CLAIMS

We claim:

1. An evaporator, for use with a reservoir containing a volatile liquid, the reservoir having disposed therein a wick that has a lower portion in contact with the volatile liquid and an upper portion protruding from the reservoir, the reservoir having a plurality of guide members disposed symmetrically around the wick and extending beyond the upper portion of the wick, the evaporator comprising:

a base having a first recess defining a complementary structure to at least a portion of the reservoir and configured to receive the reservoir;

a battery disposed within the base; and

a cover having disposed therein a cylindrical heater, the cover being closeable upon or fastenable to the base and adapted to establish a functional electrical connection between the battery and the heater when closed upon or fastened to the base, and having an interior within which are disposed a plurality of guide recesses;

wherein, when the complementary structures of the reservoir and the first recess are aligned and the cover is closed upon or fastened to the base, each of the plurality of guide members is received within one of the plurality of guide recesses and the wick is centrally disposed within the heater; and

wherein, when the reservoir is inserted into and misaligned relative to the first recess, the guide members prevent the cover from establishing the functional electrical connection between the battery and the heater.

2. The evaporator according to claim 1, wherein closing or fastening the cover to the base creates a conductive path between the heater and the battery.

3. The evaporator according to claim 1, wherein closing or fastening the cover to the base enables operation of a switch that permits current to flow between the battery and the heater.

4 The evaporator according to claim 1, wherein the battery is a disposable battery.

5. The evaporator according to claim 1, wherein the battery is a rechargeable battery.

6 The evaporator according to claim 5, wherein the battery is rechargeable in situ.

7. The evaporator according to claim 1, further comprising a microcontroller and firmware adapted to control the temperature of the heater.

8. The evaporator according to claim 7, wherein the firmware is programmed to enter a fast-heating mode when the heater is started from a cold state.

9. The evaporator according to claim 1, wherein the first recess is shaped so as to define a channel for the passage of air between the reservoir and the interior of the first recess.

10. The evaporator according to claim 1, wherein an opening in an upper surface of the cover defines a chimney through which the volatile liquid, after evaporation from the wick by operation of the heater, exits the evaporator as a volatized material, the chimney being surmounted by a raised rim which extends above the upper surface of the cover.

11. The evaporator of claim 1 wherein the plurality of guide members orients the wick to be received within the heater.

12. An evaporator comprising: a reservoir containing a volatile liquid and having a wick with a lower portion in contact with the volatile liquid and an upper portion protruding from the reservoir, the reservoir having a plurality of guide members disposed around the wick; a base having a first electrical contact and a first recess having complementary features to the reservoir that orients the reservoir and the plurality of guide members relative to the first electrical contact; and a cover having a heater with a central aperture, a plurality of guide recesses, and a second electrical contact, the cover configured to engage the base when complementary features of the reservoir and the first recess align the plurality of guide members to be received within the plurality of guide recesses, whereupon a functional electrical connection between the first and second electrical contacts is established to power the heater and the wick is oriented within the heater central aperture.

13. The evaporator of claim 12 wherein when the reservoir is misaligned within the first recess, the plurality of guide members are prevented from being received within the plurality of guide recesses and the functional electrical connection is prevented.

14. The evaporator of claim 12 wherein the complementary features of the first recess and the reservoir are engaged prior to the cover engaging the base.