

AN APPARATUS ACTIVATED BY A MECHANICAL DUAL-MODE HANDLE

FIELD OF INVENTION

5 The present invention relates to the field of apparatus activated by a mechanical dual-mode handle.

BACKGROUND

10 Currently, there are some appliances which need to be held during use. Examples of these appliances include, for example, irons, hair dryers, shavers, hair trimmers, electric toothbrushes and the like. These appliances typically are activated using either button switches or slider switches. Unfortunately, there are regular occurrences of the button/slider switches being left in the “on” position even after usage, and this leads to issues like wastage of electricity, overheating of appliances, generation of unnecessary noise, and so forth.

15 This is undesirable and such issues should be addressed.

SUMMARY

20 There is provided an apparatus activated by a mechanical dual-mode handle. The dual-mode handle comprises a handle body; and a biased handle cover for engagement with the handle portion. It is preferable that the apparatus is configured to be activated when the handle cover is at a first mode, and the apparatus is configured to be de-activated when the handle cover is at a second mode. The apparatus can be, for example, hair dryer, electric toothbrush, electric razor, iron and the like.

25 It is preferable that the handle body includes a contact switch, the contact switch being configured to be actuated when the handle cover is at the first mode.

30 Preferably, the handle cover includes a guide structure to enable engagement of the handle cover with the handle body; and a rigid extension configured to actuate the contact switch. The guide structure can include a slot configured to allow movement of the handle cover from the first mode to the second mode. The handle body can include a guide stem configured to be located within the slot of the guide structure when the handle cover is engaged with the handle body. The handle body can include circuitry, the circuitry being located under an insulating cover.

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DESCRIPTION OF FIGURES

In order that the present invention may be fully understood and readily put into practical effect, there shall now be described by way of non-limitative example only preferred embodiments of the present invention, the description being with reference to the accompanying illustrative figures.

Figure 1 shows a first embodiment of the present invention during use.

Figure 2 shows an exposed view of a handle body of the first embodiment.

Figure 3 shows an underside view of a handle cover of the first embodiment.

Figure 4 shows a second embodiment of the present invention.

Figure 5 shows a third embodiment of the present invention.

Figure 6 shows a fourth embodiment of the present invention.

DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to Figure 1, there is shown a first embodiment of an apparatus 20 activated by a mechanical dual-mode handle 22. The first embodiment of the apparatus 20 is a hair dryer. The dual-mode handle 22 comprises a handle body 24, and a biased handle cover 26 for engagement with the handle body 24. The handle body 24 also includes a guide stem 34. Figure 2 shows an exposed view of the handle body 24. The handle body 24 can be either integral with the apparatus 20 or separable from the apparatus 20. The handle body 24 also includes a spring 25 which is configured to provide a biasing effect for the handle cover 26. Furthermore, any known biasing means can be used in place of the spring 25. Figure 3 shows an underside view of the handle cover 26. The handle cover 26 can be configured to be biased using any means, and this will be further illustrated in the subsequent paragraphs.

The handle body 24 includes a mechanical contact switch 28 and circuitry located under an insulating cover 29. The circuitry can be for controlling the functionality of the apparatus 20. The insulating cover 29 ensures the circuitry is not exposed even when the handle body 24 is exposed as per Figure 2. The handle cover 26 includes a guide structure 30 to enable engagement of the handle cover 26 with the handle body 24. The guide structure 30 includes a slot 32 which is configured to allow movement of the handle cover 26 when the guide stem 34 of the handle body 24 is located within the slot 32. The guide stem 34 is located within the slot 32 when the handle cover 26 is engaged with the handle body 24. The handle cover 26 can be mounted to the handle 22 by attaching the handle cover 26 to either the apparatus 20 or the handle body 24. The handle cover 26 also includes a rigid extension 36 which is configured to actuate the contact switch 28.

When the handle cover 26 is engaged with the handle body 24, the guide stem 34 of the handle body 24 is located within the slot 32. When the handle cover 26 is engaged with the handle body 24, the handle cover 26 will not dis-engage from the handle body 24 even when the apparatus 20 is dropped from a height. The first embodiment of the apparatus 20 will appear like in Figure 1. Figure 1 shows the handle 22 in a second mode. When a palm 40 of the user applies a force by gripping the handle 22 in a typical manner when holding the apparatus 20, the handle cover 26 is moved towards the handle body 24, and consequently, the rigid extension 36 of the handle cover 26 actuates the contact switch 28, which consequently activates the apparatus 20. The handle 22 is in a first mode when the apparatus 20 is activated. Subsequently, when the user reduces the force applied to the handle 22 or ceases the act of holding the apparatus 20, the biased handle cover 26 undergoes movement and causes the handle 22 to revert to the second mode.

It should be appreciated that the apparatus 20 can have several embodiments. A second embodiment in a form of an iron is shown in Figure 4, whereby a handle 60 of the iron can be a mechanical dual-mode handle as described in the preceding paragraphs. A third embodiment in a form of an electric razor is shown in Figure 5, whereby a gripping portion 70 of the electric razor can be a mechanical dual-mode handle as described in the preceding paragraphs. In addition, a fourth embodiment in a form of an electric toothbrush is shown in Figure 6, whereby a holding portion 80 of the electric toothbrush can be a mechanical dual-mode handle as described in the preceding paragraphs. It should be appreciated that other embodiments of the apparatus 20 are possible.

It should be noted that the present invention allows the user optimal comfort when using the apparatus 20 for extended periods of time, as the user does not subject any fingers to extended periods of pressing a button or manipulating a slider switch. Moreover, the present invention prevents unnecessary wastage of electricity or undesired generation of heat in the absence of the user.

Whilst there have been described in the foregoing description preferred embodiments of the present invention, it will be understood by those skilled in the technology concerned that many variations or modifications in details of design or construction may be made without departing from the present invention.

CLAIMS

1. An apparatus activated by a mechanical dual-mode handle, the dual-mode handle comprising:
a handle body; and
5 a biased handle cover for engagement with the handle portion,
wherein the apparatus is configured to be activated when the handle cover is at a first mode,
and the apparatus is configured to be de-activated when the handle cover is at a second mode.
2. The apparatus as claimed in claim 1, wherein the handle body includes a contact switch, the
10 contact switch being configured to be actuated when the handle cover is at the first mode.
3. The apparatus as claimed in claim 2, wherein the handle cover includes:
a guide structure to enable engagement of the handle cover with the handle body; and
a rigid extension configured to actuate the contact switch.
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4. The apparatus as claimed in claim 3, wherein the guide structure includes a slot configured to
allow movement of the handle cover from the first mode to the second mode.
5. The apparatus as claimed in claim 4, wherein the handle body includes a guide stem configured
20 to be located within the slot of the guide structure when the handle cover is engaged with the handle
body.
6. The apparatus as claimed in any of claims 1 to 5, wherein the handle body includes circuitry, the
circuitry being located under an insulating cover.
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7. The apparatus of any one of claims 1 to 6 being selected from a group consisting of: hair dryer,
electric toothbrush, electric razor and iron.