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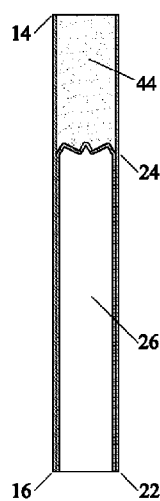


FIG. 1F

(57) Abstract: A flower cartridge for use with a portable electronic heating device for the smokeless delivery of active ingredients and volatile compounds released from heating natural consumables such as plant matter is disclosed. The cartridge contains a quantity of natural consumables and a constriction or obstruction, which together form a porous plug to which air flows freely but the consumables remain in place. The contents of the cartridge are liberated via hot air and active ingredients are delivered to the user via heating and not burning. The cartridge is made of disposable and/or biodegradable materials to reduce ecological impact.

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AMENDED CLAIMS
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CLAIMS

1. A cartridge for use with a portable electronic heating device for the delivery of vaporized natural consumables, the cartridge comprising:
 - a first tube having openings at a mouthpiece end and an insertion end, the insertion end being sized and configured to be insertable into the heating device;
 - a first cavity inside the first tube defining a longitudinal axis and a lateral axis disposed perpendicular to the longitudinal axis;
 - a second tube having openings at a junction end and a stopper end, the second tube being sized and configured to be insertable into the first cavity of the first tube;
 - a second cavity inside the second tube defining a longitudinal axis and a lateral axis disposed perpendicular to the longitudinal axis;
 - wherein the junction end of the second tube is proximate to the mouthpiece end of the first tube, the second cavity extends toward the mouthpiece end of the first tube;
 - wherein the first cavity is fillable with natural consumables between the insertion end of the first tube and the stopper end of the second tube; and
 - wherein the stopper end of the second tube is configured to form a porous plug with the natural consumables within the first cavity.

2. A cartridge for use with a portable electronic heating device for the delivery of vaporized natural consumables, the cartridge comprising:
 - a single tube having openings at a mouthpiece end and an insertion end, the insertion end being sized and configured to be insertable into the heating device;

a cavity inside the single tube defining a longitudinal axis and a lateral axis disposed perpendicular to the longitudinal axis, the cavity being fillable with natural consumables;

a stopper insert sized and configured to be disposable into the cavity proximate the mouthpiece end, the stopper being sized and configured to block natural consumables from falling out towards the mouthpiece end;

wherein the natural consumables are disposed in the cavity between the stopper insert and the insertion end, and the stopper insert being configured to form a porous plug with the natural consumables within the cavity.

3. A cartridge for use with a portable electronic heating device for the delivery of vaporized natural consumables, the cartridge comprising:

a single tube having openings at a mouthpiece end and an insertion end, the insertion end being sized and configured to be insertable into the heating device;

an obstruction structurally positioned in the single tube between the mouthpiece end and the insertion end;

wherein the obstruction is formed by a crimp around the circumference of the tube, and the obstruction being configured to form a porous plug with the natural consumables between the obstruction and the insertion end.

4. A cartridge for use with a portable electronic heating device for the delivery of vaporized natural consumables, the cartridge comprising:

a single tube formed by rolling paper, having openings at a mouthpiece end and an insertion end, the insertion end being sized and configured to be insertable into the heating device;

an obstruction structurally positioned in the single tube between the mouthpiece end and the insertion end;

a first cavity defined by the mouthpiece end and the obstruction;

a second cavity defined by the insertion end and the obstruction;

wherein the obstruction comprises the rolling paper folded or twisted within the tube;

wherein the second cavity is fillable with natural consumables; and

wherein the obstruction is configured to form a porous plug with the natural consumables within the second cavity.

5. A cartridge for use with a portable electronic heating device for the delivery of vaporized natural consumables, the cartridge comprising:

an obstruction structurally positioned in the single tube between the mouthpiece end and the insertion end;

a first cavity defined by the mouthpiece end and the obstruction;

a second cavity defined by the insertion end and the obstruction;

wherein the second cavity is fillable with natural consumables; and

wherein the obstruction is configured to form a porous plug with the natural consumables within the second cavity.

6. A cartridge for use with a portable electronic heating device for the delivery of vaporized natural consumables, the cartridge comprising:

a first tube having openings at a mouthpiece end and an insertion end, the insertion end being sized and configured to be insertable into the heating device;

a first cavity inside the first tube defining a longitudinal axis and a lateral axis disposed perpendicular to the longitudinal axis;

a second tube having openings at a junction end and a stopper end, the second tube being sized and configured to be insertable into the first cavity of the first tube;

a second cavity inside the second tube defining a longitudinal axis and a lateral axis disposed perpendicular to the longitudinal axis;

wherein the junction end of the second tube is proximate to the insertion end of the first tube, the second cavity is fillable with natural consumables between the junction end and the stopper end of the second tube, the second cavity extending towards the insertion end of the first tube, and wherein the stopper end of the second tube is configured to form a porous plug with the natural consumables within the second cavity.

7. The cartridge of Claims 1, 2, 3, 4, 5, or 6, wherein the porous plug allows air to pass freely through the plug.
8. The cartridge of Claims 1, 2, 3, 4, 5, or 6, wherein the porous plug retains its rigidity by being held under compressive forces.
9. The cartridge of Claims 1, 2, 3, 4, 5, or 6, wherein the first tube has a rigid wall construction made of one or more of the following materials: paper, plastic, or metal.
10. The cartridge of Claims 1, 2, 3, 4, 5, or 6, wherein the paper is bonded with adhesive.
11. The cartridge of Claims 1, 2, 3, 4, 5, or 6, wherein the paper is spiral-wound.

12. The cartridge of Claims 1, 2, 3, 4, 5, or 6, wherein the adhesive is PVAc adhesive, silicone adhesive, high temperature epoxy adhesive, PVA adhesive, cellulose adhesive, natural rubber, or starch-based adhesive.
13. The cartridge of Claims 1 or 6, wherein the insertion end is inserted by tolerance fit into the heating device.
14. The cartridge of Claims 1 or 6, wherein the second tube is inserted by interference fit into the first tube.
15. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a four-pointed star.
16. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a five-pointed star.
17. The cartridge of Claims 1 or 6, wherein the stopper end is in a circular shape.
18. The cartridge of Claims 1 or 6, wherein the stopper end is in a triangular shape.
19. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a crescent.
20. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a heart.

21. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a figure-8.
22. The cartridge of Claims 1 or 6, wherein the stopper end is in an s-shape.
23. The cartridge of Claims 1 or 6, wherein the stopper end is in a rectangular shape.
24. The cartridge of Claims 1 or 6, wherein the stopper end is in a square.
25. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a three-leafed clover.
26. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a four-leafed clover.
27. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of an oval.
28. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a cross.
29. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a pentagon.
30. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a three-sided polygon.

31. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a four-sided polygon.
32. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a five-sided polygon.
33. The cartridge of Claims 1 or 6, wherein the stopper end is in the shape of a polygon with more than five sides.
34. The cartridge of Claims 1 or 6, wherein the second tube is crimped at a point between the junction end and the stopper end, the stopper end being substantially in the shape of a circle.
35. The cartridge of Claim 1 or 6, wherein the stopper end of the second tube is sized and configured to block natural consumables from falling out of the stopper end.
36. The cartridge of Claims 1 or 6, wherein the stopper end of the second tube is sized and configured to block movement of natural consumables.
37. The cartridge of Claim 2, wherein the stopper insert may take the shape of an S, paper folded back on itself, or an accordion shape.
38. The cartridge of Claim 2, wherein the stopper insert may be a sphere with air holes, a jack, a disk, or a polyhedron.

39. The cartridge of Claim 2, wherein the stopper insert is of a shape that permits substantial airflow to pass between the insert and the single tube.
40. The cartridge of Claim 2, wherein the stopper insert is positioned in a compressed configuration wherein the single tube exerts sufficient force to substantially immobilize the stopper insert and the natural consumables.
41. The cartridge of Claim 3, wherein the obstruction is formed by deformation around the circumference of the single tube.