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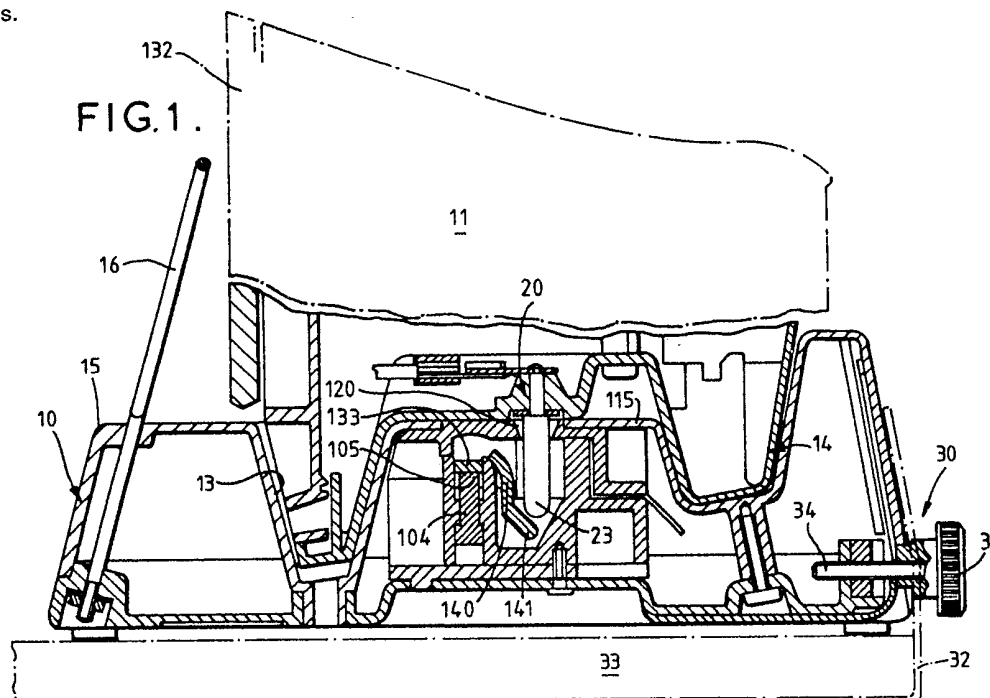
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(54) An appliance supported in electrical contact with a support

(57) Appliance support apparatus 10 having a body 40 providing walls to locate an appliance 11 in a position in which terminal pins of the appliance engage in electrical connector sockets in the body; arranged to prevent the appliance being toppled from the body; and having means 30 to enable the body to be secured to a work-surface. The anti-topple device comprises an inverted-U-shaped support rail 16 (fig. 1) or upstanding walls (64, fig. 2, not shown). The pin connectors and socket connectors are located by the shape of bodywork in the vicinity of the connectors.



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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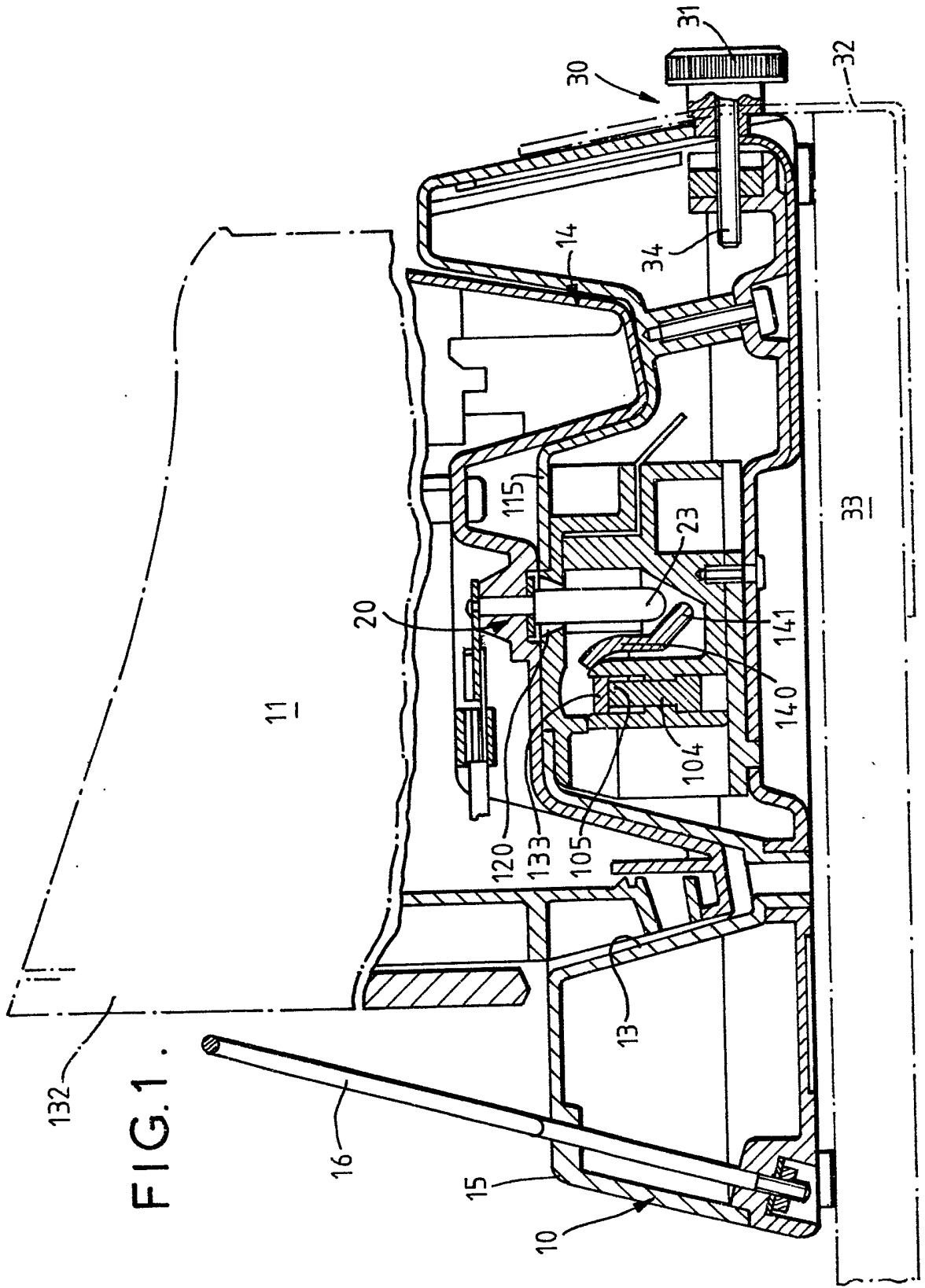


FIG. 1.

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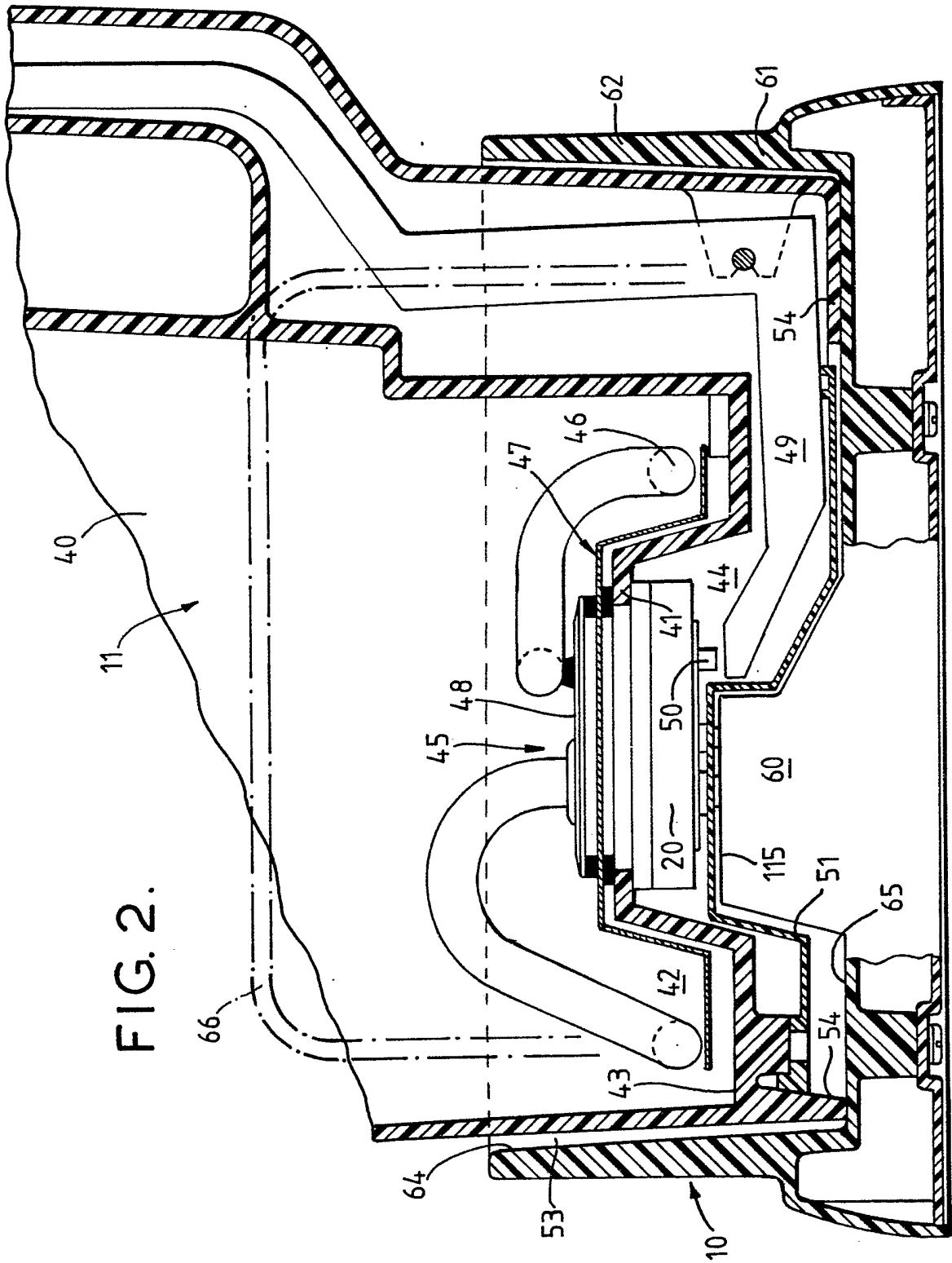


FIG. 2.

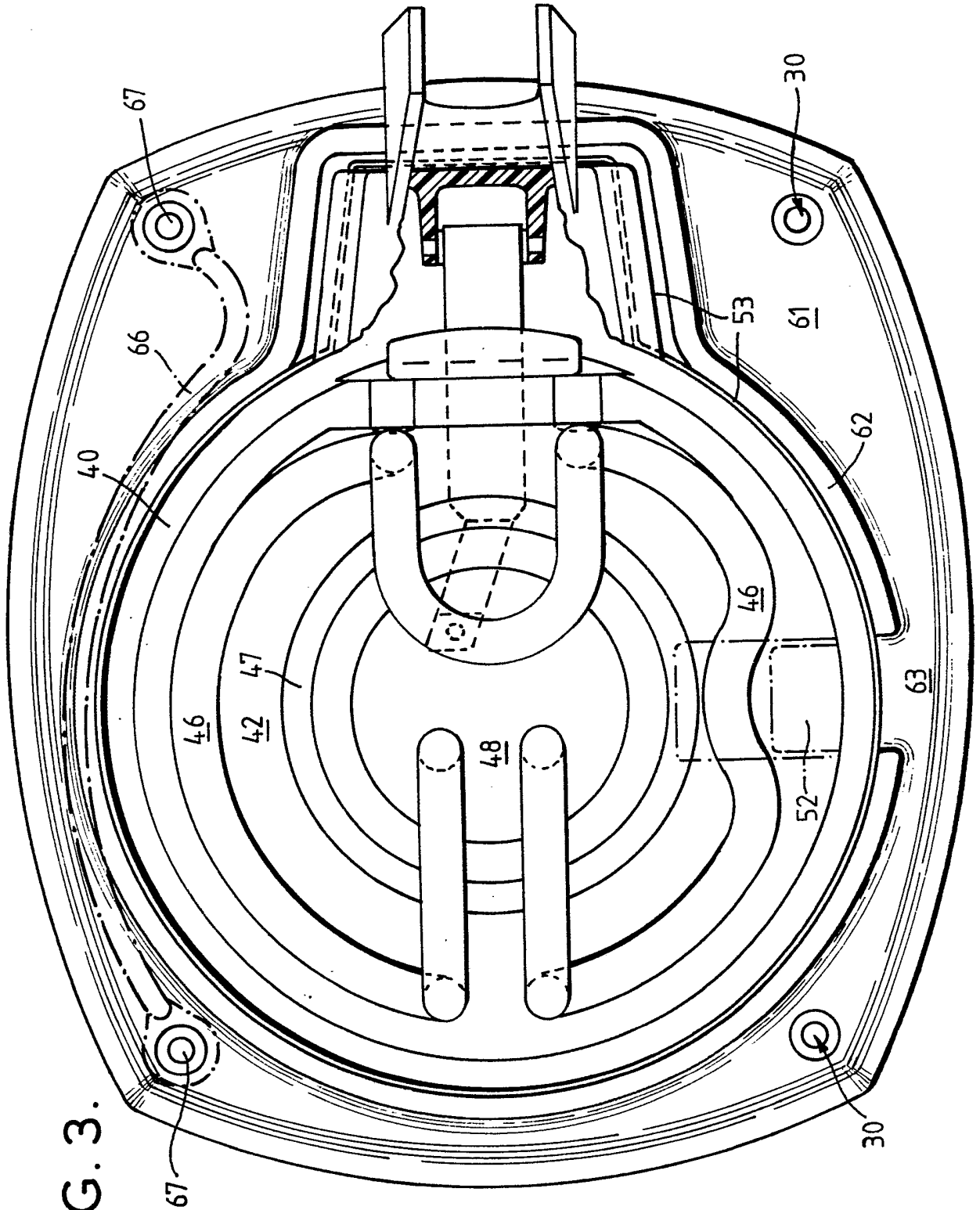


FIG. 3.

SPECIFICATION

Electrical appliances

This invention concerns electrical appliances,
5 appliance support apparatus and other forms of
electrical apparatus.

There is disclosed in our co-pending Patent
application No. 8600087, electrical apparatus,
comprising an electrical appliance provided with at
10 least live and neutral terminal pins; and appliance
support apparatus comprising locating means
engageable by the appliance to locate the appliance
in a predetermined position; live and neutral
sockets to receive the live and neutral terminal pins;
15 electrical conductors in said sockets; and switch
means, actuatable by the appliance being placed in
said predetermined position, to make an electrical
connection to at least one of said electrical
conductors; and characterised in that the appliance
20 support apparatus further comprises a displaceable
member which projects into said sockets and is
movable against a bias to actuate said switch
means. In the example shown in FIGURES 5 and 6 of
that application the appliance is an iron and the
25 support apparatus is a stand, which iron and stand
have co-operating guide surfaces, which surfaces
extend upwards to facilitate the appliance being
lowered onto the stand in a correct orientation to
align the pins with the sockets, and which surfaces
30 serve as locating means to locate the appliance in a
predetermined position on the stand. There is also
shown in FIGURE 5 an upstanding member secured
to the stand so as to be alongside a sole plate of the
iron so as to prevent the iron being tipped or
35 toppling sole plate foremost relative to the stand;
and a clamping knob member for use in securing a
bracket or like device for clamping the stand to, for
example, an ironing board or table.

Such locating means and anti-tipping or anti-
40 toppling members are useful with other forms of
appliance.

Accordingly, the present invention provides
electrical apparatus comprising an appliance and
support apparatus; the appliance having electrical
45 connectors in a base thereof to engage electrical
connectors in the support apparatus, when the
appliance is supported upon the support apparatus
in a predetermined position, for supplying electrical
power to the appliance via the support apparatus;
50 and wherein the apparatus is provided with locating
means to locate the appliance in said predetermined
position and to hinder the appliance being toppled
from the support apparatus.

The locating means is particularly advantageous
55 in preventing an appliance, such as a water heating
vessel, being tilted accidentally whilst upon the
support apparatus, for preventing spillage of hot
water.

The locating means preferably extends upwards
60 for at least 20% of the overall height of the
appliance.

The support apparatus is preferably adapted to
be secured to an article or surface, e.g. by a
clamp device, fasteners or adhesive pads; or
65 may be ballasted to provide a stable support for

the appliance.

The locating means is preferably arranged so that
the appliance must be lifted from said position by at
least five centimetres before the appliance can be
70 moved sideways from the support apparatus.

The invention includes a vessel for heating liquids
having any novel part or feature disclosed herein; a
support apparatus having any novel part or feature
disclosed herein.

75 The invention will be described further by way of
example with reference to the accompanying
diagrammatic drawings, wherein:—

FIGURE 1 shows a first embodiment of electrical
apparatus of the invention in vertical cross-section;

80 FIGURE 2 shows a lower portion of a second
embodiment of apparatus of the invention, in
vertical cross-section; and

FIGURE 3 shows said lower portion, in plan.

In all embodiments the electrical apparatus
85 comprises support apparatus 10 and an appliance
11. The apparatus 10 is provided with locating
means, which locating means serves to guide the
appliance as it is lowered to engage pins of plug
connector 20 of the appliance 11 in electrical
90 connector sockets (not shown) of a power supply
switch provided below a raised and apertured
central part 115 of the support apparatus, and
serves to restrain the appliance against being
toppled from the support apparatus. The apparatus
95 10 is further provided with holding means 30 to hold
the apparatus upon a surface of an article such as
worktop or table.

In the first embodiment, the appliance 11 is an
iron having a sole plate 132 in which the mass of the
100 iron is concentrated so that when the iron is in a
predetermined position upon the support
apparatus, as shown in FIGURE 1, the iron tends
always to topple with the sole plate foremost so that
an anti-topple part of the locating means can be
confined to in front of the sole plate 12. The anti-
105 topple part is provided by an inverted-U-shaped
metal rail 16 upstanding from a main moulded
plastics body 15 of the support apparatus. The
locating means further includes upstanding walls of
the body 15 which provide guide surfaces 13 to
110 engage co-operating surfaces 14 of the iron.

FIGURE 1 also shows various parts 103, 105, 120,
133, 140 and 141 of the power supply switch which
is described in detail in our aforesaid co-pending
115 application, and which is arranged to be actuated by
said pins (including an earth pin 23) being inserted
into the sockets so as to be held in an "on" condition
by the presence of the appliance in said position on
the support apparatus.

120 The holding means 30 comprises a clamp screw
34 having a knob 31 which provides adjustable
clamping for a bracket 32 engageable below a
worktop 33, such as an ironing board, to clamp the
support apparatus down upon the upper surface of
125 the worktop 33.

In the second embodiment, the appliance is a
water boiling jug having a hollow moulded plastics
body 40, an internal bottom 43 of which has a raised
central portion 41 to provide an annular trough 42
130 around the central portion 41 and a downwardly

open recess 44 below the central portion 41.

An immersion heater 45 is secured to and extends through the portion 41 so that a heating portion 46 of the heater is suspended in the trough above a metal heat shield 47 clamped in place by a head 48 of the heater. In the head is a switch which responds, to switch off the heater, upon overheating of the head 48 and upon a switch or control lever 49 being moved from the position shown to push a projecting switch actuating member 50 upwards. The switch is incorporated in the plug connector 20 from which the pins project downwards, through a base member 51 of the jug, into the sockets provided by the power supply switch in a raised central portion 60 of a moulded plastics body 61 of the apparatus 10.

The locating means comprises an upstanding peripheral wall 62 of the body 61, which wall 62 may be interrupted at 63 to expose a water level indicator 52 set in the side of the jug 11, and which provides an internal guide surface 64 which co-operates with lower portions of a peripheral surface 53 of the jug. The body 61 also provides an internal floor 65 on which rest base portions 54 of the jug. The vertical extent of the surface 64 is sufficient to prevent the jug being toppled from the body 61, e.g. it extends upwards for about 6 cm to co-operate with about 25% of the vertical extent of the surface 53. However, if required, the locating means may comprise supplementary locating means in the form of one or more upstanding devices secured to the body 61 to engage the jug a few centimetres, e.g. up to ten centimetres, above the wall 62 in the event of the jug being tilted by more than a few degrees, e.g. 5°, relative to the body 61. One, of a pair of such devices arranged to extend around more than 50% of the periphery of the jug, is indicated in broken lines in FIGURES 2 and 3 and is provided by an inverted U-shaped metal bar device 66, which can be held to the body by fasteners (not shown), inserted through apertures 67 of the holding means 30, to secure the support apparatus to a surface of an article such as a shelf or worktop.

The invention is not confined to details of the foregoing examples, and many variations are possible within the scope of the invention. For example, the power supply switch may be of any suitable form, or may be omitted to leave only an electrical connector device in the support apparatus.

The appliance may be of other forms, e.g. a coffee

maker, cooking utensil, warming dish, kettle, mixer, blender, grinder, incubator or like laboratory, household or kitchen appliance, particularly an appliance which may be utilised in a particular location to perform a power consuming operation and which is taken thereafter to another location to be used or for the contents therein to be extracted, used, examined or consumed.

60 CLAIMS

1. Electrical apparatus comprising an appliance and support apparatus the appliance having electrical connectors in a base thereof to engage electrical connectors in the support apparatus when the appliance is supported upon the support apparatus in a predetermined position, for supplying electrical power to the appliance via the support apparatus; and wherein the support apparatus is provided with locating means to locate the appliance in said predetermined position and to hinder the appliance being toppled from the support apparatus.

2. Apparatus as claimed in Claim 1 wherein the locating means extends upwards for at least 20% of the overall height of the appliance.

3. Apparatus as claimed in Claim 1 or 2 wherein the support apparatus is adapted to be secured to an article or surface by a clamp device, fasteners or adhesive pads.

4. Apparatus as claimed in Claim 1, 2 or 3 wherein the locating means is arranged so that the appliance must be lifted from said position by at least five centimetres before the appliance can be moved sideways from the support apparatus.

5. Apparatus as claimed in any preceding claim wherein the appliance is a vessel for heating liquids.

6. Apparatus as claimed in any preceding claim wherein the support apparatus comprises a stand having a moulded body; wherein said body and the appliance provide cooperating guide surfaces, which surfaces extend upwards for locating the appliance in said position and are arranged to guide the appliance as it is lowered to or lifted from said position.

7. Apparatus as claimed in Claim 6 wherein the support apparatus includes a locating or anti-topple member secured to said body.

8. Apparatus substantially as hereinbefore described with reference to the accompanying diagrammatic drawings.