and/or maximum temperature to which the heater is heated during operation, other interactive features that a user might access on a device, and/or other operations.

[9] Various vaporizable materials having a variety of contents and proportions of such contents can be contained in the cartridge. Some vaporizable materials, for example, may have a smaller percentage of active ingredients per total volume of vaporizable material, such as due to regulations requiring certain active ingredient percentages. As such, a user may need to vaporize a large amount of vaporizable material (e.g., compared to the overall volume of vaporizable material that can be stored in a cartridge) to achieve a desired effect.

SUMMARY

[10] In certain embodiments of the current subject matter, challenges associated with the design and construction of an electronic vaporizer device, particularly one configured to minimize the presence of liquid vaporizable materials in or near certain susceptible components, may be addressed by inclusion of one or more of the features described herein or comparable/equivalent approaches as would be understood by one of ordinary skill in the art.

[11] In one aspect, there is provided a vaporizer device including a shell, a cartridge receptacle, and a skeleton. The cartridge receptacle may be formed from a cartridge interface disposed at least partially inside a sheath. The cartridge interface may be configured to provide a plurality of electrical couplings with a vaporizer cartridge when the vaporizer cartridge is disposed at least partially inside the cartridge receptacle. The plurality of electrical couplings may include a first electrical coupling with a heating element of the vaporizer cartridge. The plurality of electrical couplings may further include a second electrical coupling with a cartridge identification chip of the vaporizer cartridge, wherein at least a portion of a wick housing of the vaporizer cartridge is disposed at an open top of the sheath when the vaporizer cartridge is inserted into the cartridge receptacle. The skeleton may be coupled with the cartridge interface and configured to secure the cartridge interface inside the shell.

[12] In some variations, one or more of the features disclosed herein including the following features can optionally be included in any feasible combination. The vaporizer device may further include a battery and a printed circuit board assembly including a controller of the vaporizer device. The printed circuit board assembly may be coupled to the battery and the cartridge interface to form a first assembly. The first assembly may be coupled to the skeleton to form a second assembly that is disposed inside the shell.

[13] In some variations, the second assembly may further include an antenna.

[14] In some variations, the shell may be formed from a first material. The vaporizer device may further include an endcap formed from a second material that is more penetrable

CLAIMS

1. A vaporizer device, comprising:

a shell;

a cartridge receptacle formed from a cartridge interface disposed at least partially inside a sheath, the cartridge interface configured to provide a plurality of electrical couplings with a vaporizer cartridge when the vaporizer cartridge is disposed at least partially inside the cartridge receptacle, the plurality of electrical couplings including a first electrical coupling with a heating element of the vaporizer cartridge, and the plurality of electrical couplings further including a second electrical coupling with a cartridge identification chip of the vaporizer cartridge, wherein at least a portion of a wick housing of the vaporizer cartridge is disposed at an open top of the sheath when the vaporizer cartridge is inserted into the cartridge receptacle; and

a skeleton coupled with the cartridge interface, the skeleton configured to secure the cartridge interface inside the shell.

2. The vaporizer device of claim 1, further comprising:

a battery; and

a printed circuit board assembly comprising a controller of the vaporizer device, the printed circuit board assembly being coupled to the battery and the cartridge interface to form a first assembly, the first assembly being coupled to the skeleton to form a second assembly that is disposed inside the shell.

3. The vaporizer device of claim 2, wherein the second assembly further includes an antenna.

4. The vaporizer device of claim 3, wherein the shell is formed from a first material, wherein the vaporizer device further includes an endcap formed from a second material that is more penetrable to radio waves from the antenna than the first material, and wherein the endcap is configured to seal an open end of the shell opposite to the cartridge receptacle.

5. The vaporizer device of claim 4, wherein the shell includes one or more insets formed from the second material and/or a third material that are more penetrable to radio waves from the antenna than the first material.

6. The vaporizer device of any of claims 1-5, wherein the cartridge interface includes a set of receptacle contacts configured to form the first electrical coupling with a set of heater contacts of the heating element of the vaporizer cartridge.

7. The vaporizer device of claim 6, wherein the set of receptacle contacts include two pairs of electrical contacts disposed at opposite sides of the cartridge receptacle.

8. The vaporizer device of any of claims 6-7, wherein the cartridge interface further includes a set of cartridge identifier contacts configured to form the second electrical coupling with a corresponding set of cartridge identifier contacts at the cartridge identification chip of the vaporizer device.

9. The vaporizer device of claim 8, wherein the set of cartridge identifier contacts includes a first set of three electrical contacts disposed at one side of the cartridge receptacle and a second set of three electrical contacts disposed at an opposite side of the cartridge receptacle.

10. The vaporizer device of any of claims 8-9, wherein the set of cartridge identifier contacts includes at least one electrical contact that is preloaded to exert a force against a corresponding electrical contact at the cartridge identification chip.

11. The vaporizer device of claim of claim 10, wherein the sheath is configured to prevent an overextension of the at least one electrical contact, and wherein the sheath is further configured to prevent contact between the at least one electrical contact and the shell of the vaporizer device.

12. The vaporizer device of any of claims 1-11, wherein the cartridge receptacle is configured to receive the vaporizer cartridge in a first rotational orientation and a second rotational orientation, and wherein the cartridge interface is configured to provide the plurality of electrical couplings with the vaporizer cartridge whether the vaporizer cartridge is inserted the first rotational orientation or the second rotational orientation.

13. The vaporizer device of any of claims 1-12, wherein the sheath and the shell are formed as a solitary unit.

14. The vaporizer device of any of claims 1-13, wherein the sheath is coupled to the shell by one or more of an adhesive, a friction fit, and/or a welding.

15. The vaporizer device of any of claims 1-14, wherein the cartridge interface is further configured to form, with the vaporizer cartridge, a mechanical coupling configured to retain the vaporizer cartridge inside the cartridge receptacle.

16. The vaporizer device of any of claims 1-15, further comprising:

a first retention feature configured to couple the vaporizer device to a charger device, the first retention feature configured to form a magnetic coupling with a second retention feature at the charger device, the magnetic coupling aligning and maintaining the vaporizer device in one or more position and/or orientation relative to the charger device.

17. The vaporizer device of claim 16, wherein the first retention feature and the second retention feature each comprise one or more magnets.

18. The vaporizer device of any of claims 16-17, wherein one of the first retention feature and the second retention feature comprises one or more magnets, and wherein the other one of the first retention feature and the second retention feature comprises one or more blocks of ferrous metal.

19. The vaporizer device of any of claims 1-18, wherein the skeleton includes one or more detents for securing, to an interior of the shell, the skeleton coupled with the cartridge interface.

20. The vaporizer device of any of claims 1-19, wherein the first electrical coupling is formed by at least contacting a contact portion of the heating element disposed at least partially outside of a wick housing of the vaporizer cartridge while a heating portion of the heating element is disposed at least partially inside the wick housing when the wick housing containing a wicking element is disposed at least partially in the cartridge receptacle.