 into the interior of the toaster, the upper surface 23 of the extension portion 22 includes an upright dam 42 in the area adjacent

the exterior shell 43 of the toaster. Note that the only join between the upright dam 42 and the exterior shell 43 is in the shape of a "Z" or labyrinth 44 as suggested by Figure 4.

5 In the embodiment shown in Figure 5, the concavity 51 only spans a partial height of the concave end 52. In embodiments of this type, the concavity 51 spans an ever greater height of the concave end 52 as the kettle penetration increases. Kettle penetration is defined as the extent to which the kettle extends past the outermost vertical portion of the toaster.

10 As shown in Figure 6, the height of the concavity may depend on the curvature or inclination of the concave end. For example, a partial concavity height 61 is achieved if the kettle 62 extends past the vertical outermost portion 63 of the toaster 64 by a non-zero distance 65. The same is also true for a toaster 66 with a more rounded concave end 67. Regardless of the curvature or inclination of the toaster, as long as the kettle penetration and
15 the concavity height are non-zero, that end of the toaster comprising the concavity will be deemed a concave end.

In some embodiments, as shown in Fig. 7, the extension portion and its extend from the concave end 72 of the external shell 73. The extension portion 71 may thus be joined to or integrally formed with the external shell 73. The
20 base 74, in this example compliments the external shell 73 and generally conforms to the shell 73 in plan view.

While the present invention has been disclosed with reference to particular details of construction, these should be understood as having been provided by way of example and not as limitations to the scope or spirit of the
25 claims. In particular we have taught a combination of toaster and cordless kettle, but it will be understood that the teaching of the invention may be applied to other combination of appliances, especially where one is cordless.

What is Claimed is

1. An appliance, comprising:

- 5 an external shell that houses a first electrical appliance, further comprising a concave end;
the concave end having formed in it a concavity that spans at least a partial height of the concave end;
the external shell being mounted on a base;
10 there being an extension portion that extends beyond the concave end;
the extension having an upper surface adapted to receive and make a detachable electrical connection with a second electrical appliance.

2. The device of claim 1, wherein,

- 15 the second electrical appliance is a kettle.

3. The device of claims 1 or 2, wherein,

- 20 a body of the second electrical appliance conforms closely with the concavity.

4. The device of claim 3, wherein,

- a profile of the body of the second electrical appliance conforms with a profile
25 of a convex end of the first electrical appliance.

5. The device of any one of claims 1 to 4, wherein,

- the concavity is a tactile guide for a user to locate the second electrical
30 appliance onto the extension portion.

6. The device of any one of claims 1 to 5, wherein,

the first electrical appliance is a toaster.

7. The device of any one of claims 1 to 6, wherein,

5 the first and second electrical appliances are supplied power by a single cord from a power outlet.

8. The device of either of claims 6 or 7, wherein,

10 the toaster has controls mounted on the external shell at a location generally opposite to the concave end.

9. The device of claims 7 or 8, wherein

15 the cord supplies power to a detachable electromechanical coupling portion located on the extension portion, wherein the electrical power is supplied to the other appliance through the electromechanical coupling portion.

10. The device of any one of claims 1 to 9, further comprising,

20 locating details provided on the upper surface of the extension portion, the locating details being received by cooperating detents formed into a bottom surface of the second electrical appliance.

11. The device of claim 10, wherein,

25 each locating detail and the cooperating detent are differently sized so as to allow the second electrical appliance to swivel horizontally while seated on the extension portion .

30 12. The device of claim 11, wherein,

the second appliance can only swivel within a safe swivel angle.

13. The device of any one of claims 10 to 12, wherein,

each locating detail and the cooperating detent are ramped.

5 14. The device of claim 13, wherein,

while seated on the extension portion, the second electrical appliance is adapted to ride up a ramp of the locating detail and become lifted from the extension portion as it becomes disoriented with respect to the locating
10 details.

15. The device of any one of claims 1 to 14, wherein,

a transverse width of the first and second electrical appliances is
15 approximately the same.

16. The device of any one of claims 1 to 15, wherein:

a neck portion is formed between the extension portion and a portion of the
20 base that is below the first electrical appliance.

17. The device of any one of claims 1 to 16, wherein,

an upper surface of the extension portion further comprises an upright dam
25 that cooperates with the shell in an area adjacent to the exterior shell of the toaster.

18. The device of claim 17, wherein,

30 a labyrinth is provided between the upright dam and the shell.

19. The device of any one of claims 1 to 18, wherein,

the external shell is integral with the base.

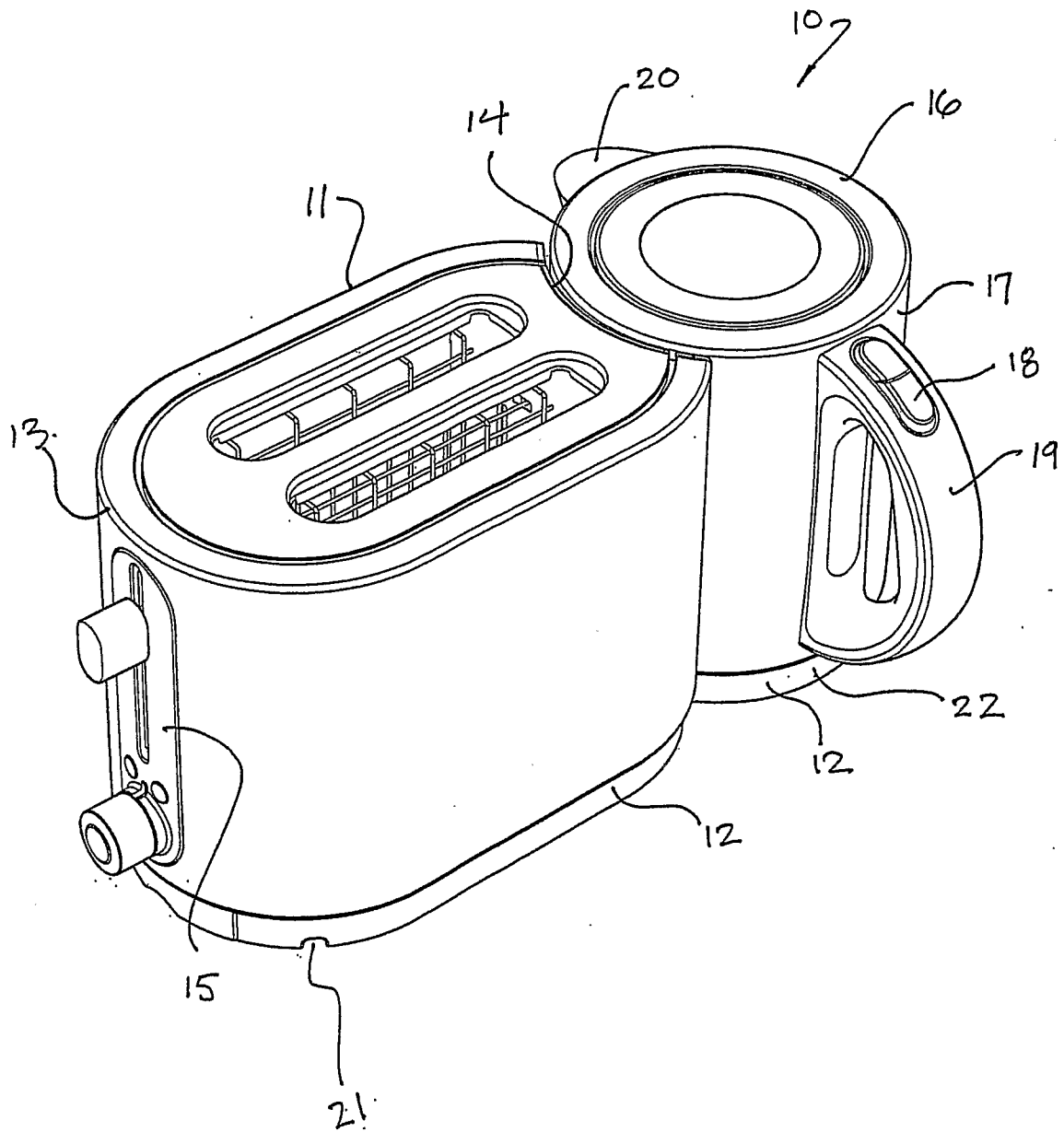
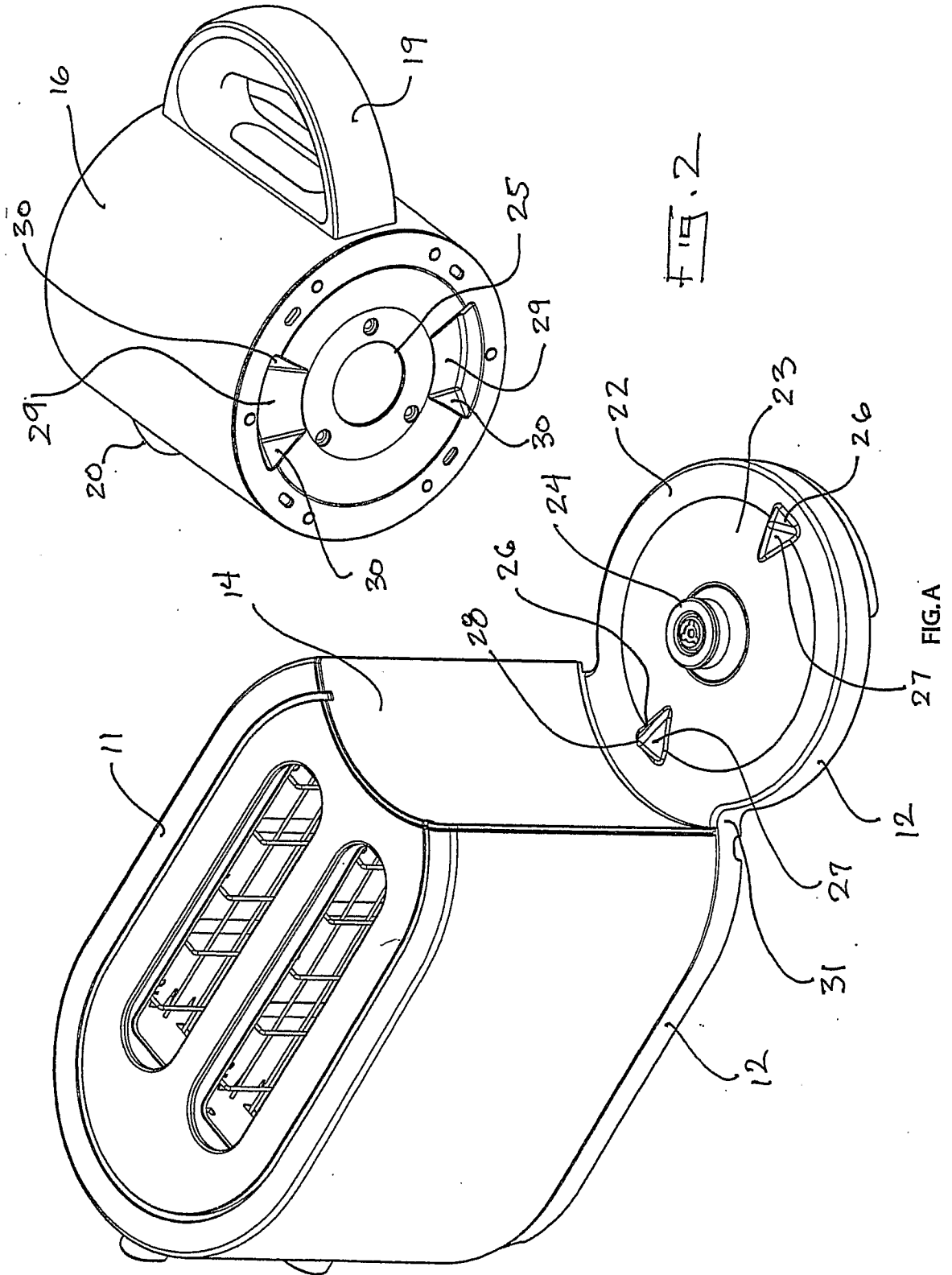
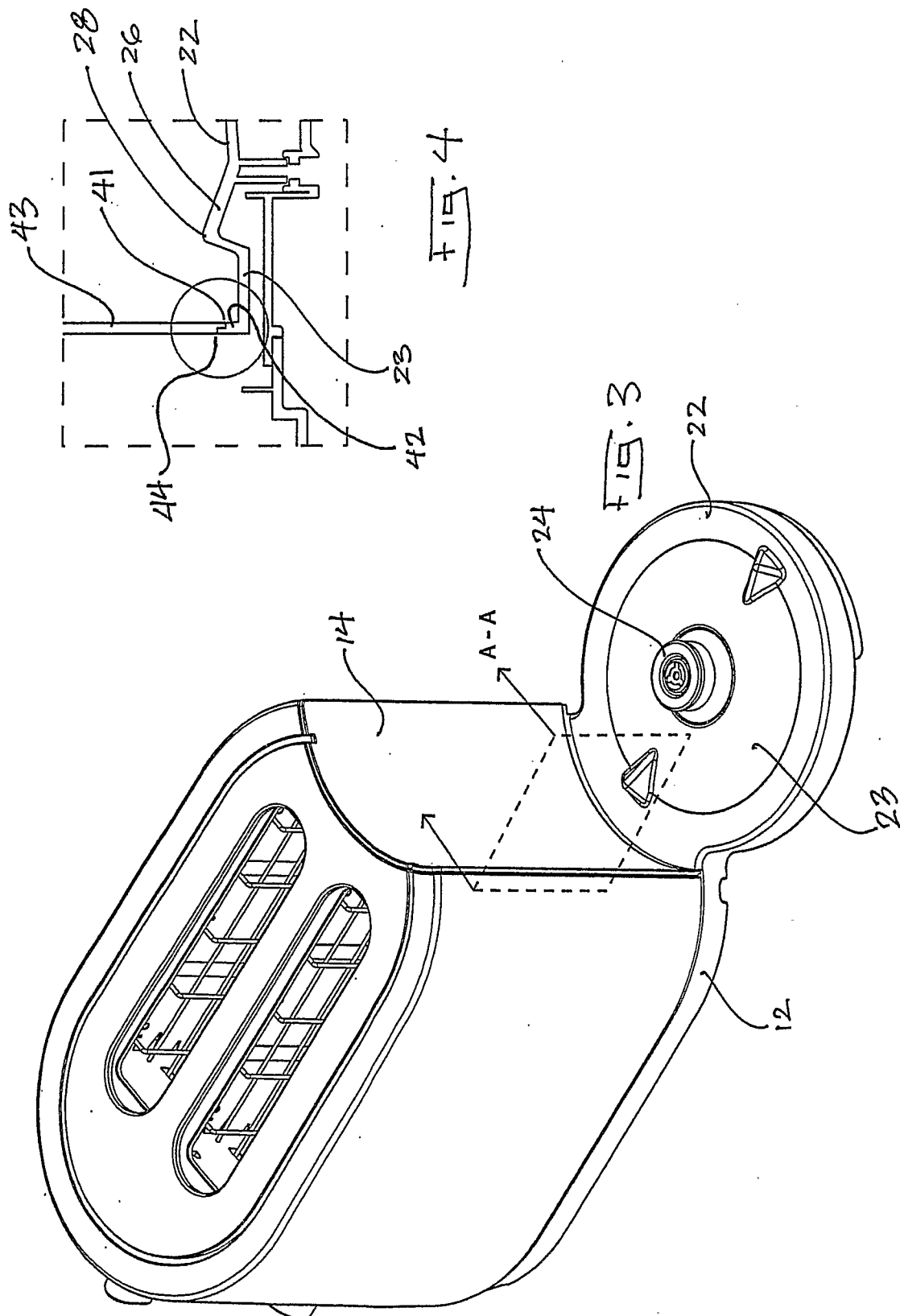
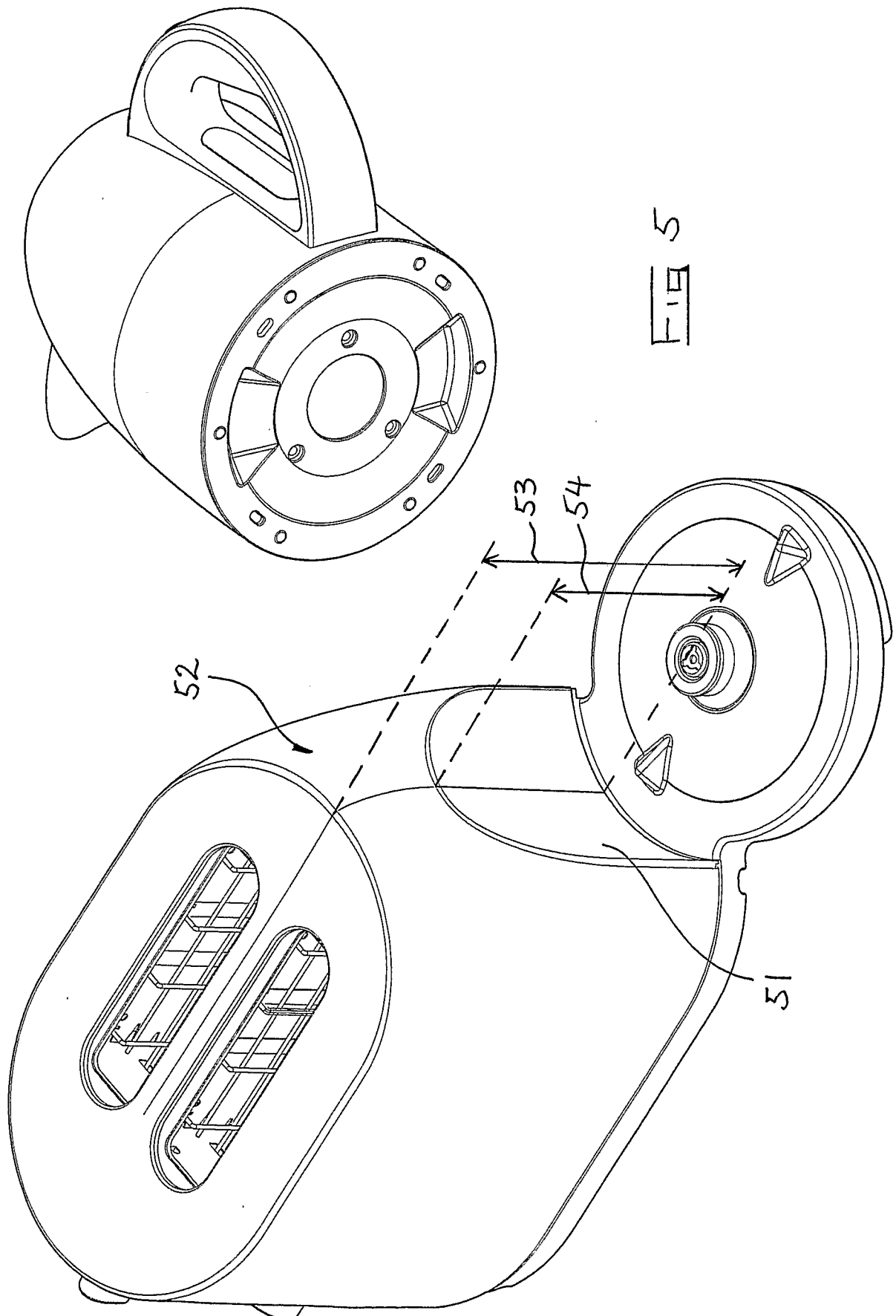


FIG. 1







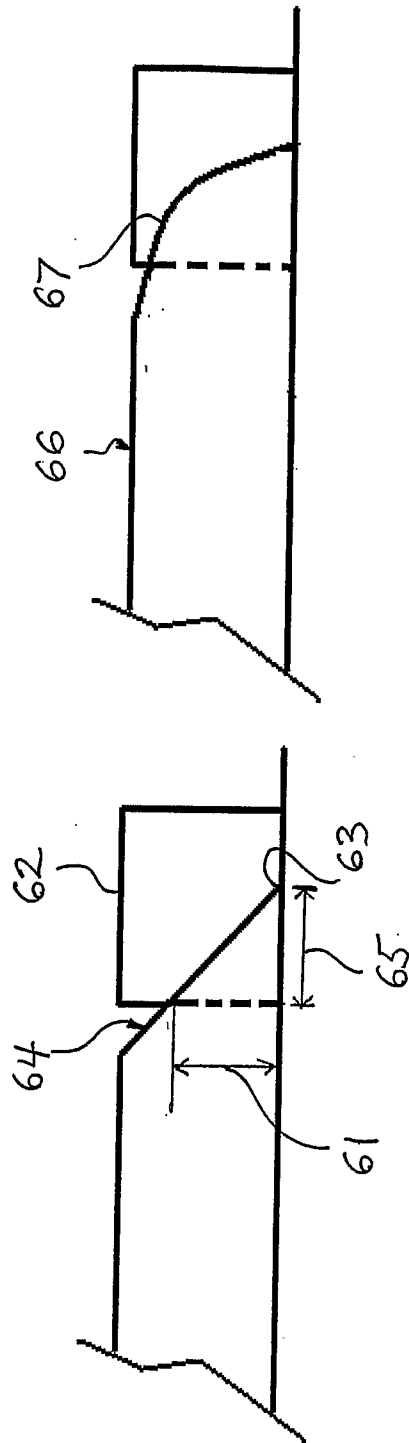
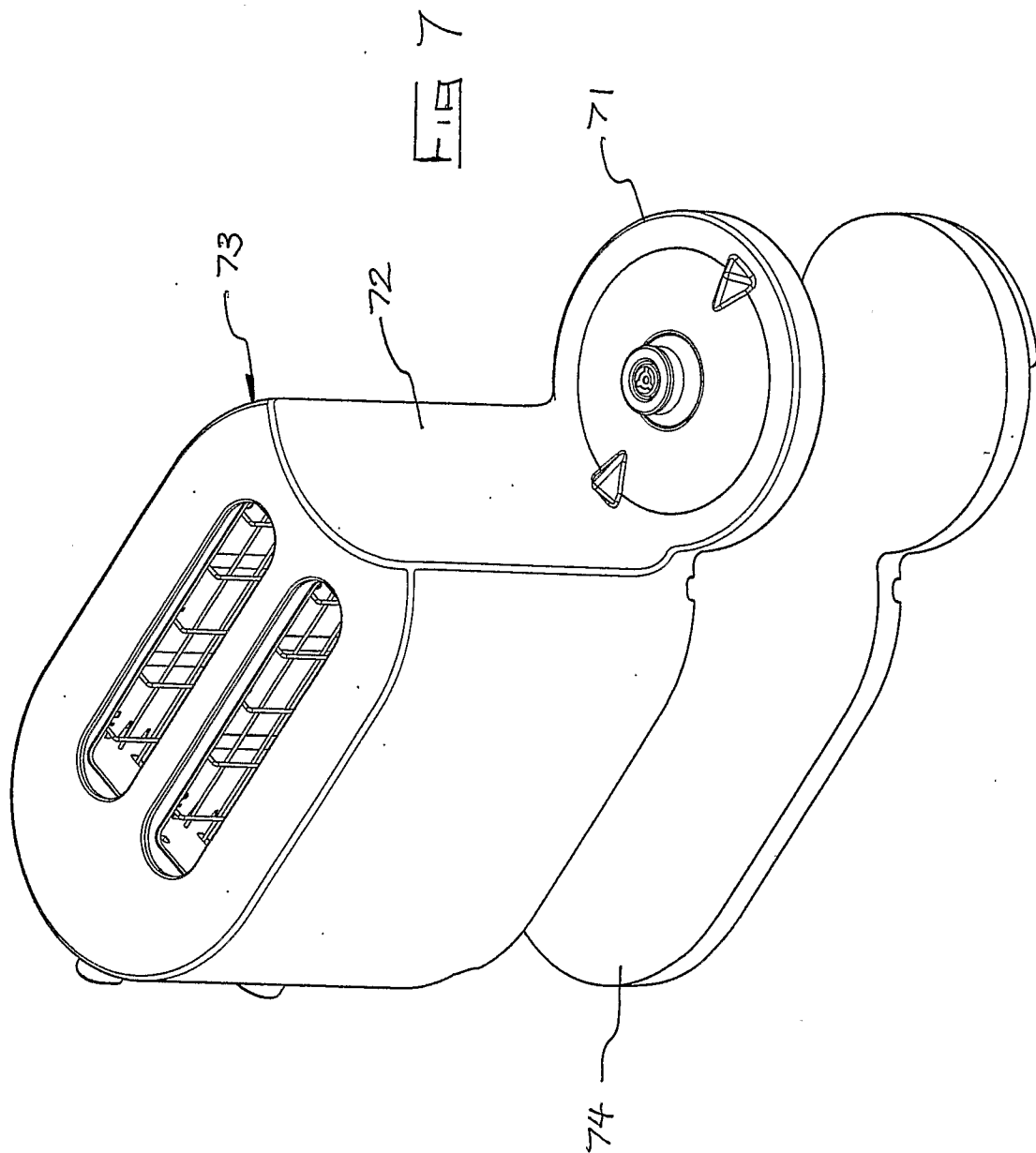


FIG. 6



INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl.												
A47J 44/00 (2006.01) A47J 27/21 (2006.01) A47J 37/08 (2006.01)												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols)												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)												
DWPI: A47J, HO1R 13/44 Keywords: Electric, Cordless, Appliance and similar terms												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
Y	US 5895595 A (HADEN J. D.) 20 April 1999 Figure 1	1-19										
Y	WO 2002/097927 A (KHOURY E. J.) 5 December 2002 Figure 1	1-19										
Y	US 6860764 B (KHOURY E. J.) 1 March 2005 Figure 1	1-19										
Y	US 4442343 A (GENUIT J. E. et al.) 10 April 1984 Figure 1	1-19										
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Date of the actual completion of the international search 22 May 2007		Date of mailing of the international search report 30 MAY 2007										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer SUHITH ILLESINGHE AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No : (02) 6283 6105										

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU2007/000599

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	5895595	EP	0808599	GB	2313295
WO	02097927	BR	0117045	CA	2449090
		CN	1722543	EP	1405375
		MX	PA03011021	NZ	530231
		RU	2003138079	US	6843667
		US	2004175989	US	2005142911
US	6860764	AU	25385/01	CN	1423538
		US	2003092322	WO	0152704
US	4442343				
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
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