

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, an upper portion protruding from the reservoir, and a plurality of guide members disposed symmetrically around the wick and extending beyond the height of the wick, the evaporator comprising:
 - a base having a first recess within which the reservoir closely fits;
 - 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 reservoir is operably fitted into the first recess and the cover is closed upon or fastened to the base, each of the plurality of guide members is fitted within one of the plurality of guide recesses and the wick is centrally disposed within the heater; and
- wherein, when the reservoir is inoperably fitted into the first recess, the guide members are not capable of being fitted within the guide recesses, and the cover cannot be closed upon or fastened to the base;
- whereby if the wick is not centrally disposed within the heater, the cover cannot be closed upon or fastened to the base, and a functional electrical connection cannot be established between the heater and the battery.

2. The evaporator according to claim 1, wherein closing or fastening the cover to the 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 causes the closure of 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 substance, after evaporation from the wick by operation of the heater, exits the evaporator, the chimney being surmounted by a raised rim which extends above the upper surface of the cover.