PTO/AIA/15 (03-13)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	R60999 1400US.C13.T1 (5803.9)
First Named Inventor	John Howard Robinson
Title	TOBACCO-CONTAINING SMOKING ARTICLE
Express Mail Label No.	FILED VIA EFS

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. [✓] **Fee Transmittal Form** (PTO/SB/17 or equivalent)
2. [ ] **Applicant asserts small entity status.** See 37 CFR 1.27
3. [ ] **Applicant certifies micro entity status.** See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent.
4. [✓] **Specification** [*Total Pages* 49] Both the claims and abstract must start on a new page. *(See MPEP § 608.01(a) for information on the preferred arrangement)*
5. [✓] **Drawing(s)** (35 U.S.C. 113) [*Total Sheets* 5]
6. **Inventor's Oath or Declaration** [*Total Pages* 5] *(including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e))*
   - a. [ ] Newly executed (original or copy)
   - b. [✓] A copy from a prior application (37 CFR 1.63(d))
7. [✓] **Application Data Sheet** ** See note below.* See 37 CFR 1.76 (PTO/AIA/14 or equivalent)
8. **CD-ROM or CD-R** in duplicate, large table, or Computer Program (*Appendix*)
   - [ ] Landscape Table on CD
9. **Nucleotide and/or Amino Acid Sequence Submission** (*if applicable, items a. – c. are required*)
   - a. [ ] Computer Readable Form (CRF)
   - b. [ ] Specification Sequence Listing on:
     - i. [ ] CD-ROM or CD-R (2 copies); or
     - ii. [ ] Paper
   - c. [ ] Statements verifying identity of above copies

ADDRESS TO:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ACCOMPANYING APPLICATION PAPERS

10. [ ] **Assignment Papers** (cover sheet & document(s))
    Name of Assignee _____
11. [ ] **37 CFR 3.73(c) Statement** (*when there is an assignee*) [ ] **Power of Attorney**
12. [ ] **English Translation Document** (*if applicable*)
13. [✓] **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    - [ ] Copies of citations attached
14. [✓] **Preliminary Amendment**
15. [ ] **Return Receipt Postcard** (*MPEP § 503*) (*Should be specifically itemized*)
16. [ ] **Certified Copy of Priority Document(s)** (*if foreign priority is claimed*)
17. [ ] **Nonpublication Request** Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
18. [✓] **Other:** Track 1 Request for Prioritized Exam
    Track 1 Fee Transmittal for Request for Prioritized Exam

***Note**: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).
(2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS

[✓] The address associated with Customer Number: 26158 **OR** [ ] Correspondence address below

Name					
Address					
City		State		Zip Code	
Country		Telephone		Email	

Signature	/ryan w. cagle/	Date	March 31, 2023
Name (Print/Type)	Ryan W. Cagle	Registration No. (Attorney/Agent)	47,468

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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ECTO WORLD-SV3 EX1002
U.S. Patent No. 11,925,202

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/17 (10-20)
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FEE TRANSMITTAL

	Complete if known	
	Application Number	Not Yet Assigned
	Filing Date	Not Yet Assigned
☐ Applicant asserts small entity status. See 37 CFR 1.27.	First Named Inventor	John Howard Robinson
☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.	Examiner Name	Not Yet Assigned
	Art Unit	Not Yet Assigned
TOTAL AMOUNT OF PAYMENT ($) 1,820	Practitioner Docket No.	R60999 1400US.C13T1 (5803.9)

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

■ Deposit Account Deposit Account Number: 09-0528 Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to (check all that apply):

■ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**

■ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ■ Credit any overpayment of fee(s)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES (U = undiscounted fee; S = small entity fee; M = micro entity fee)

	FILING FEES			SEARCH FEES			EXAMINATION FEES			
Application Type	**U ($)**	**S ($)**	**M ($)**	**U ($)**	**S ($)**	**M ($)**	**U ($)**	**S ($)**	**M ($)**	**Fees Paid ($)**
Utility	320	160*	80	700	350	175	800	400	200	1820
Design	220	110	55	160	80	40	640	320	160	
Plant	220	110	55	440	220	110	660	330	165	
Reissue	320	160	80	700	350	175	2,320	1,160	580	
Provisional	300	150	75	0	0	0		0	0	

* The $150 small entity status filing fee for a utility application is further reduced to $75 for a small entity status applicant who files the application via EFS-Web.

2. EXCESS CLAIM FEES

Fee Description	**Undiscounted Fee ($)**	**Small Entity Fee ($)**	**Micro Entity Fee ($)**
Each claim over 20 (including Reissues)	100	50	25
Each independent claim over 3 (including Reissues)	480	240	120
Multiple dependent claims	860	430	215

Total Claims		**Extra Claims**		**Fee ($)**		**Fee Paid ($)**
20	-20 or HP =	_____	x	_____	=	_____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims		**Extra Claims**		**Fee ($)**		**Fee Paid ($)**
1	-3 or HP =	_____	x	_____	=	_____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims	**Fee ($)**	**Fee Paid ($)**
	_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $420 ($210 for small entity) ($105 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		**Extra Sheets**		**Number of each additional 50 or fraction thereof**		**Fee ($)**		**Fee Paid ($)**
_____	- 100 =	_____	/ 50 =	_____ (round **up** to a whole number)	x	_____	=	_____

4. OTHER FEE(S) **Fees Paid ($)**

Non-English specification, $140 fee ($70 for small entity) ($35 for micro entity) _____

Non-electronic filing fee under 37 CFR 1.16(t) for a utility application, $400 fee ($200 small or micro entity) _____

Other (e.g., late filing surcharge): _____ _____

SUBMITTED BY

Signature	/ryan w. cagle/	Registration No. (Attorney/Agent) 47,468	Telephone 919-755-8157
Name (Print/Type)	Ryan W. Cagle		Date March 31, 2023

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Robinson *et al.*	Confirmation No.:	*Not Yet Assigned*
Appl. No.:	CON of 17/673,424	Group Art Unit:	*Not Yet Assigned*
Filed:	*Filed Concurrently Herewith*	Examiner:	*Not Yet Assigned*
For:	TOBACCO-CONTAINING SMOKING ARTICLE		

Docket No.: R60999 1400US.C13.T1 (5803.9)
Customer No.: 26158

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT
37 CFR § 1.115

Sir:

Please enter this Preliminary Amendment before calculating the claim fee and amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims beginning on page 4 of this paper.

Remarks are on page 7 of this paper.

AMENDMENTS TO THE SPECIFICATION

On page 1 of the specification, please amend the cross-reference paragraph as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Application. No. 17/673,424; filed February 16, 2022, which is a continuation of U.S. App. No. 16/271,443; filed February 8, 2019, which is a continuation of U.S. App. No. 15/879,268; filed January 24, 2018, issued on March 19, 2019, as U.S. Patent No. 10,231,488, which is a continuation of U.S. App. No. 15/286,087; filed October 5, 2016, issued on February 27, 2018, as U.S. Patent No. 9,901,123, which is a continuation of U.S. App. No. 14,527,287; filed October 29, 2014, issued on October 31, 2017, as U.S. Patent No. 9,801,416, which is a continuation of U.S. Application No. 13/297,983, filed November 16, 2011, issued on December 2, 2014, as U.S. Patent No. 8,899,238, which is a continuation of U.S. Application No. 12/763,890, filed April 20, 2010 and issued on December 20, 2011 as U.S. Patent No. 8,079,371, which is a continuation of U.S. Application No. 11/550,634, filed on October 18, 2006 and issued on June 1, 2010 as U.S. Patent No. 7,726,320, which are each incorporated by reference herein in their entirety.

As such, this paragraph should read as follows:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Application. No. 17/673,424; filed February 16, 2022, which is a continuation of U.S. App. No. 16/271,443; filed February 8, 2019, which is a continuation of U.S. App. No. 15/879,268; filed January 24, 2018, issued on March 19, 2019, as U.S. Patent No. 10,231,488, which is a continuation of U.S. App. No. 15/286,087; filed October 5, 2016, issued on February 27, 2018, as U.S. Patent No. 9,901,123, which is a continuation of U.S. App. No. 14,527,287; filed October 29, 2014, issued on October 31, 2017, as U.S. Patent No. 9,801,416, which is a continuation of U.S. Application No. 13/297,983, filed November 16,

2011, issued on December 2, 2014, as U.S. Patent No. 8,899,238, which is a continuation of U.S. Application No. 12/763,890, filed April 20, 2010 and issued on December 20, 2011 as U.S. Patent No. 8,079,371, which is a continuation of U.S. Application No. 11/550,634, filed on October 18, 2006 and issued on June 1, 2010 as U.S. Patent No. 7,726,320, which are each incorporated by reference herein in their entirety.

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions and listings of the claims in this application.

1. (Original) A tobacco-containing, electrically-powered smoking article comprising:

(a) a tubular outer housing having a mouth-end and an end distal to the mouth-end, the housing comprising an opening adapted for intake of air into the smoking article;

(b) an electrical power source within the outer housing;

(c) at least one electrical resistance heater within the outer housing, the heater being configured to allow air flow therethrough and being powered by said electrical power source;

(d) a controller adapted for regulating current flow through the heater; and

(e) a rod-shaped carrier device removably engaged with the mouth-end of the outer housing and comprising a tubular mouth-end piece and a tubular cartridge with two open ends allowing air to flow therethrough, wherein the cartridge includes a substrate that comprises a tobacco material and an aerosol-generating material, wherein the cartridge is operatively positioned within the outer housing and adjacent to the heater such that the electrical resistance heater is adapted for heating at least a portion of the tobacco and the aerosol-generating material and such that air drawn into the outer housing passes through at least a portion of the heater, through the cartridge, and through the mouth-end piece.

2. (Original) The smoking article of claim 1, wherein the aerosol-forming material comprises glycerin, propylene glycol, or a mixture thereof.

3. (Original) The smoking article of claim 1, wherein the substrate comprises an absorbent material.

4. (Original) The smoking article of claim 3, wherein the absorbent material comprises a paper material.

5. (Original) The smoking article of claim 3, wherein the absorbent material comprises a paper-type reconstituted tobacco.

6. (Original) The smoking article of claim 1, wherein the substrate comprises a paper material with a tobacco extract and the aerosol-generating material absorbed thereon.

7. (Original) The smoking article of Claim 1, wherein the substrate comprises polyethylene terephthalate fibers.

8. (Original) The smoking article of claim 7, wherein polyethylene terephthalate fibers are blended with tobacco cut filler.

9. (Original) The smoking article of claim 1, wherein the substrate further comprises a flavoring agent.

10. (Original) The smoking article of claim 1, wherein the substrate further comprises carbon particles or calcium carbonate particles therein.

11. (Original) The smoking article of claim 1, wherein the substrate further comprises a fibrous carbonaceous material.

12. (Original) The smoking article of claim 1, wherein the substrate is a laminate of metallic foil and paper.

13. (Original) The smoking article of claim 12, wherein the paper comprises reconstituted tobacco.

14. (Original) The smoking article of claim 12, wherein the paper includes a tobacco extract and the aerosol-generating material absorbed thereon.

15. (Original) The smoking article of claim 14, wherein the paper further includes a flavoring agent absorbed thereon.

16. (Original) The smoking article of claim 1, further comprising a sensor adapted for sensing draw on the smoking article.

17. (Original) The smoking article of claim 1, wherein the heater is tubular in shape and positioned around the cartridge.

18. (Original) The smoking article of claim 1, wherein the heater comprises at least one elongated portion extending downstream therefrom.

19. (Original) The smoking article of claim 1, wherein at least a portion of the cartridge is circumscribed by a wrapping material.

20. (Original) The smoking article of claim 1, wherein the cartridge is conductive and in electrical contact with an electrical circuitry within the smoking article such that electrical resistance heating can be provided by the cartridge.

21-30. (Canceled)

REMARKS

This preliminary amendment is submitted herewith to amend the Cross-Reference paragraph of the specification and to cancel original Claims 21-30. As such, original Claims 1-20 remain pending. No new matter has been added.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 09-0528.

Respectfully submitted,

/ryan w. cagle/

Ryan W. Cagle
Registration No. 47,468

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TOBACCO-CONTAINING SMOKING ARTICLE

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. App. No. 15/879,268; filed January 24, 2018, which is a continuation of U.S. App. No. 15/286,087; filed October 5, 2016, issued on February 27, 2018, as U.S. Patent No. 9,901,123, which is a continuation of U.S. App. No. 14,527,287; filed October 29, 2014, issued on October 31, 2017, as U.S. Patent No. 9,801,416, which is a continuation of U.S. Application No. 13/297,983, filed November 16, 2011, issued on December 2, 2014, as U.S. Patent No. 8,899,238, which is a continuation of U.S. Application No. 12/763,890, filed April 20, 2010 and issued on December 20, 2011 as U.S. Patent No. 8,079,371, which is a continuation of U.S. Application No. 11/550,634, filed on October 18, 2006 and issued on June 1, 2010 as U.S. Patent No. 7,726,320, which are each incorporated by reference herein in their entirety.

FIELD OF THE INVENTION

The present invention relates to tobacco products, such as tobacco-containing smoking articles.

BACKGROUND OF THE INVENTION

Popular smoking articles, such as cigarettes, have a substantially cylindrical rod shaped structure and include a charge, roll, or column of smokable material, such as shredded tobacco (e.g., in cut filler form), surrounded by a paper wrapper, thereby forming a so-called "smokable rod" or "tobacco rod." Normally, a cigarette has a cylindrical filter element aligned in an end-to-end relationship with the tobacco rod. Preferably, a filter element comprises plasticized cellulose acetate tow circumscribed by a paper material known as "plug wrap." Certain filter elements can incorporate polyhydric alcohols. See, for example, UK Pat. Spec. 755,475. Certain cigarettes incorporate a filter element having multiple segments, and one of those segments can comprise activated charcoal particles. See, for example, US Pat. Nos. 5,360,023 to Blakley et al. and 6,537,186 to Veluz. Preferably, the filter element is attached to one end of the tobacco rod using a circumscribing wrapping material known as "tipping paper." It also has become desirable to perforate the tipping material and plug wrap, in order to provide dilution of drawn mainstream

smoke with ambient air. Descriptions of cigarettes and the various components thereof are set forth in *Tobacco Production, Chemistry and Technology,* Davis et al. (Eds.) (1999). Traditionally, a cigarette of the most popular type is employed by a smoker by lighting one end thereof and burning the tobacco rod. The smoker then receives mainstream smoke produced by the burning tobacco into his/her mouth by drawing on the opposite end (e.g., the filter end) of the cigarette.

Through the years, various methods for altering the composition of mainstream tobacco smoke have been proposed. In PCT Appl. Pub. No. WO 02/37990 to Bereman, it has been suggested that metallic particles and/or carbonaceous particles can be incorporated into the smokable material of a cigarette in an attempt to reduce the amounts of certain compounds in the smoke produced by that cigarette. In US Patent Appl. Pub. No. 2005/0066986 to Nestor et al., it has been suggested that a smokable rod possessing tobacco wrapped in paper can incorporate tobacco filler combined with an aerosol-forming material, such as glycerin. US Pat. No. 6,874,508 to Shafer et al. proposes a cigarette having a paper wrapped tobacco rod having a tip portion that is treated with an additive, such as potassium bicarbonate, sodium chloride or potassium phosphate.

Various tobacco substitute materials have been proposed, and substantial listings of various types of those materials can be found in US Pat. Nos. 4,079,742 to Rainer et al. and 4,771,795 to White et al. Certain cigarette-type products that employ non-tobacco materials (e.g., dried vegetable leaves, such as lettuce leaves) as filler that is burned to produce smoke that resembles tobacco smoke have been marketed under the trade names "Cubebs," "Triumph," "Jazz," and "Bravo." See, for example, the types of materials described in US Pat. No. 4,700,727 to Torigian. Furthermore, tobacco substitute materials having the trade names "Cytrel" and "NSM" were introduced in Europe during the 1970s. Representative types of proposed synthetic tobacco substitute materials, smokable materials incorporating tobacco and other components, and cigarettes incorporating those materials, are described in British Pat. No. 1,431,045; and US Pat. Nos. 3,738,374 to Bennett; 3,844,294 to Webster; 3,878,850 to Gibson et al.; 3,931,824 to Miano et al.; 3,943,941 to Boyd et al.; 4,044,777 to Boyd et al.; 4,233,993 to Miano et al.; 4,286,604 to Ehretsmann et al.; 4,326,544 to Hardwick et al.; 4,920,990 to Lawrence et al.; 5,046,514 to Bolt; 5,074,321 to Gentry et al.; 5,092,353 to Montoya et al.; 5,778,899 to Saito et al.; 6,397,852 to McAdam; and 6,408,856 to McAdam. Furthermore,

various types of highly processed smokable materials incorporating tobacco and other ingredients are set forth in US Pat. Nos. 4,823,817 to Luke; 4,874,000 to Tamol et al.; 4,977,908 to Luke; 5,072,744 to Luke et al.; 5,829,453 to White et al.; and 6,182,670 to White et al.

Certain types of coaxial or concentric-type smoking articles have been proposed. There have been proposed cigarette-type smoking articles including tobacco smokable materials surrounding longitudinally extending cores of other materials. UK Pat. Appl. 2,070,409 proposes a smoking article having a rod of smoking material having at least one filament extending over at least a major portion of the length of the rod. US Pat. No. 3,614,956 to Thornton proposes a smoking article having an annular outer portion made of tobacco smoking material and a central cylindrical core of absorbent material. US Pat. No. 4,219,031 to Rainer et al. proposes a smoking article having a central core of carbonized fibers circumscribed by tobacco. US Pat. No. 6,823,873 to Nichols et al. proposes a cigarette including an ignition element surrounded by tobacco, which is in turn surrounded by a composite outer wrapper. One type of cigarette-type smoking article has included a rod of tobacco smokable material surrounded a longitudinally extending annulus of some other material. For example, US Pat. No. 5,105,838 to White et al. proposes a rod of smokable material, normally circumscribed by a layer of wrapping material, which is in turn circumscribed by an insulating material (e.g., glass filaments or fibers). PCT Appl. Pub. No. WO 98/16125 to Snaidr et al. proposes a smoking device constructed from a very thin cigarette designed to fit into a tubular ceramic cartridge.

Numerous references have proposed various smoking articles of a type that generate flavored vapor, visible aerosol, or a mixture of flavored vapor and visible aerosol. Some of those proposed types of smoking articles include tubular sections or longitudinally extending air passageways. See, for example, those types of smoking articles described in US Pat. Nos. 3,258,015 to Ellis et al.; 3,356,094 to Ellis et al.; 3,516,417 to Moses; 4,347,855 to Lanzellotti et al.; 4,340,072 to Bolt et al.; 4,391,285 to Burnett et al.; 4,917,121 to Riehl et al.; 4,924,886 to Litzinger; and 5,060,676 to Hearn et al. Many of those types of smoking articles have employed a combustible fuel source that is burned to provide an aerosol and/or to heat an aerosol-forming material. See, for example, the background art cited in US Pat. Nos. 4,714,082 to Banerjee et al. and 4,771,795 to White et al.; which are incorporated herein by reference. See, also, for example, those types of smoking articles described in US Pat. Nos. 4,756,318 to Clearman et al.; 4,714,082 to Banerjee et al.; 4,771,795 to White et al.; 4,793,365 to Sensabaugh et al.; 4,917,128

to Clearman et al.; 4,961,438 to Korte; 4,966,171 to Serrano et al.; 4,969,476 to Bale et al.; 4,991,606 to Serrano et al.; 5,020,548 to Farrier et al.; 5,033,483 to Clearman et al.; 5,040,551 to Schlatter et al.; 5,050,621 to Creighton et al.; 5,065,776 to Lawson; 5,076,296 to Nystrom et al.; 5,076,297 to Farrier et al.; 5,099,861 to Clearman et al.; 5,105,835 to Drewett et al.; 5,105,837 to Barnes et al.; 5,115,820 to Hauser et al.; 5,148,821 to Best et al.; 5,159,940 to Hayward et al.; 5,178,167 to Riggs et al.; 5,183,062 to Clearman et al.; 5,211,684 to Shannon et al.; 5,240,014 to Deevi et al.; 5,240,016 to Nichols et al.; 5,345,955 to Clearman et al.; 5,551,451 to Riggs et al.; 5,595,577 to Bensalem et al.; 5,819,751 to Barnes et al.; 6,089,857 to Matsuura et al.; 6,095,152 to Beven et al; 6,578,584 Beven; and 6,730,832 to Dominguez; which are incorporated herein by reference. Furthermore, certain types of cigarettes that employ carbonaceous fuel elements have been commercially marketed under the brand names "Premier" and "Eclipse" by R. J. Reynolds Tobacco Company. See, for example, those types of cigarettes described in *Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco,* R. J. Reynolds Tobacco Company Monograph (1988) and *Inhalation Toxicology,* 12:5, p. 1-58 (2000).

Certain proposed cigarette-shaped tobacco products purportedly employ tobacco in a form that is not intended to be burned. See, for example, US Pat. Nos. 4,836,225 to Sudoh; 4,972,855 to Kuriyama et al.; and 5,293,883 to Edwards; which are incorporated herein by reference. Yet other types of smoking articles, such as those types of smoking articles that generate flavored vapors by subjecting tobacco or processed tobaccos to heat produced from chemical or electrical heat sources, are described in US Pat. Nos. 4,848,374 to Chard et al.; 4,947,874 to Brooks et al.; 5,060,671 to Counts et al.; 5,146,934 to Deevi et al.; 5,224,498 to Deevi; 5,285,798 to Banerjee et al.; 5,357,984 to Farrier et al.; 5,593,792 to Farrier et al.; 5,369,723 to Counts; 5,692,525 to Counts et al.; 5,865,185 to Collins et al.; 5,878,752 to Adams et al.; 5,880,439 to Deevi et al.; 5,915,387 to Baggett et al.; 5,934,289 to Watkins et al.; 6,033,623 to Deevi et al.; 6,053,176 to Adams et al.; 6,164,287 to White; 6,289,898 to Fournier et al.; 6,615,840 to Fournier et al.; and U.S. Patent Appl. Pub. Nos. 2003/0131859 to Li et al.; 2005/0016549 to Banerjee et al.; and 2006/0185687 to Hearn et al.; each of which is incorporated herein by reference. One type of smoking article that has employed electrical energy to produce heat has been commercially marketed by Philip Morris Inc. under the brand name "Accord."

Certain attempts have been made to deliver vapors, sprays or aerosols, such as those possessing or incorporating flavors and/or nicotine. See, for example, the types of devices set forth in US Pat. Nos. 4,190,046 to Virag; 4,284,089 to Ray; 4,635,651 to Jacobs; 4,735,217 to Gerth et al.; 4,800,903 to Ray et al.; 5,388,574 to Ingebrethsen et al.; 5,799,663 to Gross et al.; 6,532,965 to Abhulimen et al.; and 6,598,607 to Adiga et al; and EP 1,618,803 to Hon; which are incorporated herein by reference. See also, US Pat. No. 7,117,867 to Cox et al. and the devices set forth on the website, www.e-cig.com, which are incorporated herein by reference.

Smoking articles that employ tobacco substitute materials and smoking articles that employ sources of heat other than burning tobacco cut filler to produce tobacco-flavored vapors or tobacco-flavored visible aerosols have not received widespread commercial success. Thus, it would be highly desirable to provide a smoking article that provides a smoker with an ability to enjoy using tobacco without the necessity of burning any significant amount of tobacco. In particular, it would be highly desirable to provide a tobacco-containing smoking article, such as an article having the general appearance of a cigarette, cigar, or pipe, that possesses the ability to provide to a smoker many of the benefits and advantages of conventional tobacco smoking without necessarily delivering considerable quantities of incomplete combustion and pyrolysis products.

SUMMARY OF THE INVENTION

The present invention relates to smoking articles for providing tobacco enjoyment, as well as manners and methods for providing tobacco enjoyment using such smoking articles. That is, the present invention relates to articles that produce aerosols incorporating components derived from, or provided by, tobacco. Preferred articles produce aerosols that are not necessarily produced as a result of burning of tobacco, but rather, produce an aerosol incorporating components derived from, or provided by, tobacco as a result of the application of heat upon tobacco or materials that are in contact with tobacco. Preferred articles produce visible aerosols that are "smoke-like" in nature, and exhibit many of the sensory characteristics associated with those types of smoking articles that burn tobacco. As a result, the present invention relates to tobacco smoking articles that produce aerosols without experiencing any necessary burning of tobacco or other component materials during periods in which the articles are used. Thus, the present invention relates to smoking articles, and in particular, to smoking

articles that incorporates tobacco in some form. Of particular interest is generally rod-shaped smoking articles (e.g., a cigarette, a cigarillo, or a cigar), or smoking articles having shapes comparable to other traditional types of smoking products (e.g., pipes).

A preferred smoking article of the present invention, when smoked, is capable of providing mainstream aerosol that may be characterized as being flavorful and satisfying. Highly preferred cigarettes provide certain of the flavors, sensations and satisfaction of popular cigarettes that burn tobacco cut filler, because those preferred cigarettes generate mainstream aerosol, at least in part, by the action of heat upon some form of tobacco.

In one embodiment, the present invention relates to a cigarette that is smoked by coupling that cigarette to an electrically powered aerosol generating device that acts as a holder for that cigarette. The cigarette possesses at least one form of tobacco, and that tobacco is wrapped in a paper wrapper. If desired, various forms of tobacco, or various forms of tobacco containing compositions, can be positioned at specific locations within the cigarette. The cigarette also incorporates aerosol-forming material, and that aerosol-forming material can be an ingredient that is employed in addition to the tobacco. The cigarette may also possess a mouth-end piece that is used by the smoker to inhale components of tobacco, components derived from tobacco, and other components, preferably in the form of a visible aerosol, generated at least in part by the action of heat upon components of that cigarette. A representative device possesses a source of electrical power (e.g., a battery), a controller mechanism including a sensor that is capable of selectively powering certain components of the device (e.g., electrical resistance heating elements) at least during periods of draw, and at least one heating device (e.g., an electrical resistance heating unit) for forming a thermally generated aerosol that incorporates components of tobacco. During use, the cigarette is positioned within the outer housing of the smoking article, and after use, the used cigarette is removed from the smoking article. When desired, another cigarette is positioned within the device for further use.

In another embodiment, the present invention relates to a smoking article that is smoked by incorporating that tobacco within an electrically-powered, aerosol-generating device. At least one form of tobacco can be positioned at one or more specific locations within the cigarette. Aerosol-forming material is employed in addition to the tobacco. A mouth-end piece is used by the smoker to inhale components of tobacco that are generated by the action of heat upon components of that smoking article. A representative smoking article possesses a source of

electrical power (e.g., a battery), a controller mechanism including a sensor that is capable of selectively powering certain components of the device (e.g., electrical resistance heating elements) at least during periods of draw, and at least one heating device (e.g., an electrical resistance heating unit) for forming a thermally generated aerosol that incorporates components of tobacco. During use, a cartridge containing some form of tobacco is positioned within the smoking article, and after use, the used cartridge is removed from the outer housing of the device. When desired, another cartridge is positioned within the device for further use.

In one preferred embodiment, a tobacco-containing, electrically-powered smoking article is provided, the smoking article comprising:

(a) an outer housing having a mouth-end and an end distal to the mouth-end, wherein the mouth-end comprises an opening adapted for egress of an aerosol generated within the smoking article and the distal end comprises an opening adapted for intake of air into the smoking article;

(b) an electrical power source within the outer housing and operatively positioned downstream of the opening in the distal end of the outer housing such that air entering the smoking article passes the electrical power source;

(c) a first electrical resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned for heating air drawn through the opening in the distal end of the outer housing;

(d) a tobacco material positioned within the outer housing;

(e) an aerosol-forming material positioned within the outer housing in fluid communication with said tobacco material such that air can be drawn through both the tobacco material and the aerosol-forming material;

(f) a second electrical resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned for heating the aerosol-forming material and tobacco material; and

(g) a puff-actuated controller adapted for regulating current flow through at least one of said first and second electrical resistance heating elements during draw, the controller comprising a sensor adapted for sensing draw by the user on the smoking article.

The aerosol-forming material and tobacco can be positioned within a cartridge within the outer housing, the cartridge having an opening facing the second electrical resistance heating element such that aerosol generated within the cartridge initially flows in the direction of the

second electrical resistance heating element. The cartridge containing the tobacco material and the aerosol-forming material can be positioned between the second resistance heating element and the mouth-end of the outer housing, and the aerosol generated in the cartridge would initially flow in the direction of the second electrical resistance heating element and then flow towards the mouth-end of the outer housing.

In one further embodiment, the tobacco material is in the form of a tobacco rod circumscribed by a wrapping material and positioned between the second resistance heating element and the mouth-end of the outer housing. A cartridge comprising an aerosol-generating material circumscribed by a wrapping material can be positioned between the tobacco rod and the second resistance heating element. Preferably, a filter element is attached to the end of the tobacco rod closest to the mouth-end of the outer housing.

The smoking article can further include, in certain embodiments, a third resistance heating element within the outer housing, powered by the electrical power source, and operatively positioned to heat the tobacco rod. The third heating element can be, for example, a tubular heating element circumscribing all or a portion of the tobacco rod. When a third heating element is present, current through this heating element can also be selectively controlled and regulated by the puff-actuated controller.

In yet another preferred embodiment, a tobacco-containing, electrically-powered smoking article is provided which comprises:

(a) an outer housing having a mouth-end and an end distal to the mouth-end, wherein the mouth-end comprises an opening adapted for egress of an aerosol generated within the smoking article and the distal end comprises an opening adapted for intake of air into the smoking article;

(b) an electrical power source within the outer housing and operatively positioned downstream of the opening in the distal end of the outer housing such that air entering the smoking article passes the electrical power source;

(c) a first electrical resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned for heating air drawn through the opening in the distal end of the outer housing;

(d) a cigarette rod (which is preferably removable so that the rod can be replaced within the smoking article) within the outer housing and comprising a tobacco rod circumscribed by a

wrapping paper and an adjacent filter element, the cigarette rod being positioned downstream of the second resistance heating element;

(e) an aerosol-forming material positioned within the outer housing in fluid communication with said cigarette rod such that air can be drawn through both the cigarette rod and the aerosol-forming material;

(f) a second electrical resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned for heating the aerosol-forming material and the tobacco rod; and

(g) a puff-actuated controller adapted for regulating current flow through at least one of said first and second electrical resistance heating elements during draw, the controller comprising a sensor adapted for sensing draw by the user on the smoking article.

The aerosol-generating material may be in intimate contact with the tobacco in the tobacco rod, or the smoking article may further include a cartridge comprising the aerosol-generating material circumscribed by a wrapping material, the cartridge positioned between the tobacco rod and the second resistance heating element. In this embodiment also, the device may further include a third resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned to heat the tobacco rod.

In a still further embodiment, the invention provides a tobacco-containing, electrically-powered smoking article comprising:

(a) an outer housing having a mouth-end and an end distal to the mouth-end, wherein the mouth-end comprises an opening adapted for egress of an aerosol generated within the smoking article and the distal end comprises an opening adapted for intake of air into the smoking article;

(b) a mouthpiece through which air can be drawn from the mouth-end of the outer housing, the mouthpiece being removably attached to the outer housing;

(c) an electrical power source within the outer housing and operatively positioned downstream of the opening in the distal end of the outer housing such that air entering the smoking article passes the electrical power source;

(d) a first electrical resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned for heating air drawn through the opening in the distal end of the outer housing;

(e) a removable carrier device within the outer housing comprising a tobacco material and an aerosol-forming material in fluid communication with the tobacco material such that air can be drawn through both the tobacco material and the aerosol-forming material;

(f) a second electrical resistance heating element within the outer housing, powered by said electrical power source, and operatively positioned for heating the aerosol-forming material and the tobacco material; and

(g) a puff-actuated controller adapted for regulating current flow through at least one of said first and second electrical resistance heating elements during draw, the controller comprising a sensor adapted for sensing draw by the user on the smoking article.

An exemplary removable carrier device is a cigarette rod as described above, the cigarette comprising a tobacco rod circumscribed by a wrapping paper and an adjacent filter element, the cigarette rod being positioned between the second resistance heating element and the removable mouthpiece. Another example of a removable carrier device is a removable cartridge enclosing the aerosol-forming material and tobacco material as described above, the cartridge having an opening facing the second electrical resistance heating element such that aerosol generated within the cartridge initially flows in the direction of the second electrical resistance heating element. The removable carrier device can be heated by a third resistance heating element within the outer housing, the third heating element being powered by the electrical power source.

In any of the above embodiments, at least a portion of the tobacco in the tobacco rod can be in the form of tobacco cut filler, and the cut filler can be in intimate contact with the aerosol-forming material. In certain embodiments, at least a portion of the tobacco in the tobacco rod is in the form of an extract. In any embodiment, at least a portion of the tobacco in the tobacco rod and the aerosol-forming material can be in the form of an intimate mixture, or the two components can be separately-located within the smoking article, such as in separate, adjacent regions in the cigarette rod or in a cartridge. Exemplary aerosol-forming materials include glycerin, propylene glycol, and mixtures thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to assist the understanding of embodiments of the invention, reference will now be made to the appended drawings, which are not necessarily drawn to scale. The drawings are exemplary only, and should not be construed as limiting the invention.

FIG. 1 through FIG. 3 depict longitudinal cross-sectional views of various embodiments of an electrically powered, tobacco-containing smoking article; and

FIG. 4 and FIG. 5 each are representative schematic diagrams of electronic circuits for smoking articles.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present inventions now will be described more fully hereinafter with reference to the accompanying drawings. The invention may be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will satisfy applicable legal requirements. Like numbers refer to like elements throughout. As used in this specification and the claims, the singular forms "a," "an," and "the" include plural referents unless the context clearly dictates otherwise.

A smoking article of the present invention incorporates tobacco. The type of tobacco can vary. One type of tobacco can be employed, or combinations or blends of various types of tobacco can be employed. Furthermore, different types of tobaccos, or different blends of tobaccos, can be employed at different locations within the smoking article.

The tobacco that is employed can include, or can be derived from, tobaccos such as flue-cured tobacco, burley tobacco, Oriental tobacco, Maryland tobacco, dark tobacco, dark-fired tobacco and *Rustica* tobacco, as well as other rare or specialty tobaccos, or blends thereof. See, also, for example, the types of tobaccos set forth in U.S. Pat. Nos. 6,730,832 to Dominguez et al.; and 7,025,066 to Lawson et al.; and US Pat. Appl. Serial No. 60/818,198, filed June 30, 2006, to Stebbins et al.; each of which is incorporated herein by reference. Descriptions of various types of tobaccos, growing practices, harvesting practices and curing practices are set for in *Tobacco Production, Chemistry and Technology,* Davis et al. (Eds.) (1999). Most preferably, the tobacco that is employed has been appropriately cured and aged. Especially preferred techniques and conditions for curing flue-cured tobacco are set forth in Nestor et al., Beitrage Tabakforsch. Int., 20 (2003) 467-475 and U.S. Pat. No. 6,895,974 to Peele, which are incorporated herein by reference. Representative techniques and conditions for air curing tobacco are set forth in Roton et al., Beitrage Tabakforsch. Int., 21 (2005) 305-320 and Staaf et al., Beitrage Tabakforsch. Int., 21 (2005) 321-330, which are incorporated herein by reference.

The tobacco that is incorporated within the smoking article can be employed in various forms; and combinations of various forms of tobacco can be employed, or different forms of tobacco can be employed at different locations within the smoking article. For example, the tobacco can be employed in the form of cut or shredded pieces of lamina or stem; in a processed form (e.g., reconstituted tobacco sheet, such as pieces of reconstituted tobacco sheet shredded into a cut filer form; films incorporating tobacco components; extruded tobacco parts or pieces; expanded tobacco lamina, such as cut filler that has been volume expanded; pieces of processed tobacco stems comparable to cut filler in size and general appearance; granulated tobacco; foamed tobacco materials; compressed or pelletized tobacco; or the like); as pieces of finely divided tobacco (e.g., tobacco dust, tobacco powder, agglomerated tobacco powders, or the like); or in the form of a tobacco extract. See, for example, US Pat. App. Ser. Nos. 11/194,215 filed August 1, 2005, to Cantrell et al. and 11/377,630 filed March 16, 2006 to Crooks et al.; which are incorporated herein by reference.

The smoking article can employ tobacco in the form of lamina and/or stem. As such, the tobacco can be used in forms, and in manners, that are virtually identical in many regards to those traditionally used for the manufacture of tobacco products, such as cigarettes. Traditionally, cut or shredded pieces of tobacco lamina and stem have been employed as so-called "cut filler" for cigarette manufacture. Pieces of water extracted stems also can be employed. As such, the tobacco in such a form introduces mass and bulk within the smoking article. Manners and methods for curing, de-stemming, aging, moistening, cutting, reordering and handling tobacco that is employed as cut filler will be apparent to those skilled in the art of tobacco product manufacture.

Processed tobaccos that can be incorporated within the smoking article can vary. Exemplary manners and methods for providing reconstituted tobacco sheet, including casting and paper-making techniques, are set forth in US Pat. Nos. 4,674,519 to Keritsis et al.; 4,941,484 to Clapp et al.; 4,987,906 to Young et al.; 4,972,854 to Kiernan et al.; 5,099,864 to Young et al.; 5,143,097 to Sohn et al.; 5,159,942 to Brinkley et al.; 5,322,076 to Brinkley et al.; 5,339,838 to Young et al.; 5,377,698 to Litzinger et al.; 5,501,237 to Young; and 6,216,707 to Kumar; each of which is incorporated herein by reference. Exemplary manners and methods for providing extruded forms of processed tobaccos are set forth in US Pat. Nos. 4,821,749 to Toft et al.; 4,880,018 to Graves, Jr. et al.; 5,072,744 to Luke et al.; 4,874,000 to Tamol et al.; 5,551,450 to

Hemsley; 5,649,552 to Cho et al.; 5,829,453 to White; 6,125,855 to Nevett et al.; and 6,182,670 to White; each of which is incorporated herein by reference. Extruded tobacco materials can have the forms of cylinders, strands, discs, or the like. Exemplary expanded tobaccos (e.g., puffed tobaccos) can be provided using the types of techniques set forth in US Pat. Nos. Re 32,013 to de la Burde et al.; 3,771,533 to Armstrong et al.; 4,577,646 to Ziehn; 4,962,773 to White; 5,095,922 to Johnson et al.; 5,143,096 to Steinberg; 5,172,707 to Zambelli; 5,249,588 to Brown et al.; 5,687,748 to Conrad; and 5,908,032 to Poindexter; and US Pat. Pub. 2004/0182404 to Poindexter et al.; each of which is incorporated herein by reference. One particularly preferred type of expanded tobacco is dry ice expanded tobacco (DIET). Exemplary forms of processed tobacco stems include cut-rolled stems, cut-rolled-expanded stems, cut-puffed stems and shredded-steam expanded stems. Exemplary manners and methods for providing processed tobacco stems are set forth in US Pat. Nos. 4,195,646 to Kite; 5,873,372 to Honeycutt et al.; each of which is incorporated herein by reference. Manners and methods for employing tobacco dust are set forth in US Pat. Nos. 4,341,228 to Keritsis et al.; 4,611,608 to Vos et al.; 4,706,692 to Gellatly; and 5,724,998 to Gellatly et al.; each of which is incorporated herein by reference. Yet other types of processed tobaccos are of the type set forth in US Pat. Pub. No. 2006/0162733 to McGrath et al.

The tobacco can be used in a blended form. Typically, the blends of various types and forms of tobaccos are provided in a blended cut filler form. For example, certain popular tobacco blends for cigarette manufacture, commonly referred to as "American blends," comprise mixtures of cut or shredded pieces of flue-cured tobacco, burley tobacco and Oriental tobacco; and such blends, in many cases, also contain pieces of processed tobaccos, such as processed tobacco stems, volume expanded tobaccos and/or reconstituted tobaccos. The precise amount of each type or form of tobacco within a tobacco blend used for the manufacture of a particular smoking article can vary, and is a manner of design choice, depending upon factors such as the sensory characteristics (e.g., flavor and aroma) that are desired. See, for example, the types of tobacco blends described in *Tobacco Encyclopedia,* Voges (Ed.) p. 44-45 (1984), Browne, *The Design of Cigarettes,* 3rd Ed., p.43 (1990) and *Tobacco Production, Chemistry and Technology,* Davis et al. (Eds.) p. 346 (1999). See, also, the representative types of tobacco blends set forth in US Pat. Nos. 4,836,224 to Lawson et al.; 4,924,888 to Perfetti et al.; 5,056,537 to Brown et al.; and 5,220,930 to Gentry; U.S. Patent Appl. Pub. Nos. 2004/0255965 to Perfetti et al.; and

2005/0066986 to Nestor et al.; PCT Appl. Pub. No. WO 02/37990 to Bereman; and Bombick et al., *Fund. Appl. Toxicol.,* 39, p. 11-17 (1997); each of which is incorporated herein by reference.

Certain processed tobaccos can incorporate ingredients other than tobacco. However, it is preferred that processed tobaccos be composed predominantly of tobacco of some form, based on the dry weights of those processed tobaccos. That is, the majority of the dry weight of those processed tobaccos, and the majority of the weight of a mixture incorporating those processed tobaccos (including a blend of materials, or materials having additives applied thereto or otherwise incorporated therein), are provided by tobacco of some form. For example, those materials can be processed tobaccos that incorporate minor amounts of non-tobacco filler materials (e.g., calcium carbonate particles, spongy or absorbent materials, carbonaceous materials including carbon particles and graphite fibers, grains or wood pulp) and/or binding agents (e.g., guar gum, sodium alginate or ammonium alginate); and/or a blend of those materials can incorporate tobacco substitutes or extenders. Exemplary types of tobacco substitutes or extenders are set forth in US Pat. Appl. Serial No. 11/489,334, filed July 19, 2006, to Fagg et al., which is incorporated herein by reference. The foregoing materials, and blends incorporating those materials, frequently include greater than about 70 percent tobacco, often are greater than about 80 percent tobacco, and generally are greater than about 90 percent tobacco, on a dry weight basis, based on the combined weights of the tobacco, non-tobacco filler material, and non-tobacco substitute or extender. However, those processed tobaccos also can be made of virtually all tobacco, and not incorporate any non-tobacco fillers, substitutes or extenders.

The tobacco can be treated with tobacco additives of the type that are traditionally used for the manufacture of tobacco products. Those additives can include the types of materials used to enhance the flavor and aroma of tobaccos used for the production of cigars, cigarettes, pipes, and the like. For example, those additives can include various cigarette casing and/or top dressing components. See, for example, US Pat. Nos. 3,419,015 to Wochnowski; 4,054,145 to Berndt et al.; 4,887,619 to Burcham, Jr. et al.; 5,022,416 to Watson; 5,103,842 to Strang et al.; and 5,711,320 to Martin. Preferred casing materials include water, sugars and syrups (e.g., sucrose, glucose and high fructose corn syrup), humectants (e.g. glycerin or propylene glycol), and flavoring agents (e.g., cocoa and licorice). Those added components also include top dressing materials (e.g., flavoring materials, such as menthol). See, for example, US Pat. No. 4,449,541 to Mays et al. Additives also can be added to the tobacco using the types of

equipment described in US Pat. No. 4,995,405 to Lettau, or that are available as Menthol Application System MAS from Kohl Maschinenbau GmbH. The selection of particular casing and top dressing components is dependent upon factors such as the sensory characteristics that are desired, and the selection and use of those components will be readily apparent to those skilled in the art of cigarette design and manufacture. See, Gutcho, *Tobacco Flavoring Substances and Methods,* Noyes Data Corp. (1972) and Leffingwell et al., *Tobacco Flavoring for Smoking Products* (1972). The tobacco also may be treated, for example, with ammonia or ammonium hydroxide or otherwise treated to incorporate ammonia (e.g., by addition of ammonia salts such as, for example, diammonium phosphate). Preferably, the amount of ammonia optionally incorporated into the smokable tobacco is less than about 5 percent, and generally about 1 to about 3 percent, based on the dry weight of the tobacco.

Tobacco can be incorporated with the smoking article in a form other than cut filler form. For example, tobacco leaf and/or reconstituted tobacco sheet can be used as a wrapper for a tobacco-containing component having the form of a cigar or an inner wrapper of a double wrapped cigarette rod. Alternatively, processed tobaccos, such as certain types of reconstituted tobaccos, can be employed as longitudinally extending strands. See, for example, the type of configuration set forth in US Pat. No. 5,025,814 to Raker, which is incorporated herein by reference. In addition, certain types of reconstituted tobacco sheets can be formed, rolled or gathered into a desired configuration. In addition, molded, compressed or extruded segments or pieces of tobacco-containing materials that are formed into desired shapes (e.g., strands, tubes, cylinders, pellets, or the like) can be incorporated within the aerosol delivery article. See, for example, US Pat. Nos. 4,836,225 to Sudoh; 4,893,639 to White; 4,972,855 to Kuriyama et al.; and 5,293,883 to Edwards; each of which is incorporated herein by reference. If desired, finely milled tobacco or tobacco dust can be incorporated within other types of processed tobaccos, such as extrudate formulations, reconstituted tobacco sheets, or the like. Furthermore, finely milled tobacco or tobacco dust can be contained on substrates, such as membranes or screens. If desired, at least a portion of the tobacco can be heat treated prior to use within the smoking article (e.g., have the form of high temperature dried, toasted, pre-pyrolyzed, condensed volatiles collected after tobacco is heated, condensed tobacco smoke components, or the like).

At least a portion of the tobacco incorporated with the smoking article can be provided in the form of a tobacco extract. As used herein, the term "tobacco extract" means components

separated from, removed from, or derived from, tobacco using tobacco extraction processing conditions and techniques. Typically, tobacco extracts are obtained using solvents, such as solvents having an aqueous nature (e.g., water) or organic solvents (e.g., alcohols, such as ethanol or alkanes, such as hexane). As such, extracted tobacco components are removed from tobacco and separated from the unextracted tobacco components; and for extracted tobacco components that are present within a solvent, (i) the solvent can be removed from the extracted tobacco components, or (ii) the mixture of extracted tobacco components and solvent can be used as such. For example, tobacco can be subjected to extraction conditions using water as a solvent; the resulting aqueous extract of tobacco then is separated from the water insoluble pulp; and then (i) the mixture of aqueous extract of tobacco within water can be used as such, or (ii) substantial amounts of the water can be removed from extracted tobacco components (e.g., using spray drying or freeze drying techniques) in order to provide a tobacco extract in powder form. Preferred tobacco extracts incorporate numerous components that are separated from, removed from, or derived from, tobacco; and are not obtained using tobacco extraction processes conditions that are highly selective to a single component (e.g., preferred extracts are not high nicotine content extracts, or extracts that can be characterized as relatively pure nicotine compositions). As such, exemplary preferred tobacco extracts possess less than 45 percent nicotine, often less than 35 percent nicotine, and frequently less than 25 percent nicotine, on the basis of the total extract weight with solvent removed (e.g., on a dry weight basis when the solvent is water). In addition, highly preferred tobacco extracts are highly aromatic and flavorful, and hence introduce desirable sensory characteristics to the aerosol produced by the smoking articles incorporating those extracts. Exemplary types of tobacco extracts, tobacco essences, solvents, tobacco extraction processing conditions and techniques, and tobacco extract collection and isolation procedures, are set forth in Australia Pat. No. 276,250 to Schachner; US Pat. Nos. 2,805,669 to Meriro; 3,316,919 to Green et al.; 3,398,754 to Tughan; 3,424,171 to Rooker; 3,476,118 to Luttich; 4,150,677 to Osborne; 4,131,117 to Kite; 4,506,682 to Muller; 4,986,286 to Roberts et al.; 5,005,593 to Fagg; 5,065,775 to Fagg; 5,060,669 to White et al.; 5,074,319 to White et al.; 5,099,862 to White et al.; 5,121,757 to White et al.; 5,131,415 to Munoz et al.; 5,230,354 to Smith et al.; 5,235,992 to Sensabaugh; 5,243,999 to Smith; 5,301,694 to Raymond; 5,318,050 to Gonzalez-Parra et al.; 5,435,325 to Clapp et al.; and 5,445,169 to Brinkley et al.; each of which is incorporated herein by reference.

Tobacco extracts typically are carried by a substrate, or are otherwise contained within a carrier or material. The substrate for the tobacco extract can be provided by generally solid substances, such as alumina beads, pieces of carbonaceous materials, paper or paper-type materials (e.g., shredded or gathered pieces of porous paper, papers incorporating tobacco materials such as tobacco stems or stalks, papers incorporating pieces of absorbent carbon particles, or the like), pieces of tobacco lamina and/or stem, pieces of processed tobacco, synthetic fibers, or the like. Alternatively, the tobacco extract can be mixed with generally liquid or fluid substances, such as solvents, aerosol-forming materials, flavor carrying agents, and the like. Mixtures of tobacco extracts and generally liquid or fluid substances, in turn, can be carried by generally solid substrate materials or can be contained within suitable containers, vials, cartridges, or the like.

Various manners and methods for incorporating tobacco into smoking articles, and particularly smoking articles that are designed so as to not purposefully burn virtually all of the tobacco within those smoking articles, are set forth in US Pat. No. 4,947,874 to Brooks et al.; U.S. Patent Application Pub. No. 2005/0016549 to Banerjee et al.; and US Pat. App. Ser. Nos. 11/194,215 filed August 1, 2005, to Cantrell et al. and 11/377,630 filed March 16, 2006 to Crooks et al.; which are incorporated herein by reference. In addition, tobacco has been incorporated with cigarettes that have been marketed commercially under the brand names "Premier" and "Eclipse" by R. J. Reynolds Tobacco Company. See, for example, those types of cigarettes described in *Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco,* R. J. Reynolds Tobacco Company Monograph (1988) and *Inhalation Toxicology,* 12:5, p. 1-58 (2000). Tobacco also has been incorporated within a smoking article that has been marketed commercially by Philip Morris Inc. under the brand name "Accord."

The smoking article of the present invention further includes an aerosol-generating material, which can be in intimate contact with the tobacco material (e.g., in the form of an intimate mixture), or can be carried by a non-tobacco substrate and segregated from the tobacco in the smoking article (e.g., positioned in an adjacent region of the device). The aerosol-generating material is positioned in fluid communication with the tobacco material such that air can be drawing through both the tobacco and the aerosol-generating material, thereby generating an aerosol that includes volatilized portions of the aerosol-generating material and volatilized components derived from the tobacco. The aerosol-forming material can vary, and mixtures of

various aerosol-forming materials can be used. Representative types of aerosol-forming materials are set forth in US Pat. Nos. 4,793,365 to Sensabaugh, Jr. et al.; and 5,101,839 to Jakob et al.; PCT Appl. Pub. No. WO 98/57556 to Biggs et al.; EPO 1,618,803 to Hon; and *Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco,* R. J. Reynolds Tobacco Company Monograph (1988); which are incorporated herein by reference.

A preferred aerosol-forming material produces a visible aerosol upon the application of sufficient heat thereto, or otherwise through the action of aerosol forming conditions using components of the smoking article. A highly preferred aerosol-forming material produces an aerosol that can be considered to be "smoke-like." A preferred aerosol-forming material is chemically simple, relative to the chemical nature of the smoke produced by burning tobacco. A preferred aerosol-forming material is a polyol; and exemplary preferred aerosol-forming materials include glycerin, propylene glycol, and mixtures thereof. If desired, aerosol-forming materials can be combined with other liquid materials, such as water. For example, aerosol-forming material formulations can incorporate mixtures of glycerin and water, or mixtures of propylene glycol and water. Exemplary aerosol-forming materials also include those types of materials incorporated within devices available through Atlanta Imports Inc., Acworth, Georgia, USA., as an electronic cigar having the brand name E-CIG, which can be employed using associated Smoking Cartridges Type C1a, C2a, C3a, C4a, C1b, C2b, C3b and C4b; and as Ruyan Atomizing Electronic Pipe and Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd., Beijing, China.

The aerosol-forming material can be maintained within the smoking article in a variety of ways. For example, the aerosol-forming material can be contained within a container in liquid form, or soaked within absorbent fibrous materials or sponge-like materials. Exemplary absorbent materials can be composed of synthetic polymeric materials, such as fibers of polyethylene terephthalate. Alternatively, the aerosol-forming material can be incorporated within, or carried by, a material that acts as a substrate. For example, the substrate can be, at least in part, a material that incorporates tobacco. Exemplary substrate materials, and exemplary formulations incorporating aerosol-forming materials, are set forth in US Pat. Nos. 4,793,365 to Sensabaugh et al.; 4,893,639 to White; 5,099,861 to Clearman et al.; 5,101,839 to Jakob et al.; 5,105,836 to Gentry et al.; 5,159,942 to Brinkley et al.; 5,203,355 to Clearman et al.; 5,271,419 to Arzonico et al.; 5,327,917 to Lekwauwa et al.; 5,396,911 to Casey, III et al.; 5,533,530 to

Young et al.; 5,588,446 to Clearman; 5,598,868 to Jakob et al.; and 5,715,844 to Young et al.; and U.S. Patent Application Pub. No. 2005/0066986 to Nestor et al.; which are incorporated herein by reference. See, also, *Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco,* R. J. Reynolds Tobacco Company Monograph (1988). Exemplary substrate materials have been incorporated within the types of cigarettes commercially marketed under the trade names "Premier" and "Eclipse" by R. J. Reynolds Tobacco Company.

The substrate material can incorporate tobacco of some form, normally is composed predominantly of tobacco, and can be provided by virtually all tobacco material. The form of the substrate material can vary; but most preferably that material is employed in an essentially traditional cigarette, cigar or pipe filler form (e.g., as cut filler). The substrate material can be otherwise formed into desired configurations. The substrate material can be used in the form of a gathered web or sheet, using the types of techniques generally set forth in US Pat. No. 4,807,809 to Pryor et al. The substrate material can be used into the form of a web or sheet that is shredded into a plurality of longitudinally extending strands, using the types of techniques generally set forth in US Pat. No. 5,025,814 to Raker. The substrate material can have the form of a loosely rolled sheet, such that a spiral type of air passageway extends longitudinally through the aerosol-generation segment. Representative types of tobacco containing substrate materials can be manufactured from mixtures of tobacco types; or from one predominant type of tobacco (e.g., a cast sheet-type or paper-type reconstituted tobacco composed primarily of burley tobacco, or a cast sheet-type or paper-type reconstituted tobacco composed primarily of Oriental tobacco).

The substrate material also can be treated with tobacco additives of the type that are traditionally used for the manufacture of cigarettes, such as casing and/or top dressing components. The substrate material optionally can be ammoniated (e.g., by treatment with anhydrous ammonia, aqueous ammonium hydroxide, or ammonium salts such as diammonium phosphate). Alternatively those materials can be absent, or virtually absent, of any type of added ammonia (e.g., whether by treatment with anhydrous ammonia, aqueous ammonium hydroxide, or ammonium salts such as diammonium phosphate). Those materials also can be treated with other additives, such as potassium carbonate or sodium bicarbonate. Other materials, such as catalytic agents, nanoparticle compositions, and the like, also can be incorporated within any of

the smokable materials of the smokable rod. See, for example, the types of components set forth in US Pat. Publication 2004/0173229 to Crooks et al. Preferably, the material is not treated with more that about 10 percent of any of those types of additive agents other than aerosol-forming materials, based on the dry weight of tobacco material within that substrate material.

The manner by which the aerosol-forming material is contacted with the substrate material (e.g., the tobacco) can vary. The aerosol-forming material can be applied to a formed tobacco material, or can be incorporated into processed tobaccos during manufacture of those tobaccos. The aerosol-forming material can be dissolved or dispersed in an aqueous liquid, or other suitable solvent or liquid carrier, and sprayed onto that substrate material. See, for example, U.S. Patent Appl. Pub. No. 2005/0066986 to Nestor et al. The amount of aerosol-forming material employed relative to the dry weight of substrate material can vary. Materials including exceedingly high levels of aerosol-forming material can be difficult to process into cigarette rods using conventional types of automated cigarette manufacturing equipment.

Cast sheet types of processed tobaccos preferably can incorporate relatively high levels aerosol-forming material. Reconstituted tobaccos manufactured using paper-making types of processes preferably can incorporate moderate levels of aerosol-forming material. Tobacco lamina strip and tobacco cut fuller can incorporate lower amounts of aerosol-forming material. For processed materials, such as cast sheet materials and paper-type reconstituted tobaccos, tobacco pulp materials that are extracted with aqueous liquids can be used as components thereof. The removal of some fraction or essentially all of the water soluble components of tobacco can assist in providing a processed material that is capable of acting as an effective substrate for higher levels of aerosol-forming material. In addition, dusting processed tobaccos with dry tobacco powders can assist in providing processed materials having relatively high levels of glycerin while not demonstrating overly tacky or sticky characteristics. Alternatively, relatively high levels of aerosol-forming materials can be applied to, or incorporated within, tobacco substrate materials; and those resulting materials can be considered to be somewhat moist, wet, tacky, sticky or gooey in nature.

Cast sheet processes tobaccos, and particularly cast sheet tobaccos incorporating certain amounts of tobacco pulp that have been extracted with water, often can comprise up to about 65 percent, often up to about 60 percent, and frequently up to about 55 percent, aerosol-forming material, based on the dry weight of the tobacco and aerosol-forming material in the processed

material so produced. Paper-type reconstituted tobaccos, and particularly those forms of tobacco incorporating certain amounts of tobacco pulp materials that have been extracted with water, and not reapplying some or all of the water soluble extract components back to that pulp, often can comprise up to about 55 percent, often up to about 50 percent, and frequently up to about 45 percent, aerosol-forming material, based on the dry weight of the tobacco and aerosol-forming material in the material so produced. A tobacco material produced by spraying tobacco strip or cut filler with aerosol-forming material often does not comprise more than about 20 percent, and frequently does not comprise more than about 15 percent, aerosol-forming material, based on the dry weight of the tobacco and aerosol-forming material of the material so produced. Materials having relatively high loading levels of aerosol-forming material can be dried (e.g., by being subjected to a flow of hot air) to a moisture content of about 4 percent to about 5 percent, by weight; the dried material then can be processed to form the components of the designed configuration; and then those components can be re-equilibrated to a moisture content of about 12 to about 13 weight percent. Alternatively, those materials can be used in a somewhat moist or wet form.

Other types of materials incorporating relatively high levels of aerosol-forming material can be incorporated in the smoking article. Formed, encapsulated or microencapsulated materials can be employed. Such types of materials preferably include primarily of aerosol-forming material, and those materials most preferably incorporate some amount and form of tobacco. An example of such a type of material is a film produced by casting and drying an aqueous solution of about 65 to about 70 weight parts glycerin, and about 25 to about 30 weight parts binder (e.g., citrus pectin, ammonium alginate, sodium alginate or guar gum), and about 5 weight parts flavoring agent (e.g., vanillin, coffee, tea, cocoa and/or fruit flavor concentrates); and then surface-coating that film with about 2 to about 10 weight parts of a finely divided powder that is provided by milling tobacco lamina.

The amount of aerosol-forming material that is used within the smoking article is such that the cigarette exhibits acceptable sensory and organoleptic properties, and desirable performance characteristics. For example, it is highly preferred that sufficient aerosol-forming material, such as glycerin and/or propylene glycol, be employed in order to provide for the generation of a visible mainstream aerosol that in many regards resembles the appearance of tobacco smoke. Typically, the amount of aerosol-generating material incorporated into the

smoking article is in the range of less than about 1.5 g, often less than about 1 g, and sometimes less than about 0.5 g. The amount of aerosol-forming material is dependent upon factors such as the number of puffs desired per tobacco-containing cartridge or cigarette incorporated within the smoking article. The amount of aerosol-forming material also can be dependent upon factors such as the position or location of that material relative to the heat-producing components of the smoking article, the ability of that material to wick or transfer to heating regions within the smoking article, the desired concentration of that material in the aerosol generated by the smoking article, and the like.

It is desirable for the aerosol-generating composition not to introduce significant degrees of unacceptable off-taste, filmy mouth-feel, or an overall sensory experience that is significantly different from that of a traditional type of cigarette that generates mainstream smoke by burning tobacco cut filler. The selection of the particular aerosol-generating material and substrate material, the amounts of those components used, and the types of tobacco material used, can be altered in order to control the overall chemical composition of the mainstream aerosol produced by the cigarette.

Other types of flavoring agents, or materials that alter the sensory or organoleptic character or nature of the mainstream aerosol of the smoking article, can be employed. Such flavoring agents can be provided from sources other than tobacco, can be natural or artificial in nature, and can be employed as concentrates or flavor packages. Of particular interest are flavoring agents that are applied to, or incorporated within, those regions of the smoking article where aerosol is generated. Exemplary flavoring agents include vanillin, ethyl vanillin, cream, tea, coffee, fruit (e.g., apple, cherry, strawberry, peach and citrus flavors, including lime and lemon), maple, menthol, mint, peppermint, spearmint, wintergreen, nutmeg, clove, lavender, cardamom, ginger, honey, anise, sage, cinnamon, sandalwood, jasmine, cascarilla, cocoa, licorice; and flavorings and flavor packages of the type and character traditionally used for the flavoring of cigarette, cigar and pipe tobaccos. Syrups, such as high fructose corn syrup, also can be employed. Flavoring agents also can include acidic or basic characteristics (e.g., organic acids, such as levulinic acid). Preferably, such flavoring agents constitute less than about 10 percent, and often less than about 5 percent of the total weight of tobacco, on a dry weight basis. The flavoring agents can be added to the tobacco material or to the aerosol-generating material or both.

The amount of tobacco incorporated within each smoking article can vary. For certain embodiments, the amount of tobacco cut filler incorporated within each smoking article is at least about 20 mg, generally at least about 50 mg, often at least about 75 mg, and frequently at least 100 mg, on a dry weight basis. For certain embodiments, the amount of tobacco cut filler incorporated within each smoking article does not exceed about 400 mg, generally does not exceed about 350 mg, often does not exceed about 300 mg, and frequently does not exceed about 250 mg, on a dry weight basis. For segments or sections incorporating tobacco cut filler or processed tobacco in cut filler form, the packing density of the material within those segments or sections typically is less than about 400 mg/cm^3, and generally is less than about 350 mg/cm^3; while the packing density of the material within those segments or sections can exceed about 100 mg/cm^3, and often can exceed about 150 mg/cm^3. Preferably, each such segment or section is composed entirely of tobacco and/or processed tobacco. Alternatively, each such segment or section can be composed of tobacco and/or processed tobacco mixed or blended with a non-tobacco substrate material. In either case, the tobacco material, and optional non-tobacco substrate material, can act as a substrate for aerosol-forming materials, flavoring agents, and the like.

The moisture content of the tobacco that is used within the smoking article can vary. Typically, the moisture content of the tobacco exceeds about 12 weight percent, and often can exceed about 15 weight percent. In certain circumstances, moist tobacco can be employed; and that tobacco can have a moisture content in excess of about 20 weight percent, often in excess of about 30 weight percent, and even in excess of about 40 weight percent.

Certain embodiments of the smoking article of the invention incorporate a cigarette rod as a necessary component. That is, the smoking article of the invention can incorporate a tobacco rod wrapped in paper or other wrapping material. The wrapping material used as a wrapper for containing the tobacco, and hence used for cigarette manufacture, can vary. Exemplary types of wrapping materials are set forth in US Pat. Nos. 4,938,238 to Barnes et al. and 5,105,837 to Barnes et al. Wrapping materials, such as those set forth in U.S. Patent Appl. Pub. No. 2005/0005947 to Hampl, Jr. et al. and PCT Appl. Pub. No. WO 2005/039326 to Rasouli et al., can be employed as inner wrapping materials of a so-called "double wrap" configuration. An exemplary type of heat conductive wrapping material is set forth in US Pat. No. 5,551,451 to Riggs et al.; and other suitable wrapping materials are set forth in US Pat. Nos.

5,065,776 to Lawson et al. and 6,367,481 to Nichols et al.; each of which is incorporated herein by reference. Exemplary wrapping materials, such as laminates of paper and metal foil, and papers used as the outer circumscribing wrapper of the heat generation segment, have been incorporated within the types of cigarettes commercially marketed under the trade names "Premier" and "Eclipse" by R. J. Reynolds Tobacco Company. Other representative wrapping materials, and processed wrapping materials, suitable for use for cigarette manufacture are set forth in US Pat. Nos. 5,220,930 to Gentry; 6,976,493 to Chapman et al.; and 7,047,982 to Seymour et al.; and US Pat. Application Ser. No. 11/377,630 filed March 16, 2006 to Crooks et al.; each of which is incorporated herein by reference. Paper materials can be composed of materials, or treated with films, in order to provide resilience, particularly when the paper material is used to contain tobacco materials that are substrates for relatively high amounts of liquid materials (e.g., aerosol-forming materials). For example, such papers can be treated with coatings of nitrocellulose or ethylcellulose. Alternatively, paper materials can be highly absorbent in nature, and can act as substrates for liquid materials (e.g., aerosol-forming materials, liquid flavoring agents, or mixture of aerosol-forming materials and tobacco extracts).

The tobacco can be wrapped in at least one layer of tobacco lamina and/or reconstituted tobacco sheet. As such, the tobacco that is incorporated within the smoking article is configured in a type of form characteristic of a cigar. Outer wrappers for cigar type tobacco segments or sections can act as substrates for liquid materials (e.g., aerosol-forming materials, liquid flavoring agents, tobacco extracts, or mixtures thereof).

The tobacco can be wrapped in moisture permeable and air permeable pouches, sachets, packets, or the like. For example, finely divided tobacco pieces can be sealed in mesh-type pouches. Suitable pouches are of the type traditionally used for containment of certain types of smokeless tobacco products. See, for example, the types of pouches and types of contents of those pouches that are set forth in US Pat. Appl. Serial Nos. 11/233,399, filed September 22, 2005, to Holton et al.; 11/351,919, filed February 10, 2006, to Holton et al.; and 11/461,633, filed August 1, 2006, to Mua et al.; which are incorporated herein by reference. Such pouches and the contents thereof can act as substrates for significant amounts of aerosol-forming materials, flavoring agents and tobacco extracts. For example, relatively high levels of liquid materials can be applied to, or incorporated within, those substrates; and those resulting materials can be considered to be moist, wet, tacky, sticky or gooey in nature. If desired, those substrates

can be soaked in liquid mixtures of aerosol-forming material and other components that provide tobacco flavor characteristics to the aerosol produced by the smoking article. The number of such types of pouches that are incorporated within a representative smoking article can vary, and typically can range, for example, from 1 to about 5.

The smoking article typically possesses a mouth-end piece. Representative types of filter elements, such as those employed for cigarettes, including segmented cigarette filter elements, are set forth in US Pat. Appl. Serial No. 11/461,941, filed August 2, 2006, to Nelson et al., which is incorporated herein by reference. Mouth-end pieces also can be fashioned into desired shapes using plastic materials such as nylon, polypropylene, polystyrene, poly(butadiene/styrene/acrylonitrile), or the like.

Representative smoking articles can possesses certain components comparable to, and operate in a manner generally comparable to, that type of device set forth in EPO 1,618,803 to Hon. Representative smoking articles, and exemplary components thereof, also can be provided using components of those nicotine aerosol delivery systems available through Atlanta Imports Inc., Acworth, Georgia, USA., as an electronic cigar having the brand name E-CIG, which can be employed using associated Smoking Cartridges Type C1a, C2a, C3a, C4a, C1b, C2b, C3b and C4b. Exemplary components for representative smoking articles also have been available components of those devices available as Ruyan Atomizing Electronic Pipe and Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd., Beijing, China.

Aspects and embodiments of the present invention relating to various smoking articles now are described with reference to the illustrations contained in FIGS. 1-3. Referring to FIG. 1, an embodiment of a representative smoking article 10 is shown. The smoking article 10 has an overall shape that is generally rod-like or tubular in nature, generally akin to a cigarette-type or cigar-type smoking article. The smoking article 10 includes a distal end 13 and a mouth-end 15.

The smoking article 10 possesses an outer container or housing 20. Although the dimensions and shape of the outer container 20 can vary, a representative outer housing is generally tubular in shape (e.g., having an overall length of about 11 cm and an outer diameter of about 1.5 cm). The outer housing 20 can be provided using a variety of materials. For example, the outer housing 20 can be provided from metal (e.g., aluminum or stainless steel), heat-resistant plastic (e.g., polycarbonate), treated paperboard material, or the like. If desired, the

outer housing can possess an aesthetically pleasing cover (not shown). A representative outer housing can be of the type possessed by the Ruyan Atomizing Electronic Cigarette available from Ruyan SBT Technology and Development Co., Ltd. As shown, the outer housing 20 includes a mouth-end 15 and an end 13 distal to the mouth-end, wherein the mouth-end comprises an opening adapted for egress of an aerosol generated within the smoking article and the distal end comprises an opening adapted for intake of air into the smoking article 10.

The distal end 13 of the outer container 20 of the smoking article 10 can possess an end cover or cap 35. The end cover or cap 35 can be maintained in place by friction fit, a threaded screw mechanism that cooperates with a complementing threaded mechanism 28 that is secured to the distal region of the outer container, or the like. The end cover 35 can act to assist in maintaining various components of the smoking article contained within the outer container. The end cover preferably possesses at least one air passageway 32 to allow drawn air to enter the inner region of the outer container 20. A representative end cover or cap 35 can be of the type possessed by the Ruyan Atomizing Electronic Cigarette available from Ruyan SBT Technology and Development Co., Ltd.

Within the outer container 20 is located an electric power source 36, such as at least one battery. The battery typically is maintained in place by a generally tubular battery holder 40 that is positioned and secured in place within the outer container 20. Typically, at least one longitudinally extending air passageway 45 allows for drawn air to pass by the battery towards the mouth-end 15 of the smoking article 10. As shown, the passageway 45 can be created by incorporation of one or more grooves in the battery holder 40 or, alternatively, by incorporating ribs (not shown) extending into the interior of the battery holder in order to prevent the power source 36 from entering the passageway. The battery holder 40 also can act as a container for relevant electrical wiring (not shown) that passes from the battery to downstream regions of the smoking article 10. Representative types of power sources, and representative arrangements thereof within the outer container, are of the type incorporated within a device available as Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd. If desired, higher power electrical power sources can be employed.

The smoking article 10 incorporates various electrically powered control components 50. For a representative embodiment, the control components 50 are positioned within the tubular battery holder 40 in a region downstream from the battery 36. Typically, the electrically-

powered control components 50 include microchips that provide control of time of operation, control of current, control of electrical resistance heat generation, and the like. Exemplary circuits that can be included in the controller 50 are set forth in FIGS. 4-5. The electrically-powered components 50 are powered by the battery 36. Representative types of electronic control components are of the type can be of the type possessed by the Ruyan Atomizing Electronic Cigarette available from Ruyan SBT Technology and Development Co., Ltd. See, also, the types of electronic systems set forth in US Pat. No. 4,947,874 to Brooks et al.

The representative smoking article 10 incorporates suitably adapted sensing mechanism 60 in order to provide for operation of the electrically powered components during desired periods of time. Representative types of sensing mechanism components are incorporated within a device available as Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd. See, also, those types of airflow sensing mechanisms proposed in EPO 1,618,803 to Hon; and US Pat. Nos. 4,735,217 to Gerth et al.; 4,947,874 to Brooks et al.; and 5,388,574 to Ingebrethsen. The sensing mechanism 60 also can be powered by the battery 36. Typically, the sensing mechanism components 60 are positioned within the outer container 20 in a location downstream from the electrically powered control components 50. The sensor 60, in concert with certain control circuitry within the controller 50, is preferably part of a puff-actuated controller adapted for regulating current flow through one or more of the resistance heating elements discussed below. The sensor 60 is preferably adapted for sensing draw (i.e., intake of air from the smoking article) by the user of the smoking article. Representative types of draw sensors are set forth in US Pat. No. 4,947,874 to Brooks et al., wherein pressure sensitive switches are discussed, such as pressure sensitive differential switches available from Micro Pneumatic Logic, Inc. of Ft. Lauderdale, Florida, pressure sensitive transducers, airflow-deflected vanes with motion sensors, and the like. See also, US Pat. No. 7,117,867 to Cox et al. The sensor 60 is configured to allow airflow through or around the sensor. In the embodiment shown, the sensor 60 is configured in an annular shape with a passageway through the center thereof. Other configurations are also possible, such as configurations with multiple passageways through or around the sensor 60.

The representative smoking article 10 also incorporates at least one electrical resistance heating element 70, 72. An optional first resistance heating element 70 can be located upstream from the sensing mechanism 60, and as such, can act to heat drawn air passing through the

smoking article from the distal end 13 of the outer housing 20. A second resistance heating element 72 can be located downstream from the sensing mechanism 60. The resistance heating elements 70, 72 also can be powered by the battery 36, and control of the operation of those heating elements can be controlled by the electrically powered control components 50. The heating elements 70, 72 are configured to allow airflow therethrough. The heating element 70 upstream of the sensor 60 is configured in the same manner as the sensor (i.e., in an annular shape); however, other configurations are possible as noted above.

Typically, the second resistance element 72 can be formed from relatively high surface area absorbent or wicking-type materials, such as graphite yarn, high surface area metallic cloth or screen, or the like. Resistance elements of such type are useful for supporting or holding sufficient aerosol-forming material for aerosol generation, as well as for wicking additional aerosol-forming material for aerosol generation during subsequent puffs. Alternatively, the second resistance element 72 can be employed in close proximity to an absorbent wicking material such that aerosol-forming material can be wicked or otherwise transferred so as to contact the second resistance element or contact an area in close proximity to the second resistance element (e.g., a region that is exposed to a the heat produced by the second resistance element). Representative types of resistance heating elements are incorporated within a device available as Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd. If desired, each of the heating elements 70, 72 can be arranged to have current pass therethrough (and hence provide heat) in response to a signal provided by a puff-actuated controller that regulates current through one or more of the heating elements in response to signals from the sensor 60. For example, each heating element 70, 72 can be turned "on" and "off" in response to a signal provided in response to the sensing mechanism 60 and related control circuitry. Alternatively, current flow through the first heating element 70 can be controlled during periods of normal use of the smoking article 10, and current flow through the second heating element 72 can be controlled only during periods of draw (i.e., the second heating element will be energized when the sensor 60 detects draw by the user).

The representative smoking article 10 of FIG. 1 incorporates a cartridge 85. The cartridge can be manufactured from a variety of materials, such as metal (e.g., aluminum or stainless steel), paper (e.g., paperboard or paper coated with a hydrophobic film or coating), plastic (e.g., polyester, polypropylene, nylon, polycarbonate, or the like). The cartridge 85

contains tobacco 89 in some form. The cartridge 85 also most preferably contains aerosol-forming material. The tobacco 89 and the aerosol-forming material can be in the form of an intimate mixture or provided in separate regions of the cartridge 85. Representative types of cartridges are of the type incorporated within a device available as Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd. can be modified by adding tobacco extract thereto, or by removing at least a portion of the substrate and nicotine-containing material incorporated therein and replacing that removed portion with a tobacco composition. For example, for the embodiment shown in FIG. 1, the cartridge 85 can contain an upstream segment 95 composed of tobacco filler or processed tobacco filler material 89 incorporating aerosol-forming material, and a downstream segment 98 composed of a substrate 101, such as fibers of polyethylene terephthalate carrying flavors and/or aerosol-forming material. The representative smoking article 10 is assembled such that a certain amount of aerosol-forming material and tobacco components can be wicked or otherwise transferred to heating element 72 or the region in close proximity to the heating element. Optionally, as shown, the extreme mouth end region of the cartridge 85 is sealed, and as such, tobacco components and aerosol-forming material have a tendency to travel upstream towards the resistance heater 72. Typically, at least one air passageway 115 extends longitudinally between the inner surface of the outer container 20 and the outer surface of the cartridge 85. This air passageway 115 can be created using the same techniques noted above in connection with the passageway 45 in the batter holder 40.

A representative cartridge 85 is provided by modifying the components of a cartridge employed in a device available as Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd. For example, the section or segment of the fibrous substrate and aerosol-forming material is removed from that cartridge and discarded, and that portion is replaced by a section or segment composed of tobacco cut filler saturated with a mixture of glycerin and spray dried tobacco extract. As another example, a web of reconstituted tobacco sheet that is gathered so as to possess a plurality of longitudinally extending passageways can be treated with a mixture of propylene glycol, flavoring agent and tobacco extract. As still another example, the whole section or segment of the fibrous substrate and aerosol-forming material is removed from that cartridge and discarded, and all of that material is replaced by a section or segment composed of aqueous extracted tobacco cut filler pulp saturated or nearly saturated with a mixture of glycerin, flavoring agent and spray dried tobacco extract.

As a further example, the fibrous substrate and aerosol-forming material can be positioned in the upstream end of the cartridge, and the downstream end of the cartridge can be provided by a plurality of formed tobacco pieces or pellets that act as a substrate for aerosol-forming material and flavoring agent.

The amount of aerosol-forming material, tobacco extract, flavoring agent, and the like that is carried by the substrate can vary; and the weight of those ingredients typically can be as much as at least equal to, often can be at least about twice that, and frequently can be at least about three times that, of the dry weight of the substrate. As such, the cartridge can be adapted to provide components, of types and in amounts, sufficient to provide aerosols demonstrating acceptable visual characteristics, acceptable mouthfeel and other organoleptic effects, acceptable tobacco flavor, and the like.

In a further embodiment, tobacco can be incorporated within a cartridge 85 having the ability to act as a type of liquid storage container of the smoking article. For example, powdered spray dried tobacco extract can be incorporated within the liquid storage container 85, or liquid tobacco extracts or essences can be combined within components contained within the liquid storage container (e.g., aerosol-forming materials) so as to be intimately combined with those components. In another embodiment, pieces of tobacco lamina, stems, or processed tobacco can be incorporated within the liquid storage container 85. For example, pieces of tobacco lamina cut filler, tobacco dust, or pieces of reconstituted tobacco sheet, can be incorporated within the liquid storage container. As such, the tobacco can be mixed with, or be part of, the aerosol-forming mixture within the cartridge 85. Most preferably, essentially pure nicotine, extracts composed predominantly of nicotine, or formulations composed predominantly of nicotine, are not incorporated within the liquid storage container 85 or elsewhere within the smoking article.

In another embodiment, the tobacco can be located within the smoking article 10 in a region that is physically separate from the cartridge 85. For example, the tobacco can be positioned so as to abut the cartridge 85, or positioned in a spaced apart relationship relative to the cartridge. As such, the tobacco is not mixed with the aerosol-forming mixture within the cartridge 85. In one embodiment, a charge or roll of tobacco cut filler wrapped in paper (e.g., so as to provide a generally cylindrical charge of tobacco) can be positioned either upstream or downstream from the cartridge 85. In another embodiment, tobacco-containing reconstituted tobacco sheet (e.g., a formed cast sheet or reconstituted tobacco paper) can be used as wrapping

materials of various components (e.g., including the cartridge 85) within the smoking article 10. In another embodiment, tobacco cut filler can surround the cartridge 85 or other components located within the smoking article 10. In another embodiment, tobacco extract can be carried by a substrate or positioned within a cartridge that is located within the smoking article 10 physically separate from the aforementioned cartridge 85 that contains the aerosol-forming material.

The number of puffs during the use of a single cartridge 85 can vary, depending upon factors such as the amount of aerosol-forming material, tobacco, and other associated components that is employed, the form of those components, the positioning of those components within the smoking article 10 relative to the resistance heating elements, and the like. The amount of those components can be sufficient to provide, for example, about 10 to about 15 puffs per cartridge, when that cartridge is employed within a smoking article and smoked under FTC smoking conditions. However, amount of those components can be sufficient to provide, for example, greater than about 200 puffs per cartridge, often greater than about 400 puffs per cartridge, and frequently greater than about 600 puffs per cartridge, when that cartridge is employed within a smoking article and smoked under FTC smoking conditions. For smoking articles employing cartridges containing sufficient components to provide a relatively large number of puffs, those smoking articles can be employed in conjunction with removable caps, or other suitable sealing means, in order that the smoking article can be sealed during periods of non-use. The smoking article 10 can be configured such that the cartridge 85 can be removed from the smoking article and replaced as needed.

The smoking article 10, at its mouth-end 15, possesses a mouth-end piece 120. The mouth-end piece 120, which is typically removable, can be maintained in place by friction fit, a threaded screw mechanism that cooperates with a complementing threaded mechanism that is secured to the outer container, or the like. A representative mouth-end piece can be of the type incorporated within a device available as Ruyan Atomizing Electronic Cigarette from Ruyan SBT Technology and Development Co., Ltd. Alternatively, the mouth-end piece 120 can have the form of other types of holders that have been proposed for use with smoking articles. See, also, for example, the types of mouth-end pieces and cigarette-type filter elements set forth in US Pat. Appl. Serial No. 11/377,630 filed March 16, 2006 to Crooks et al.

During use, the mouth-end 15 of the smoking article 10 is placed in the lips of the smoker. Air is drawn through the air passageways or openings 32 in the cap 35 located at the distal end 13 of the smoking article, and into the outer container 20. Drawn air passes through air passageway 45 that extends along the length of the power source 36 and the electronic control components 50, through an air passageway area within the first heating element 70, through the air flow sensing region 60, past or through the second heating element 72, through air passageway 115 that extends along the length of the cartridge 85, and into the mouth-end piece 120. Typically, resistance heating elements provide surface region temperatures, and hence the ability to heat aerosol-forming materials and tobacco materials in surrounding regions in the vicinity of those heating elements. Typically, during relevant periods of use, those heating elements can provide surface region temperatures of at least about 200°C, and often at least about 300°C. Typically, those temperatures do not exceed about 600°C, often do not exceed about 500°C, and frequently do not exceed about 400°C. Aerosol that is formed by the action of drawn air passing heated tobacco components and aerosol-forming material in the region occupied by the second heating element 72 is drawn through the mouth-end piece 120, and into the mouth of the smoker. That is, when used, the smoking article 10 yields visible mainstream aerosol that preferably resembles the mainstream tobacco smoke of traditional cigarettes that burn tobacco cut filler. The aerosol may also contain flavors and other components provided by, or derived from, tobacco.

Referring to FIG. 2, another embodiment of a representative smoking article 10 is shown. The smoking article 10 has a rod-like shape, and includes a distal end 13 and a mouth-end 15. The smoking article 10 possesses certain components comparable to, and in certain regards operates in a manner generally comparable to, that smoking article described previously with reference to FIG. 1. However, the smoking article is adapted to incorporate a cigarette 150.

An exemplary type of cigarette 150 possesses a charge or roll of tobacco 89 (e.g., tobacco cut filler or processed tobacco material) wrapped in wrapping material 160 (e.g., paper). The length of the resulting tobacco rod can vary; with a typical tobacco rod having a length of at least about 30 mm, often at least about 40 mm, while a typical tobacco rod has a length that does not exceed about 60 mm, and often does not exceed about 50 mm. The circumference of the tobacco rod can vary; with a typical tobacco rod having a circumference of about 20 mm to about 35 mm, and often about 25 mm to about 30 mm. Depending upon factors such as the ingredients

incorporated within the cigarette 150, the number of puffs of aerosol per cigarette than are expected, the configuration of the holder into which the cigarette is inserted, the amount of heat generated by the resistance heating element, and the like, the physical dimensions of the cigarette can be smaller than those of conventional, commercially available cigarettes that burn tobacco.

Typically, the wrapping material 160 is wrapped around the tobacco 89 so as to form a generally cylindrical rod-shaped cigarette rod or tobacco rod. That is, the wrapping material 160 is formed into a generally tubular shape, and the tobacco is positioned within the hollow region within that tube. Preferably, the wrapping material 160 is formed such that each end of the tobacco rod is open to expose the tobacco contained therein, and to allow the passage of drawn air therethrough.

The wrapping material 160 can vary. The wrapping material 160 can be a paper wrapping material of the type traditionally used for cigarette manufacture. The wrapping material 160 also can be composed of a laminate of metallic foil and paper, and as such, heat generated by the second heating element can heat the metallic foil of the laminate and hence heat the tobacco contained within that laminate. See, for example, the types of wrapping materials, wrapping material laminates and wrapping material configurations set forth US Pat. Appl. Ser. No. 11/377,630 filed March 16, 2006 to Crooks et al.

For the embodiment shown, the cigarette 150 possesses a type of cartridge 85 at its distal end within the wrapping material 160 and in fluid communication with the tobacco rod. That optional cartridge 85 contains an aerosol-generating material composition 101 therein. The components of the composition 101 can include a substrate material (e.g., polyethylene terephthalate fibers) that can be mixed or blended with tobacco filler. Typically, the substrate materials act as carriers for tobacco components and other aerosol-forming materials that can be delivered to the mouth of the smoker. The cartridge 85 can have a generally tubular shape with open ends such that air may flow therethrough. Cartridges can be manufactured from a variety of materials, such as paper or plastic, or heat conductive materials (e.g., metal foil, metal mesh or screen, ceramic non-woven web, or the like). Typically, when present, the length of the cartridge 85 does not exceed about 30 mm, and often does not exceed about 20 mm. Typically, when present, the cartridge 85 has a length of at least about 5 mm, and often at least about 10 mm. Optionally, an air passageway or gap (not shown) can exist downstream from the cartridge 85, or the cartridge 85 can abut the tobacco rod as shown in FIG. 2 such that some migration of

material between the tobacco rod and the cartridge is possible. Such an air passageway, when present, typically has a length of up to about 10 mm.

In one embodiment, the cartridge 85 and/or the wrapping material 160 of the tobacco rod can be manufactured from materials that, to some degree, conduct electricity. As such, depending upon the positioning of the cigarette 150 within the smoking article 10, the cartridge 85 and/or the wrapping material 160 can be in electrical contact with the electrical circuitry associated with the electrical resistance heating element 72. As a result, it is possible that some degree of electrical resistance heating also can be provided by the cartridge 85 and/or the wrapping material 160.

In one embodiment, the cartridge 85 can be virtually devoid or free of nicotine. For example, the cartridge 85 can contain aerosol-forming materials, non-tobacco flavoring agents, and optionally, tobacco (e.g., as pieces of tobacco or as an extract) that has been de-nicotinized (e.g., using de-nicotinization processes or by using tobaccos virtually devoid of nicotine). As such, visible aerosol or flavored visible aerosol that is produced solely using components incorporated within the container 85 possesses virtually no nicotine. Rather, nicotine provided to the smoker of the smoking article within the mainstream aerosol delivered by the smoking article is provided by action upon tobacco 89 located in another region of the smoking article 10 rather than from nicotine incorporation within the cartridge 85.

In one embodiment, the cartridge 85 can contain a gathered web of paper that incorporates carbon particles (e.g., about 10 to about 60 weight parts carbon and about 40 to about 90 weight parts wood pulp or flax fiber). See, for example, the types of carbon-containing papers set forth in US Pat. No. 5,360,023 to Blakley et al., which is incorporated herein by reference. For example, a gathered sheet of carbon paper weighing about 40 mg, and having a length of about 10 mm to about 20 mm, can be saturated with a liquid mixture of glycerin, tobacco extract, and flavoring agent (e.g., with about 40 mg to about 120 mg of liquid mixture).

In a further embodiment, the cartridge 85 can contain a gathered web of paper that incorporates calcium carbonate particles (e.g., about 10 to about 40 weight parts calcium carbonate and about 60 to about 90 weight parts wood pulp or flax fiber). For example, a gathered sheet of carbon paper weighing about 40 mg, and having a length of about 10 mm to about 20 mm, can be saturated with a liquid mixture of glycerin, tobacco extract, and flavoring agent (e.g., with about 40 mg to about 100 mg of liquid mixture).

In yet another embodiment, the cartridge 85 can contain a fibrous carbonaceous material (e.g., graphite fibers). For example, a segment formed from about 40 mg to about 100 mg of those fibers, and having a length of about 10 mm to about 20 mm, can be saturated with a liquid mixture of glycerin, tobacco extract, and flavoring agent (e.g., in an amount of about 3 times of the dry weight of those fibers).

In a still further embodiment, the cartridge 85 can contain a reconstituted tobacco material (e.g., a cast sheet type material, an extruded material, or a paper-type reconstituted tobacco material) that incorporates particles or pieces of highly heat conductive materials (e.g., a matrix of aluminum wires, aluminum foil, copper wire, copper tubing, metal beads, or the like). Representative pieces or beads can have lengths, thicknesses or diameters of about 0.01 micrometers to about 1 mm. That material can act as a substrate for aerosol-forming material, tobacco extract, flavoring agents, and the like, and also can act as a conductor of heat produced by electrical resistance heating to regions within the cigarette 150.

If desired, the region of the cigarette 150 that is wrapped in the paper wrapper 160 can be composed entirely of tobacco material, processed tobacco material, or a blend of tobacco material and other substrate material, and those materials is treated in such a manner so as to act as substrates for aerosol-forming materials. For such an embodiment, the previously described cartridge 85 is not incorporated within the cigarette 150, and the components contained within the wrapping material 160 are not necessarily positioned or arranged therein in a segmented fashion.

The cigarette 150 also can possess an optional filter element 200 located at the downstream end of the tobacco rod. The filter element can be composed of filter material 215 (e.g., cellulose acetate tow, gathered polypropylene web, plasticized cellulose acetate tube, or the like) wrapped in circumscribing plug wrap 218. The filter element can be attached to the tobacco rod using a tipping material 222 that circumscribes the length of the filter element 200 and an adjacent region of the tobacco rod.

The mouth-end piece 120 of the smoking article 10 can be adapted to act as a support for the filter element 200 of the cigarette 150, and can be removably attached to the outer housing 20 of the smoking article. That is, the mouth-end piece 120 can be removed from the outer housing 20 of the smoking article 10, the filter element 200 of the cigarette 150 can be secured within the mouth-end piece (e.g., by friction fit), and the cigarette can be inserted into the downstream end

of the outer housing. In such a circumstance, the mouth-end piece 120 can have a generally tubular shape. As such, the mouth-end piece can act as a type of support for the cigarette 120 while that cigarette is positioned within the outer housing 20 for use.

During use, the mouth-end 15 of the smoking article 10 is placed in the lips of the smoker. Air is drawn through the through the air passageways or openings 32 in the cap 35 located at the distal end 13 of the smoking article, and into the outer container 20. Draw air passages through air passageway 45 that extends along the length of the power source 36 and the electronic control components 50, through an air passageway area within the first optional heating element 70, through the air flow sensing region 60, past or through the second heating element 72, through the cigarette 150 (including through cartridge 85), and into the mouth-end piece 120. Heat generated by the heating elements acting upon the tobacco and components thereof acts to volatilize components of the tobacco or otherwise cause components of tobacco to be entrained in drawn air. As such, the resulting aerosol incorporating tobacco components or tobacco-derived components is drawn into the mouth of the smoker. After use, the spent cigarette 150 is removed from the outer container 20 and disposed of, and when desired, a new cigarette is replaced within the outer container.

Referring to FIG. 3, yet another embodiment of a representative smoking article 10 is shown. The smoking article possesses a distal end 13 and a mouth-end 15. The smoking article 10 possesses certain components comparable to, and in certain regards operates in a manner generally comparable to, that smoking article described previously with reference to FIG. 1. The smoking article 10 is adapted to incorporate a type of cigarette 150. The tobacco segment 89, circumscribed with a wrapping material 160, can be provided so as to provide tobacco components or tobacco derived components by the action of heat. Components of the tobacco segment 89 can be treated (e.g., by contact with metal salts, moisture, or other suitable materials) in order that the tobacco (e.g., as cut filler, reconstituted tobacco sheet, or the like) that is subjected to heating by the action of the electrically generated heat exhibits desirable heat resistance, does not burn to an undesirable extent, experiences a controlled smolder, or the like. The tobacco segment 89 can also incorporate an aerosol-generating material. As shown, the cigarette 150 may include a filter element 200 as noted in connection with FIG. 2.

The smoking article 10 possesses a third optional resistance heating element 300 that is powered by the power source 36. The third resistance heating element is operated in essentially

the same manner as the first and second resistance heating elements 70, 72 that have been described previously with reference to FIG. 1. As such, the third resistance heating element 300 is powered by the power source 36 and controlled by the electrically powered control components 50, through suitable electrical connections, such as conductive wires, or the like (not shown). The third resistance heating element 300 can be provided by a suitable conductive material that can be suitably used as a resistance heating element, such as non-woven graphite yarn or web, ceramic material, metallic cloth or screen, metal alloy sheet, or the like. The physical size and shape of the third resistance heating element is such that the heating element can provide heat to at least a portion of the tobacco 89 of the cigarette 150. For example, the third resistance heating element 300 can have the general shape of a tube that is adapted to fit snuggly around a portion of a tobacco rod 89 inserted therein. Alternatively, the third resistance heating element 300 can have a form so that aerosol-forming material and extracted tobacco components can be wicked from a tobacco substrate or a substrate paper material that is wrapped around that tobacco 89. If desired, at least one of the resistance heating elements (e.g., the first and/or third resistance elements) can be equipped with a separate on/off timing mechanisms and/or switching mechanisms in order that the cigarette 150 can be pre-heated or heating can be otherwise controlled during certain desired periods of use of the smoking article 10. In other words, each heating element can be selectively and separately controlled in certain embodiments. If desired, each of the heating elements can be arranged to have current pass therethrough (and hence provide heat) in response to a signal provided by response to the sensing mechanism component 60. For example, each heating element can be turned "on" and "off" in response to a signal provided by response to the sensing mechanism 60. Alternatively, current flow through the first heating element 70 can be controlled during periods of normal use of the smoking article 10, and current flow through the second heating element 72 can be controlled only during periods of draw. Thus, each resistance heating element can provide differing amounts of heat, and can be operated to provide heat during differing periods.

Optionally, the size and shape of the second resistance heating element 72 can be altered. For example, as shown in FIG. 3, at least a portion of the second resistance heating element can be elongated, and at least a portion thereof can extend downstream within the outer container 20. As such, at least a portion of the second resistance heating element can extend into the tobacco

segment 89, and hence be in close contact with a significant amount of substrate and aerosol-forming material within the tobacco.

Preferably, a thermally insulated region 400 circumscribes the resistance heating element 300 of the smoking article 10 as shown, although the insulation can extend further down the smoking article and circumscribe, for example, the first and second heating elements as well. Representative types and configurations of insulation are set forth in US Pat. Appl. Ser. Nos. 11/194,215 filed August 1, 2005, to Cantrell et al. and 11/377,630 filed March 16, 2006 to Crooks et al. As such, there is provided a way to prevent the outer regions of the outer container 20 from becoming unduly hot to the touch during use of the smoking article 10. In addition, a series of substantially non-permeable walls or like structural regions 420 can assist in ensuring that drawn air has a tendency to pass through the tobacco 89 during use of the smoking article 10. The insulating material 400 also can be positioned elsewhere within the smoking article 10. For example, insulating material 400 can be used as a substrate material for tobacco extract, tobacco dust, aerosol-forming material, flavoring agent, and the like. In addition, insulating material 400 can be positioned at the locations or regions near the distal end 13 of the smoking article 10, around the power source 36, around the electronic and/or puff control components of the smoking article 10, or elsewhere.

During use, the mouth-end 15 of the smoking article 10 is placed in the lips of the smoker. Air is drawn through the air passageways or openings 32 in the cap 35 located at the distal end 13 of the smoking article, and into the outer container 20. Draw air passages through air passageway 45 that extends along the length of the power source 36 and the electronic control components 50, through an air passageway area within the first heating element 70, through the air flow sensing region 60, past or through the second heating element 72, through the cigarette 150, and into the mouth-end piece 120. Heat generated by the three heating elements 70, 72, 300 acting upon the tobacco and components thereof act to volatilize components of the tobacco or otherwise cause components of tobacco to be entrained in drawn air. Typically, resistance heating elements provide surface region temperatures, and hence the ability to heat aerosol-forming materials and tobacco materials in surrounding regions in the vicinity of those heating elements. Typically, during relevant periods of use, those heating elements can provide surface region temperatures of at least about 200°C, and often at least about 300°C. Those temperatures typically do not exceed about 600°C, often do not exceed about 500°C, and frequently do not

exceed about 400°C. As such, the resulting aerosol incorporating tobacco components or tobacco derived components is drawn into the mouth of the smoker. After use, the spent cigarette 150 is removed from the outer container 20 and disposed of, and when desired, a new cigarette is replaced within the outer container. Removal of the cigarette 150 can be accomplished by removing the mouthpiece 120, which is typically removably attached to the outer housing 20.

For all the embodiments described above, the selection of battery and resistance heating elements can vary, and can be a matter of design choice. For example, the battery voltage, amount of electrical current and resistance provided by the various resistance heating elements can be selected to provide sufficient power for initial heating (e.g., sufficient to provide virtually immediate aerosol formation and delivery of tobacco derived components upon draw), adequate heating of relevant components within the smoking article (i.e., sufficient heat to generate aerosol formation), adequate power source lifetime, and the like. Typically, the various components of the various control circuitry acts to ensure that current is controlled in order that resistance heating heats relevant components to a desired temperature or within a desired temperature range (i.e., a preferred smoking article does not overheat). Selection of the power source and resistance heating elements can be a matter of design choice, and will be readily apparent to one skilled in the art of design and manufacture of electrical resistance heating systems.

If desired, the smoking articles 10 of the present invention optionally can be air diluted. For smoking articles 10 that optionally are air diluted or ventilated, the amount or degree of air dilution or ventilation can vary. Frequently, the amount of air dilution for an air diluted cigarette is greater than about 10 percent, generally is greater than about 20 percent, often is greater than about 30 percent, and sometimes is greater than about 40 percent. Preferably, the upper level for air dilution for an air diluted cigarette is less than about 80 percent, and often is less than about 70 percent. As used herein, the term "air dilution" is the ratio (expressed as a percentage) of the volume of air drawn through the air dilution means to the total volume and air and aerosol drawn through the cigarette and exiting the mouth end portion of the cigarette. Higher air dilution levels can act to reduce the transfer efficiency of aerosol-forming material into mainstream aerosol.

Preferred smoking articles 10 of the present invention exhibit desirable resistance to draw. For example, an exemplary smoking article exhibits a pressure drop of between about 50 and about 200 mm water pressure drop at 17.5 cc/sec. air flow. Preferred smoking articles exhibit pressure drop values of between about 60 mm and about 180, more preferably between about 70 mm to about 150 mm, water pressure drop at 17.5 cc/sec. air flow. Preferably, pressure drop values of smoking articles are measured using a Filtrona Cigarette Test Station (CTS Series) available form Filtrona Instruments and Automation Ltd.

Aerosols that are produced by smoking articles of the present invention are those that comprise air-containing components such as vapors, gases, suspended particulates, and the like. Aerosol components can be generated by the action of heat upon tobacco of some form; and in certain circumstances, by thermally decomposing tobacco caused by heating tobacco, smoldering tobacco, and charring tobacco; and by vaporizing aerosol-forming agent. As such, the aerosol can contain volatilized components, combustion products (e.g., carbon dioxide and water), incomplete combustion products, and products of pyrolysis. Aerosol components may also be generated by the action of heat from burning tobacco of some form (and optionally other components that are burned to generate heat), upon substances that are located in a heat exchange relationship with tobacco material that is burned and other components that are burned. Aerosol components may also be generated by the aerosol generation system as a result of the action of heat of the heat generation system. Most preferably, components resulting from the aerosol generation system have an overall composition, and are positioned within the smoking article, such that those components have a tendency not to undergo a significant degree of thermal decomposition (e.g., as a result of combustion, smoldering or pyrolysis) during conditions of normal use.

Referring to FIG. 4, there is shown a diagram of an embodiment of an electronic circuit 500 that can be incorporated within a smoking article of the present invention. The control circuitry for the smoking articles of the invention can be assembled as discrete electronic components or functionally as an integrated microprocessor device. The representative circuit includes a power source 36, an actuation mechanism 510 (e.g., an actuation switch), and at least one resistance heating element; and for the embodiment shown, a first resistance heating element 70, a second resistance heating element 72, and a third resistance heating element 300. Such a circuit that incorporates three resistance heating elements can be incorporated within the type of

smoking article described previously with reference to FIG. 3. It is noted that the circuit 500 of FIG. 4 can be readily adapted for use in a smoking article comprising two heating elements by simply removing the circuit pathways involving heating element 300, and thus would be suitable for use in the embodiments of FIGS. 1 and 2.

The actuation mechanism 510 typically is a switching mechanism that can be engaged by activity of the smoker. That is, such a switch can be activated by pressing or other type of movement by the smoker using his/her finger, by activation by contact with the lips of the smoker, or by at least one other type of sensing mechanism located at an appropriate location on the smoking article. A representative switch can be manually operated by the smoker.

The circuit preferably incorporates a timing mechanism 520. Such a timing mechanism can be programmed to provide for a controlled period of operation. For example, after the circuit has been activated by activity resulting in the switching of the current actuation mechanism 510 to an "on" position, the timing mechanism operates for a selected period of time (e.g., 1 minute, 2 minutes, 4 minutes, or the like). In the event that the remaining portion of the circuit is reactivated within the selected period of time, the timing mechanism 520 is reset and begins operating again. In the event of the occurrence a certain period of inactivity or non-use, the timing mechanism then can act to turn the circuit "off," until reactivation of the cycle.

During operation of the circuit, current passes through the first resistance heating element 70 and the third resistance heating element 300, and as such, those resistance heating elements produce heat. Control of the temperatures generated by each resistance heating element is provided by control mechanisms 530, 540, respectively.

A puff control mechanism 550, such as a suitable air flow sensing switch, acts to complete the circuit that provides current to the second resistance heating element 72. That is, during periods of draw, the circuit that provides current through the second resistance heating element is closed, and hence that heating element produces heat. A predetermined quantity of heat can be produced by current controlled by a timer (e.g., a fixed pulse set at about 0.5 second to about 2 seconds in duration). Alternatively, a series of "on/off" types of pulses can be provided during draw periods. When draw is complete, that circuit is broken. A control mechanism 560, such as a timer, acts to provide for control of the current passing through the circuit, and hence the amount of heat generated by heating element. For example, for longer puff periods, current supplied to the heating element, and hence power for aerosol generation, can be

provided by a controlled sequential "on" and "off" signal provided by the timer. Typically, the timed period for current flow ranges from about 0.1 second to about 1 second, and about 0.2 second to about 0.6 second generally can be employed; while the "off" period for between periods of periodic current flow often can range from about 0.1 second to about 0.6 second.

Referring to FIG. 5, there is shown a diagram of another embodiment of an electronic circuit 500 that can be incorporated within a smoking article of the present invention. It is again noted that the control circuitry for the smoking articles of the invention can be assembled as discrete electronic components or as an integrated microprocessor device. The representative circuit includes a power source 36, an actuation mechanism 510, and at least one resistance heating element; and for the embodiment shown, a first resistance heating element 70, a second resistance heating element 72, and a third resistance heating element 300. Such a circuit that incorporates three resistance heating elements can be incorporated within the type of smoking article described previously with reference to FIG. 3. Again, simply removing the third heating element 300 could produce a circuit useful in other smoking article embodiments set forth herein.

The circuit preferably incorporates a timing mechanism 520. Such a timing mechanism can be programmed to provide for a controlled period of operation. For example, after the circuit has been activated by activity resulting in the switching of the current actuation mechanism 510 to an "on" position, the timing mechanism operates for a selected period of time. In the event that the remaining portion of the circuit is activated, the timing mechanism is reset and begins operating again. In the event of the occurrence a certain period of inactivity or non-use, the timing mechanism then can act to turn the circuit "off."

During operation, current passes through the first resistance heating element 70 and the third resistance heating element 300, and as such, those resistance heating elements produce heat. Control of the temperatures generated by each resistance heating element is provided by control mechanisms 530, 540, respectively.

A puff control mechanism 590 acts to complete the circuit that provides current to the second resistance heating element 72. That is, during periods of draw, the circuit that provides current through the second resistance heating element is closed, and hence that heating element produces heat. When draw is complete, that circuit is broken. In the embodiment shown, the puff control mechanism 590 is provided by a pressure sensor 570 and a threshold detector 580

(e.g., a Schmitt trigger), which can provide for control of the current passing through the second resistance heating element 72, and hence for heat generation by heating element 72 that is proportional to the period and magnitude of the draw. For example, for longer puff periods, current supplied to the heating element 72, and hence power for aerosol generation, can be provided for longer periods of time. As another example, for deeper or more rigorous puffs, a sensing of stronger draw can be used to provide for greater current flow to the appropriate resistance heating element, and hence provide for a correspondingly greater aerosol generation. Alternatively, a separate switch (not shown) can be selected by the smoker to provide control of current to at least one of the resistance heating elements; and as such, during periods of draw (e.g., whether or not the draw or puff is intense, long, short, deep, shallow, large in volume, small in volume, or the like) the conditions associated with heat generation for aerosol formation are controlled, and hence, consistent aerosol formation can be provided during each puff.

Many modifications and other embodiments of the invention will come to mind to one skilled in the art to which this invention pertains having the benefit of the teachings presented in the foregoing description; and it will be apparent to those skilled in the art that variations and modifications of the present invention can be made without departing from the scope or spirit of the invention. Therefore, it is to be understood that the invention is not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.

What is claimed is:

1. A tobacco-containing, electrically-powered smoking article comprising:

(a) a tubular outer housing having a mouth-end and an end distal to the mouth-end, the housing comprising an opening adapted for intake of air into the smoking article;

(b) an electrical power source within the outer housing;

(c) at least one electrical resistance heater within the outer housing, the heater being configured to allow air flow therethrough and being powered by said electrical power source;

(d) a controller adapted for regulating current flow through the heater; and

(e) a rod-shaped carrier device removably engaged with the mouth-end of the outer housing and comprising a tubular mouth-end piece and a tubular cartridge with two open ends allowing air to flow therethrough, wherein the cartridge includes a substrate that comprises a tobacco material and an aerosol-generating material, wherein the cartridge is operatively positioned within the outer housing and adjacent to the heater such that the electrical resistance heater is adapted for heating at least a portion of the tobacco and the aerosol-generating material and such that air drawn into the outer housing passes through at least a portion of the heater, through the cartridge, and through the mouth-end piece.

2. The smoking article of claim 1, wherein the aerosol-forming material comprises glycerin, propylene glycol, or a mixture thereof.

3. The smoking article of claim 1, wherein the substrate comprises an absorbent material.

4. The smoking article of claim 3, wherein the absorbent material comprises a paper material.

5. The smoking article of claim 3, wherein the absorbent material comprises a paper-type reconstituted tobacco.

6. The smoking article of claim 1, wherein the substrate comprises a paper material with a tobacco extract and the aerosol-generating material absorbed thereon.

7. The smoking article of Claim 1, wherein the substrate comprises polyethylene terephthalate fibers.

8. The smoking article of claim 7, wherein polyethylene terephthalate fibers are blended with tobacco cut filler.

9. The smoking article of claim 1, wherein the substrate further comprises a flavoring agent.

10. The smoking article of claim 1, wherein the substrate further comprises carbon particles or calcium carbonate particles therein.

11. The smoking article of claim 1, wherein the substrate further comprises a fibrous carbonaceous material.

12. The smoking article of claim 1, wherein the substrate is a laminate of metallic foil and paper.

13. The smoking article of claim 12, wherein the paper comprises reconstituted tobacco.

14. The smoking article of claim 12, wherein the paper includes a tobacco extract and the aerosol-generating material absorbed thereon.

15. The smoking article of claim 14, wherein the paper further includes a flavoring agent absorbed thereon.

16. The smoking article of claim 1, further comprising a sensor adapted for sensing draw on the smoking article.

17. The smoking article of claim 1, wherein the heater is tubular in shape and positioned around the cartridge.

18. The smoking article of claim 1, wherein the heater comprises at least one elongated portion extending downstream therefrom.

19. The smoking article of claim 1, wherein at least a portion of the cartridge is circumscribed by a wrapping material.

20. The smoking article of claim 1, wherein the cartridge is conductive and in electrical contact with an electrical circuitry within the smoking article such that electrical resistance heating can be provided by the cartridge.

21. The smoking article of claim 20, wherein the substrate incorporates a conductive material that conducts heat produced by electrical resistance heating.

22. The smoking article of claim 21, wherein the conductive material comprises aluminum or copper.

23. A tobacco-containing, electrically-powered smoking article comprising:

(a) a tubular outer housing having a mouth-end and an end distal to the mouth-end, the housing comprising an opening adapted for intake of air into the smoking article;

(b) an electrical power source within the outer housing;

(c) at least one electrical resistance heater within the outer housing, the heater being configured to allow air flow therethrough and being powered by said electrical power source, and wherein the heater comprises at least one elongated portion extending downstream therefrom;

(d) a puff-actuated controller adapted for regulating current flow through the heater during draw, the controller comprising a sensor adapted for sensing draw by the user on the smoking article; and

(e) a rod-shaped carrier device removably engaged with the mouth-end of the outer housing and comprising a tubular mouth-end piece and a tubular cartridge with two open ends allowing air to flow therethrough, wherein the cartridge includes a tobacco-containing absorbent material with an aerosol-generating material absorbed thereon, wherein the cartridge is operatively positioned within the outer housing and adjacent to the heater such that the heater is adapted for heating at least a portion of the tobacco and the aerosol-generating material and such that air drawn into the outer housing passes through at least a portion of the heater, through the cartridge, and through the mouth-end piece.

24. The smoking article of claim 23, wherein the aerosol-forming material comprises glycerin, propylene glycol, or a mixture thereof.

25. The smoking article of claim 23, wherein the tobacco-containing absorbent material is a paper material.

26. The smoking article of claim 25, wherein the tobacco-containing absorbent material is a paper material with a tobacco extract absorbed thereon.

27. The smoking article of claim 23, wherein the tobacco-containing absorbent material is a paper-type reconstituted tobacco.

28. The smoking article of Claim 23, wherein the tobacco-containing absorbent material comprises polyethylene terephthalate fibers.

29. The smoking article of claim 28, wherein the polyethylene terephthalate fibers are blended with tobacco cut filler.

30. The smoking article of claim 23, wherein the tobacco-containing absorbent material further comprises a flavoring agent absorbed thereon.

ABSTRACT OF THE DISCLOSURE

A smoking article may include a cigarette incorporated within an electrically powered aerosol generating device that acts as a holder for that cigarette. The smoking article possesses at least one form of tobacco. The smoking article also possesses a mouth-end piece that is used by the smoker to inhale components of tobacco that are generated by the action of heat upon components of the cigarette. A representative smoking article possesses an outer housing incorporating a source of electrical power (e.g., a battery), a sensing mechanism for powering the device at least during periods of draw, and a heating device (e.g., at least one electrical resistance heating element) for forming a thermally generated aerosol that incorporates components of tobacco. During use, the cigarette is positioned within the device, and after use, the used cigarette is removed from the device and replaced with another cigarette.

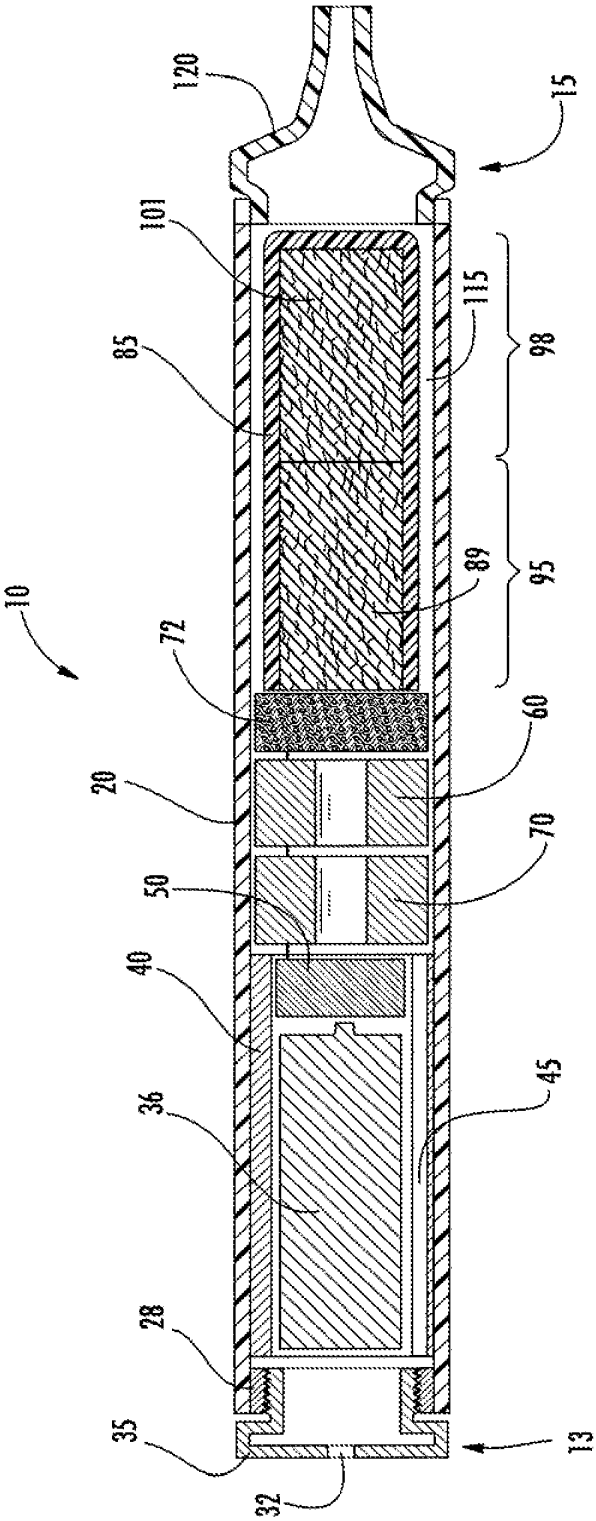

FIG. 1

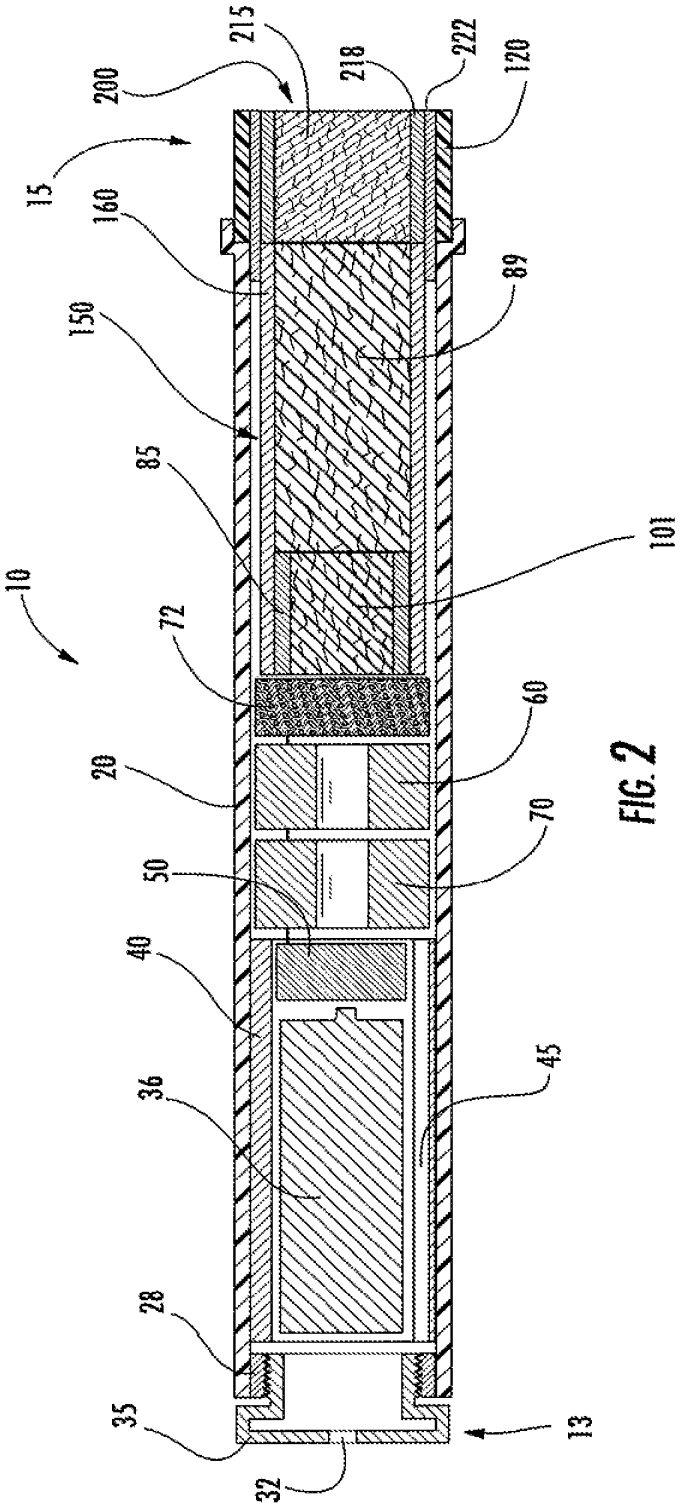
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FIG. 2

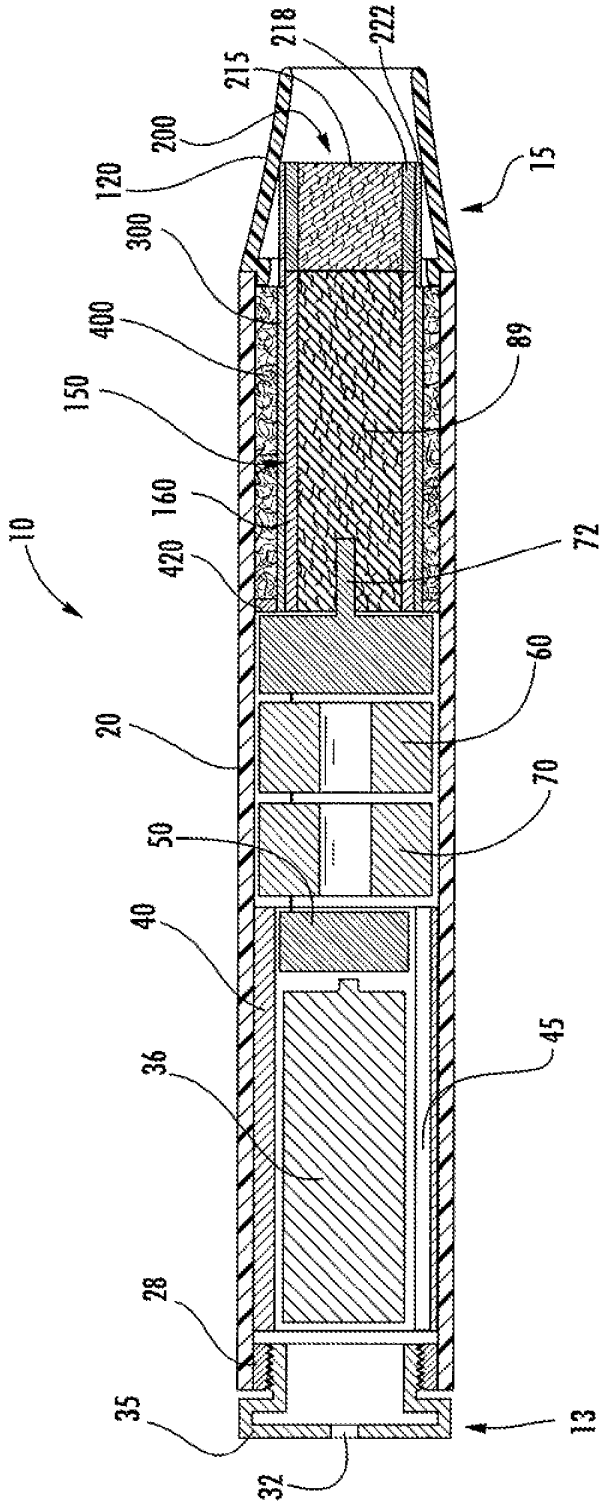
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FIG. 3

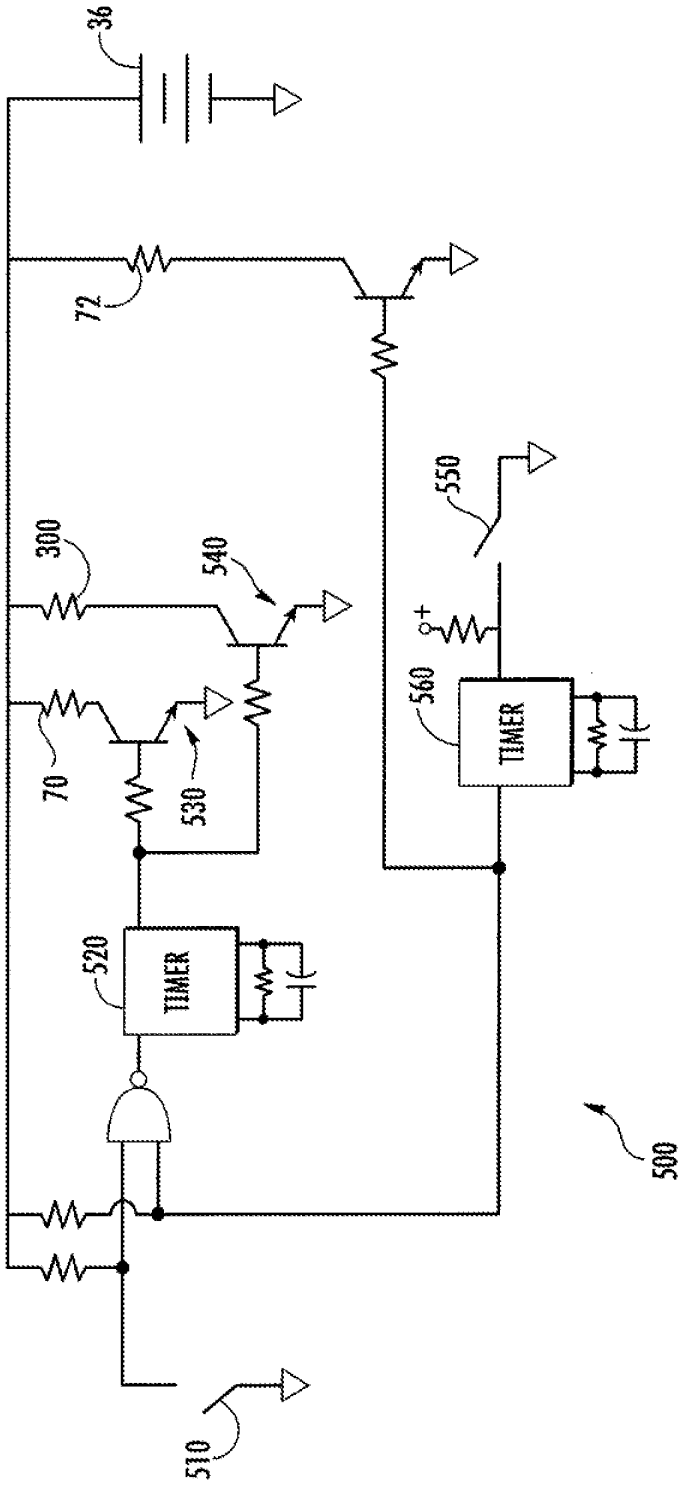

FIG. 4

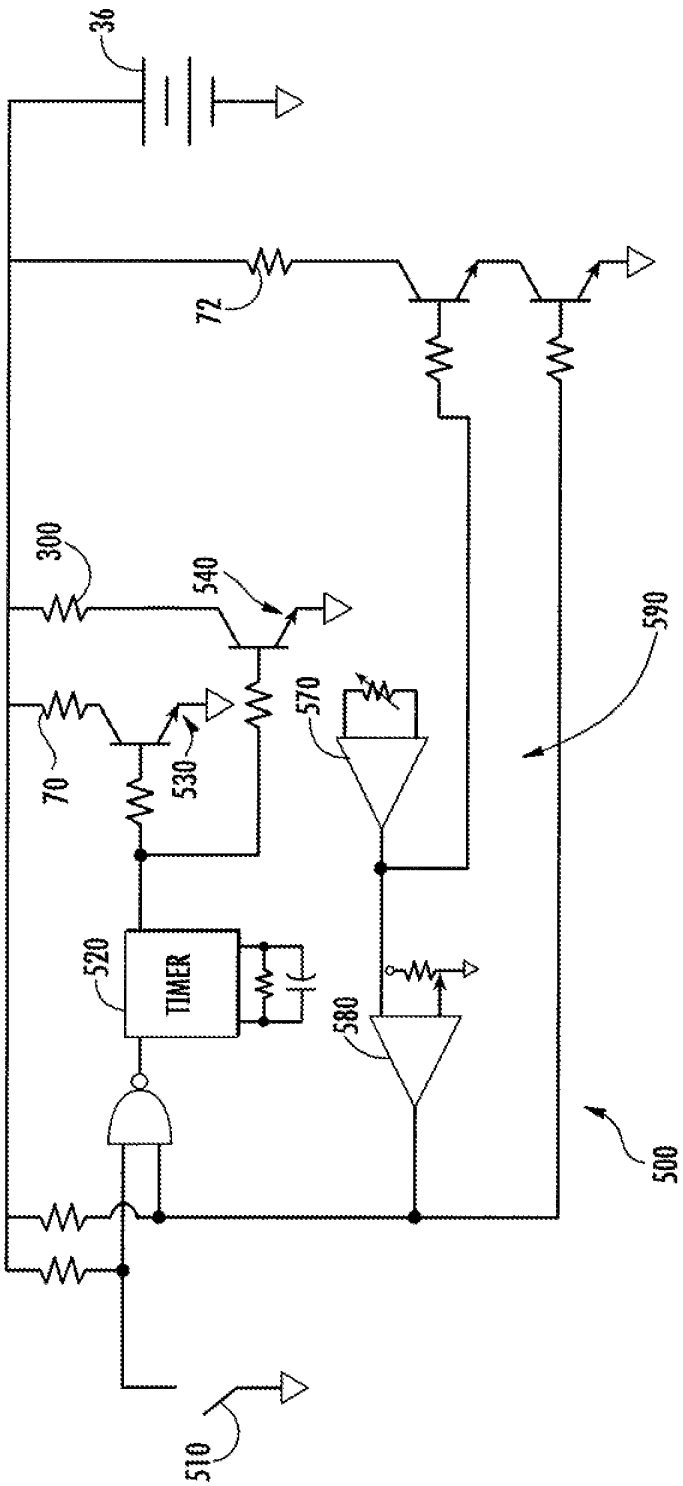

FIG. 5

COPY

Attorney Docket No. R60999 1400US.C3 (0830.9)

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

This Declaration is directed to the patent application entitled:

TOBACCO-CONTAINING SMOKING ARTICLE,

the specification of which

☐ is attached hereto

OR

☒ was filed on October 29, 2014 as United States Application No. 14/527,287 or PCT International Application Number ___ and was amended on ___ (if applicable).

Each below named inventor hereby declares that: (1) the above-identified application was made or authorized to be made by me; (2) I believe that I am the original inventor or an original joint inventor of a claimed invention in the application; and (3) I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Full name of (first/sole) inventor: John Howard Robinson

Inventor's Signature: John Howard Robinson Date: 10/14/16

Full name of second inventor: David William Griffith, Jr.

Inventor's Signature: David William Griffith Date: 10-10-2016

Full name of third inventor: Billy Tyrone Conner

Inventor's Signature: Billy Tyrone Conner Date: 10/07/2016

Full name of fourth inventor: Evon Llewellyn Crooks
Inventor's
Signature: Evon Llewellyn Crooks Date: 10/12/2016

Full name of fifth inventor: Dempsey Bailey Brewer, Jr.
Inventor's
Signature: _____ Date: 10/21/2016

Attorney's Docket No. **R60999 1400US.C13.T1 (5803.9)** PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Robinson *et al.*	Confirmation No.:	*Not Yet Assigned*
Appl. No.:	CON of 17/673,424	Group Art Unit:	*Not Yet Assigned*
Filed:	*Filed concurrently herewith*	Examiner:	*Not Yet Assigned*
For:	TOBACCO-CONTAINING SMOKING ARTICLE		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
CITATION UNDER 37 C.F.R. § 1.97

Sir:

Attached is a list of documents on form PTO-1449.

It is requested that the Examiner consider these documents and officially make them of record in accordance with the provisions of 37 C.F.R. § 1.97 and Section 609 of the MPEP. By identifying the listed documents, Applicant in no way makes any admission as to the prior art status of the listed documents, but is instead identifying the listed documents for the sake of full disclosure.

Any foreign patents or non-patent literature documents items are attached, except those that were supplied in, or cited by the Office during prosecution of, parent Application No. 17/673,424, filed February 16, 2022. Since the benefit of this application was claimed under 35 U.S.C. 120, no copies need to be furnished in accordance with 37 C.F.R. 1.98(d); however, copies will be furnished on request.

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Respectfully submitted,

/ryan w. cagle/

Ryan W. Cagle
Registration No. 47,468

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON MARCH 31, 2023.

WBD (US) 61125234v1

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	1	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear
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	3	US-780,087	01-17-1905	Burt	
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Examiner Signature		Date Considered	

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				Examiner Name	*Not yet assigned*
Sheet	2	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

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				Examiner Name	*Not yet assigned*
Sheet	3	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

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				Examiner Name	*Not yet assigned*
Sheet	4	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

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				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	5	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

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				First Named Inventor	John Howard Robinson
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U. S. PATENT DOCUMENTS					
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	134	US-4,941,483	07-17-1990	Ridings *et al.*	
	135	US-4,941,484	07-17-1990	Clapp *et al.*	
	136	US-4,941,486	07-17-1990	Dube	
	137	US-4,945,448	07-31-1990	Bremenour	
	138	US-4,945,929	08-07-1990	Egilmex	
	139	US-4,945,931	08-07-1990	Gori	
	140	US-4,947,874	08-14-1990	Brooks *et al.*	
	141	US-4,947,875	08-14-1990	Brooks *et al.*	
	142	US-4,961,438	10-09-1990	Korte	
	143	US-4,966,171	10-30-1990	Serrano *et al.*	
	144	US-4,968,263	11-06-1990	Silbernagel	
	145	US-4,969,476	11-13-1990	Bale *et al.*	
	146	US-4,972,854	11-27-1990	Kiernan *et al.*	
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	148	US-4,977,908	12-18-1990	Luke	
	149	US-4,981,522	01-01-1991	Nichols *et al.*	
	150	US-4,986,286	01-22-1991	Roberts *et al.*	
	151	US-4,987,906	01-29-1991	Young *et al.*	
	152	US-4,990,939	02-05-1991	Sekiya	
	153	US-4,991,606	02-12-1991	Serrano *et al.*	
	154	US-5,005,593	04-09-1991	Fagg	
	155	US-5,019,122	05-28-1991	Clearman *et al.*	
	156	US-5,020,548	06-04-1991	Farrier *et al.*	
	157	US-5,022,416	06-11-1991	Watson	
	158	US-5,025,814	06-25-1991	Raker	
	159	US-5,027,837	07-02-1991	Clearman *et al.*	

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U. S. PATENT DOCUMENTS					
	160	US-5,033,483	07-23-1991	Clearman *et al.*	
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	162	US-5,042,510	08-27-1991	Curtiss *et al.*	
	163	US-5,046,514	09-10-1991	Bolt	
	164	US-5,050,621	09-24-1991	Creighton *et al.*	
	165	US-5,056,537	10-15-1991	Brown *et al.*	
	166	US-5,060,667	10-29-1991	Strubel	
	167	US-5,060,669	10-29-1991	White *et al.*	
	168	US-5,060,671	10-29-1991	Counts *et al.*	
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	170	US-5,065,775	11-19-1991	Fagg	
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	172	US-5,072,744	12-17-1991	Luke *et al.*	
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	177	US-5,092,353	03-03-1992	Montoya *et al.*	
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	185	US-5,103,842	04-14-1992	Strang *et al.*	
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	202	US-5,177,424	01-05-1993	Connors	
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	204	US-5,179,966	01-19-1993	Losee *et al.*	
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	209	US-5,224,265	07-06-1993	Dux	
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	211	US-5,228,460	07-20-1993	Sprinkel *et al.*	
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	213	US-5,235,992	08-17-1993	Sensabaugh, Jr.	

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	215	US-5,240,016	08-31-1993	Nichols *et al.*	
	216	US-5,243,999	09-14-1993	Smith	
	217	US-5,246,018	09-21-1993	Deevi *et al.*	
	218	US-5,247,947	09-28-1993	Clearman *et al.*	
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	220	US-5,255,674	10-26-1993	Oftedal *et al.*	
	221	US-5,261,424	11-16-1993	Sprinkel, Jr.	
	222	US-5,266,746	11-30-1993	Nishihara	
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	224	US-5,271,419	12-21-1993	Arzonico *et al.*	
	225	US-5,282,798	02-01-1994	Bruse *et al.*	
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	227	US-5,293,883	03-15-1994	Edwards	
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	230	US-5,318,050	06-07-1994	Gonzalez-Parra *et al.*	
	231	US-5,322,075	06-21-1994	Deevi *et al.*	
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	233	US-5,327,915	07-12-1994	Porenski	
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	235	US-5,331,981	07-26-1994	Tamaoki *et al.*	
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	239	US-5,353,813	10-11-1994	Deevi *et al.*	
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	242	US-5,369,723	11-29-1994	Counts *et al.*	
	243	US-5,372,148	12-13-1994	McCafferty *et al.*	
	244	US-5,377,698	01-03-1995	Litzinger *et al.*	
	245	US-5,388,574	02-14-1995	Ingebrethsen	
	246	US-5,388,594	02-14-1995	Counts *et al.*	
	247	US-5,396,911	03-14-1995	Casey, III *et al.*	
	248	US-5,408,574	04-18-1995	Deevi *et al.*	
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	250	US-5,435,325	07-25-1995	Clapp *et al.*	
	251	US-5,445,169	08-29-1995	Brinkley *et al.*	
	252	US-5,468,266	11-21-1995	Bensalem *et al.*	
	253	US-5,468,936	11-21-1995	Deevi *et al.*	
	254	US-5,479,948	01-02-1996	Counts *et al.*	
	255	US-5,497,791	03-12-1996	Bowen	
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	257	US-5,498,850	03-12-1996	Das	
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	259	US-5,499,636	03-19-1996	Baggett, Jr. *et al.*	
	260	US-5,501,237	03-26-1996	Young *et al.*	
	261	US-5,505,214	04-09-1996	Collins *et al.*	
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	263	US-5,530,225	06-25-1996	Hajaligol	
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U. S. PATENT DOCUMENTS					
	268	US-5,573,692	11-12-1996	Das *et al.*	
	269	US-5,588,446	12-31-1996	Clearman	
	270	US-5,591,368	01-07-1997	Fleischhauer *et al.*	
	271	US-5,593,792	01-14-1997	Farrier *et al.*	
	272	US-5,595,577	01-21-1997	Bensalem *et al.*	
	273	US-5,596,706	01-21-1997	Shimazaki *et al.*	
	274	US-5,598,868	02-04-1997	Jakob *et al.*	
	275	US-5,611,360	03-18-1997	Tang	
	276	US-5,613,504	03-25-1997	Collins *et al.*	
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	278	US-5,646,666	07-08-1997	Cowger	
	279	US-5,649,552	07-22-1997	Cho *et al.*	
	280	US-5,649,554	07-22-1997	Sprinkel *et al.*	
	281	US-5,659,656	08-19-1997	Das	
	282	US-5,665,262	09-09-1997	Hajaligol *et al.*	
	283	US-5,666,976	09-16-1997	Adams *et al.*	
	284	US-5,666,977	09-16-1997	Higgins *et al.*	
	285	US-5,666,978	09-16-1997	Counts *et al.*	
	286	US-5,687,746	11-18-1997	Rose *et al.*	
	287	US-5,692,525	12-02-1997	Counts *et al.*	
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	290	US-5,708,258	01-13-1998	Counts *et al.*	
	291	US-5,711,320	01-27-1998	Martin	
	292	US-5,715,844	02-10-1998	Young *et al.*	
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	295	US-5,730,158	03-24-1998	Collins *et al.*	
	296	US-5,732,685	03-31-1998	Nakamura	
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	298	US-5,745,985	05-05-1998	Ghosh	
	299	US-5,750,964	05-12-1998	Counts *et al.*	
	300	US-5,778,899	07-14-1998	Saito *et al.*	
	301	US-5,799,663	09-01-1998	Gross *et al.*	
	302	US-5,816,263	10-06-1998	Counts *et al.*	
	303	US-5,819,751	10-13-1998	Barnes *et al.*	
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	305	US-5,829,453	11-03-1998	White *et al.*	
	306	US-5,865,185	02-02-1999	Collins *et al.*	
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	308	US-5,878,752	03-09-1999	Adams *et al.*	
	309	US-5,880,439	03-09-1999	Deevi *et al.*	
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	311	US-5,915,387	06-29-1999	Baggett, Jr., *et al.*	
	312	US-5,934,289	08-10-1999	Watkins *et al.*	
	313	US-5,944,025	08-31-1999	Cook	
	314	US-5,954,979	09-21-1999	Counts *et al.*	
	315	US-5,967,148	10-19-1999	Harris *et al.*	
	316	US-5,996,589	12-07-1999	St. Charles	
	317	US-6,026,820	02-22-2000	Baggett, Jr. *et al.*	
	318	US-6,033,623	03-07-2000	Deevi *et al.*	
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	327	US-6,119,700	09-19-2000	Fleischhauer *et al.*	
	328	US-6,125,853	10-03-2000	Susa *et al.*	
	329	US-6,125,855	10-03-2000	Nevett *et al.*	
	330	US-6,125,866	10-03-2000	Nichols *et al.*	
	331	US-6,146,934	11-14-2000	Gardner *et al.*	
	332	US-6,155,268	12-05-2000	Takeuchi	
	333	US-6,164,287	12-26-2000	White	
	334	US-6,182,670	02-06-2001	White *et al.*	
	335	US-6,196,218	03-06-2001	Voges	
	336	US-6,196,219	03-06-2001	Hess *et al.*	
	337	US-6,216,706	04-17-2001	Kumar *et al.*	
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	340	US-6,234,167	05-22-2001	Cox *et al.*	
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	342	US-6,289,898	09-18-2001	Fournier *et al.*	
	343	US-6,311,561	11-06-2001	Bang	
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	345	US-6,349,728	02-26-2002	Pham	
	346	US-6,349,729	02-26-2002	Meyer *et al.*	
	347	US-6,357,671	03-19-2002	Cewers	
	348	US-6,397,852	06-04-2002	McAdam	

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	350	US-6,418,938	07-16-2002	Fleischhauer *et al.*	
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	354	US-6,501,052	12-31-2002	Cox	
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	356	US-6,532,965	03-18-2003	Abhulimen *et al.*	
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	374	US-6,772,756	08-10-2004	Shayan	
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	396	US-7,290,549	11-06-2007	Banerjee *et al.*	
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	399	US-7,392,809	07-01-2008	Larson *et al.*	
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	419	US-8,365,742	02-05-2013	Hon	
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	422	US-8,402,976	03-26-2013	Fernando *et al.*	
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	545	US-2011/0168194	07-14-2011	Hon	
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	554	US-2012/0111347	05-10-2012	Hon	
	555	US-2012/0132643	05-31-2012	Choi *et al.*	
	556	US-2012/0186594	07-26-2012	Liu	
	557	US-2012/0199146	08-09-2012	Marangos	
	558	US-2012/0227752	09-13-2012	Alelov	
	559	US-2012/0227753	09-13-2012	Newton	
	560	US-2012/0231464	09-13-2012	Yu *et al.*	
	561	US-2012/0260927	10-18-2012	Liu	
	562	US-2012/0279512	11-08-2012	Hon	
	563	US-2012/0318882	12-20-2012	Abehasera	
	564	US-2013/0037031	02-14-2013	Gredat	

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	566	US-2013/0042865	02-21-2013	Monsees *et al.*	
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	568	US-2013/0081625	04-04-2013	Rustad *et al.*	
	569	US-2013/0081642	04-04-2013	Safari	
	570	US-2013/0192619	08-01-2013	Tucker *et al.*	
	571	US-2013/0213418	08-22-2013	Tucker *et al.*	
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	573	US-2013/0220315	08-29-2013	Conley *et al.*	
	574	US-2013/0228191	09-05-2013	Newton	
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	588	US-2014/0020696	01-23-2014	Liu	
	589	US-2014/0034071	02-06-2014	Levitz *et al.*	
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				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
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OTHER DOCUMENTS			
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	788	Brief of *Amicus Curiae* Fitbit, Inc. in Support of Plaintiffs' Motion for Summary Judgment, *Apple Inc. v. Iancu*, No. 20-cv-06128-EJD (N.D. Cal Dec. 23, 2020), ECF No. 81-1	
	789	Cambridge Dictionary of American English (2nd ed. 2008), p. 715.	
	790	Chambers Dictionary of Science and Technology (Peter M.B. Walker, ed., 1999), pp. 261, 975	
	791	Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco, R. J. Reynolds Tobacco Company Monograph, 1988, pp. 43-72.	
	792	*Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco*, R.J. Reynolds Tobacco Company Monograph (1988) ("RJR monograph") (excerpts)	
	793	Civil docket report for RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. filed April 9, 2020)	
	794	Civil Minutes, Ancora Technologies, Inc. v. TCT Mobile (US), Inc., et al., No. SACV 19-2192-GW-ADSx (C.D. Cal. November 12, 2020)	
	795	Claim Construction Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. November 24, 2020), ECF No. 360	
	796	Comments of The American Conservative Union in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-3447 (U.S.I.T.C. Apr. 22, 2020)	
	797	Commission Investigative Staff's Opening Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Aug. 21, 2020)	
	798	Commission Investigative Staff's Responsive Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Sept. 4, 2020)	
	799	Communication of Further Notices of Opposition filed in corresponding European Application No. 19151511.3, Patent No. 3491944, mailed March 16, 2021, 27 pages.	

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	800	Communication of Further Notices of Opposition filed in corresponding European Application No. 19151511.3, Patent No. 3491944, mailed March 16, 2021, 63 pages.	
	801	Complainants RAI Strategic Holdings, Inc., R.J. Reynolds Vapor Company, and R.J. Reynolds Tobacco Company's Infringement Claim Chart for U.S. Patent No. 9,839,238 from ITC Inv. No. 337-TA-1199	
	802	Complainants' Opening Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Aug. 21, 2020)	
	803	Complainants' Responsive Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Sept. 4, 2020)	
	804	Complaint and Public Interest Statement in *Certain Tobacco Heating Articles and Components Thereof*, ITC Inv. No. 337-TA-1199	
	805	Complaint for Patent Infringement in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. Apr. 9, 2020)	
	806	Concise Oxford English Dictionary (11th ed., 2008), pp. 311, 1213	
	807	Consent Order in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. May 4, 2020)	
	808	CORESTA, Physical Test Methods Sub-Group Technical Report: Tobacco Moisture, Water and Oven Volatiles, July 2014.	
	809	CORESTA, Tobacco and Tobacco Products Analytes Sub-Group Technical Report: 2018 Moisture (OV), Water by Karl Fischer and Gas Chromatography Interlaboratory Study, August 2018.	
	810	Curriculum Vitae of Dr. Deevi	
	811	Curriculum Vitae of Dr. Seetharama C. Deevi	

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	812	Curriculum Vitae of Samir Nayfeh, Ph.D.	
	813	Curriculum Vitae of Stewart Fox	
	814	D. Kirk Davidson, Selling Sin: The Marketing of Socially Unacceptable Products (2d ed. 2003)	
	815	Decision Denying Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated November 16, 2020.	
	816	Decision Denying Institution of *Inter Partes* Review of U.S. Patent 9,839,238 (January 19, 2021)	
	817	Decision Denying Patent Owner's Request for Rehearing in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated February 25, 2022.	
	818	Decision Denying Petitioner's Request for Rehearing in *Inter Partes* Review of U.S. Patent 9,839,238 (July 30, 2021)	
	819	Decision Granting Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated January 25, 2021.	
	820	Decision Granting Request for Rehearing and Granting Institution of *Inter Partes* Review in *Inter Partes* Reexamination of U.S. Patent No. 9,814,268, dated August 5, 2021.	
	821	Decision of the Opposition Division dated July 20, 2021 in corresponding European Application No. 18173918.6	
	822	Declaration of Charles E. Clemens in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated April 16, 2021.	
	823	Declaration of Dr. Deevi in Support of Petition for Inter Partes Review of '915 Patent ("Deevi Decl.")	

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	824	Declaration of Dr. Seetharama C. Deevi in Support of Petition for *Inter Partes* Review of '268 Patent	
	825	Declaration of Dr. Seetharama C. Deevi in Support of Petition for *Inter Partes* Review of '123 Patent	
	826	Declaration of Dr. Seetharama C. Deevi in Support of Petitions for PTAB Review of '542 Patent ("Deevi Decl.")	
	827	Declaration of Dr. Seetharama Deevi in support of Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated July 10, 2021.	
	828	Declaration of Jonathan M. Strang in Response to Patent Owner's Objections to Petitioner's Exhibits [served August 12, 2021, not filed]	
	829	Declaration of Samir Nayfeh, Ph.D. in Support of Petition for Inter Partes Review of '238 Patent ("Nayfeh Decl.")	
	830	Declaration of Stewart Fox in Support of Petition for *Inter Partes* Review of '123 Patent	
	831	Defendants' Unopposed Motion to Invoke the Statutory Stay of Plaintiffs' Claims Relating to U.S. Patent Nos. 9,839,238, 9,901,123, and 9,930,915 Pursuant to 28 U.S.C. § 1659 in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. June 12, 2020)	
	832	Douglas C. McGill, 'Smokeless' Cigarette's Hapless Start, N.Y. Times, Nov. 19, 1988, at 33	
	833	Email exchange among Carolyn Carpenter, John Robinson et al. regarding electric cigarette, available at https://www.industrydocuments.ucsf.edu/docs/nsxy0228	
	834	Email from Jonathan Strang "Precedential Opinion Panel Request: IPR2020-00921 (USP 9,814,268)", Exhibit 3002 in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated December 15, 2020.	
	835	Email from Jonathan Strang "Precedential Opinion Panel Request: IPR2020-01097 (USP 9,839,238)" Exhibit 3001 in *Inter Partes* Review of U.S. Patent 9,839,238 (February 18, 2021)	

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	836	Excerpts from James W. Dally, Packaging of Electronic Systems: A Mechanical Engineering Approach (1990), 18 pgs.	
	837	Extended European Search Report, EP 17 18 5645, mailed November 28, 2017.	
	838	FDA News release, *FDA Authorizes Marketing of IQOS Tobacco Heating System with 'Reduced Exposure' Information* (July 7, 2020), https://www.fda.gov/news-events/press-announcements/fda-authorizesmarketing-iqos-tobacco-heating-system-reduced-exposure-information	
	839	FDA News Release, FDA Permits Sale of IQOS Tobacco Heating System Through Premarket Tobacco Product Application Pathway (Apr. 30, 2019)	
	840	FDA News release, *FDA permits sale of IQOS Tobacco Heating System through premarket tobacco product application pathway* (Apr. 30, 2019), https://www.fda.gov/news-events/press-announcements/fdapermits-sale-iqos-tobacco-heating-system-through-premarket-tobaccoproduct-application-pathway	
	841	File history for U.S. Patent 9,814,268	
	842	File History regarding U.S. Patent No. 10,588,355 ("'355 FH")	
	843	File History regarding U.S. Patent No. 9,839,238	
	844	George Wypych, *Handbook of Polymers* (2d ed. 2016)	
	845	HAJALIGOL *et al.,* "Method of Making a Heather with Bullet Shape (Design) to be Used in the Beta Article, Specifically Useful for Beta Cigarettes Made with Cut Filler" May, 1994, Invention Record www.industrydocuments.ucsf.edu/docs/#id=mhpp0217	
	846	HAJALIGOL, M. R., "METHOD OF MAKING A HEATER WITH BULLET SHAPE," 1994 March. Philip Morris Records; Master Settlement Agreement. https://www.industrydocuments.ucsf.edu/docs/ktbn0130	

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	847	Harvard School of Public Health, Division of Public Health Practice, Potentially Reduced Exposure Tobacco Products - A Public Health Information Guide (2008) ("Eclipse-Premier")	
	848	Hon Lik, *I Was Sure That The Electronic Cigarette Would Be Welcomed With Open Arms*, Sciences at Avenir (Oct. 7, 2013) https://www.sciencesetavenir.fr/sante/i-was-sure-that-the-electronic-cigarette-would-be-welcomed-with-open-arms_26020 (updated Oct. 18, 2013)	
	849	Honeywell datasheet for Pressure Sensors, 160PC Series ("Honeywell datasheet")	
	850	Honeywell Microbridge Mass Airflow Sensor/Unamplified, AWM2000 Series	
	851	HOROWITZ, et al., The Art of Electronics, 1980, pp. 33-35.	
	852	IEEE 100, The Authoritative Dictionary of IEEE Standards Terms (7th ed. 2000), pp. 230, 234.	
	853	In re Court Operations Under the Exigent Circumstances Created by the Outbreak of Coronavirus Disease 2019 (COVID-19): Temporary Suspension of Criminal Jury Trials (E.D. Va. November 16, 2020)	
	854	Inhalation Technology, Dr. Donald E. Garden, ed., Vol. 12, No. 5, pp. 1-58, (2000).	
	855	IQOS - A New Era in Tobacco (2014)	
	856	J.P. Hammond et al., Brazing Ceramic Oxides to Metals at Low Temperatures, Welding Research Supplement, 227-232-s (1998) ("Hammond Brazing")	
	857	J.R. Davis, Joining, Metals Handbook Desk Edition, 1049-1056 (2d ed. 1998) ("ASM Joining")	
	858	James A. Speck, Mechanical Fastening, Joining, and Assembly, Marcel Dekker, Inc. 1997, 4 pgs	

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	859	Joint Proposed Discovery Plan Pursuant to Rule 26(f), RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO- TCB (E.D. Va. September 2, 2020), ECF No. 97	
	860	Joint Proposed Procedural Schedule in *Certain Tobacco Heating Articles and Components Thereof*, ITC Inv. No. 337-TA-1199 (U.S.I.T.C. June 9, 2020)	
	861	JONES J. et al. CIGARETTE BRAINSTORMING TEAM NUMBER 2. 1994 May 13. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/gqcv0119	
	862	Judgment Final Written Decision Determining All Challenged Claims Unpatentable in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated June 30, 2022.	
	863	Judgment Final Written Decision Determining All Challenged Claims Unpatentable in IPR2020-01094, *Inter Partes* Review of U.S. Patent No. 9,930,915, January 11, 2022.	
	864	Judgment Final Written Decision in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated March 30, 2022.	
	865	Kevin Hatch, et al., *Preliminary Evaluation of a Commercially Available Electric Aerosol Inhaler from China* (Sept. 14, 2006) ("RJR Teardown"), available at https://www.industrydocuments.ucsf.edu/docs/nyvy0228	
	866	LAROY, B; UTSCH, F. AN OUTLINE OF PERMANENT HEATER / DISPOSABLE FLAVOR INSERT CONCEPTS. 1991 November. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/ygcc0114	
	867	LAROY, *et al.,* "An Outltine of Permanent Heater/Disposable Flavor Insert Cncepts," November, 1991, www.industrydocuments.ucsf.edu/docs/#id=jxbh0090	
	868	Letter accompanying subsequently filed items, Further Written Submissions filed in corresponding European Application No. 19151511.3, Patent No. 3491944. December 13, 2021.	
	869	Letter from David M. Maiorana, counsel for Complainants, to The Honorable Lisa R. Barton, regarding *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. April 9, 2020)	

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	870	Letter from Maximillian Grant, counsel for Defendants, to David Maiorana, counsel for Plaintiffs, regarding RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (September 18, 2020)	
	871	Letter from Robert B. Swierupski, Director, National Commodity Specialist Division, to Mark Weiss, Weiss & Moy, P.C. regarding tariff classification ruling (Aug. 22, 2006), https://rulings.cbp.gov/ruling/M85579	
	872	LISH, Tom, "What is the difference between Vented and Sealed Gauge Reference Pressure, Setra, January 26, 2017, https://www.setra.com/blog/what-is-the-difference-between-vented-and-sealed-gauge-reference-pressure	
	873	LU, ZHANG, "Safe Substitute", China Daily, July 11, 2005.	
	874	Mark's Standard Handbook for Mechanical Engineers, Eugene A. Avallone *et al.*, published 1978, page 15-6.	
	875	McGraw-Hill Dictionary of Electrical and Computer Engineering (2003), p. 479.	
	876	Memorandum in Support of Defendants' Partial Motion to Stay Plaintiffs' Claims Regarding U.S. Patent Nos. 9,814,268 and 10,492,542, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. November 27, 2020), ECF No. 371	
	877	Merriam-Webster's Collegiate Dictionary (10th ed., 2001), (excerpt)	
	878	Modern Dictionary of Electronics (7th ed., 1999), pp. 151, 636, 637	
	879	Modification of Limited Exclusion Order and Cease and Desist Order; Termination of the Modification Proceeding as to U.S. Patent No. 6,377,577 and Suspension of the Modification Proceeding as to U.S. Patent No. 7,224,668 in *Certain Network Devices, Related Software and Components Thereof,* No. 337-TA-945 (U.S.I.T.C. June 26, 2018) ("Commission Order")	

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	880	Monique Williams & Prue Talbot, Variability Among Electronic Cigarettes in the Pressure Drop, Airflow Rate, and Aerosol Production, 13 Nicotine & Tobacco Research 1276-84 (Dec. 2011) ("Williams and Talbot")	
	881	MORGAN *et al.,* "Philip Morris USA Invention Record," October, 1988, www.industrydocuments.ucsf.edu/docs/#id=znbc0114	
	882	Mosdesign Semiconductor Corp. Datasheet for M1600 LED Drivers ("Mosdesign M1600 Datasheet"), 1 pg.	
	883	MPL 502 Series Specifications, Micro Pneumatic Logic, Inc., (March 11, 2006), http://www.pressureswitch.com/PDFs/0502STANDARDA.pdf [https://web.archive.org/web/20060311132848 / http://www.pressureswitch.com/PDFs/0502STANDARDA.pdf], 17 pgs.	
	884	MPL Pressure Switch Solutions, Micro Pneumatic Logic, Inc., (Product Brochure) (March 11, 2006), http://www.pressureswitch.com/PDFs/2000_MPLBrochure.pdf [https://web.archive.org/web/20060311132419/ http://www.pressureswitch.com/PDFs/2000_MPLBrochure.pdf]. 2 pgs.	
	885	N.A. Fuchs, The Mechanics of Aerosols (1989), 22 pgs.	
	886	Notice of Opposition filed in corresponding European Application No. 18173918.6, Patent No. 3398460 on April 14, 2020	
	887	Notification of Receipt of POP Request in *Inter Partes* Review of U.S. Patent 9,839,238 (March 24, 2021)	
	888	Order Granting Defendants' Unopposed Motion to Invoke the Statutory Stay of Plaintiffs' Claims Relating to U.S. Patent Nos. 9,839,238, 9,901,123, and 9,930,915 Pursuant to 28 U.S.C. § 1659 in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. June 18, 2020)	
	889	Order No. 28: Construing Certain Claims in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Jan. 6, 2021)	

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	890	Order No. 8 in *Certain Laser-driven Light Sources, Subsystems Containing Laser-driven Light Sources, and Products Containing Same*, No. 337-TA-983 (U.S.I.T.C. Mar. 3, 2016)	
	891	Order No. 8, Amending Ground Rules in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. July 27, 2020)	
	892	Order, Bushnell Hawthorne, LLC v. Cisco Systems, Inc., No. 1:18-cv- 760 (E.D. Va. April 22, 2019)	
	893	Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 4, 2020), ECF No. 426	
	894	Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 7, 2020), ECF No. 432	
	895	Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-393 (E.D. Va. February 16, 2021).	
	896	OTT, Henry W., Noise Reduction Techniques in Electronic Systems, (2d E. 1988), pp. 286-293.	
	897	Oxford Dictionary of English (3d ed. 2010), p. 477.	
	898	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,814,268 dated August 17, 2020.	
	899	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent 9,839,238 (October 27, 2020)	
	900	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,930,915 dated October 27, 2020.	
	901	Patent Owner Response to Petition for *Inter Partes* Review Pursuant to 37 C.F.R. § 42.220 in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated December 6, 2021.	

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				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
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	902	Patent Owner Response to Petition for *Inter Partes* Review Pursuant to 37 C.F.R. § 42.220 in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated April 19, 2021.	
	903	Patent Owner Sur-Reply in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated April 11, 2022.	
	904	Patent Owner Sur-Reply in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated August 30, 2021.	
	905	Patent Owner's Demonstratives for Oral Argument: RAI's PTAB Presentation, Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-00921, Exhibit 2011, May 11, 2022	
	906	Patent Owner's Infringement Chart for '123 patent, In the Matter of Certain Tobacco Heating Articles and Components Thereof, Inv. No. ___, EDIS Doc. ID 707369 (filed April 9, 2020)	
	907	Patent Owner's Mandatory Notices in *Inter Partes* Review of U.S. Patent 9,839,238, July 2, 2020	
	908	Patent Owner's Rehearing Request in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated February 10, 2022.	
	909	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated September 29, 2020.	
	910	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent 9,839,238 (December 10, 2020)	
	911	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated December 10, 2020.	
	912	Petition for *Inter Partes* Review of U.S. Patent 10,492,542	
	913	Petition for *Inter Partes* Review of U.S. Patent 9,839,238	

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	914	Petition for *Inter Partes* Review of U.S. Patent 9,930,915	
	915	Petition for *Inter Partes* Review of U.S. Patent No. 9,814,268, submitted May 8, 2020	
	916	Petition for *Inter Partes* Review of U.S. Patent No. 9,901,123, submitted May 8, 2020	
	917	Petition for *Inter Partes* Review of U.S. Patent No. 9,901,123, submitted September 18, 2020	
	918	Petition for Post-Grant Review of U.S. Patent 10,492,542	
	919	Petitioner's Demonstratives: Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-00921, May 11, 2022.	
	920	Petitioner's Demonstratives: Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-01094, in *Inter Partes* Review of U.S. Patent No. 9,930,915, October 27, 2021.	
	921	Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,814,268, entered February 28, 2022.	
	922	Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated July 12, 2021.	
	923	Petitioner's Reply to Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,814,268, entered September 18, 2020.	
	924	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent 9,839,238 (November 25, 2020)	
	925	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent 9,930,915 (November 25, 2020)	

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	926	Petitioner's Request for Rehearing of Decision Denying Institution in *Inter Partes* Review of U.S. Patent 9,839,238 (February 18, 2021)	
	927	Petitioner's Updated Mandatory Notices in *Inter Partes* Review of U.S. Patent 9,839,238 (May 11, 2021)	
	928	Philip Morris Incorporated Invention Record (dated October 11, 1988)	
	929	Philip Morris Incorporated Invention Record (submitted May 19, 1994; witnessed May 23, 1994)	
	930	Philip Morris Int'l, 2019 Third-Quarter Results Presentation (Oct. 17, 2019)	
	931	Philip Morris Int'l, The IQOS Heating System, Tobacco Products Scientific Advisory Committee Presentation (Jan. 24, 2018)	
	932	Philip Morris Products SA's Comments to Complainants' Public Interest Statement in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	933	Philip Morris U.S.A. interoffice correspondence from R.H. Moffitt to K. Torrence regarding operational analysis of SBT Ruyan Atomizing Nicotine Inhaler (Sept. 27, 2004) (Original)	
	934	Philip Morris U.S.A. interoffice correspondence from R.H. Moffitt to K. Torrence regarding operational analysis of SBT Ruyan Atomizing Nicotine Inhaler (Sept. 27, 2004), https://www.industrydocuments.ucsf.edu/docs/fnpb0219	
	935	Pilot Corp. Stores Offer Ruyan Smoking Alternatives in Knoxville, Tenn.-Area Convenience Stores; Ruyan Vegas(R) Disposable E-Cigar in Select Stores in December; Jazz Disposable E-Cigarette Will Premier in Next 30 Days, PR Newswire, Dec. 16, 2008	
	936	Plaintiffs' Notice of Motion and Motion for Summary Judgment, Apple Inc. v. Iancu, No. 5:20-cv-06128-EJD (N.D. Cal. November 23, 2020), ECF No. 65	

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	937	Plaintiffs' Opposition to Defendants' Partial Motion to Stay Plaintiffs' Claims Regarding U.S. Patent Nos. 9,814,268 and 10,492,542, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 2, 2020), ECF No. 405	
	938	Press Release, Altria, FDA Authorizes Sale of IQOS Tobacco Heating System in the U.S. (Apr. 30, 2019) ("Altria Announcement")	
	939	Public Interest Comments of Congressman George Holding in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 15, 2020)	
	940	Public Interest Comments of Dr. Nikan H. Khatibi, MD in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	941	Public Interest Comments of Nextera Healthcare in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	942	Public Interest Comments of Spark MD in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	943	Public Interest Comments of TechFreedom in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	944	Public Interest Comments of the Consumer Advocates for Smoke-free Alternatives Association in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	945	Public Interest Comments of the Progressive Policy Institute in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	946	Public Interest Comments of the Reason Foundation in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	947	Public Interest Comments of the Schizophrenia and Related Disorder Alliance of America in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	948	Public Interest Comments of the Smoke-Free Alternatives Trade Association in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	

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	949	Public Version of Commission Investigative Staff's Pre-Hearing Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on January 4, 2021.	
	950	Public Version of Commission Investigative Staff's Responsive Post-Hearing Brief in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on March 5, 2021.	
	951	Public Version of Commission Opinion in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on October 19, 2021.	
	952	Public Version of Complainant's Opening Post-Hearing Brief in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on March 31, 2021.	
	953	Public Version of Complainant's Responsive Post-Hearing Brief in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on March 31, 2021.	
	954	Public Version of Complainants' Pre-Hearing Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on December 11, 2020. (Parts 1 & 2)	
	955	Public Version of Initial Determination on Violation of Section 337 and Recommended Determination on Remedy and Bond in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on May 14, 2021.	
	956	Public Version of Representative Claim Chart of Domestic Industry of Claims 1-4 in U.S. Patent No. 9,930,915 by the VUSE Solo Device from ITC Inv. No. 337-TA-1199 November 25, 2020	
	957	Public Version of Respondent's Joint Disclosure of Final Contentions in Response to Individual Interrogatory No. 12, in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (September 18, 2020)	
	958	Public Version of Respondents' Notice of Prior Art filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on August 13, 2020.	

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	959	Public Version of Respondents' Notice of Prior Art filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on August 13, 2020.	
	960	Public Version of Respondents' Petition and Contingent Petition for Review of the Final Initial Determination in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on May 28, 2021.	
	961	Public Version of Respondents' Post-Hearing Initial Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on February 12, 2021.	
	962	Public Version of Respondents' Post-Hearing Responsive Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on March 31, 2021.	
	963	Public Version of Respondents' Prehearing Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on December 11, 2020.	
	964	R.J. REYNOLDS TOBACCO CO., *Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco,* Reynolds Tobacco Company Monograh, 1988, pp. 60-62, pp. 119-124.	
	965	R.R. Baker, *Temperature Distribution Inside a Burning Cigarette*, Nature, Vol. 247, pp. 405-406, (1974)	
	966	Rebuttal Expert Report of Charles Clemens in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Oct. 23, 2020)	
	967	Record of Oral Hearing held October 27, 2021, in IPR2020-01094, *Inter Partes* Review of U.S. Patent No. 9,930,915, November 24, 2021.	
	968	Remote Deposition of Seetharama C. Deevi, Ph.D. in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated August 20, 2021.	
	969	Remote Deposition of Seetharama C. Deevi, Ph.D. in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated March 26, 2021.	

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	970	Reply Support of Defendants' Partial Motion to Stay Plaintiffs' Claims Regarding U.S. Patent Nos. 9,814,268 and 10,492,542, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO- TCB (E.D. Va. December 3, 2020), ECF No. 422	
	971	Respondents' Opening Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Aug. 21, 2020)	
	972	Respondents' Responsive Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Sept. 4, 2020)	
	973	Richard R. Baker, *Smoke Generation Inside a Burning Cigarette: Modifying Combustion to Develop Cigarettes That May be Less Hazardous to Health*, Progress in Energy and Combustion Science, Vol. 32, pp. 373-385, (2006)	
	974	Robert W. Messler, Jr., Joining of Materials and Structures, Elsevier Butterworth-Heinemann 2004 – Excerpt, 4 pgs.	
	975	Rohsenow, "Heat, Mass, And Momentum Transfer", copyright 1961 Prentice-Hall, 3 pgs.	
	976	Rule 16(b) Scheduling Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. September 8, 2020), ECF No. 99	
	977	SAMEJIMA, T., et al., "Moisture Sorption Isotherms of Various Tobaccos", 1978, *Agric. Biol. Chem.*, Vol. 42(12), pp 2285-2290.	
	978	SHERZ, Paul, Practical Electronics for Inventors, 2000, p. 107, p. 234.	
	979	Steven M. Kaplan, Wiley Electrical and Electronics Engineering Dictionary (2004), pp 144 – 145.	
	980	Submission in Opposition Proceedings, filed in corresponding European Application No. 18173918.6, Patent No. 3398460, dated December 3, 2020.	
	981	Submission in opposition proceedings, Further Written Submissions filed in corresponding European Application No. 18173918.6, Patent No. 3398460. Dated April 16, 2021.	

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	982	Summary of Group #3 Brainstorming on May 13, 1994	
	983	The American Heritage Dictionary of the English Language (5th ed. 2011), p. 1467.	
	984	The Lady Smokes, www.theladysmokes.com, webpages archived at https://web.archive.org/web/20061107040128/http://theladysmokes.com (November 7, 2006), https://web.archive.org/web/20061107040116/http://www.theladysmokes.com/CigaretteHolders.html (November 7, 2006), https://web.archive.org/web/20061107040116/http://www.theladysmokes.com/Bitchsticks.html (November 7, 2006), and https://web.archive.org/web/20061107040116/http://www.theladysmokes.com/FAQs.html (March 13, 2007)	
	985	Thermal Ink—Jet Print Cartridge Designer's Guide (2nd Edition Hewlett Packard) ("Jet Print Cartridge Designers Guide"), 12 pgs.	
	986	Third Party Observation filed in corresponding European Application No. 19151515.4, Patent No. 3508076, mailed January 18, 2021.	
	987	Third Party Observation filed in corresponding European Application No. 19151515.4, Patent No. 3508076, mailed March 12, 2020.	
	988	Transcript of Motion Hearing Proceedings (Via Zoom Conference) Before the Honorable Theresa C. Buchanan, United States District Court Magistrate Judge, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 4, 2020)	
	989	Transcript Record of Oral Hearing held May 11, 2022 in *Inter Partes* Review of U.S. Patent No. 9,814,268.	
	990	U.S. Provisional Application Serial No. 60/722,036	
	991	UK Approved Judgment In the High Court of Justice Business and Property Courts of England and Wales Intellectual Property List (ChD) Patents Court, dated March 9, 2021, EWHC 537	

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	992	Unknown. HEATER DEVELOPMENT. 1994 March. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/hxwy0118	
	993	Unknown. PHILIP MORRIS PATENT DATABASE SEARCH INVENTION DISCLOSURES DATING FROM ABOUT 800000 TO PRESENT FOR WHICH PATENT APPLICATIONS WERE NOT FILED. 1996 August 21. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/kgdl0071	
	994	Unknown. PROJECT BETA CORE TEAMS - ASHLAND. 1994 May 06. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/szjn0076	
	995	Videotaped Deposition of Charles E. Clemens, Conducted Virtually in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on November 5, 2020.	
	996	Waybackmachine Archive of Wikipedia page "Polycarbonate" 2006, Accessed from web.archive.org/web/20060913000000/https://en.wikipedia.org/wiki/Polycarbonate	
	997	Webpages from Beijing SBT Ruyan Technology & Development Corp., Sbtry.cn (archived at web.archive.org, 2005-2006, with affidavit)	
	998	Webpages from E-cig.com (archived at web.archive.org, 2006-2007, with affidavit)	
	999	Wiley Electrical and Electronics Engineering Dictionary (2004), p. 181.	
	1000	Written Opinion of the International Searching Authority in International Application No. PCT/US2007/081461, mailed April 18, 2009	
	1001	Yunus A. Cengel & Michael A. Boles, THERMODYNAMICS: AN ENGINEERING APPROACH (5th ed. 2006) (excerpts) ("THERMODYNAMICS"), 9 pgs.	
	1002	Patent Owner Preliminary Response in post-grant review of U.S. Patent No. 10,492,542 dated October 16, 2020.	

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON MARCH 31, 2023.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	54	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

OTHER DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s) , volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	1003	Petitioner's Reply to the Patent Owner Preliminary Response in post-grant review of U.S. Patent No. 10,492,542 entered November 10, 2020.	
	1004	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in post-grant review of U.S. Patent No. 10,492,542 dated November 20, 2020.	
	1005	Decision Granting Institution of Post-Grant Review in post-grant review of U.S. Patent No. 10,492,542 entered January 13, 2021.	
	1006	Declaration of Charles E. Clemens in post-grant review of U.S. Patent No. 10,492,542 dated April 6, 2021.	
	1007	Deposition of Dr. Seetharama C. Deevi taken by videoconference on March 22, 2021 in post-grant review of U.S. Patent No. 10,492,542.	
	1008	Patent Owner Response to Petition for Post-Grant Review Pursuant to 37 C.F.R. § 42.220 in post-grant review of U.S. Patent No. 10,492,542 dated April 7, 2021.	
	1009	Petitioner's Reply in post-grant review of U.S. Patent No. 10,492,542 entered June 30, 2021.	
	1010	Videotaped Deposition of Dr. Seetharama C. Deevi, Ph.D. taken remotely via ZOOM on July 30, 2021 in post-grant review of U.S. Patent No. 10,492,542.	
	1011	Patent Owner Sur-Reply in post-grant review of U.S. Patent No. 10,492,542 dated August 11, 2021.	
	1012	Judgment Final Written Decision Determining All Challenged Claims Unpatentable in post-grant review of U.S. Patent No. 10,492,542 entered January 10, 2022.	
	1013	Patent Owner's Rehearing Request in post-grant review of U.S. Patent No. 10,492,542 dated February 9, 2022.	
	1014	Decision Denying Patent Owner's Request for Rehearing in post-grant review of U.S. Patent No. 10,492,542 entered March 31, 2022.	

Examiner Signature		Date Considered	

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				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	55	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

OTHER DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s) , volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	1015	File History regarding U.S. Patent No. 10,492,542 ("'542 FH")	
	1016	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated August 17, 2020	
	1017	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered September 18, 2020	
	1018	Patent Owner's Sur-Reply to Petitioner's Reply to the Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated September 29, 2020	
	1019	Decision Denying Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated November 16, 2020	
	1020	Patent Owner's Demonstratives for Oral Argument: RAI's PTAB Presentation, Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-01602, Exhibit 2017, January 6, 2021.	
	1021	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated January 8, 2021.	
	1022	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered February 9, 2021.	
	1023	Decision Granting Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated April 2, 2021.	
	1024	Declaration of Charles E. Clemens in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated July 1, 2021.	
	1025	Patent Owner Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated July 2, 2021.	
	1026	Remote Videotaped Deposition of Stewart M. Fox on June 25, 2021, in *Inter Partes* Review of U.S. Patent No. 9,901,123.	

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	56	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

OTHER DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s) , volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	1027	Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated October 8, 2021.	
	1028	Patent Owner Sur-Reply in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated November 19, 2021.	
	1029	Record of Oral Hearing held January 6, 2022, in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered March 1, 2022.	
	1030	Petitioner's Request for Rehearing of the Institution Decision in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered July 21, 2022.	
	1031	File History for U.S. Patent 9,930,915	
	1032	File History for U.S. Patent 9,901,123	
	1033	Patent Owner's Notice of Appeal in IPR2020-01094, *Inter Partes* Review of U.S. Patent No. 9,930,915, April 28, 2022.	
	1034	Petitioner's Notice of Appeal in IPR2020-01602, *Inter Partes* Review of U.S. Patent No. 9,901,123, May 27, 2022.	
	1035	Notification of Receipt of POP Request in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, July 21, 2022.	
	1036	POP Request in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, July 21, 2022.	
	1037	POP Request Dismissed in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, July 26, 2022.	
	1038	Panel Change Order Conduct of the Proceeding in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, September 13, 2022.	

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	57	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

OTHER DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s) , volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached
	1039	Decision Denying Petitioner's Request on Rehearing of Decision Denying Institution in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, October 13, 2022.	
	1040	"How the eCigarette Works," Screenshots YouTube Video by esmokeinpeace, https://www.youtube.com/watch?v=eqz6TvAKcBQ, March 1, 2009 "E10"	
	1041	"How the eCigarette Works," Wayback Machine Screenshots YouTube Video by esmokeinpeace, https://web.archive.org/web/20140227122005/https:/www.youtube.com/watch?v=eqz6TvAKcBQ, March 1, 2009 " E10' "	
	1042	"How To Use An Electronic Cigarette," Screenshots YouTube Video by Vapin Lizards, https://www.youtube.com/watch?v=xPJxBRxLIfs, November 15, 2013 "E15"	
	1043	Annex to Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 3, 2023, "Feature Analysis of Claim 1".	
	1044	Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 3, 2023.	
	1045	Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 8, 2023. (37 pgs)	
	1046	Vape Ranks, "E-Cigarette Inventor Complains about Lack of Financial Rewards," Posted October 14, 2013, Retrieved 2.20.2023, "Hon Lik Article"	
	1047	Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 8, 2023. (47 pgs)	
	1048	Letter Accompanying Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated February 20, 2023.	

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	John	Howard	Robinson	

Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

City	State/Province	Country of Residence
Kernersville	NC	US

Mailing Address of Inventor:

Address 1	604 Antler Court
Address 2	
City	Kernersville
State/Province	NC
Postal Code	27284
Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	David	William	Griffith	Jr.

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	State/Province	Country of Residence
Winston-Salem	NC	US

Mailing Address of Inventor:

Address 1	4130 White Hawk Lane
Address 2	
City	Winston-Salem
State/Province	NC
Postal Code	27106
Country	US

Inventor 3 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Billy	Tyrone	Conner	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

City	Clemmons	State/Province	NC	Country of Residence	US

Mailing Address of Inventor:

Address 1	180 Scott Farm Road		
Address 2			
City	Clemmons	State/Province	NC
Postal Code	27012	Country	US

Inventor 4 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Evon	Llewellyn	Crooks	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	Mocksville	State/Province	NC	Country of Residence	US

Mailing Address of Inventor:

Address 1	749 Howell Road		
Address 2			
City	Mocksville	State/Province	NC
Postal Code	27028	Country	US

Inventor 5 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Dempsey	Bailey	Brewer	Jr.

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

City	East Bend	State/Province	NC	Country of Residence	US

Mailing Address of Inventor:

Address 1	2853 Davis Road		
Address 2			
City	East Bend	State/Province	NC
Postal Code	27018	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

PTO/AIA/14 (02-18)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

Customer Number	26158		
Email Address	IPdocketing@wbd-us.com	Add Email	Remove Email

Application Information:

Title of the Invention	TOBACCO-CONTAINING SMOKING ARTICLE		
Attorney Docket Number	R60999 1400USC13T1(5803.9	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	5	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	26158		

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending			Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)	
	Continuation of	17673424	2022-02-16	
Prior Application Status	Pending			Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)	
17673424	Continuation of	16271443	2019-02-08	
Prior Application Status	Patented			Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16271443	Continuation of	15879268	2018-01-24	10231488	2019-03-19

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15879268	Continuation of	15286087	2016-10-05	9901123	2018-02-27

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15286087	Continuation of	14/527287	2014-10-29	9801416	2017-10-31

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14/527287	Continuation of	13297983	2011-11-16	8899238	2014-12-02

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13297983	Continuation of	12763890	2010-04-20	8079371	2011-12-20

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12763890	Continuation of	11550634	2006-10-18	7726320	2010-06-01

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 — Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	RAI Strategic Holdings, Inc.		
Mailing Address Information For Applicant:			
Address 1	401 North Main Street		
Address 2			
City	Winston-Salem	**State/Province**	NC
Country	US	Postal Code	27101
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/ryan w. cagle/			Date (YYYY-MM-DD)	2023-03-31
First Name	Ryan	Last Name	Cagle	Registration Number	47,468

Additional Signature may be generated within this form by selecting the Add button. Add

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	R60999 1400USC13T1(5803.9
	Application Number	
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Filer:	Ryan W. Cagle/Diann Gravius
Attorney Docket Number:	R60999 1400USC13T1(5803.9

Filed as Large Entity

Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800
REQUEST FOR PRIORITIZED EXAMINATION	1817	1	4200	4200
Pages:				
Claims:				
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**6160**

Electronic Acknowledgement Receipt

EFS ID:	47772281
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	31-MAR-2023
Filing Date:	
Time Stamp:	17:33:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$6160
RAM confirmation Number	E20233UH34026602
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Track One Request	R60999_1400US_C13_T1_Transmittal_Track_One_Certification_and_Request_for_Prioritized_Exam.PDF	119306 e9bafd65dab3568bb4b135f913d4e13ff84be127	no	2
Warnings:					
Information:					
2	Track One Request	R60999_1400US_C13_T1_Transmittal_Track_One_Processing_Fee.PDF	131505 b0b006d04f5189c3d9cac67c8d7d167c7828e851	no	2
Warnings:					
Information:					
3	Transmittal of New Application	R60999_1400US_C13_T1_Transmittal_CON_Patent_Application.PDF	277202 4a47e98225773f0e890e2e979991fd267b4d4584	no	2
Warnings:					
Information:					
4	Transmittal Letter	R60999_1400US_C13_T1_Transmittal_Fees_for_CON_Patent_Application.PDF	294473 0afe76caa7a2e160284bf66138af8c8403ec439a	no	2
Warnings:					
Information:					
5		R60999_1400US_C13_T1_Preliminary_Amendment.pdf	136647 9b03492799c19b312ca4fdfd1bf867fdf2ad47b4	yes	7

Multipart Description/PDF files in .zip description

Document Description	Start	End
Preliminary Amendment	1	1
Specification	2	3
Claims	4	6

	Applicant Arguments/Remarks Made in an Amendment		7	7	
Warnings:					
Information:					
6		R60999_1400US_C13_T1_CON_Patent_Application.pdf	222927 ab0c5472cfdc0d9beec0ad145af031997a83c315	yes	49
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	43	
	Claims		44	48	
	Abstract		49	49	
Warnings:					
Information:					
7	Drawings-only black and white line drawings	R60999_1400US_C13_T1_Drawings.PDF	297920 1684155cdb4866cb5ae2979221b275122656db8c	no	5
Warnings:					
Information:					
8	Oath or Declaration filed	R60999_1400US_C13_T1_Copy_of_Parent_Declaration.PDF	2212514 5ee4418b845efbbc628599954215b5b90e85e8dd	no	5
Warnings:					
Information:					
9	Transmittal Letter	R60999_1400US_C13_T1_IDS_Coversheet.pdf	124144 8e3c84b6f7e655cfd58359c658fedb43bc0bf8b2	no	1
Warnings:					
Information:					
10	Information Disclosure Statement (IDS) Form (SB08)	R60999_1400US_C13_T1_IDS_Form_1449.pdf	1099724 69ccc6f8de1d3986b61e973871929090 64a9b1d2	no	57
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					

11	Application Data Sheet	R60999_1400US_C13_T1_ADS.pdf	1256954 99308873609b6c6f390814fa5e62c635332741aa	no	10
Warnings:					
Information:					
12	Fee Worksheet (SB06)	fee-info.pdf	51252 6839e05243e86cb271ea52a6aa8895947d72e54	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	6224568		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/17i (05-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PROCESSING FEE Under 37 CFR 1.17(i) TRANSMITTAL

(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Application Number	Not Yet Assigned
Filing Date	Not Yet Assigned
First Named Inventor	John Howard Robinson
Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Practitioner Docket No.	R60999 1400US.C13T1 (5803.9)

Enclosed is a paper filed under 37 CFR 1.102(e) **that requires a processing fee (37 CFR 1.17(i)(1) or (2)).**

Payment of $ 4340 **is enclosed.**

This form should be included with the above-mentioned paper and faxed or mailed to the Office using the appropriate Mail Stop, if applicable.
For transmittal of petition fees under 37 CFR 1.17(f), (g) or (h), see form PTO/SB/17p or PTO/AIA/17p, as applicable.

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

Payment of Fees

☑ The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 09-0528:

☑ processing fee under 37 CFR 1.17(i)(1) ☑ processing fee under 37 CFR 1.17(i)(2) ☑ any deficiency of fees and credit of any overpayments

☐ Check in the amount of $ _____ is enclosed. ☑ Payment via EFS-Web.

☐ Payment by credit card (Form PTO-2038 or equivalent is enclosed). Do not provide credit card information on this form.

Processing Fees Under 37 CFR 1.17(i)(1):

Undiscounted Fee $140 (Fee Code 1053) **Small Entity Fee $70 (Fee Code 2053)** **Micro Entity Fee $35 (Fee Code 3053)**

For papers filed under:
§ 1.28(c)(3) - for processing a non-itemized fee deficiency based on an error in small entity status.
§ 1.29(k)(3) - for processing a non-itemized fee deficiency based on an error in micro entity status.
§ 1.41(b) - for supplying the name or names of the inventor or joint inventors in an application without either an application data sheet or the inventor's oath or declaration, except in provisional applications.
§ 1.48 - for correcting inventorship, except in provisional applications.
§ 1.52(d) - for processing a nonprovisional application filed with a specification in a language other than English.
§ 1.53(c)(3) - to convert a provisional application filed under § 1.53(c) into a nonprovisional application under § 1.53(b).
§ 1.71(g)(2) - for processing a belated amendment under § 1.71(g).
§ 1.102(e) - for requesting prioritized examination of an application.
§ 1.103(b) - for requesting limited suspension of action, continued prosecution application for a design patent (§ 1.53(d)).
§ 1.103(c) - for requesting limited suspension of action, request for continued examination (§ 1.114).
§ 1.103(d) - for requesting deferred examination of an application.
§ 1.291(c)(5) - for processing a second or subsequent protest by the same real party in interest.
§ 3.81 - for a patent to issue to assignee, assignment submitted after payment of the issue fee.

Processing Fees Under 37 CFR 1.17(i)(2):

Fee $130 (small and micro entity discounts are not available for the 37 CFR 1.17(i)(2) processing fee)

For papers filed under:
§ 1.217 - for processing a redacted copy of a paper submitted in the file of an application in which a redacted copy was submitted for the patent application publication. **FEE CODE 1808**
§ 1.221 - for requesting voluntary publication or republication of an application. **FEE CODE 1803**

SUBMITTED BY

Signature	/ryan w. cagle/	Registration No. (Attorney/Agent) 47,468	Telephone 919-755-8157
Name (Print/Type)	Ryan W. Cagle		Date March 31, 2023

This collection of information is required by 37 CFR 1.17. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 5 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	John Howard Robinson	Nonprovisional Application Number (if known):	
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /ryan w. cagle/	Date March 31, 2023
Name (Print/Typed) Ryan W. Cagle	Practitioner Registration Number 47,468

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☐ *Total of _____ forms are submitted.

Privacy Act Statement

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
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Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
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NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	18/129,643
Filing Date	March 31, 2023
First Named Inventor	John Howard Robinson
Title	TOBACCO-CONTAINING SMOKING ARTICLE
Art Unit	Not yet assigned
Examiner Name	Not yet assigned
Attorney Docket Number	R60999 1400US.C13T1 (5839.9)

SIGNATURE of Applicant or Patent Practitioner

Signature	/ryan w. cagle/	Date (Optional)	
Name	Ryan W. Cagle	Registration Number	47,468
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)	RAI Strategic Holdings, Inc.		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 26158

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter to:

☑ The address associated with the above-mentioned Customer Number

OR

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OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

RAI STRATEGIC HOLDINGS, INC.

☐ Inventor or Joint Inventor (title not required below)
☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	Michael J Madigan	Date (Optional)	March 31, 2016
Name	Michael J. Madigan		
Title	Secretary		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Acknowledgement Receipt

EFS ID:	47776886
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	31-MAR-2023
Filing Date:	
Time Stamp:	17:55:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	R60999_1400US_C13_T1_POA_and_Coversheet.pdf	336813 394138575569cdd9334af57adcff23448008a563	no	2
Warnings:					

Information:	
Total Files Size (in bytes):	336813

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Robinson *et al.*	Confirmation No.:	4055
Appl. No.:	18/129,643	Group Art Unit:	*Not Yet Assigned*
Filed:	March 30, 2023	Examiner:	*Not Yet Assigned*
For:	TOBACCO-CONTAINING SMOKING ARTICLE		

Docket No.: R60999 1400US.C13.T1 (5803.9)
Customer No.: 26158

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SECOND PRELIMINARY AMENDMENT
37 CFR § 1.115

Sir:

Please enter this Preliminary Amendment before calculating the claim fee and amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims beginning on page 2 of this paper.

Remarks are on page 7 of this paper.

Amendments to the Claims:

1.-30. (Canceled)

31. (New) An electrically-powered, aerosol-generating smoking article comprising:

an outer housing having two ends;

a mouthpiece defined at one of the two ends;

an electrical power source arranged within the outer housing;

an electrical resistance heater positioned within the outer housing, the electrical resistance heater being configured for electrical connection with the electrical power source

a storage compartment defined within the outer housing, the storage compartment being configured for storage of a liquid aerosol-forming material and being arranged such that the liquid aerosol-forming material can be wicked into contact with the electrical resistance heater to volatilize the liquid aerosol-forming material;

an air passageway through at least a portion of the outer housing, the air passageway being arranged so that air drawn into the outer housing combines with volatilized liquid aerosol-forming material to produce an aerosol that can be drawn into the mouth of a user of the electrically-powered, aerosol-generating smoking article through the mouthpiece; and

a controller configured to activate current flow through the electrical resistance heater in response to a draw on the electrically-powered, aerosol-generating smoking article.

32. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment is arranged within the housing proximate the mouthpiece.

33. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment comprises a fibrous substrate.

34. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the aerosol that is produced passes at least partially through the storage compartment before exiting through the mouthpiece.

35. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment is configured as a cartridge.

36. (New) The electrically-powered, aerosol-generating smoking article of claim 35, wherein the cartridge is circumscribed with a wrapping material.

37. (New) The electrically-powered, aerosol-generating smoking article of claim 35, wherein the cartridge comprises a plastic material

38. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment is configured as a container for holding liquid.

39. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrical resistance heater is arranged in contact with the storage compartment.

40. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrical resistance heater is arranged proximate to an absorbent wicking material configured for transferring the liquid aerosol-forming material to the electrical resistance heater.

41. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein at least a portion of the electrical resistance heater extends into the storage compartment.

42. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrical resistance heater is configured to allow airflow therethrough.

43. (New) The electrically-powered, aerosol-generating smoking article of claim 31, further comprising a sensor adapted for sensing the draw by a user on the electrically-powered, aerosol-generating smoking article.

44. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the controller is configured to regulate the current flow through the electrical resistance heater during the draw on the electrically-powered, aerosol-generating smoking article.

45. (New) The electrically-powered, aerosol-generating smoking article of claim 31, further comprising an end cap defined at a second of the two ends.

46. (New) The electrically-powered, aerosol-generating smoking article of claim 45, wherein the electrical power source is arranged within the housing proximate the end cap.

47. (New) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrically-powered, aerosol-generating smoking article is generally rod-shaped.

48. (New) An electrically-powered, aerosol-generating smoking article comprising:

an outer housing;

an electrical power source arranged within the outer housing;

an electrical resistance heater positioned within the outer housing, the electrical resistance heater being configured for electrical connection with the electrical power source

a liquid storage arranged within the outer housing such that liquid aerosol-forming material in the liquid storage can be wicked into contact with the electrical resistance heater to volatilize the liquid aerosol-forming material;

an air passageway through at least a portion of the outer housing, the air passageway being arranged so that air drawn into the outer housing combines with volatilized liquid aerosol-forming material to produce an aerosol that can be drawn into the mouth of a user of the electrically-powered, aerosol-generating smoking article; and

a puff-actuated controller configured to regulate current flow through the electrical resistance heater in response to a draw on the electrically-powered, aerosol-generating smoking article.

49. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the puff-actuated controller comprises a sensor that senses the draw on the electrically-powered, aerosol-generating smoking article.

50. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the puff-actuated controller comprises additional control circuitry.

51. (New) The electrically-powered, aerosol-generating smoking article of claim 48, further comprising a mouthpiece attached to the outer housing.

52. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the liquid storage is configured as a container in which the liquid aerosol-forming material can be stored.

53. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the liquid storage is configured as an absorbent fibrous material.

54. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the aerosol that is produced passes at least partially through the storage before exiting through the electrically-powered, aerosol-generating smoking article.

55. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrical resistance heater is arranged in contact with the liquid storage.

56. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrical resistance heater is arranged proximate to an absorbent wicking material configured for transferring the liquid aerosol-forming material to the electrical resistance heater.

57. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein at least a portion of the electrical resistance heater extends into the liquid storage.

58. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrical resistance heater is configured to allow airflow therethrough.

59. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the outer housing comprises a mouthpiece defined at a first end thereof and an end cap defined at a second end thereof.

60. (New) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrically-powered, aerosol-generating smoking article is generally rod-shaped.

REMARKS

This preliminary amendment is submitted herewith to cancel claims 1-20 and add new claims 31-50. No new matter is added. As such, all of original claims 1-30 are canceled, and new claims 31-50 are pending.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 09-0528.

Respectfully submitted,

/ryan w. cagle/

Ryan W. Cagle
Registration No. 47,468

Customer No. 26158
Womble Bond Dickinson (US) LLP
Attn: Patent Docketing
P.O. Box 7037
Atlanta, GA 30357-0037
Tel Raleigh Office (919) 755-2100
Fax Raleigh Office (919) 755-2150

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON APRIL 3, 2023.

Electronic Patent Application Fee Transmittal

Application Number:	18129643
Filing Date:	
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Filer:	Ryan W. Cagle/Diann Gravius
Attorney Docket Number:	R60999 1400USC13T1(5803.9

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	10	100	1000
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1000**

Electronic Acknowledgement Receipt	
EFS ID:	47781086
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	03-APR-2023
Filing Date:	
Time Stamp:	13:03:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1000
RAM confirmation Number	E202343D03305963
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		R60999_1400US_C13T1_Second_Preliminary_Amendment.pdf	111306 acc274b09440d64dc6cfc07b4e57dc9811ec4ea0	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Preliminary Amendment	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	7

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38174 80c47bc62acb476b995d5b3c9be725d1a1413095	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	149480		

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/129,643	03/31/2023		2820	R60999 1400USC13T1(5803.9	30	2

CONFIRMATION NO. 4055

FILING RECEIPT

26158
WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

OC000000056124911

Date Mailed: 04/20/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

John Howard Robinson, Kernersville, NC;
David William Griffith, Jr., Winston-Salem, NC;
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Applicant(s)

RAI Strategic Holdings, Inc., Winston-Salem, NC;

Power of Attorney: The patent practitioners associated with Customer Number 26158

Domestic Priority data as claimed by applicant

This application is a CON of 17/673,424 02/16/2022
which is a CON of 16/271,443 02/08/2019
which is a CON of 15/879,268 01/24/2018 PAT 10,231,488
which is a CON of 15/286,087 10/05/2016 PAT 9,901,123
which is a CON of 14/527,287 10/29/2014 PAT 9,801,416
which is a CON of 13/297,983 11/16/2011 PAT 8,899,238
which is a CON of 12/763,890 04/20/2010 PAT 8,079,371
which is a CON of 11/550,634 10/18/2006 PAT 7,726,320

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/129,643**

Projected Publication Date: 07/27/2023

Non-Publication Request: No

Early Publication Request: No
Title

TOBACCO-CONTAINING SMOKING ARTICLE

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

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NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 18/129,643

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	320
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	700
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800
TOTAL CLAIMS (37 CFR 1.16(i))	30 minus 20 =	* 10			OR	x 100 =	1000
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 minus 3 =	*				x =	0
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1820

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

26158 7590 05/15/2023

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

EXAMINER	
CENTRAL, DOCKET	

ART UNIT	PAPER NUMBER
1747	

NOTIFICATION DATE	DELIVERY MODE
05/15/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

BostonDocket@wbd-us.com
IPDocketing@wbd-us.com

Decision Granting Request for Prioritized Examination (Track I)	**Application No.** 18/129,643	**Applicant(s)** Robinson et al.	
	Examiner FIKIRTE A GEREMEW	**Art Unit** OMBL	**AIA (FITF) Status** No

1. THE REQUEST FILED 31 March 2023 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination

A. ☑ for an original nonprovisional application (Track I).
B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination**. The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;

B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims** , or a multiple dependent claim;

C. filing a **request for continued examination** ;

D. filing a notice of appeal;

E. filing a request for suspension of action;

F. mailing of a notice of allowance;

G. mailing of a final Office action;

H. completion of examination as defined in 37 CFR 41.102; or

I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to FIKIRTE GEREMEW at (703) 756-1930. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

/FIKIRTE A GEREMEW/ PROGRAM SUPPORT ASSISTANT, OMBL	

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

26158 7590 06/21/2023

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

EXAMINER	
NGUYEN, PHU HOANG	
ART UNIT	**PAPER NUMBER**
1747	
NOTIFICATION DATE	**DELIVERY MODE**
06/21/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

BostonDocket@wbd-us.com
IPDocketing@wbd-us.com

Office Action Summary	Application No. 18/129,643	Applicant(s) Robinson et al.	
	Examiner PHU H NGUYEN	Art Unit 1747	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 4/3/2023.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 31-60 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 31-60 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Information Disclosure Statement

It is noted that the IDS filed 3/31/2023 contains an extremely large number of references for consideration by the Examiner. If the applicant and/or applicant's representative are aware of any particular reference or portion of a reference in the list which the examiner should take pay particular attention to it is requested that it be specifically pointed out in response to this Office action.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the

scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 31-60 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 10231488, claims 1-29 of U.S. Patent No. 9901123, claims 1-25 of U.S. Patent No. 9801416, claims 1-40 of U.S. Patent No. 8899238, claims 1-35 of U.S. Patent No. 8079371 and claims 1-9 of Patent No. 7726320. Although the claims at issue are not identical, they are not patentably distinct from each other because they have the same scope of invention with the same features of a smoking article has an outer housing, an electrical power source, resistance heating element, puff actuated controller and a rod-shaped carrier device.

Claims 31-60 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claim 31-59 of copending Application No. 16271443 (reference application) and claims 31-50 of copending Application No. 17673424. Although the claims at issue are not identical, they are not patentably distinct from each other because they have the same scope of invention with the same features of a smoking article has an outer housing,

an electrical power source, resistance heating element, controller and a rod-shaped carrier device.

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHU H NGUYEN whose telephone number is (571)272-5931. The examiner can normally be reached on M-F 9-5.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at http://www.uspto.gov/interviewpractice.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael H Wilson can be reached on 5712703882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PHU H NGUYEN/
Examiner, Art Unit 1747

.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	Art Unit
	PHU H NGUYEN	1747

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
See Search History	06/15/2023	P.N

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	Art Unit
	PHU H NGUYEN	1747

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/15/2023								
	31	✓								
	32	✓								
	33	✓								
	34	✓								
	35	✓								
	36	✓								
	37	✓								
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	59	✓								
	60	✓								

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
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L11	54	(L8 L7) and glycerin and extract	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2009/06/04 04:33 PM
L12	2	("20080092912").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2010/01/06 08:51 PM
L13	18	aerosol near2 material and cartridge and electrica$4 and tobacco and heat$4 near2 element	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2010/01/06 09:08 PM
L14	497	("2881770"|"20020000235"|"20020014453"|"20030075193"|"20030114298"|"20030131859"|"20030154993"|"20040084056"|"20040107973"|"20040134631"|"20040173229"|"20040194792"|"20040217023"|"20040226569"|"20040237984"|"20040255965"|"20040256253"|"20040261807"|"20050005947"|"20050016549"|"20050016556"|"20050049128"|"20050066983"|"20050066984"|"20050066986"|"20050076929"|"20050133051"|"20050133052"|"20050150786"|"20050194014"|"20050252693"|"20050274390"|"20060021624"|"20060025292"|"20070023056"|"20070190347"|"3101723"|"3217715"|"3258015"|"3263244"|"3308600"|"3347247"|"3356094"|"3370595"|"3419015"|"35164	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2010/01/06 09:13 PM

		17"|"3614956"|"364871 1"|"3738374"|"3844294" |"3878850"|"3931824"|" 3943941"|"3957563"|"3 972335"|"4044777"|"40 54145"|"4079742"|"417 4720"|"4201234"|"4219 031"|"4223597"|"42339 93"|"4280187"|"428167 0"|"4286604"|"4294353" |"4326544"|"4340072"|" 4347855"|"4391285"|"4 449541"|"4508525"|"45 34463"|"4700727"|"471 4082"|"4715497"|"4756 318"|"4771795"|"47933 65"|"4807809"|"482381 7"|"4836224"|"4848374" |"4852734"|"4874000"|" 4881556"|"4887619"|"4 893637"|"4893639"|"49 03714"|"4917121"|"491 7128"|"4920990"|"4924 883"|"4924886"|"49248 88"|"4938238"|"494787 4"|"4961438"|"4966171" |"4969476"|"4977908"|" 4989619"|"4991606"|"4 995405"|"5012829"|"50 20548"|"5022416"|"502 5814"|"5027836"|"5027 837"|"5033483"|"50405 51"|"5046514"|"505062 1"|"5052413"|"5056537" |"5060676"|"5065776"|" 5067499"|"5072744"|"5 074320"|"5074321"|"50 76295"|"5076296"|"507 6297"|"5088507"|"5092 353"|"5099861"|"51018 39"|"5103842"|"510583 1"|"5105834"|"5105835" |"5105836"|"5105837"|" 5105838"|"5115820"|"5 129409"|"5137034"|"51 39140"|"5146934"|"514 8821"|"5156170"|"5159 940"|"5159942"|"51599 44"|"5178167"|"518306 2"|"5203355"|"5211684" |"5220930"|"5224498"|" 5240014"|"5240016"|"5 247947"|"5261425"|"52 71419"|"5285798"|"530 3720"|"5327917"|"5345 955"|"5357984"|"53600 23"|"5369723"|"539690 9"|"5396911"|"5462073"					

		|"5469871"|"5533530"|"5546965"|"5551451"|"5560376"|"5568819"|"5588446"|"5593792"|"5595577"|"5598868"|"5622190"|"5699812"|"5706834"|"5711320"|"5715844"|"5718250"|"5727571"|"5778899"|"5819751"|"5829453"|"5865185"|"5874508"|"5878752"|"5880439"|"5902431"|"5915387"|"5934289"|"5938018"|"5944025"|"6089857"|"6095152"|"6164287"|"6182670"|"6229115"|"6367481"|"6378528"|"6397852"|"6408856"|"6530377"|"6537186"|"6578584"|"6584979"|"6595218"|"6615842"|"6631722"|"6656412"|"6730832"|"6761174"|"6779528"|"6789547"|"6805174"|"6814786"|"6823873"|"6848450"|"6907885"|"6913784"|"7004896").PN.					
L17	2	("20120060853").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/27 01:59 PM
L18	598	("2881770"|"20020000235"|"20020014453"|"20030075193"|"20030114298"|"20030131859"|"20030154993"|"20040084056"|"20040107973"|"20040134631"|"20040173229"|"20040194792"|"20040217023"|"20040226569"|"20040237984"|"20040255965"|"20040256253"|"20040261807"|"20050005947"|"20050016549"|"20050016556"|"20050049128"|"20050066983"|"20050066984"|"20050066986"|"20050076929"|"20050133051"|"20050133052"|"20050150786"|"20050194014"|"20050252693"|"20050274390"|"20060021624"|"20060025292"|"20070023056"|"20070190347"|"3101723"|"3217715"|"3258015"|"32	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 04:59 PM

		63244"|"3308600"|"334 7247"|"3356094"|"3370 595"|"3419015"|"35164 17"|"3614956"|"364871 1"|"3738374"|"3844294" |"3878850"|"3931824"|" 3943941"|"3957563"|"3 972335"|"4044777"|"40 54145"|"4079742"|"417 4720"|"4201234"|"4219 031"|"4223597"|"42339 93"|"4280187"|"428167 0"|"4286604"|"4294353" |"4326544"|"4340072"|" 4347855"|"4391285"|"4 449541"|"4508525"|"45 34463"|"4700727"|"471 4082"|"4715497"|"4756 318"|"4771795"|"47933 65"|"4807809"|"482381 7"|"4836224"|"4848374" |"4852734"|"4874000"|" 4881556"|"4887619"|"4 893637"|"4893639"|"49 03714"|"4917121"|"491 7128"|"4920990"|"4924 883"|"4924886"|"49248 88"|"4938238"|"494787 4"|"4961438"|"4966171" |"4969476"|"4977908"|" 4989619"|"4991606"|"4 995405"|"5012829"|"50 20548"|"5022416"|"502 5814"|"5027836"|"5027 837"|"5033483"|"50405 51"|"5046514"|"505062 1"|"5052413"|"5056537" |"5060676"|"5065776"|" 5067499"|"5072744"|"5 074320"|"5074321"|"50 76295"|"5076296"|"507 6297"|"5088507"|"5092 353"|"5099861"|"51018 39"|"5103842"|"510583 1"|"5105834"|"5105835" |"5105836"|"5105837"|" 5105838"|"5115820"|"5 129409"|"5137034"|"51 39140"|"5146934"|"514 8821"|"5156170"|"5159 940"|"5159942"|"51599 44"|"5178167"|"518306 2"|"5203355"|"5211684" |"5220930"|"5224498"|" 5240014"|"5240016"|"5 247947"|"5261425"|"52 71419"|"5285798"|"530 3720"|"5327917"|"5345					

		955"|"5357984"|"53600 23"|"5369723"|"539690 9"|"5396911"|"5462073" |"5469871"|"5533530"|" 5546965"|"5551451"|"5 560376"|"5568819"|"55 88446"|"5593792"|"559 5577"|"5598868"|"5622 190"|"5699812"|"57068 34"|"5711320"|"571584 4"|"5718250"|"5727571" |"5778899"|"5819751"|" 5829453"|"5865185"|"5 874508"|"5878752"|"58 80439"|"5902431"|"591 5387"|"5934289"|"5938 018"|"5944025"|"60898 57"|"6095152"|"616428 7"|"6182670"|"6229115" |"6367481"|"6378528"|" 6397852"|"6408856"|"6 530377"|"6537186"|"65 78584"|"6584979"|"659 5218"|"6615842"|"6631 722"|"6656412"|"67308 32"|"6761174"|"677952 8"|"6789547"|"6805174" |"6814786"|"6823873"|" 6848450"|"6907885"|"6 913784"|"7004896").PN .					
L19	38	L18 and cartridge	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 04:59 PM
L20	29	A24F47/$ and cartridge and substrate	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 05:00 PM
L22	4	(("20120060853") or ("7726320")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 05:02 PM
L24	21	A24F$/$ and polyethylene near2 terephthalate and electronic	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:14 PM
L27	18	polyethylene near2 terephthalate and electronic and absorbent and tobacco and smoking	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:17 PM
L28	359	("20030131859"|"20040 173229"|"20050016549 "|"20050066986"|"2006 0185687"|"2006019651 8"|"20070062549"|"325 8015"|"3356094"|"3516 417"|"3614956"|"37383	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2014/01/29 05:17 PM

		74"|"3844294"|"387885 0"|"3931824"|"3943941" |"4044777"|"4079742"|" 4190046"|"4219031"|"4 233993"|"4284089"|"42 86604"|"4326544"|"434 0072"|"4347855"|"4391 285"|"4635651"|"47007 27"|"4714082"|"473521 7"|"4756318"|"4771795" |"4793365"|"4800903"|" 4807809"|"4819665"|"4 823817"|"4836225"|"48 48374"|"4874000"|"489 2109"|"4893639"|"4917 121"|"4917128"|"49209 90"|"4924886"|"494787 4"|"4961438"|"4966171" |"4969476"|"4972855"|" 4977908"|"4991606"|"5 020548"|"5025814"|"50 33483"|"5040551"|"505 0621"|"5060667"|"5060 671"|"5060676"|"50657 76"|"5072744"|"507432 1"|"5076296"|"5076297" |"5092353"|"5099861"|" 5101839"|"5105835"|"5 105836"|"5105837"|"51 05838"|"5115820"|"514 6934"|"5148821"|"5159 940"|"5159942"|"51781 67"|"5183062"|"520335 5"|"5211684"|"5224498" |"5240014"|"5240016"|" 5271419"|"5285798"|"5 293883"|"5327917"|"53 45955"|"5357984"|"536 0023"|"5369723"|"5388 574"|"5396911"|"55335 30"|"5551451"|"558844 6"|"5593792"|"5595577" |"5598868"|"5692525"|" 5715844"|"5743251"|"5 778899"|"5799663"|"58 19751"|"5829453"|"586 5185"|"5878752"|"5880 439"|"5915387"|"59342 89"|"6033623"|"605317 6"|"6089857"|"6095152" |"6146934"|"6164287"|" 6182670"|"6234167"|"6 289898"|"6397852"|"64 08856"|"6516796"|"653 2965"|"6537186"|"6578 584"|"6591841"|"65986 07"|"6615840"|"673083 2"|"6823873"|"7117867"					

		).PN.					
L31	713	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:20 PM
L32	12	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber) and base near2 web	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:20 PM
L33	65	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber) and absorbent	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:34 PM
L34	28	(polyethylene near2 terephthalate near2 fiber) same bio	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 12:35 AM
L38	2	("3486508").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 01:31 AM
L40	22	A24F$/$ and paper same "metallic foil"	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 01:32 AM
L42	14	A24F$/$ and paper and base near2 web and calcium near carbonate	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/03 03:41 PM
L43	2	("8079371").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/03 09:22 PM
L44	7	cigarette near2 paper and carbon near2 fiber and carbon near2 particle and carbonate near2 particle	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:31 PM
L45	0	(A24B15/165).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:32 PM
L46	2	(A24B15/14).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:32 PM
L47	0	(A24D1/18).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:33 PM
L49	142	("1771366"|"2057353"|"2104266"|"20020146242"|"20030226837"|"20040129280"|"20040200488"|"20040226568"|"20050016550"|"20060016453"|"20060196518"|"20070074734"|"20070102013"|"20070215167"|"3200819"|"4303083"|"4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2014/09/29 11:59 PM

		907606"|"4945931"|"4986286"|"5019122"|"5042510"|"5093894"|"5261424"|"5353813"|"5408574"|"5468936"|"5498850"|"5515842"|"5530225"|"5564442"|"5649554"|"5666977"|"5687746"|"5726421"|"5727571"|"5865186"|"5894841"|"5954979"|"5967148"|"6095153"|"6125853"|"6155268"|"6164287"|"6196218"|"6196219"|"6601776"|"6772756"|"6803545"|"6854461"|"6854470"|"7293565").PN.					
L50	1	L49 and glycerin and (electrical electronic) and controller	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/30 12:00 AM
L53	122	smoking near2 article and tobacco near extract and heater	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 08:40 PM
L54	2	("8899238").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:47 PM
L55	0	(smoking and puff and carrier and wick and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:55 PM
L56	1	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:55 PM
L58	4	(("7726320") or ("8899238")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:42 AM
L59	2	("20150047656").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:46 AM
L60	6	(("7726320") or ("8899238") or ("8079371")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 02:00 AM
L61	2	("20150047656").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:33 PM
L62	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:46 PM
L64	921	("1771366"|"2057353"|"2104266"|"20020146242"|"20030131859"|"20030226837"|"200400205	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/19 11:29 PM

		08"|"20040118401"|"20 040129280"|"20040173 229"|"20040198127"|"2 0040200488"|"2004022 6568"|"20050016549"|" 20050016550"|"200500 66986"|"20060016543"| "20060185687"|"20060 196518"|"20070062549 "|"20070074734"|"2007 0102013"|"2007021516 7"|"20070267031"|"200 80085103"|"200800929 12"|"20080257374"|"20 090095311"|"20090095 312"|"20090126745"|"2 0090188490"|"2009023 0117"|"20090272379"|" 20090283103"|"200903 20863"|"20100043809"| "20100083959"|"20100 200006"|"20100229881 "|"20100242974"|"2010 0307518"|"2010031390 1"|"20110005535"|"201 10011396"|"201100363 63"|"20110036365"|"20 110094523"|"20110126 848"|"20110155153"|"2 0110155718"|"2011016 8194"|"20110265806"|" 20110309157"|"201200 42885"|"20120060823"| "20120060853"|"20120 111347"|"20120132643 "|"20120227752"|"2012 0231464"|"2012026092 7"|"20120279512"|"201 20318882"|"201300370 41"|"20130056013"|"20 130081625"|"20130081 642"|"20130192619"|"2 0130255702"|"2013030 6084"|"20130319439"|" 20130340750"|"201303 40775"|"20140000638"| "20140060554"|"20140 060555"|"20140096781 "|"20140096782"|"2014 0109921"|"2014015758 3"|"20140209105"|"201 40253144"|"201402614 08"|"20140261486"|"20 140261487"|"20140261 495"|"20140270727"|"2 0140270729"|"2014027 0730"|"20140345631"|" 3200819"|"3258015"|"3					

		486508"|"3516417"|"36 14956"|"3738274"|"376 6000"|"3844294"|"3878 850"|"3931824"|"39439 41"|"4044777"|"407974 2"|"4190046"|"4219031" |"4233993"|"4284089"|" 4286604"|"4303083"|"4 326544"|"4340072"|"43 47855"|"4391285"|"463 6561"|"4700727"|"4714 082"|"4735217"|"47563 18"|"4771995"|"479336 5"|"4800903"|"4807809" |"4819665"|"4823817"|" 4836225"|"4848374"|"4 874000"|"4892109"|"48 93639"|"4907606"|"491 7121"|"4917128"|"4920 990"|"4922901"|"49248 86"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4969476"|" 4972855"|"4977908"|"4 981522"|"4986286"|"50 19122"|"5042510"|"509 3894"|"5159942"|"5178 167"|"5183062"|"52033 55"|"5211684"|"522449 8"|"5240014"|"5240016" |"5249586"|"5261424"|" 5271419"|"5285798"|"5 293883"|"5322075"|"53 27917"|"5345955"|"535 3813"|"5357984"|"5360 023"|"5369723"|"53721 48"|"5388594"|"539691 1"|"5408574"|"5468936" |"5498850"|"5505214"|" 5515842"|"5530225"|"5 533530"|"5564442"|"55 88446"|"5593792"|"559 5577"|"5598868"|"5649 554"|"5665262"|"56669 77"|"5687746"|"569252 5"|"5715844"|"5726421" |"5727571"|"5743251"|" 5778899"|"5799663"|"5 819751"|"5819756"|"58 29453"|"5865185"|"586 5186"|"5878752"|"5880 439"|"5894841"|"59153 87"|"5934289"|"595497 9"|"5967148"|"0551451" |"6033623"|"6040560"|" 6053176"|"6089857"|"6 095152"|"6095153"|"61 25853"|"6146287"|"615					

		5268"|"6164287"|"6182670"|"6196218"|"6196219"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6688313"|"6730832"|"6772756"|"6803546"|"6823873"|"6854461"|"6854470"|"6994096"|"7117867"|"7293565"|"7513253"|"7775459"|"7832410"|"7845359"|"7896006"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069").PN.					
L65	7	L64 and carrier and wick and extract and mainstream and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/20 12:04 AM
L66	1	("15286087").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/09/28 10:53 PM
L69	3	("5666978").PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	ON	ON	2018/01/12 12:27 AM
L70	76	ep near2 "0503767"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/01/12 12:28 AM
L71	3	ep near2 "2949114"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/01/12 12:30 AM
L74	3	"15286087"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/03/19 10:20 AM
L77	9	"14527287"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/03/19 10:21 AM
L78	216	A24F$/$ and polyethylene near2 terephthalate and electronic	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2018/05/23 12:10 AM
L79	33	(("9901123") or ("9801416") or ("8899238") or ("8079371") or ("7726320")).PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	ON	ON	2018/05/23 12:11 AM
L80	3	("5692525").PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	OFF	OFF	2018/05/24 10:28 AM
L83	593	("4924886"|"4945931"|"	(US-PGPUB; USPAT;	OR	OFF	OFF	2018/10/13

		4947874"|"4947875"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4981522"|"4986286"|"4991606"|"5019122"|"5020548"|"5025814"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5099861"|"5101839"|"5105835"|"5105836"|"5105838"|"5115820"|"5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5249586"|"5261424"|"5271419"|"5285798"|"5293883"|"5322075"|"5327917"|"5345955"|"5353813"|"5357984"|"5360023"|"5369723"|"5388574"|"5388594"|"5396911"|"5408574"|"5468936"|"5498850"|"5505214"|"5515842"|"5530225"|"5533530"|"5551451"|"5564442"|"5588446"|"5593792"|"5595577"|"5598868"|"5649554"|"5665262"|"5666977"|"5666978"|"5687746"|"5692525"|"5715844"|"5726421"|"5727571"|"5743251"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5954979"|"5967148"|"6033623"|"6040560"|"6053176"|"6089857"|"6095152"|"6095153"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"66	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:18 PM

		88313"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6994096"|"7117867"|"7293565"|"7513253"|"7775459"|"7832410"|"7845359"|"7896006"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").PN.					
L84	1137	("0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1517584"|"1879128"|"20010026788"|"20030011579"|"20030033055"|"20030108342"|"20030189826"|"20040149282"|"20040234916"|"20040261802"|"20050115243"|"20060093977"|"20070030306"|"20110120482"|"2032695"|"2086192"|"2140516"|"2461664"|"2472282"|"2545851"|"2959664"|"3060429"|"3203025"|"3234357"|"3281637"|"3292635"|"3385303"|"3428053"|"3431393"|"3502588"|"3651240"|"3685521"|"3685522"|"3747120"|"3860012"|"3933643"|"3934117"|"4016878"|"4207457"|"4219032"|"4270552"|"4506682"|"4531178"|"4589428"|"4629665"|"4637407"|"4676237"|"4771295"|"4771796"|"4797692"|"4878506"|"4941486"|"4945448"|"4945929"|"4968263"|"4990939"|"5005593"|"5124200"|"5129409"|"5177424"|"5224265"|"5255674"|"5266746"|"5327915"|"5372148"|"5497791"|"5646666"|"5703633"|"5732685"|"5745985"|"5944025"|"5996589"|"6062213"|"6102036"|"6217315"|"6232784"|"6285017"|"6311561"|"6322268"|"6476151"|"6501052"|"6620659"|"6690121"|"6719443"|"6	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 03:18 PM

		722763"|"6885814"|"69 38986"|"7159464"|"728 4424"|"7337782"|"7445 007"|"7997280"|"00000 05"|"0726320"|"151468 2"|"1771366"|"2002014 6242"|"20030131859"|" 20030226837"|"200400 20508"|"20040118401"| "20040129280"|"20040 173229"|"20040198127 "|"20040200488"|"2004 0226568"|"2005001654 9"|"20050016550"|"200 50066986"|"200600164 53"|"20060185687"|"20 060196518"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20080085103"|"200800 92912"|"20080257367"| "20080276947"|"20080 302374"|"20090095311 "|"20090095312"|"2009 0126745"|"2009018849 0"|"20090230117"|"200 90272379"|"200902831 03"|"20090320863"|"20 100043809"|"20100083 959"|"20100200006"|"2 0100229881"|"2010024 2974"|"20100307518"|" 20100313901"|"201100 05535"|"20110011396"| "20110036363"|"20110 036365"|"20110094523 "|"20110126848"|"2011 0155153"|"2011015571 8"|"20110168194"|"201 10265806"|"201103091 57"|"20120042885"|"20 120060853"|"20120111 347"|"20120132643"|"2 0120227752"|"2012023 1464"|"20120260927"|" 20120279512"|"201203 18882"|"20130037041"| "20130056013"|"20130 081625"|"20130081642 "|"20130192619"|"2013 0255702"|"2013030608 4"|"20130319439"|"201 30340750"|"201303407 75"|"20140000638"|"20 140060554"|"20140060 555"|"20140096781"|"2 0140096782"|"2014010					

		9921"|"20140157583"|"20140209105"|"20140253144"|"20140261408"|"20140261486"|"20140261487"|"20140261495"|"20140270727"|"20140270729"|"20140270730"|"20140345631"|"2057353"|"2104266"|"3200819"|"3258015"|"3356094"|"3479561"|"3486508"|"3516417"|"3614956"|"3738374"|"3766000"|"3844294"|"3878850"|"3931824"|"3943941"|"4044777"|"4079742"|"4190046"|"4219031"|"4233993"|"4284089"|"4286604"|"4303083"|"4326544"|"4340072"|"4347855"|"4391285"|"4635651"|"4700727"|"4714082"|"4735217"|"4756318"|"4771795"|"4793365"|"4800903"|"4807809"|"4819665"|"4823817"|"4836225"|"4848374"|"4874000"|"4892109"|"4893639"|"4907606"|"4917121"|"4917128"|"4920990"|"4922901").PN.					
L86	593	("4924886"|"4945931"|"4947874"|"4947875"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4981522"|"4986286"|"4991606"|"5019122"|"5020548"|"5025814"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5099861"|"5101839"|"5105835"|"5105836"|"5105838"|"5115820"|"5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5249586"|"5261424"|"5271419"|"5285798"|"5293883"|"5322075"|"5327917"|"5345955"|"5353813"|"53	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM

		57984"|"5360023"|"536 9723"|"5388574"|"5388 594"|"5396911"|"54085 74"|"5468936"|"549885 0"|"5505214"|"5515842" |"5530225"|"5533530"|" 5551451"|"5564442"|"5 588446"|"5593792"|"55 95577"|"5598868"|"564 9554"|"5665262"|"5666 977"|"5666978"|"56877 46"|"5692525"|"571584 4"|"5726421"|"5727571" |"5743251"|"5778899"|" 5799663"|"5819751"|"5 819756"|"5829453"|"58 65185"|"5865186"|"587 8752"|"5880439"|"5894 841"|"5915387"|"59342 89"|"5954979"|"596714 8"|"6033623"|"6040560" |"6053176"|"6089857"|" 6095152"|"6095153"|"6 125853"|"6146934"|"61 55268"|"6164287"|"618 2670"|"6196218"|"6196 219"|"6234167"|"62898 98"|"6397852"|"640885 6"|"6516796"|"6532965" |"6537186"|"6578584"|" 6591841"|"6598607"|"6 601776"|"6615840"|"66 88313"|"6730832"|"677 2756"|"6803545"|"6823 873"|"6854461"|"68544 70"|"6994096"|"711786 7"|"7293565"|"7513253" |"7775459"|"7832410"|" 7845359"|"7896006"|"8 079371"|"8127772"|"83 14591"|"8365742"|"840 2976"|"8499766"|"8528 569"|"8550069"|"88992 38").PN.					
L87	1137	("0438310"|"0705919"|" 0780087"|"1016844"|"1 084304"|"1147416"|"13 47631"|"1446087"|"151 7584"|"1879128"|"2001 0026788"|"2003001157 9"|"20030033055"|"200 30108342"|"200301898 26"|"20040149282"|"20 040234916"|"20040261 802"|"20050115243"|"2 0060093977"|"2007003 0306"|"20110120482"|" 2032695"|"2086192"|"2	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM

		140516"|"2461664"|"24 72282"|"2545851"|"295 9664"|"3060429"|"3203 025"|"3234357"|"32816 37"|"3292635"|"338530 3"|"3428053"|"3431393" |"3502588"|"3651240"|" 3685521"|"3685522"|"3 747120"|"3860012"|"39 33643"|"3934117"|"401 6878"|"4207457"|"4219 032"|"4270552"|"45066 82"|"4531178"|"458942 8"|"4629665"|"4637407" |"4676237"|"4771295"|" 4771796"|"4797692"|"4 878506"|"4941486"|"49 45448"|"4945929"|"496 8263"|"4990939"|"5005 593"|"5124200"|"51294 09"|"5177424"|"522426 5"|"5255674"|"5266746" |"5327915"|"5372148"|" 5497791"|"5646666"|"5 703633"|"5732685"|"57 45985"|"5944025"|"599 6589"|"6062213"|"6102 036"|"6217315"|"62327 84"|"6285017"|"631156 1"|"6322268"|"6476151" |"6501052"|"6620659"|" 6690121"|"6719443"|"6 722763"|"6885814"|"69 38986"|"7159464"|"728 4424"|"7337782"|"7445 007"|"7997280"|"00000 05"|"0726320"|"151468 2"|"1771366"|"2002014 6242"|"20030131859"|" 20030226837"|"200400 20508"|"20040118401"| "20040129280"|"20040 173229"|"20040198127 "|"20040200488"|"2004 0226568"|"2005001654 9"|"20050016550"|"200 50066986"|"200600164 53"|"20060185687"|"20 060196518"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20080085103"|"200800 92912"|"20080257367"| "20080276947"|"20080 302374"|"20090095311 "|"20090095312"|"2009 0126745"|"2009018849					

		0"|"20090230117"|"200 90272379"|"200902831 03"|"20090320863"|"20 100043809"|"20100083 959"|"20100200006"|"2 0100229881"|"2010024 2974"|"20100307518"|" 20100313901"|"201100 05535"|"20110011396"| "20110036363"|"20110 036365"|"20110094523 "|"20110126848"|"2011 0155153"|"2011015571 8"|"20110168194"|"201 10265806"|"201103091 57"|"20120042885"|"20 120060853"|"20120111 347"|"20120132643"|"2 0120227752"|"2012023 1464"|"20120260927"|" 20120279512"|"201203 18882"|"20130037041"| "20130056013"|"20130 081625"|"20130081642 "|"20130192619"|"2013 0255702"|"2013030608 4"|"20130319439"|"201 30340750"|"201303407 75"|"20140000638"|"20 140060554"|"20140060 555"|"20140096781"|"2 0140096782"|"2014010 9921"|"20140157583"|" 20140209105"|"201402 53144"|"20140261408"| "20140261486"|"20140 261487"|"20140261495 "|"20140270727"|"2014 0270729"|"2014027073 0"|"20140345631"|"205 7353"|"2104266"|"3200 819"|"3258015"|"33560 94"|"3479561"|"348650 8"|"3516417"|"3614956" |"3738374"|"3766000"|" 3844294"|"3878850"|"3 931824"|"3943941"|"40 44777"|"4079742"|"419 0046"|"4219031"|"4233 993"|"4284089"|"42866 04"|"4303083"|"432654 4"|"4340072"|"4347855" |"4391285"|"4635651"|" 4700727"|"4714082"|"4 735217"|"4756318"|"47 71795"|"4793365"|"480 0903"|"4807809"|"4819 665"|"4823817"|"48362					

		25"|"4848374"|"4874000"|"4892109"|"4893639"|"4907606"|"4917121"|"4917128"|"4920990"|"4922901").PN.					
L88	9	(L87 L86) and wicked and tobacco	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM
L90	881	("0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"20010026788"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040173229"|"20040198127"|"20040200488"|"20040226568"|"20040234916"|"20040261802"|"20050016549"|"20050016550"|"20050066986"|"20050115243"|"20060016453"|"20060093977"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20080085103"|"20080092912"|"20080257367"|"20080276947"|"20080302374"|"20090002301"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090272379"|"20090283103"|"20090320863"|"20100043809"|"20100083959"|"20100200006"|"20100229881"|"20100242974"|"20100307518"|"20100313901"|"20110005535"|"20110011396"|"20110036363"|"20110036365"|"20110094523"|"20110120482"|"20110126848"|"20110155153"|"20110155718"|"2011016819	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/20 12:47 PM

		4"|"20110265806"|"201 10309157"|"201200428 85"|"20120060853"|"20 120111347"|"20120132 643"|"20120227752"|"2 0120231464"|"2012026 0927"|"20120279512"|" 20120318882"|"201300 37041"|"20130056013"| "20130081625"|"20130 081642"|"20130192619 "|"20130255702"|"2013 0306084"|"2013031943 9"|"20130340750"|"201 30340775"|"201400006 38"|"20140060554"|"20 140060555"|"20140096 781"|"20140096782"|"2 0140109921"|"2014015 7583"|"20140209105"|" 20140253144"|"201402 61408"|"20140261486"| "20140261487"|"20140 261495"|"20140270727 "|"20140270729"|"2014 0270730"|"2014034563 1"|"2032695"|"2057353" |"2086192"|"2104266"|" 2140516"|"2461664"|"2 472282"|"2545851"|"29 59664"|"3060429"|"320 0819"|"3203025"|"3234 357"|"3258015"|"32816 37"|"3292635"|"335609 4"|"3385303"|"3428053" |"3431393"|"3479561"|" 3486508"|"3502588"|"3 516417"|"3614956"|"36 51240"|"3685521"|"368 5522"|"3738374"|"3747 120"|"3766000"|"38442 94"|"3860012"|"387885 0"|"3931824"|"3933643" |"3934117"|"3943941"|" 4016878"|"4044777"|"4 079742"|"4190046"|"42 07457"|"4219031"|"421 9032"|"4233993"|"4270 552"|"4284089"|"42866 04"|"4303083"|"432654 4"|"4340072"|"4347855" |"4391285"|"4506682"|" 4531178"|"4589428"|"4 629665"|"4635651"|"46 37407").PN.				
L91	854	("4676237"|"4700727"|" 4714082"|"4735217"|"4 756318"|"4771295"|"47	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	OFF	2019/05/20 12:48 PM

		71795"|"4771796"|"479 3365"|"4797692"|"4800 903"|"4807809"|"48196 65"|"4823817"|"483622 5"|"4848374"|"4874000" |"4878506"|"4892109"|" 4893639"|"4907606"|"4 917121"|"4917128"|"49 20990"|"4922901"|"492 4886"|"4941486"|"4945 448"|"4945929"|"49459 31"|"4947874"|"494787 5"|"4961438"|"4966171" |"4968263"|"4969476"|" 4972855"|"4977908"|"4 981522"|"4986286"|"49 90939"|"4991606"|"500 5593"|"5019122"|"5020 548"|"5025814"|"50334 83"|"5040551"|"504251 0"|"5046514"|"5050621" |"5060667"|"5060671"|" 5060676"|"5065776"|"5 072744"|"5074321"|"50 76296"|"5076297"|"509 2353"|"5093894"|"5099 861"|"5101839"|"51058 35"|"5105836"|"510583 7"|"5105838"|"5115820" |"5124200"|"5129409"|" 5144962"|"5146934"|"5 148821"|"5159940"|"51 59942"|"5177424"|"517 8167"|"5183062"|"5203 355"|"5211684"|"52242 65"|"5224498"|"524001 4"|"5240016"|"5249586" |"5255674"|"5261424"|" 5266746"|"5271419"|"5 285798"|"5293883"|"53 22075"|"5327915"|"532 7917"|"5345955"|"5353 813"|"5357984"|"53600 23"|"5369723"|"537214 8"|"5388574"|"5388594" |"5396911"|"5408574"|" 5468936"|"5497791"|"5 498850"|"5505214"|"55 15842"|"5530225"|"553 3530"|"5551451"|"5564 442"|"5588446"|"55937 92"|"5595577"|"559886 8"|"5646666"|"5649554" |"5665262"|"5666977"|" 5666978"|"5687746"|"5 692525"|"5703633"|"57 15844"|"5726421"|"572 7571"|"5732685"|"5743	IBM_TDB)				

		251"|"5745985"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5944025"|"5954979"|"5967148"|"5996589"|"6033623"|"6040560"|"6053176"|"6062213"|"6089857"|"6095152"|"6095153"|"6102036"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").PN.					
L92	8	(("20180146713") or ("10231488")).PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/20 01:10 PM
L93	258	("1771336" | "1968509" | "2057353" | "2104266" | "2442004" | "2974669" | "3200819" | "3255760" | "3363633" | "3402723" | "3482580" | "3496336" | "3591753" | "3608560" | "3738374" | "3744496" | "3804100" | "3889690" | "4016061" | "4068672" | "4077784" | "4131119"	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/05/21 03:10 PM

		| "4141369" | "4164230" | "4193411" | "4194108" | "4203025" | "4215708" | "4219032" | "4246913" | "4256945" | "4259564" | "4259970" | "4303083" | "4319591" | "4393884" | "4431903" | "4436100" | "4463247" | "4505282" | "4510950" | "4562337" | "4570646" | "4580583" | "4621649" | "4623401" | "4629604" | "4637407" | "4659912" | "4682010" | "4686353" | "4692590" | "4694824" | "4735217" | "4771796" | "4776353" | "4837421" | "4846199" | "4848376" | "4874924" | "4877989" | "4922901" | "4945931" | "4947874" | "4947875" | "4966171" | "4981522" | "4991606" | "4998541" | "5016656" | "5040552" | "5042510" | "5060671" | "5076296" | "5093894" | "5095921" | "5144962" | "5159940" | "5179966" | "5188130" | "5224498" | "5235157" | "5249586" | "5269327" | "5274214" | "5285050" | "5388594" | "5479948").PN. OR ("5692525").URPN.					
L94	65	L93 and wick	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/05/21 03:11 PM
L95	2245	electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:54 PM
L97	218	131/$.ccls. and electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L98	205	128/$.ccls. and electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L99	32	128/$.ccls. and electrical near2 resistance and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L100	93	131/$.ccls. and electrical near2	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	OFF	OFF	2019/05/21 05:56 PM

		resistance and mouth and liquid and aerosol and cartridge	JPO; DERWENT; IBM_TDB)				
L101	22	("2057353").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:00 PM
L102	218	("2057353").URPN.	(USPAT)	OR	OFF	OFF	2019/05/21 06:01 PM
L104	147	L102 and mouth	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:01 PM
L105	137	L102 and mouth and liquid	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:03 PM
L106	98	L102 and mouth and liquid and wick	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:03 PM
L107	640	electronic near2 cigarette and "hon"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:33 AM
L108	198	electronic near2 cigarette and "hon" and channel	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:34 AM
L109	120	electronic near2 cigarette and "hon" and channel and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:34 AM
L110	2	"20190166917"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/11/12 02:22 PM
L111	4	("5692525").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 01:56 AM
L112	7	("10231488").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 02:37 AM
L113	103397	aerosol and cartridge and liquid ane heat$4 and mouthpiece	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 03:51 PM
L115	949	aerosol and cartridge and liquid and electrical near2 resistance and path	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/01 01:46 AM

L116	71	(131/$.ccls. 128/$.ccls.) and aerosol and cartridge and liquid and electrical near2 resistance and path	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/01 01:47 AM
L117	4	("4583559").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:49 PM
L118	571	("4168712"|"4583559"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"20010026788"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040173229"|"20040198127"|"20040200488"|"20040226568"|"20040234916"|"20040261802"|"20050016549"|"20050016550"|"20050066986"|"20050115243"|"20060016453"|"20060093977"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20080085103"|"20080092912"|"20080257367"|"20080276947"|"20080302374"|"20090002301"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090272379"|"20090283103"|"20090320863"|"20100043809"|"20100083959"|"20100200006"|"20100229881"|"20100242974"|"20100307518"|"20100313901"|"20110005535"|"20110011396"|"20110036363"|"20110036365"|"20110094523"|"20110120482"|"20110126848"|"20110155153"|"20110	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:52 PM

		155718"|"20110168194"|"20110265806"|"20110309157"|"20120042885"|"20120060853"|"20120111347"|"20120132643"|"20120227752"|"20120231464"|"20120260927"|"20120279512"|"20120318882"|"20130037041"|"20130056013"|"20130081625"|"20130081642"|"20130192619"|"20130255702"|"20130306084"|"20130319439"|"20130340750"|"20130340775"|"20140000638"|"20140060554"|"20140060555"|"20140096781"|"20140096782"|"20140109921"|"20140157583"|"20140209105"|"20140253144"|"20140261408"|"20140261486"|"20140261487"|"20140261495"|"20140270727"|"20140270729"|"20140270730"|"20140345631"|"2032695"|"2057353"|"2086192"|"2104266"|"2140516"|"2461664"|"2472282"|"2545851").PN.					
L119	1205	("2959664"|"3060429"|"3200819"|"3203025"|"3234357"|"3258015"|"3281637"|"3292635"|"3356094"|"3385303"|"3428053"|"3431393"|"3479561"|"3486508"|"3502588"|"3516417"|"3614956"|"3651240"|"3685521"|"3685522"|"3738374"|"3747120"|"3766000"|"3844294"|"3860012"|"3878850"|"3931824"|"3933643"|"3934117"|"3943941"|"4016878"|"4044777"|"4079742"|"4190046"|"4207457"|"4219031"|"4219032"|"4233993"|"4270552"|"4284089"|"4286604"|"4303083"|"4326544"|"4340072"|"4347855"|"4391285"|"4506682"|"4531178"|"4589428"|"4629665"|"4635651"|"4637407"|"4676237"|"4700727"|"4714082"|"4735217"|"4756318"|"47	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:52 PM

		71295"|"4771795"|"477 1796"|"4793365"|"4797 692"|"4800903"|"48078 09"|"4819665"|"482381 7"|"4836225"|"4848374" |"4874000"|"4878506"|" 4892109"|"4893639"|"4 907606"|"4917121"|"49 17128"|"4920990"|"492 2901"|"4924886"|"4941 486"|"4945448"|"49459 29"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4968263"|" 4969476"|"4972855"|"4 977908"|"4981522"|"49 86286"|"4990939"|"499 1606"|"5005593"|"5019 122"|"5020548"|"50258 14"|"5033483"|"504055 1"|"5042510"|"5046514" |"5050621"|"5060667"|" 5060671"|"5060676"|"5 065776"|"5072744"|"50 74321"|"5076296"|"507 6297"|"5092353"|"5093 894"|"5099861"|"51018 39"|"5105835"|"510583 6"|"5105837"|"5105838" |"5115820"|"5124200"|" 5129409"|"5144962"|"5 146934"|"5148821"|"51 59940"|"5159942"|"517 7424"|"5178167"|"5183 062"|"5203355"|"52116 84"|"5224265"|"522449 8"|"5240014"|"5240016" |"5249586"|"5255674"|" 5261424"|"5266746"|"5 271419"|"5285798"|"52 93883"|"5322075"|"532 7915"|"5327917"|"5345 955"|"5353813"|"53579 84"|"5360023"|"536972 3"|"5372148"|"5388574" |"5388594"|"5396911"|" 5408574"|"5468936"|"5 497791"|"5498850"|"55 05214"|"5515842"|"553 0225"|"5533530"|"5551 451"|"5564442"|"55884 46"|"5593792"|"559557 7"|"5598868"|"5646666" |"5649554"|"5665262"|" 5666977"|"5666978"|"5 687746"|"5692525"|"57 03633"|"5715844"|"572 6421"|"5727571"|"5732					

		685"|"5743251"|"5745985"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5944025"|"5954979"|"5967148"|"5996589"|"6033623"|"6040560"|"6053176"|"6062213"|"6089857"|"6095152"|"6095153"|"6102036"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").pn.					
L120	92	(L118 L119) and cartridge and liquid and heat$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:53 PM
L121	68	L120 and battery	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:54 PM
L122	378	("2005/0016550").URPN.	(USPAT)	OR	OFF	OFF	2020/05/02 10:02 PM
L123	574	("4168712"|"4583559"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM

		682"|"1517584"|"17713 66"|"1879128"|"200100 26788"|"20020146242"| "20030011579"|"20030 033055"|"20030108342 "|"20030131859"|"2003 0189826"|"2003022683 7"|"20040020508"|"200 40118401"|"200401292 80"|"20040149282"|"20 040173229"|"20040198 127"|"20040200488"|"2 0040226568"|"2004023 4916"|"20040261802"|" 20050016549"|"200500 16550"|"20050066986"| "20050115243"|"20060 016453"|"20060093977 "|"20060185687"|"2006 0196518"|"2007003030 6"|"20070062549"|"200 70074734"|"200701020 13"|"20070215167"|"20 070267031"|"20080085 103"|"20080092912"|"2 0080257367"|"2008027 6947"|"20080302374"|" 20090002301"|"200900 95311"|"20090095312"| "20090126745"|"20090 188490"|"20090272379 "|"20090283103"|"2009 0320863"|"2010004380 9"|"20100083959"|"201 00200006"|"201002298 81"|"20100242974"|"20 100307518"|"20100313 901"|"20110005535"|"2 0110011396"|"2011003 6363"|"20110036365"|" 20110094523"|"201101 20482"|"20110126848"| "20110155153"|"20110 155718"|"20110168194 "|"20110265806"|"2011 0309157"|"2012004288 5"|"20120060853"|"201 20111347"|"201201326 43"|"20120227752"|"20 120231464"|"20120260 927"|"20120279512"|"2 0120318882"|"2013003 7041"|"20130056013"|" 20130081625"|"201300 81642"|"20130192619"| "20130255702"|"20130 306084"|"20130319439 "|"20130340750"|"2013					

		0340775"|"2014000063 8"|"20140060554"|"201 40060555"|"201400967 81"|"20140096782"|"20 140109921"|"20140157 583"|"20140209105"|"2 0140253144"|"2014026 1408"|"20140261486"|" 20140261487"|"201402 61495"|"20140270727"| "20140270729"|"20140 270730"|"20140345631 "|"2032695"|"2057353"|" 2086192"|"2104266"|"2 140516"|"2461664"|"24 72282"|"2545851").PN.					
L124	1222	("2959664"|"3060429"|" 3200819"|"3203025"|"3 234357"|"3258015"|"32 81637"|"3292635"|"335 6094"|"3385303"|"3428 053"|"3431393"|"34795 61"|"3486508"|"350258 8"|"3516417"|"3614956" |"3651240"|"3685521"|" 3685522"|"3738374"|"3 747120"|"3766000"|"38 44294"|"3860012"|"387 8850"|"3931824"|"3933 643"|"3934117"|"39439 41"|"4016878"|"404477 7"|"4079742"|"4190046" |"4207457"|"4219031"|" 4219032"|"4233993"|"4 270552"|"4284089"|"42 86604"|"4303083"|"432 6544"|"4340072"|"4347 855"|"4391285"|"45066 82"|"4531178"|"458942 8"|"4629665"|"4635651" |"4637407"|"4676237"|" 4700727"|"4714082"|"4 735217"|"4756318"|"47 71295"|"4771795"|"477 1796"|"4793365"|"4797 692"|"4800903"|"48078 09"|"4819665"|"482381 7"|"4836225"|"4848374" |"4874000"|"4878506"|" 4892109"|"4893639"|"4 907606"|"4917121"|"49 17128"|"4920990"|"492 2901"|"4924886"|"4941 486"|"4945448"|"49459 29"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4968263"|" 4969476"|"4972855"|"4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM

		977908"|"4981522"|"49 86286"|"4990939"|"499 1606"|"5005593"|"5019 122"|"5020548"|"50258 14"|"5033483"|"504055 1"|"5042510"|"5046514" |"5050621"|"5060667"|" 5060671"|"5060676"|"5 065776"|"5072744"|"50 74321"|"5076296"|"507 6297"|"5092353"|"5093 894"|"5099861"|"51018 39"|"5105835"|"510583 6"|"5105837"|"5105838" |"5115820"|"5124200"|" 5129409"|"5144962"|"5 146934"|"5148821"|"51 59940"|"5159942"|"517 7424"|"5178167"|"5183 062"|"5203355"|"52116 84"|"5224265"|"522449 8"|"5240014"|"5240016" |"5249586"|"5255674"|" 5261424"|"5266746"|"5 271419"|"5285798"|"52 93883"|"5322075"|"532 7915"|"5327917"|"5345 955"|"5353813"|"53579 84"|"5360023"|"536972 3"|"5372148"|"5388574" |"5388594"|"5396911"|" 5408574"|"5468936"|"5 497791"|"5498850"|"55 05214"|"5515842"|"553 0225"|"5533530"|"5551 451"|"5564442"|"55884 46"|"5593792"|"559557 7"|"5598868"|"5646666" |"5649554"|"5665262"|" 5666977"|"5666978"|"5 687746"|"5692525"|"57 03633"|"5715844"|"572 6421"|"5727571"|"5732 685"|"5743251"|"57459 85"|"5778899"|"579966 3"|"5819751"|"5819756" |"5829453"|"5865185"|" 5865186"|"5878752"|"5 880439"|"5894841"|"59 15387"|"5934289"|"594 4025"|"5954979"|"5967 148"|"5996589"|"60336 23"|"6040560"|"605317 6"|"6062213"|"6089857" |"6095152"|"6095153"|" 6102036"|"6125853"|"6 146934"|"6155268"|"61 64287"|"6182670"|"619					

		6218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").pn.					
L125	92	(L123 L124) and cartridge and liquid and heat$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM
L127	7	("0005247"|"20050005947"|"5027837").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/06/19 11:52 PM
L130	22	("20050067503"|"20140305453"|"20150245659"|"5331981"|"6533395"|"6739700"|"8375957").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2021/12/18 11:37 PM
L132	639	("5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5177424"|"5178167"|"5179966"|"5183062"|"5203355"|"5211684"|"5220930"|"5224265"|"5224498"|"5228460"|"5230354"|"5235992"|"5240014"|"5240016"|"5243999"|"5246018"|"5247947"|"5249586"|"5255674"|"5261424"|"5266746"|"5269327"|"5271419"|"5282798"|"5285798"|"5293883"|"5301694"|"5303720"|"5318050"|"5322075"|"5322076"|"5327915"|"5327917"|"5	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:55 PM

		331981"|"5339838"|"53 45951"|"5345955"|"535 3813"|"5357984"|"5360 023"|"5369723"|"53721 48"|"5377698"|"538857 4"|"5388594"|"5396911" |"5408574"|"5415186"|" 5435325"|"5445169"|"5 468266"|"5468936"|"54 79948"|"5497791"|"549 8850"|"5498855"|"5499 636"|"5501237"|"55052 14"|"5515842"|"553022 5"|"5533530"|"5551450" |"5551451"|"5564442"|" 5573692"|"5588446"|"5 591368"|"5593792"|"55 95577"|"5596706"|"559 8868"|"5611360"|"5613 504"|"5613505"|"56466 66"|"5649552"|"564955 4"|"5659656"|"5665262" |"5666976"|"5666977"|" 5666978"|"5687746"|"5 692525"|"5692526"|"57 03633"|"5708258"|"571 1320"|"5715844"|"5726 421"|"5727571"|"57301 58"|"5732685"|"574325 1"|"5745985"|"5750964" |"5778899"|"5799663"|" 5816263"|"5819751"|"5 819756"|"5829453"|"58 65185"|"5865186"|"587 8752"|"5880439"|"5894 841"|"5915387"|"59342 89"|"5944025"|"595497 9"|"5967148"|"5996589" |"6026820"|"6033623"|" 6040560"|"6053176"|"6 062213"|"6089857"|"60 95152"|"6095153"|"610 2036"|"6116247"|"6119 700"|"6125853"|"61258 55"|"6125866"|"614693 4"|"6155268"|"6164287" |"6182670"|"6196218"|" 6196219"|"6216706"|"6 217315"|"6232784"|"62 34167"|"6285017"|"628 9898"|"6311561"|"6322 268"|"6349729"|"63576 71"|"6397852"|"640885 6"|"6418938"|"6446426" |"6476151"|"6501052"|" 6516796"|"6532965"|"6 533395"|"6537186"|"65 78584"|"6591841"|"659					

		8607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6701936"|"6715494"|"6719443"|"6722756"|"6722763"|"6730832"|"6739700"|"6772756"|"6803545"|"6803550"|"6810883"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7011096"|"7017585"|"7025066"|"7117867"|"7159464"|"7163015"|"7173322"|"7185659"|"7234470"|"7284424"|"7290549"|"7293565"|"7337782"|"7392809"|"7445007"|"7513253"|"7647932"|"7690385"|"7692123"|"7726320"|"7775459"|"7810505"|"7832410"|"7845359"|"7878209"|"7896006"|"7997280"|"8066010"|"8079371"|"8127772"|"8314591"|"8365742"|"8375957"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238"|"8950587"|"9930915").PN.					
L133	223	("9814268"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"1968509"|"20010026788"|"20010036365"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020500"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040149296"|"20040173229"|"20040198127"|"20040200488"|"20040224435"|"20040226568"|"20040234916"|"20040255965"|"20040261802"|"20050005947"|"20050016549"|"20050016550"|"20050066986"|"20050067503"|"20050115243"|"20050151126"|"20050172976"|"20	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:55 PM

		050274390"|"20060016453"|"20060032501"|"20060070633"|"20060093977"|"20060162733"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20070283972"|"20080085103"|"20080092912"|"20080149118"|"20080245377"|"20080257367"|"20080276947"|"20080302374"|"20090065010"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090230117"|"20090260641"|"20090260642"|"20090272379"|"20090283103"|"20090293892"|"20090320863"|"20090320864"|"20090324206"|"20100006113"|"20100024834").pn.					
L134	795	("20100043809"|"20100059070"|"20100059073"|"20100065075"|"20100083959"|"20100163063"|"20100200006"|"20100229881"|"20100242974"|"20100242976"|"20100258139"|"20100300467"|"20100307518"|"20100313901"|"20110005535"|"20110011286"|"20110011396"|"20110015513"|"20110036363"|"20110036365"|"20110073121"|"20110088707"|"20110094523"|"20110120480"|"20110120482"|"20110126847"|"20110126848"|"20110155153"|"20110155718"|"20110162663"|"20110168194"|"20110180082"|"20110265806"|"20110309157"|"20120042885"|"20120060853"|"20120111347"|"20120132643"|"20120227752"|"20120231464"|"20120260927"|"20120279512"|"20120318882"|"20130037031"|"20130037041"|"20130056013"|"20130081	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:56 PM

		25"|"20130081642"|"20 130192619"|"20130255 702"|"20130306074"|"2 0130306084"|"2013031 9439"|"20130340750"|" 20130340775"|"201400 00638"|"20140060554"| "20140060555"|"20140 096781"|"20140096782 "|"20140109921"|"2014 0157583"|"2014020910 5"|"20140253144"|"201 40261408"|"201402614 86"|"20140261487"|"20 140261495"|"20140270 727"|"20140270729"|"2 0140270730"|"2014030 5453"|"20140345631"|" 20150245659"|"203269 5"|"2057353"|"2086192" |"2104266"|"2140516"|" 2461664"|"2472282"|"2 545851"|"2805669"|"29 59664"|"3060429"|"320 0819"|"3203025"|"3234 357"|"3258015"|"32816 37"|"3292635"|"331691 9"|"3356094"|"3385303" |"3398754"|"3419015"|" 3424171"|"3428053"|"3 431393"|"3476118"|"34 79561"|"3486508"|"350 2588"|"3516417"|"3614 956"|"3651240"|"36855 21"|"3685522"|"373837 4"|"3747120"|"3766000" |"3844294"|"3860012"|" 3878850"|"3931824"|"3 933643"|"3934117"|"39 43941"|"4016878"|"404 4777"|"4054145"|"4079 742"|"4131117"|"41506 77"|"4168712"|"419004 6"|"4207457"|"4219031" |"4219032"|"4233993"|" 4259970"|"4270552"|"4 284089"|"4286604"|"43 03083"|"4326544"|"434 0072"|"4347855"|"4391 285"|"4449541"|"44843 76"|"4506682"|"451095 0"|"4531178"|"4583559" |"4589428"|"4629665"|" 4635651"|"4637407"|"4 674519"|"4676237"|"47 00727"|"4708151"|"471 4082"|"4735217"|"4756 318"|"4771295"|"47717					

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L140	10	L139 AND mouthpiece AND electrical near2 heater AND wick AND controller AND current	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/15 01:00 AM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N16	1	(tobacco and aerosol and heating and cartridge).clm.	(USPAT)	OR	ON	ON	2010/01/11 01:26 PM
N48	5	(tobacco and tub$3 and electric$3 and heater and aerosol).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/08/02 11:34 PM
N51	0	(tobacco and tub$3 and electric$3 and heater	(US-PGPUB; USPAT)	OR	ON	ON	2014/09/30 12:14 AM

		and aerosol and absorbent).clm.					
N52	1	(tobacco and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/09/30 12:15 AM
N57	1	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2016/10/02 09:55 PM
N63	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/06/19 10:26 PM
N67	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 10:58 PM
N68	2	(smoking and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 10:58 PM
N72	3	(smoking and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/01/12 12:33 AM
N73	7	(tobacco and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/01/12 12:33 AM
N89	6	(tobacco and electric$3 and heater and aerosol and wicked).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/10/13 10:21 PM
N126	26	(tobacco and aerosol and heating and cartridge).clm.	(USPAT)	OR	ON	ON	2020/11/07 11:56 PM
N128	1	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(USPAT)	OR	ON	ON	2021/06/19 11:53 PM
N129	5	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/19 11:53 PM
N131	6	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/18 11:37 PM
N132	9	(tobacco AND rod AND heater AND controller AND cartridge).clm.	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/01/11 11:47 PM
N133	9	(tobacco AND aerosol AND tubular AND cartridge SAME (open near2 ends) AND heater AND controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/01 04:16 AM

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	1	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear
	1	US-438,310	10-14-1890	Edison	
	2	US-705,919	07-29-1902	Gill	
	3	US-780,087	01-17-1905	Burt	
	4	US-1,016,844	02-06-1912	Moonelis	
	5	US-1,084,304	01-13-1914	Vaughn	
	6	US-1,147,416	07-20-1915	MacDonald	
	7	US-1,304,075	05-20-1919	Lofgren	
	8	US-1,347,631	07-27-1920	Jean	
	9	US-1,446,087	02-20-1923	Griffin	
	10	US-1,514,682	11-11-1924	Wilson	
	11	US-1,517,584	12-02-1924	Reece	
	12	US-1,771,366	07-22-1930	Wyss *et al.*	
	13	US-1,879,128	09-27-1932	Despe	
	14	US-1,968,509	07-31-1934	Tiffany	
	15	US-2,032,695	03-03-1936	Gimera	
	16	US-2,057,353	10-13-1936	Whittemore, Jr.	
	17	US-2,086,192	07-06-1937	Schumaker	
	18	US-2,104,266	01-04-1938	McCormick	
	19	US-2,140,516	12-20-1938	Cowan	
	20	US-2,461,664	02-15-1949	Smith	
	21	US-2,472,282	06-07-1949	Burchett	
	22	US-2,545,851	03-20-1951	Kardos	
	23	US-2,805,669	09-10-1957	Miquel Y Merino	
	24	US-2,959,664	11-08-1960	Fenn	

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON MARCH 31, 2023.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.H.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
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U. S. PATENT DOCUMENTS					
	25	US-3,060,429	10-23-1962	Winston	
	26	US-3,281,637	09-23-1963	Hultquist	
	27	US-3,200,819	08-17-1965	Gilbert	
	28	US-3,203,025	08-31-1965	Schreur	
	29	US-3,234,357	02-08-1966	Seuthe	
	30	US-3,258,015	06-28-1966	Ellis *et al.*	
	31	US-3,281,637	10-25-1966	Hultquist	
	32	US-3,292,635	12-20-1966	Kolodny	
	33	US-3,316,919	05-02-1967	Green *et al.*	
	34	US-3,356,094	12-05-1967	Ellis *et al.*	
	35	US-3,385,303	05-28-1968	Hind	
	36	US-3,393,927	07-23-1968	Kelly *et al.*	
	37	US-3,398,754	08-27-1968	Tughan	
	38	US-3,419,015	12-31-1968	Wochnowski	
	39	US-3,424,171	01-28-1969	Rooker	
	40	US-3,428,053	02-18-1969	Schoenbaum	
	41	US-3,431,393	03-04-1969	Katsuda	
	42	US-3,476,118	11-04-1969	Gotthard Luttich	
	43	US-3,479,561	11-18-1969	Janning	
	44	US-3,486,508	12-30-1969	Sipos	
	45	US-3,502,588	03-24-1970	Winberg	
	46	US-3,516,417	06-23-1970	Moses	
	47	US-3,614,956	10-26-1971	Thornton	
	48	US-3,651,240	03-21-1972	Kirkpatrick	
	49	US-3,685,521	08-22-1972	Dock	
	50	US-3,685,522	08-22-1972	Kleinhans	
	51	US-3,738,374	06-12-1973	Bennett	

Examiner Signature		Date Considered	

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U. S. PATENT DOCUMENTS					
	52	US-3,747,120	07-17-1973	Stemme	
	53	US-3,766,000	10-16-1973	Gibson	
	54	US-3,860,012	01-14-1974	Selke	
	55	US-3,844,294	10-29-1974	Webster	
	56	US-3,878,850	04-22-1975	Gibson *et al.*	
	57	US-3,931,824	01-13-1976	Miano *et al.*	
	58	US-3,933,643	01-20-1976	Colvin	
	59	US-3,934,117	01-20-1976	Schladitz	
	60	US-3,943,941	03-16-1976	Boyd *et al.*	
	61	US-4,016,878	04-12-1977	Castel *et al.*	
	62	US-4,044,777	08-30-1977	Boyd *et al.*	
	63	US-4,054,145	10-18-1977	Berndt *et al.*	
	64	US-4,079,742	03-21-1978	Rainer *et al.*	
	65	US-4,131,117	12-26-1978	Kite *et al.*	
	66	US-4,150,677	04-24-1979	Osborne, Jr. *et al.*	
	67	US-4,168,712	09-25-1979	Labbe	
	68	US-4,190,046	02-26-1980	Virag	
	69	US-4,207,457	06-10-1980	Haglund	
	70	US-4,219,031	08-26-1980	Rainer *et al.*	
	71	US-4,219,032	08-26-1980	Tabatznik	
	72	US-4,233,993	11-18-1980	Miano *et al.*	
	73	US-4,259,970	04-07-1981	Green, Jr.	
	74	US-4,270,552	06-02-1981	Jenkins	
	75	US-4,284,089	08-18-1981	Ray	
	76	US-4,286,604	09-01-1981	Ehretsmann *et al.*	
	77	US-4,303,083	12-01-1981	Burruss, Jr.	
	78	US-4,326,544	04-27-1982	Hardwick *et al.*	

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	79	US-4,340,072	07-20-1982	Bolt *et al.*	
	80	US-4,347,855	09-07-1982	Lanzillotti *et al.*	
	81	US-4,361,374	11-30-1982	Marmillion *et al.*	
	82	US-4,391,285	07-05-1983	Burnett *et al.*	
	83	US-4,449,541	05-22-1984	Mays *et al.*	
	84	US-4,484,376	11-27-1984	Glock *et al.*	
	85	US-4,506,682	03-26-1985	Muller	
	86	US-4,510,950	04-16-1985	Keritsis *et al.*	
	87	US-4,531,178	07-23-1985	Uke	
	88	US-4,550,967	11-05-1985	Riches *et al.*	
	89	US-4,583,559	04-22-1986	Hedge	
	90	US-4,589,428	05-20-1986	Keritsis	
	91	US-4,629,665	12-16-1986	Matsuo	
	92	US-4,635,651	01-13-1987	Jacobs	
	93	US-4,637,407	01-20-1987	Bonanno	
	94	US-4,674,519	06-23-1987	Keritsis *et al.*	
	95	US-4,676,237	06-30-1987	Wood	
	96	US-4,700,727	10-20-1987	Torigian	
	97	US-4,708,151	11-24-1987	Shelar	
	98	US-4,714,082	12-22-1987	Banerjee *et al.*	
	99	US-4,735,217	04-05-1988	Gerth *et al.*	
	100	US-4,756,318	07-12-1988	Clearman *et al.*	
	101	US-4,771,295	09-13-1988	Baker	
	102	US-4,771,795	09-20-1988	White *et al.*	
	103	US-4,771,796	09-20-1988	Myer	
	104	US-4,776,353	10-11-1988	Lilja *et al.*	
	105	US-4,793,365	12-27-1988	Sensabaugh, Jr. *et al.*	

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U. S. PATENT DOCUMENTS					
	106	US-4,797,692	01-10-1989	Ims	
	107	US-4,800,903	01-31-1989	Ray *et al.*	
	108	US-4,807,809	02-28-1989	Pryor *et al.*	
	109	US-4,819,665	04-11-1989	Roberts *et al.*	
	110	US-4,821,749	04-18-1989	Toft *et al.*	
	111	US-4,823,817	04-25-1989	Luke	
	112	US-4,830,028	05-16-1989	Lawson *et al.*	
	113	US-4,836,224	06-06-1989	Lawson *et al.*	
	114	US-4,836,225	06-06-1989	Sudoh	
	115	US-4,848,374	07-18-1989	Chard *et al.*	
	116	US-4,848,376	07-18-1989	Lilja *et al.*	
	117	US-4,874,000	10-17-1989	Tamol *et al.*	
	118	US-4,878,506	11-07-1989	Pinck	
	119	US-4,880,018	11-14-1989	Graves, Jr. *et al.*	
	120	US-4,887,619	12-19-1989	Burcham, Jr. *et al.*	
	121	US-4,892,109	01-09-1990	Strubel	
	122	US-4,893,639	01-16-1990	White	
	123	US-4,907,606	03-13-1990	Lilja *et al.*	
	124	US-4,913,168	04-03-1990	Potter *et al.*	
	125	US-4,917,119	04-17-1990	Potter *et al.*	
	126	US-4,917,121	04-17-1990	Riehl *et al.*	
	127	US-4,917,128	04-17-1990	Clearman *et al.*	
	128	US-4,920,990	05-01-1990	Lawrence *et al.*	
	129	US-4,922,901	05-08-1990	Brooks *et al.*	
	130	US-4,924,886	05-15-1990	Litzinger	
	131	US-4,924,888	05-15-1990	Perfetti *et al.*	
	132	US-4,928,714	05-29-1990	Shannon	

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U. S. PATENT DOCUMENTS					
	133	US-4,938,236	07-03-1990	Banerjee *et al.*	
	134	US-4,941,483	07-17-1990	Ridings *et al.*	
	135	US-4,941,484	07-17-1990	Clapp *et al.*	
	136	US-4,941,486	07-17-1990	Dube	
	137	US-4,945,448	07-31-1990	Bremenour	
	138	US-4,945,929	08-07-1990	Egilmex	
	139	US-4,945,931	08-07-1990	Gori	
	140	US-4,947,874	08-14-1990	Brooks *et al.*	
	141	US-4,947,875	08-14-1990	Brooks *et al.*	
	142	US-4,961,438	10-09-1990	Korte	
	143	US-4,966,171	10-30-1990	Serrano *et al.*	
	144	US-4,968,263	11-06-1990	Silbernagel	
	145	US-4,969,476	11-13-1990	Bale *et al.*	
	146	US-4,972,854	11-27-1990	Kiernan *et al.*	
	147	US-4,972,855	11-27-1990	Kuriyama *et al.*	
	148	US-4,977,908	12-18-1990	Luke	
	149	US-4,981,522	01-01-1991	Nichols *et al.*	
	150	US-4,986,286	01-22-1991	Roberts *et al.*	
	151	US-4,987,906	01-29-1991	Young *et al.*	
	152	US-4,990,939	02-05-1991	Sekiya	
	153	US-4,991,606	02-12-1991	Serrano *et al.*	
	154	US-5,005,593	04-09-1991	Fagg	
	155	US-5,019,122	05-28-1991	Clearman *et al.*	
	156	US-5,020,548	06-04-1991	Farrier *et al.*	
	157	US-5,022,416	06-11-1991	Watson	
	158	US-5,025,814	06-25-1991	Raker	
	159	US-5,027,837	07-02-1991	Clearman *et al.*	

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U. S. PATENT DOCUMENTS					
	160	US-5,033,483	07-23-1991	Clearman *et al.*	
	161	US-5,040,551	08-20-1991	Schlatter *et al.*	
	162	US-5,042,510	08-27-1991	Curtiss *et al.*	
	163	US-5,046,514	09-10-1991	Bolt	
	164	US-5,050,621	09-24-1991	Creighton *et al.*	
	165	US-5,056,537	10-15-1991	Brown *et al.*	
	166	US-5,060,667	10-29-1991	Strubel	
	167	US-5,060,669	10-29-1991	White *et al.*	
	168	US-5,060,671	10-29-1991	Counts *et al.*	
	169	US-5,060,676	10-29-1991	Hearn *et al.*	
	170	US-5,065,775	11-19-1991	Fagg	
	171	US-5,065,776	11-19-1991	Lawson *et al.*	
	172	US-5,072,744	12-17-1991	Luke *et al.*	
	173	US-5,074,319	12-24-1991	White *et al.*	
	174	US-5,074,321	12-24-1991	Gentry *et al.*	
	175	US-5,076,296	12-31-1991	Nystrom *et al.*	
	176	US-5,076,297	12-31-1991	Farrier *et al.*	
	177	US-5,092,353	03-03-1992	Montoya *et al.*	
	178	US-5,093,894	03-03-1992	Deevi *et al.*	
	179	US-5,095,921	03-17-1992	Losee *et al.*	
	180	US-5,097,850	03-24-1992	Braunshteyn *et al.*	
	181	US-5,099,861	03-31-1992	Clearman *et al.*	
	182	US-5,099,862	03-31-1992	White *et al.*	
	183	US-5,099,864	03-31-1992	Young *et al.*	
	184	US-5,101,839	04-07-1992	Jakob *et al.*	
	185	US-5,103,842	04-14-1992	Strang *et al.*	
	186	US-5,105,835	04-21-1992	Drewett *et al.*	

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U. S. PATENT DOCUMENTS					
	187	US-5,105,836	04-21-1992	Gentry *et al.*	
	188	US-5,105,837	04-21-1992	Barnes *et al.*	
	189	US-5,105,838	04-21-1992	White *et al.*	
	190	US-5,115,820	05-26-1992	Hauser *et al.*	
	191	US-5,121,757	06-16-1992	White *et al.*	
	192	US-5,124,200	06-23-1992	Mallonee	
	193	US-5,129,409	07-14-1992	White	
	194	US-5,131,415	07-21-1992	Munoz *et al.*	
	195	US-5,137,034	08-11-1992	Perfetti *et al.*	
	196	US-5,143,097	09-01-1992	Stephen Sohn *et al.*	
	197	US-5,144,962	09-08-1992	Counts *et al.*	
	198	US-5,146,934	09-15-1992	Deevi *et al.*	
	199	US-5,148,821	09-22-1992	Best *et al.*	
	200	US-5,159,940	11-03-1992	Hayward *et al.*	
	201	US-5,159,942	11-03-1992	Brinkley *et al.*	
	202	US-5,177,424	01-05-1993	Connors	
	203	US-5,178,167	01-12-1993	Riggs *et al.*	
	204	US-5,179,966	01-19-1993	Losee *et al.*	
	205	US-5,183,062	02-02-1993	Clearman *et al.*	
	206	US-5,203,355	04-20-1993	Clearman *et al.*	
	207	US-5,211,684	05-18-1993	Shannon *et al.*	
	208	US-5,220,930	06-22-1993	Gentry	
	209	US-5,224,265	07-06-1993	Dux	
	210	US-5,224,498	07-06-1993	Deevi *et al.*	
	211	US-5,228,460	07-20-1993	Sprinkel *et al.*	
	212	US-5,230,354	07-27-1993	Smith *et al.*	
	213	US-5,235,992	08-17-1993	Sensabaugh, Jr.	

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U. S. PATENT DOCUMENTS					
	214	US-5,240,014	08-31-1993	Deevi *et al.*	
	215	US-5,240,016	08-31-1993	Nichols *et al.*	
	216	US-5,243,999	09-14-1993	Smith	
	217	US-5,246,018	09-21-1993	Deevi *et al.*	
	218	US-5,247,947	09-28-1993	Clearman *et al.*	
	219	US-5,249,586	10-05-1993	Morgan *et al.*	
	220	US-5,255,674	10-26-1993	Oftedal *et al.*	
	221	US-5,261,424	11-16-1993	Sprinkel, Jr.	
	222	US-5,266,746	11-30-1993	Nishihara	
	223	US-5,269,327	12-14-1993	Counts *et al.*	
	224	US-5,271,419	12-21-1993	Arzonico *et al.*	
	225	US-5,282,798	02-01-1994	Bruse *et al.*	
	226	US-5,285,798	02-15-1994	Banerjee *et al.*	
	227	US-5,293,883	03-15-1994	Edwards	
	228	US-5,301,694	04-12-1994	Raymond *et al.*	
	229	US-5,303,720	04-19-1994	Banerjee *et al.*	
	230	US-5,318,050	06-07-1994	Gonzalez-Parra *et al.*	
	231	US-5,322,075	06-21-1994	Deevi *et al.*	
	232	US-5,322,076	06-21-1994	Brinkley *et al.*	
	233	US-5,327,915	07-12-1994	Porenski	
	234	US-5,327,917	07-12-1994	Lekwauwa *et al.*	
	235	US-5,331,981	07-26-1994	Tamaoki *et al.*	
	236	US-5,339,838	08-23-1994	Young *et al.*	
	237	US-5,345,951	09-13-1994	Serrano *et al.*	
	238	US-5,345,955	09-13-1994	Clearman *et al.*	
	239	US-5,353,813	10-11-1994	Deevi *et al.*	
	240	US-5,357,984	10-25-1994	Farrier *et al.*	

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	241	US-5,360,023	11-01-1994	Blakley *et al.*	
	242	US-5,369,723	11-29-1994	Counts *et al.*	
	243	US-5,372,148	12-13-1994	McCafferty *et al.*	
	244	US-5,377,698	01-03-1995	Litzinger *et al.*	
	245	US-5,388,574	02-14-1995	Ingebrethsen	
	246	US-5,388,594	02-14-1995	Counts *et al.*	
	247	US-5,396,911	03-14-1995	Casey, III *et al.*	
	248	US-5,408,574	04-18-1995	Deevi *et al.*	
	249	US-5,415,186	05-16-1995	Casey, III *et al.*	
	250	US-5,435,325	07-25-1995	Clapp *et al.*	
	251	US-5,445,169	08-29-1995	Brinkley *et al.*	
	252	US-5,468,266	11-21-1995	Bensalem *et al.*	
	253	US-5,468,936	11-21-1995	Deevi *et al.*	
	254	US-5,479,948	01-02-1996	Counts *et al.*	
	255	US-5,497,791	03-12-1996	Bowen	
	256	US-5,497,791	03-12-1996	Bowen *et al.*	
	257	US-5,498,850	03-12-1996	Das	
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	259	US-5,499,636	03-19-1996	Baggett, Jr. *et al.*	
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				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
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	736	WO 2010/091593	08-19-2010	HON, Lik		Abstract
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	764	2020-12-18 - 728487 - Complainants' Pre-Hearing Trial Brief, Part 2 of 8 (Public)	
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	788	Brief of *Amicus Curiae* Fitbit, Inc. in Support of Plaintiffs' Motion for Summary Judgment, *Apple Inc. v. Iancu*, No. 20-cv-06128-EJD (N.D. Cal Dec. 23, 2020), ECF No. 81-1	
	789	Cambridge Dictionary of American English (2nd ed. 2008), p. 715.	
	790	Chambers Dictionary of Science and Technology (Peter M.B. Walker, ed., 1999), pp. 261, 975	
	791	Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco, R. J. Reynolds Tobacco Company Monograph, 1988, pp. 43-72.	
	792	*Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco*, R.J. Reynolds Tobacco Company Monograph (1988) ("RJR monograph") (excerpts)	
	793	Civil docket report for RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. filed April 9, 2020)	
	794	Civil Minutes, Ancora Technologies, Inc. v. TCT Mobile (US), Inc., et al., No. SACV 19-2192-GW-ADSx (C.D. Cal. November 12, 2020)	
	795	Claim Construction Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. November 24, 2020), ECF No. 360	
	796	Comments of The American Conservative Union in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-3447 (U.S.I.T.C. Apr. 22, 2020)	
	797	Commission Investigative Staff's Opening Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Aug. 21, 2020)	
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	799	Communication of Further Notices of Opposition filed in corresponding European Application No. 19151511.3, Patent No. 3491944, mailed March 16, 2021, 27 pages.	

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	800	Communication of Further Notices of Opposition filed in corresponding European Application No. 19151511.3, Patent No. 3491944, mailed March 16, 2021, 63 pages.	
	801	Complainants RAI Strategic Holdings, Inc., R.J. Reynolds Vapor Company, and R.J. Reynolds Tobacco Company's Infringement Claim Chart for U.S. Patent No. 9,839,238 from ITC Inv. No. 337-TA-1199	
	802	Complainants' Opening Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Aug. 21, 2020)	
	803	Complainants' Responsive Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Sept. 4, 2020)	
	804	Complaint and Public Interest Statement in *Certain Tobacco Heating Articles and Components Thereof*, ITC Inv. No. 337-TA-1199	
	805	Complaint for Patent Infringement in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. Apr. 9, 2020)	
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	809	CORESTA, Tobacco and Tobacco Products Analytes Sub-Group Technical Report: 2018 Moisture (OV), Water by Karl Fischer and Gas Chromatography Interlaboratory Study, August 2018.	
	810	Curriculum Vitae of Dr. Deevi	
	811	Curriculum Vitae of Dr. Seetharama C. Deevi	

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	812	Curriculum Vitae of Samir Nayfeh, Ph.D.	
	813	Curriculum Vitae of Stewart Fox	
	814	D. Kirk Davidson, Selling Sin: The Marketing of Socially Unacceptable Products (2d ed. 2003)	
	815	Decision Denying Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated November 16, 2020.	
	816	Decision Denying Institution of *Inter Partes* Review of U.S. Patent 9,839,238 (January 19, 2021)	
	817	Decision Denying Patent Owner's Request for Rehearing in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated February 25, 2022.	
	818	Decision Denying Petitioner's Request for Rehearing in *Inter Partes* Review of U.S. Patent 9,839,238 (July 30, 2021)	
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	823	Declaration of Dr. Deevi in Support of Petition for Inter Partes Review of '915 Patent ("Deevi Decl.")	

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	824	Declaration of Dr. Seetharama C. Deevi in Support of Petition for *Inter Partes* Review of '268 Patent	
	825	Declaration of Dr. Seetharama C. Deevi in Support of Petition for *Inter Partes* Review of '123 Patent	
	826	Declaration of Dr. Seetharama C. Deevi in Support of Petitions for PTAB Review of '542 Patent ("Deevi Decl.")	
	827	Declaration of Dr. Seetharama Deevi in support of Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated July 10, 2021.	
	828	Declaration of Jonathan M. Strang in Response to Patent Owner's Objections to Petitioner's Exhibits [served August 12, 2021, not filed]	
	829	Declaration of Samir Nayfeh, Ph.D. in Support of Petition for Inter Partes Review of '238 Patent ("Nayfeh Decl.")	
	830	Declaration of Stewart Fox in Support of Petition for *Inter Partes* Review of '123 Patent	
	831	Defendants' Unopposed Motion to Invoke the Statutory Stay of Plaintiffs' Claims Relating to U.S. Patent Nos. 9,839,238, 9,901,123, and 9,930,915 Pursuant to 28 U.S.C. § 1659 in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. June 12, 2020)	
	832	Douglas C. McGill, 'Smokeless' Cigarette's Hapless Start, N.Y. Times, Nov. 19, 1988, at 33	
	833	Email exchange among Carolyn Carpenter, John Robinson et al. regarding electric cigarette, available at https://www.industrydocuments.ucsf.edu/docs/nsxy0228	
	834	Email from Jonathan Strang "Precedential Opinion Panel Request: IPR2020-00921 (USP 9,814,268)", Exhibit 3002 in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated December 15, 2020.	
	835	Email from Jonathan Strang "Precedential Opinion Panel Request: IPR2020-01097 (USP 9,839,238)" Exhibit 3001 in *Inter Partes* Review of U.S. Patent 9,839,238 (February 18, 2021)	

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	836	Excerpts from James W. Dally, Packaging of Electronic Systems: A Mechanical Engineering Approach (1990), 18 pgs.	
	837	Extended European Search Report, EP 17 18 5645, mailed November 28, 2017.	
	838	FDA News release, *FDA Authorizes Marketing of IQOS Tobacco Heating System with 'Reduced Exposure' Information* (July 7, 2020), https://www.fda.gov/news-events/press-announcements/fda-authorizesmarketing-iqos-tobacco-heating-system-reduced-exposure-information	
	839	FDA News Release, FDA Permits Sale of IQOS Tobacco Heating System Through Premarket Tobacco Product Application Pathway (Apr. 30, 2019)	
	840	FDA News release, *FDA permits sale of IQOS Tobacco Heating System through premarket tobacco product application pathway* (Apr. 30, 2019), https://www.fda.gov/news-events/press-announcements/fdapermits-sale-iqos-tobacco-heating-system-through-premarket-tobaccoproduct-application-pathway	
	841	File history for U.S. Patent 9,814,268	
	842	File History regarding U.S. Patent No. 10,588,355 ("'355 FH")	
	843	File History regarding U.S. Patent No. 9,839,238	
	844	George Wypych, *Handbook of Polymers* (2d ed. 2016)	
	845	HAJALIGOL *et al.,* "Method of Making a Heather with Bullet Shape (Design) to be Used in the Beta Article, Specifically Useful for Beta Cigarettes Made with Cut Filler" May, 1994, Invention Record www.industrydocuments.ucsf.edu/docs/#id=mhpp0217	
	846	HAJALIGOL, M. R., "METHOD OF MAKING A HEATER WITH BULLET SHAPE," 1994 March. Philip Morris Records; Master Settlement Agreement. https://www.industrydocuments.ucsf.edu/docs/ktbn0130	

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	847	Harvard School of Public Health, Division of Public Health Practice, Potentially Reduced Exposure Tobacco Products - A Public Health Information Guide (2008) ("Eclipse-Premier")	
	848	Hon Lik, *I Was Sure That The Electronic Cigarette Would Be Welcomed With Open Arms*, Sciences at Avenir (Oct. 7, 2013) https://www.sciencesetavenir.fr/sante/i-was-sure-that-the-electronic-cigarette-would-be-welcomed-with-open-arms_26020 (updated Oct. 18, 2013)	
	849	Honeywell datasheet for Pressure Sensors, 160PC Series ("Honeywell datasheet")	
	850	Honeywell Microbridge Mass Airflow Sensor/Unamplified, AWM2000 Series	
	851	HOROWITZ, et al., The Art of Electronics, 1980, pp. 33-35.	
	852	IEEE 100, The Authoritative Dictionary of IEEE Standards Terms (7th ed. 2000), pp. 230, 234.	
	853	In re Court Operations Under the Exigent Circumstances Created by the Outbreak of Coronavirus Disease 2019 (COVID-19): Temporary Suspension of Criminal Jury Trials (E.D. Va. November 16, 2020)	
	854	Inhalation Technology, Dr. Donald E. Garden, ed., Vol. 12, No. 5, pp. 1-58, (2000).	
	855	IQOS - A New Era in Tobacco (2014)	
	856	J.P. Hammond et al., Brazing Ceramic Oxides to Metals at Low Temperatures, Welding Research Supplement, 227-232-s (1998) ("Hammond Brazing")	
	857	J.R. Davis, Joining, Metals Handbook Desk Edition, 1049-1056 (2d ed. 1998) ("ASM Joining")	
	858	James A. Speck, Mechanical Fastening, Joining, and Assembly, Marcel Dekker, Inc. 1997, 4 pgs	

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	859	Joint Proposed Discovery Plan Pursuant to Rule 26(f), RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO- TCB (E.D. Va. September 2, 2020), ECF No. 97	
	860	Joint Proposed Procedural Schedule in *Certain Tobacco Heating Articles and Components Thereof*, ITC Inv. No. 337-TA-1199 (U.S.I.T.C. June 9, 2020)	
	861	JONES J. et al. CIGARETTE BRAINSTORMING TEAM NUMBER 2. 1994 May 13. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/gqcv0119	
	862	Judgment Final Written Decision Determining All Challenged Claims Unpatentable in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated June 30, 2022.	
	863	Judgment Final Written Decision Determining All Challenged Claims Unpatentable in IPR2020-01094, *Inter Partes* Review of U.S. Patent No. 9,930,915, January 11, 2022.	
	864	Judgment Final Written Decision in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated March 30, 2022.	
	865	Kevin Hatch, et al., *Preliminary Evaluation of a Commercially Available Electric Aerosol Inhaler from China* (Sept. 14, 2006) ("RJR Teardown"), available at https://www.industrydocuments.ucsf.edu/docs/nyvy0228	
	866	LAROY, B; UTSCH, F. AN OUTLINE OF PERMANENT HEATER / DISPOSABLE FLAVOR INSERT CONCEPTS. 1991 November. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/ygcc0114	
	867	LAROY, *et al.,* "An Outltine of Permanent Heater/Disposable Flavor Insert Cncepts," November, 1991, www.industrydocuments.ucsf.edu/docs/#id=jxbh0090	
	868	Letter accompanying subsequently filed items, Further Written Submissions filed in corresponding European Application No. 19151511.3, Patent No. 3491944. December 13, 2021.	
	869	Letter from David M. Maiorana, counsel for Complainants, to The Honorable Lisa R. Barton, regarding *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. April 9, 2020)	

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	870	Letter from Maximillian Grant, counsel for Defendants, to David Maiorana, counsel for Plaintiffs, regarding RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (September 18, 2020)	
	871	Letter from Robert B. Swierupski, Director, National Commodity Specialist Division, to Mark Weiss, Weiss & Moy, P.C. regarding tariff classification ruling (Aug. 22, 2006), https://rulings.cbp.gov/ruling/M85579	
	872	LISH, Tom, "What is the difference between Vented and Sealed Gauge Reference Pressure, Setra, January 26, 2017, https://www.setra.com/blog/what-is-the-difference-between-vented-and-sealed-gauge-reference-pressure	
	873	LU, ZHANG, "Safe Substitute", China Daily, July 11, 2005.	
	874	Mark's Standard Handbook for Mechanical Engineers, Eugene A. Avallone *et al.*, published 1978, page 15-6.	
	875	McGraw-Hill Dictionary of Electrical and Computer Engineering (2003), p. 479.	
	876	Memorandum in Support of Defendants' Partial Motion to Stay Plaintiffs' Claims Regarding U.S. Patent Nos. 9,814,268 and 10,492,542, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. November 27, 2020), ECF No. 371	
	877	Merriam-Webster's Collegiate Dictionary (10th ed., 2001), (excerpt)	
	878	Modern Dictionary of Electronics (7th ed., 1999), pp. 151, 636, 637	
	879	Modification of Limited Exclusion Order and Cease and Desist Order; Termination of the Modification Proceeding as to U.S. Patent No. 6,377,577 and Suspension of the Modification Proceeding as to U.S. Patent No. 7,224,668 in *Certain Network Devices, Related Software and Components Thereof,* No. 337-TA-945 (U.S.I.T.C. June 26, 2018) ("Commission Order")	

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	880	Monique Williams & Prue Talbot, Variability Among Electronic Cigarettes in the Pressure Drop, Airflow Rate, and Aerosol Production, 13 Nicotine & Tobacco Research 1276-84 (Dec. 2011) ("Williams and Talbot")	
	881	MORGAN *et al.,* "Philip Morris USA Invention Record," October, 1988, www.industrydocuments.ucsf.edu/docs/#id=znbc0114	
	882	Mosdesign Semiconductor Corp. Datasheet for M1600 LED Drivers ("Mosdesign M1600 Datasheet"), 1 pg.	
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	884	MPL Pressure Switch Solutions, Micro Pneumatic Logic, Inc., (Product Brochure) (March 11, 2006), http://www.pressureswitch.com/PDFs/2000_MPLBrochure.pdf [https://web.archive.org/web/20060311132419/ http://www.pressureswitch.com/PDFs/2000_MPLBrochure.pdf]. 2 pgs.	
	885	N.A. Fuchs, The Mechanics of Aerosols (1989), 22 pgs.	
	886	Notice of Opposition filed in corresponding European Application No. 18173918.6, Patent No. 3398460 on April 14, 2020	
	887	Notification of Receipt of POP Request in *Inter Partes* Review of U.S. Patent 9,839,238 (March 24, 2021)	
	888	Order Granting Defendants' Unopposed Motion to Invoke the Statutory Stay of Plaintiffs' Claims Relating to U.S. Patent Nos. 9,839,238, 9,901,123, and 9,930,915 Pursuant to 28 U.S.C. § 1659 in *RAI Strategic Holdings, Inc. v. Altria Client Services LLC*, No. 1:20-cv-393 (E.D. Va. June 18, 2020)	
	889	Order No. 28: Construing Certain Claims in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Jan. 6, 2021)	

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	890	Order No. 8 in *Certain Laser-driven Light Sources, Subsystems Containing Laser-driven Light Sources, and Products Containing Same*, No. 337-TA-983 (U.S.I.T.C. Mar. 3, 2016)	
	891	Order No. 8, Amending Ground Rules in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. July 27, 2020)	
	892	Order, Bushnell Hawthorne, LLC v. Cisco Systems, Inc., No. 1:18-cv- 760 (E.D. Va. April 22, 2019)	
	893	Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 4, 2020), ECF No. 426	
	894	Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 7, 2020), ECF No. 432	
	895	Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-393 (E.D. Va. February 16, 2021).	
	896	OTT, Henry W., Noise Reduction Techniques in Electronic Systems, (2d E. 1988), pp. 286-293.	
	897	Oxford Dictionary of English (3d ed. 2010), p. 477.	
	898	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,814,268 dated August 17, 2020.	
	899	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent 9,839,238 (October 27, 2020)	
	900	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,930,915 dated October 27, 2020.	
	901	Patent Owner Response to Petition for *Inter Partes* Review Pursuant to 37 C.F.R. § 42.220 in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated December 6, 2021.	

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	902	Patent Owner Response to Petition for *Inter Partes* Review Pursuant to 37 C.F.R. § 42.220 in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated April 19, 2021.	
	903	Patent Owner Sur-Reply in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated April 11, 2022.	
	904	Patent Owner Sur-Reply in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated August 30, 2021.	
	905	Patent Owner's Demonstratives for Oral Argument: RAI's PTAB Presentation, Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-00921, Exhibit 2011, May 11, 2022	
	906	Patent Owner's Infringement Chart for '123 patent, In the Matter of Certain Tobacco Heating Articles and Components Thereof, Inv. No. ___, EDIS Doc. ID 707369 (filed April 9, 2020)	
	907	Patent Owner's Mandatory Notices in *Inter Partes* Review of U.S. Patent 9,839,238, July 2, 2020	
	908	Patent Owner's Rehearing Request in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated February 10, 2022.	
	909	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,814,268, dated September 29, 2020.	
	910	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent 9,839,238 (December 10, 2020)	
	911	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated December 10, 2020.	
	912	Petition for *Inter Partes* Review of U.S. Patent 10,492,542	
	913	Petition for *Inter Partes* Review of U.S. Patent 9,839,238	

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	914	Petition for *Inter Partes* Review of U.S. Patent 9,930,915	
	915	Petition for *Inter Partes* Review of U.S. Patent No. 9,814,268, submitted May 8, 2020	
	916	Petition for *Inter Partes* Review of U.S. Patent No. 9,901,123, submitted May 8, 2020	
	917	Petition for *Inter Partes* Review of U.S. Patent No. 9,901,123, submitted September 18, 2020	
	918	Petition for Post-Grant Review of U.S. Patent 10,492,542	
	919	Petitioner's Demonstratives: Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-00921, May 11, 2022.	
	920	Petitioner's Demonstratives: Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-01094, in *Inter Partes* Review of U.S. Patent No. 9,930,915, October 27, 2021.	
	921	Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,814,268, entered February 28, 2022.	
	922	Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated July 12, 2021.	
	923	Petitioner's Reply to Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,814,268, entered September 18, 2020.	
	924	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent 9,839,238 (November 25, 2020)	
	925	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent 9,930,915 (November 25, 2020)	

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	926	Petitioner's Request for Rehearing of Decision Denying Institution in *Inter Partes* Review of U.S. Patent 9,839,238 (February 18, 2021)	
	927	Petitioner's Updated Mandatory Notices in *Inter Partes* Review of U.S. Patent 9,839,238 (May 11, 2021)	
	928	Philip Morris Incorporated Invention Record (dated October 11, 1988)	
	929	Philip Morris Incorporated Invention Record (submitted May 19, 1994; witnessed May 23, 1994)	
	930	Philip Morris Int'l, 2019 Third-Quarter Results Presentation (Oct. 17, 2019)	
	931	Philip Morris Int'l, The IQOS Heating System, Tobacco Products Scientific Advisory Committee Presentation (Jan. 24, 2018)	
	932	Philip Morris Products SA's Comments to Complainants' Public Interest Statement in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	933	Philip Morris U.S.A. interoffice correspondence from R.H. Moffitt to K. Torrence regarding operational analysis of SBT Ruyan Atomizing Nicotine Inhaler (Sept. 27, 2004) (Original)	
	934	Philip Morris U.S.A. interoffice correspondence from R.H. Moffitt to K. Torrence regarding operational analysis of SBT Ruyan Atomizing Nicotine Inhaler (Sept. 27, 2004), https://www.industrydocuments.ucsf.edu/docs/fnpb0219	
	935	Pilot Corp. Stores Offer Ruyan Smoking Alternatives in Knoxville, Tenn.-Area Convenience Stores; Ruyan Vegas(R) Disposable E-Cigar in Select Stores in December; Jazz Disposable E-Cigarette Will Premier in Next 30 Days, PR Newswire, Dec. 16, 2008	
	936	Plaintiffs' Notice of Motion and Motion for Summary Judgment, Apple Inc. v. Iancu, No. 5:20-cv-06128-EJD (N.D. Cal. November 23, 2020), ECF No. 65	

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	937	Plaintiffs' Opposition to Defendants' Partial Motion to Stay Plaintiffs' Claims Regarding U.S. Patent Nos. 9,814,268 and 10,492,542, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 2, 2020), ECF No. 405	
	938	Press Release, Altria, FDA Authorizes Sale of IQOS Tobacco Heating System in the U.S. (Apr. 30, 2019) ("Altria Announcement")	
	939	Public Interest Comments of Congressman George Holding in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 15, 2020)	
	940	Public Interest Comments of Dr. Nikan H. Khatibi, MD in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	941	Public Interest Comments of Nextera Healthcare in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	942	Public Interest Comments of Spark MD in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	943	Public Interest Comments of TechFreedom in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	944	Public Interest Comments of the Consumer Advocates for Smoke-free Alternatives Association in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	945	Public Interest Comments of the Progressive Policy Institute in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	946	Public Interest Comments of the Reason Foundation in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	947	Public Interest Comments of the Schizophrenia and Related Disorder Alliance of America in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	
	948	Public Interest Comments of the Smoke-Free Alternatives Trade Association in *Certain Tobacco Heating Articles and Components Thereof,* No. 337-TA-3447 (U.S.I.T.C. Apr. 23, 2020)	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
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	949	Public Version of Commission Investigative Staff's Pre-Hearing Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on January 4, 2021.	
	950	Public Version of Commission Investigative Staff's Responsive Post-Hearing Brief in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on March 5, 2021.	
	951	Public Version of Commission Opinion in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on October 19, 2021.	
	952	Public Version of Complainant's Opening Post-Hearing Brief in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on March 31, 2021.	
	953	Public Version of Complainant's Responsive Post-Hearing Brief in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on March 31, 2021.	
	954	Public Version of Complainants' Pre-Hearing Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on December 11, 2020. (Parts 1 & 2)	
	955	Public Version of Initial Determination on Violation of Section 337 and Recommended Determination on Remedy and Bond in International Trade Commission Investigation No. 337-TA-1199 in the matter of *Certain Tobacco Heating Articles and Components Thereof* on May 14, 2021.	
	956	Public Version of Representative Claim Chart of Domestic Industry of Claims 1-4 in U.S. Patent No. 9,930,915 by the VUSE Solo Device from ITC Inv. No. 337-TA-1199 November 25, 2020	
	957	Public Version of Respondent's Joint Disclosure of Final Contentions in Response to Individual Interrogatory No. 12, in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (September 18, 2020)	
	958	Public Version of Respondents' Notice of Prior Art filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on August 13, 2020.	

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	959	Public Version of Respondents' Notice of Prior Art filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on August 13, 2020.	
	960	Public Version of Respondents' Petition and Contingent Petition for Review of the Final Initial Determination in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on May 28, 2021.	
	961	Public Version of Respondents' Post-Hearing Initial Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on February 12, 2021.	
	962	Public Version of Respondents' Post-Hearing Responsive Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on March 31, 2021.	
	963	Public Version of Respondents' Prehearing Brief filed in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on December 11, 2020.	
	964	R.J. REYNOLDS TOBACCO CO., *Chemical and Biological Studies on New Cigarette Prototypes that Heat Instead of Burn Tobacco,* Reynolds Tobacco Company Monograh, 1988, pp. 60-62, pp. 119-124.	
	965	R.R. Baker, *Temperature Distribution Inside a Burning Cigarette*, Nature, Vol. 247, pp. 405-406, (1974)	
	966	Rebuttal Expert Report of Charles Clemens in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Oct. 23, 2020)	
	967	Record of Oral Hearing held October 27, 2021, in IPR2020-01094, *Inter Partes* Review of U.S. Patent No. 9,930,915, November 24, 2021.	
	968	Remote Deposition of Seetharama C. Deevi, Ph.D. in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated August 20, 2021.	
	969	Remote Deposition of Seetharama C. Deevi, Ph.D. in *Inter Partes* Review of U.S. Patent No. 9,930,915, dated March 26, 2021.	

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	970	Reply Support of Defendants' Partial Motion to Stay Plaintiffs' Claims Regarding U.S. Patent Nos. 9,814,268 and 10,492,542, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO- TCB (E.D. Va. December 3, 2020), ECF No. 422	
	971	Respondents' Opening Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Aug. 21, 2020)	
	972	Respondents' Responsive Claim Construction Brief in *Certain Tobacco Heating Articles and Components Thereof*, No. 337-TA-1199 (U.S.I.T.C. Sept. 4, 2020)	
	973	Richard R. Baker, *Smoke Generation Inside a Burning Cigarette: Modifying Combustion to Develop Cigarettes That May be Less Hazardous to Health*, Progress in Energy and Combustion Science, Vol. 32, pp. 373-385, (2006)	
	974	Robert W. Messler, Jr., Joining of Materials and Structures, Elsevier Butterworth-Heinemann 2004 – Excerpt, 4 pgs.	
	975	Rohsenow, "Heat, Mass, And Momentum Transfer", copyright 1961 Prentice-Hall, 3 pgs.	
	976	Rule 16(b) Scheduling Order, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. September 8, 2020), ECF No. 99	
	977	SAMEJIMA, T., et al., "Moisture Sorption Isotherms of Various Tobaccos", 1978, *Agric. Biol. Chem.*, Vol. 42(12), pp 2285-2290.	
	978	SHERZ, Paul, Practical Electronics for Inventors, 2000, p. 107, p. 234.	
	979	Steven M. Kaplan, Wiley Electrical and Electronics Engineering Dictionary (2004), pp 144 – 145.	
	980	Submission in Opposition Proceedings, filed in corresponding European Application No. 18173918.6, Patent No. 3398460, dated December 3, 2020.	
	981	Submission in opposition proceedings, Further Written Submissions filed in corresponding European Application No. 18173918.6, Patent No. 3398460. Dated April 16, 2021.	

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	982	Summary of Group #3 Brainstorming on May 13, 1994	
	983	The American Heritage Dictionary of the English Language (5th ed. 2011), p. 1467.	
	984	The Lady Smokes, www.theladysmokes.com, webpages archived at https://web.archive.org/web/20061107040128/http://theladysmokes.com (November 7, 2006), https://web.archive.org/web/20061107040116/http://www.theladysmokes.com/CigaretteHolders.html (November 7, 2006), https://web.archive.org/web/20061107040116/http://www.theladysmokes.com/Bitchsticks.html (November 7, 2006), and https://web.archive.org/web/20061107040116/http://www.theladysmokes.com/FAQs.html (March 13, 2007)	
	985	Thermal Ink—Jet Print Cartridge Designer's Guide (2nd Edition Hewlett Packard) ("Jet Print Cartridge Designers Guide"), 12 pgs.	
	986	Third Party Observation filed in corresponding European Application No. 19151515.4, Patent No. 3508076, mailed January 18, 2021.	
	987	Third Party Observation filed in corresponding European Application No. 19151515.4, Patent No. 3508076, mailed March 12, 2020.	
	988	Transcript of Motion Hearing Proceedings (Via Zoom Conference) Before the Honorable Theresa C. Buchanan, United States District Court Magistrate Judge, RAI Strategic Holdings, Inc. v. Altria Client Services LLC, No. 1:20-cv-00393-LO-TCB (E.D. Va. December 4, 2020)	
	989	Transcript Record of Oral Hearing held May 11, 2022 in *Inter Partes* Review of U.S. Patent No. 9,814,268.	
	990	U.S. Provisional Application Serial No. 60/722,036	
	991	UK Approved Judgment In the High Court of Justice Business and Property Courts of England and Wales Intellectual Property List (ChD) Patents Court, dated March 9, 2021, EWHC 537	

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	992	Unknown. HEATER DEVELOPMENT. 1994 March. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/hxwy0118	
	993	Unknown. PHILIP MORRIS PATENT DATABASE SEARCH INVENTION DISCLOSURES DATING FROM ABOUT 800000 TO PRESENT FOR WHICH PATENT APPLICATIONS WERE NOT FILED. 1996 August 21. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/kgdl0071	
	994	Unknown. PROJECT BETA CORE TEAMS - ASHLAND. 1994 May 06. Philip Morris Records; Master Settlement Agreement. Unknown. https://www.industrydocuments.ucsf.edu/docs/szjn0076	
	995	Videotaped Deposition of Charles E. Clemens, Conducted Virtually in United States International Trade Commission Investigation 337-TA-1199 in the matter of Certain Tobacco Heating Articles and Components Thereof on November 5, 2020.	
	996	Waybackmachine Archive of Wikipedia page "Polycarbonate" 2006, Accessed from web.archive.org/web/20060913000000/https://en.wikipedia.org/wiki/Polycarbonate	
	997	Webpages from Beijing SBT Ruyan Technology & Development Corp., Sbtry.cn (archived at web.archive.org, 2005-2006, with affidavit)	
	998	Webpages from E-cig.com (archived at web.archive.org, 2006-2007, with affidavit)	
	999	Wiley Electrical and Electronics Engineering Dictionary (2004), p. 181.	
	1000	Written Opinion of the International Searching Authority in International Application No. PCT/US2007/081461, mailed April 18, 2009	
	1001	Yunus A. Cengel & Michael A. Boles, THERMODYNAMICS: AN ENGINEERING APPROACH (5th ed. 2006) (excerpts) ("THERMODYNAMICS"), 9 pgs.	
	1002	Patent Owner Preliminary Response in post-grant review of U.S. Patent No. 10,492,542 dated October 16, 2020.	

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	1003	Petitioner's Reply to the Patent Owner Preliminary Response in post-grant review of U.S. Patent No. 10,492,542 entered November 10, 2020.	
	1004	Patent Owner's Sur-Reply to Petitioner's Reply to Patent Owner's Preliminary Response in post-grant review of U.S. Patent No. 10,492,542 dated November 20, 2020.	
	1005	Decision Granting Institution of Post-Grant Review in post-grant review of U.S. Patent No. 10,492,542 entered January 13, 2021.	
	1006	Declaration of Charles E. Clemens in post-grant review of U.S. Patent No. 10,492,542 dated April 6, 2021.	
	1007	Deposition of Dr. Seetharama C. Deevi taken by videoconference on March 22, 2021 in post-grant review of U.S. Patent No. 10,492,542.	
	1008	Patent Owner Response to Petition for Post-Grant Review Pursuant to 37 C.F.R. § 42.220 in post-grant review of U.S. Patent No. 10,492,542 dated April 7, 2021.	
	1009	Petitioner's Reply in post-grant review of U.S. Patent No. 10,492,542 entered June 30, 2021.	
	1010	Videotaped Deposition of Dr. Seetharama C. Deevi, Ph.D. taken remotely via ZOOM on July 30, 2021 in post-grant review of U.S. Patent No. 10,492,542.	
	1011	Patent Owner Sur-Reply in post-grant review of U.S. Patent No. 10,492,542 dated August 11, 2021.	
	1012	Judgment Final Written Decision Determining All Challenged Claims Unpatentable in post-grant review of U.S. Patent No. 10,492,542 entered January 10, 2022.	
	1013	Patent Owner's Rehearing Request in post-grant review of U.S. Patent No. 10,492,542 dated February 9, 2022.	
	1014	Decision Denying Patent Owner's Request for Rehearing in post-grant review of U.S. Patent No. 10,492,542 entered March 31, 2022.	

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	1015	File History regarding U.S. Patent No. 10,492,542 ("'542 FH")	
	1016	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated August 17, 2020	
	1017	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered September 18, 2020	
	1018	Patent Owner's Sur-Reply to Petitioner's Reply to the Patent Owner's Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated September 29, 2020	
	1019	Decision Denying Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated November 16, 2020	
	1020	Patent Owner's Demonstratives for Oral Argument: RAI's PTAB Presentation, Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc., IPR2020-01602, Exhibit 2017, January 6, 2021.	
	1021	Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated January 8, 2021.	
	1022	Petitioner's Reply to the Patent Owner Preliminary Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered February 9, 2021.	
	1023	Decision Granting Institution of *Inter Partes* Review in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated April 2, 2021.	
	1024	Declaration of Charles E. Clemens in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated July 1, 2021.	
	1025	Patent Owner Response in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated July 2, 2021.	
	1026	Remote Videotaped Deposition of Stewart M. Fox on June 25, 2021, in *Inter Partes* Review of U.S. Patent No. 9,901,123.	

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	1027	Petitioner's Reply in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated October 8, 2021.	
	1028	Patent Owner Sur-Reply in *Inter Partes* Review of U.S. Patent No. 9,901,123, dated November 19, 2021.	
	1029	Record of Oral Hearing held January 6, 2022, in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered March 1, 2022.	
	1030	Petitioner's Request for Rehearing of the Institution Decision in *Inter Partes* Review of U.S. Patent No. 9,901,123, entered July 21, 2022.	
	1031	File History for U.S. Patent 9,930,915	
	1032	File History for U.S. Patent 9,901,123	
	1033	Patent Owner's Notice of Appeal in IPR2020-01094, *Inter Partes* Review of U.S. Patent No. 9,930,915, April 28, 2022.	
	1034	Petitioner's Notice of Appeal in IPR2020-01602, *Inter Partes* Review of U.S. Patent No. 9,901,123, May 27, 2022.	
	1035	Notification of Receipt of POP Request in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, July 21, 2022.	
	1036	POP Request in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, July 21, 2022.	
	1037	POP Request Dismissed in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, July 26, 2022.	
	1038	Panel Change Order Conduct of the Proceeding in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, September 13, 2022.	

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	1039	Decision Denying Petitioner's Request on Rehearing of Decision Denying Institution in IPR2020-00919, *Inter Partes* Review of U.S. Patent No. 9,901,123, October 13, 2022.	
	1040	"How the eCigarette Works," Screenshots YouTube Video by esmokeinpeace, https://www.youtube.com/watch?v=eqz6TvAKcBQ, March 1, 2009 "E10"	
	1041	"How the eCigarette Works," Wayback Machine Screenshots YouTube Video by esmokeinpeace, https://web.archive.org/web/20140227122005/https:/www.youtube.com/watch?v=eqz6TvAKcBQ, March 1, 2009 " E10' "	
	1042	"How To Use An Electronic Cigarette," Screenshots YouTube Video by Vapin Lizards, https://www.youtube.com/watch?v=xPJxBRxLIfs, November 15, 2013 "E15"	
	1043	Annex to Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 3, 2023, "Feature Analysis of Claim 1".	
	1044	Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 3, 2023.	
	1045	Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 8, 2023. (37 pgs)	
	1046	Vape Ranks, "E-Cigarette Inventor Complains about Lack of Financial Rewards," Posted October 14, 2013, Retrieved 2.20.2023, "Hon Lik Article"	
	1047	Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated March 8, 2023. (47 pgs)	
	1048	Letter Accompanying Notice of Opposition filed in corresponding European Patent Application No. 20156199.0, Patent No. 3669682, dated February 20, 2023.	

Examiner Signature	/PHU H NGUYEN/	Date Considered	06/15/2023

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.H.N/

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9

CONFIRMATION NO. 4055

26158
WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

PUBLICATION NOTICE

OC000000059850262

Date Mailed: 07/27/2023

Title:TOBACCO-CONTAINING SMOKING ARTICLE

Publication No.US-2023-0232886-A1
Publication Date:07/27/2023

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 18/129,643	Filing Date 03/31/2023	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT	08/30/2023	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 30	Minus	** 30	= 0		x $ =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $ =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $ =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	SLIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/MONIQUE BENJAMIN/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/25 PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION AND TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	18129643
Filing Date	31-Mar-2023
First Named Inventor	John Robinson
Attorney Docket Number	R60999 1400USC13T1(5803.9
Title of Invention	TOBACCO-CONTAINING SMOKING ARTICLE

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
RAI Strategic Holdings, Inc.	100 %

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

16271443 filed on 02/08/2019

17673424 filed on 02/16/2022

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

8899238

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8079371

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicants claims the following fee status:

○ Small Entity

○ Micro Entity

◉ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- (●) An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

  Registration Number 47468

- ( ) A sole inventor
- ( ) A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- ( ) A joint inventor; all of whom are signing this request

Signature	/ryan w. cagle/
Name	Ryan W. Cagle

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	18129643
Filing Date:	31-Mar-2023
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Filer:	Ryan W. Cagle/Diann Gravius
Attorney Docket Number:	R60999 1400USC13T1(5803.9

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 18129643

Filing Date: 31-Mar-2023

Applicant/Patent under Reexamination: Robinson

Electronic Terminal Disclaimer filed on August 30, 2023

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	48516258
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	30-AUG-2023
Filing Date:	31-MAR-2023
Time Stamp:	17:35:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$170
RAM confirmation Number	E20238TH35179929
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	49282 5b435018a92c8a03175bb81e9f0b378c1d76b991	no	3
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38248 3efdd37fadd14a6e634bed403f83f2faf49a0751	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	87530		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney's Docket No. **R60999 1400US.C13.T1 (5803.9)**

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Robinson *et al.*	Confirmation No.:	4055
Appl. No.:	18/129,643	Group Art Unit:	1747
Filed:	March 31, 2023	Examiner:	Nguyen, Phu Hoang
For:	TOBACCO-CONTAINING SMOKING ARTICLE		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION UNDER 37 CFR § 1.111

Sir:

Listing of the Claims begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

Listing of the Claims:

1.-30. (Canceled)

31. (Previously presented) An electrically-powered, aerosol-generating smoking article comprising:

an outer housing having two ends;

a mouthpiece defined at one of the two ends;

an electrical power source arranged within the outer housing;

an electrical resistance heater positioned within the outer housing, the electrical resistance heater being configured for electrical connection with the electrical power source

a storage compartment defined within the outer housing, the storage compartment being configured for storage of a liquid aerosol-forming material and being arranged such that the liquid aerosol-forming material can be wicked into contact with the electrical resistance heater to volatilize the liquid aerosol-forming material;

an air passageway through at least a portion of the outer housing, the air passageway being arranged so that air drawn into the outer housing combines with volatilized liquid aerosol-forming material to produce an aerosol that can be drawn into the mouth of a user of the electrically-powered, aerosol-generating smoking article through the mouthpiece; and

a controller configured to activate current flow through the electrical resistance heater in response to a draw on the electrically-powered, aerosol-generating smoking article.

32. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment is arranged within the housing proximate the mouthpiece.

33. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment comprises a fibrous substrate.

34. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the aerosol that is produced passes at least partially through the storage compartment before exiting through the mouthpiece.

35. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment is configured as a cartridge.

36. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 35, wherein the cartridge is circumscribed with a wrapping material.

37. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 35, wherein the cartridge comprises a plastic material

38. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the storage compartment is configured as a container for holding liquid.

39. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrical resistance heater is arranged in contact with the storage compartment.

40. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrical resistance heater is arranged proximate to an absorbent wicking material configured for transferring the liquid aerosol-forming material to the electrical resistance heater.

41. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein at least a portion of the electrical resistance heater extends into the storage compartment.

42. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrical resistance heater is configured to allow airflow therethrough.

43. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, further comprising a sensor adapted for sensing the draw by a user on the electrically-powered, aerosol-generating smoking article.

44. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the controller is configured to regulate the current flow through the electrical resistance heater during the draw on the electrically-powered, aerosol-generating smoking article.

45. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, further comprising an end cap defined at a second of the two ends.

46. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 45, wherein the electrical power source is arranged within the housing proximate the end cap.

47. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 31, wherein the electrically-powered, aerosol-generating smoking article is generally rod-shaped.

48. (Previously presented) An electrically-powered, aerosol-generating smoking article comprising:

an outer housing;

an electrical power source arranged within the outer housing;

an electrical resistance heater positioned within the outer housing, the electrical resistance heater being configured for electrical connection with the electrical power source

a liquid storage arranged within the outer housing such that liquid aerosol-forming material in the liquid storage can be wicked into contact with the electrical resistance heater to volatilize the liquid aerosol-forming material;

an air passageway through at least a portion of the outer housing, the air passageway being arranged so that air drawn into the outer housing combines with volatilized liquid aerosol-forming material to produce an aerosol that can be drawn into the mouth of a user of the electrically-powered, aerosol-generating smoking article; and

a puff-actuated controller configured to regulate current flow through the electrical resistance heater in response to a draw on the electrically-powered, aerosol-generating smoking article.

49. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the puff-actuated controller comprises a sensor that senses the draw on the electrically-powered, aerosol-generating smoking article.

50. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the puff-actuated controller comprises additional control circuitry.

51. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, further comprising a mouthpiece attached to the outer housing.

52. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the liquid storage is configured as a container in which the liquid aerosol-forming material can be stored.

53. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the liquid storage is configured as an absorbent fibrous material.

54. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the aerosol that is produced passes at least partially through the storage before exiting through the electrically-powered, aerosol-generating smoking article.

55. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrical resistance heater is arranged in contact with the liquid storage.

56. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrical resistance heater is arranged proximate to an absorbent wicking material configured for transferring the liquid aerosol-forming material to the electrical resistance heater.

57. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein at least a portion of the electrical resistance heater extends into the liquid storage.

58. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrical resistance heater is configured to allow airflow therethrough.

59. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the outer housing comprises a mouthpiece defined at a first end thereof and an end cap defined at a second end thereof.

60. (Previously presented) The electrically-powered, aerosol-generating smoking article of claim 48, wherein the electrically-powered, aerosol-generating smoking article is generally rod-shaped.

REMARKS

Reexamination and reconsideration of this application, withdrawal of the rejections, and formal notification of the allowability are solicited in light of the remarks that follow.

Status of the Claims

Claims 31-60 are presently pending. No amendments to the claims are introduced in this response.

Double Patenting Rejections

Claims 31-60 stand rejected on the ground of nonstatutory double patenting over claims 1-20 of US Pat. No. 10,231,488. Claims 31-60 stand rejected on the ground of nonstatutory double patenting over claims 1-29 of US Pat. No. 9,901,123. Claims 31-60 stand rejected on the ground of nonstatutory double patenting over claims 1-25 of US Pat. No. 9,801,416. Claims 31-60 stand rejected on the ground of nonstatutory double patenting over claims 1-40 of US Pat. No. 8,899,238. Claims 31-60 stand rejected on the ground of nonstatutory double patenting over claims 1-35 of US Pat. No. 8,079,371. Claims 31-60 stand rejected on the ground of nonstatutory double patenting over claims 1-9 of US Pat. No. 7,726,320. Claims 31-60 stand provisionally rejected on the ground of nonstatutory double patenting over claims 31-59 of copending App. No. 16/271,443. Claims 31-60 stand provisionally rejected on the ground of nonstatutory double patenting over claims 31-50 of copending App. No. 17/673,424. Applicant respectfully traverses each of the foregoing rejections.

Although Applicant does not necessarily agree with the above-noted rejections, in order to expedite examination, Applicant has filed electronic terminal disclaimers over each of the above-noted patents and pending applications. Accordingly, Applicant believes that each of the rejections is moot, and Applicant requests reconsideration and withdrawal of the rejections.

Conclusion

It is believed that all pending claims are now in condition for immediate allowance. As such, Applicant respectfully requests reconsideration and withdrawal of the present rejections. It is requested that the Examiner telephone the undersigned should the Examiner have any comments or suggestions in order to expedite examination of this case.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR §1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 09-0528.

Respectfully submitted,

/ryan w. cagle/

Ryan W. Cagle
Registration No. 47,468

Customer No. 26158
Womble Bond Dickinson (US) LLP
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Fax Raleigh Office (919) 755-2150

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Electronic Acknowledgement Receipt

EFS ID:	48516391
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	30-AUG-2023
Filing Date:	31-MAR-2023
Time Stamp:	17:45:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		R60999_1400US_C13_T1_Response_to_6-21-23_OA.pdf	124692 eecdd8f0f17976202884b5252724b305184cec64	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	8
Warnings:			
Information:			
	Total Files Size (in bytes):	124692	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26158 7590 09/21/2023

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

EXAMINER	
NGUYEN, PHU HOANG	
ART UNIT	PAPER NUMBER
1747	

DATE MAILED: 09/21/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

TITLE OF INVENTION: TOBACCO-CONTAINING SMOKING ARTICLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	12/21/2023

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26158 7590 09/21/2023
WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

TITLE OF INVENTION: TOBACCO-CONTAINING SMOKING ARTICLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	12/21/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, PHU HOANG	1747	131-275000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via Patent Center or EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

26158 7590 09/21/2023

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ATLANTA, GA 30357-0037

EXAMINER	
NGUYEN, PHU HOANG	
ART UNIT	PAPER NUMBER
1747	

DATE MAILED: 09/21/2023

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 18/129,643	Applicant(s) Robinson et al.	
	Examiner PHU H NGUYEN	Art Unit 1747	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 8/30/2023.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 31-60 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PHU H NGUYEN/
Examiner, Art Unit 1747

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	Art Unit
	PHU H NGUYEN	1747

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
See Search History	06/15/2023	P.N
See Search History	09/18/2023	P.N

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	See Search History	09/18/2023	P.N

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	**Art Unit**
	PHU H NGUYEN	1747

CPC						
Symbol					**Type**	**Version**
A24B	/	3	/	14	F	2013-01-01
A24D	/	1	/	20	I	2020-01-01
A24F	/	40	/	40	I	2020-01-01
A24F	/	40	/	42	I	2020-01-01
A24B	/	15	/	12	I	2013-01-01
A24D	/	1	/	002	I	2013-01-01
A24B	/	13	/	02	I	2013-01-01
A24B	/	15	/	167	I	2016-11-01
H05B	/	3	/	42	I	2013-01-01
A24F	/	40	/	10	A	2020-01-01
A24F	/	40	/	20	A	2020-01-01
H05B	/	2203	/	021	A	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	30	
/PHU H NGUYEN/ Examiner, Art Unit 1747	18 September 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20230918

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	**Art Unit**
	PHU H NGUYEN	1747

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A24B3/14	/	3	/	14
A24D1/20	/	1	/	20
A24F40/40	/	40	/	40
A24F40/42	/	40	/	42
A24B15/12	/	15	/	12
A24D1/00	/	1	/	00
A24B13/02	/	13	/	02
A24B15/167	/	15	/	167
H05B3/42	/	3	/	42
A24F40/10	/	40	/	10
A24F40/20	/	40	/	20

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 30	
/PHU H NGUYEN/ Examiner, Art Unit 1747 (Primary Examiner)	18 September 2023 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	**Art Unit**
	PHU H NGUYEN	1747

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	31	10	40	19	49	28	58								
2	32	11	41	20	50	29	59								
3	33	12	42	21	51	30	60								
4	34	13	43	22	52										
5	35	14	44	23	53										
6	36	15	45	24	54										
7	37	16	46	25	55										
8	38	17	47	26	56										
9	39	18	48	27	57										

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	30	
/PHU H NGUYEN/ Examiner, Art Unit 1747	18 September 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office Part of Paper No.: 20230918

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	Art Unit
	PHU H NGUYEN	1747

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/15/2023	09/18/2023							
1	31	✓	=							
2	32	✓	=							
3	33	✓	=							
4	34	✓	=							
5	35	✓	=							
6	36	✓	=							
7	37	✓	=							
8	38	✓	=							
9	39	✓	=							
10	40	✓	=							
11	41	✓	=							
12	42	✓	=							
13	43	✓	=							
14	44	✓	=							
15	45	✓	=							
16	46	✓	=							
17	47	✓	=							
18	48	✓	=							
19	49	✓	=							
20	50	✓	=							
21	51	✓	=							
22	52	✓	=							
23	53	✓	=							
24	54	✓	=							
25	55	✓	=							
26	56	✓	=							
27	57	✓	=							
28	58	✓	=							
29	59	✓	=							
30	60	✓	=							

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	284	("20030131859"|"20040173229"|"20050016549"|"20050066986"|"20060185687"|"20060196518"|"20070062549"|"3258015"|"3356094"|"3516417"|"3614956"|"3738374"|"3844294"|"3878850"|"3931824"|"3943941"|"4044777"|"4079742"|"4190046"|"4219031"|"4233993"|"4284089"|"4286604"|"4326544"|"4340072"|"4347855"|"4391285"|"4635651"|"4700727"|"4714082"|"4735217"|"4756318"|"4771795"|"4793365"|"4800903"|"4807809"|"4819665"|"4823817"|"4836225"|"4848374"|"4874000"|"4892109"|"4893639"|"4917121"|"4917128"|"4920990"|"4924886"|"4947874"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4991606"|"5020548"|"5025814"|"5033483"|"5040551"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5099861"|"5101839"|"5105835"|"5105836"|"5105837"|"5105838"|"5115820"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5271419"|"5285798"|"5293883"|"5327917"|"5345955"|"5357984"|"5360023"|"5369723"|"5388574"|"5396911"|"5533530"|"5551451"|"5588446"|"5593792"|"5595577"|"5598868"|"5692525"|"5715844"|"5743251"|"5778899"|"5799663"|"5819751"|"5829453"|"586	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2009/06/03 09:16 PM

		5185"|"5878752"|"5880439"|"5915387"|"5934289"|"6033623"|"6053176"|"6089857"|"6095152"|"6146934"|"6164287"|"6182670"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6615840"|"6730832"|"6823873"|"7117867").PN.					
L2	42	L1 and electrical	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2009/06/03 09:19 PM
L4	2	"20080092912"	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2009/06/03 09:46 PM
L5	3	flameless near2 electronic near2 cigarette	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2009/06/04 12:58 PM
L6	4	(("5093894") or ("5505214")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2009/06/04 01:40 PM
L7	109	("1771366" | "1968509" | "2057353" | "2104266" | "2442004" | "2974669" | "3200819" | "3255760" | "3258015" | "3363633" | "3402723" | "3482580" | "3608560" | "3738374" | "3744496" | "3804100" | "3889690" | "4016061" | "4068672" | "4077784" | "4131119" | "4141369" | "4164230" | "4193411" | "4215708" | "4219032" | "4246913" | "4256945" | "4259970" | "4303083" | "4319591" | "4393884" | "4431903" | "4436100" | "4463247" | "4505282" | "4562337" | "4570646" | "4580583" | "4621649" | "4623401" | "4637407" | "4659912" | "4735217" | "4771796" | "4776353" | "4837421" | "4846199" | "4848376" | "4874924" | "4877989" | "4922901" | "4945931" | "4947874" | "4947875" | "4966171" | "4981522" | "4991606" | "5016656" | "5040552" | "5060671" | "5076296"	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2009/06/04 01:41 PM

		| "5093894" | "5159940" | "5249586" | "5274214").PN. OR ("5505214").URPN.					
L8	284	("20030131859"|"20040173229"|"20050016549"|"20050066986"|"20060185687"|"20060196518"|"20070062549"|"3258015"|"3356094"|"3516417"|"3614956"|"3738374"|"3844294"|"3878850"|"3931824"|"3943941"|"4044777"|"4079742"|"4190046"|"4219031"|"4233993"|"4284089"|"4286604"|"4326544"|"4340072"|"4347855"|"4391285"|"4635651"|"4700727"|"4714082"|"4735217"|"4756318"|"4771795"|"4793365"|"4800903"|"4807809"|"4819665"|"4823817"|"4836225"|"4848374"|"4874000"|"4892109"|"4893639"|"4917121"|"4917128"|"4920990"|"4924886"|"4947874"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4991606"|"5020548"|"5025814"|"5033483"|"5040551"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5099861"|"5101839"|"5105835"|"5105836"|"5105837"|"5105838"|"5115820"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5271419"|"5285798"|"5293883"|"5327917"|"5345955"|"5357984"|"5360023"|"5369723"|"5388574"|"5396911"|"5533530"|"5551451"|"5588446"|"5593792"|"5595577"|"5598868"|"5692525"|"5715844"|"5743251"|"5778899"|"5799663"|"5819751"|"5829453"|"5865185"|"5878752"|"5880	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2009/06/04 01:55 PM

		439"|"5915387"|"5934289"|"6033623"|"6053176"|"6089857"|"6095152"|"6146934"|"6164287"|"6182670"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6615840"|"6730832"|"6823873"|"7117867").PN.					
L9	2	(L8 L7) and puff near2 controller	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2009/06/04 01:55 PM
L10	16	(L8 L7) and glycerin and (electrical electronic)	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2009/06/04 02:28 PM
L11	54	(L8 L7) and glycerin and extract	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2009/06/04 04:33 PM
L12	2	("20080092912").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2010/01/06 08:51 PM
L13	18	aerosol near2 material and cartridge and electrica$4 and tobacco and heat$4 near2 element	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2010/01/06 09:08 PM
L14	497	("2881770"|"20020000235"|"20020014453"|"20030075193"|"20030114298"|"20030131859"|"20030154993"|"20040084056"|"20040107973"|"20040134631"|"20040173229"|"20040194792"|"20040217023"|"20040226569"|"20040237984"|"20040255965"|"20040256253"|"20040261807"|"20050005947"|"20050016549"|"20050016556"|"20050049128"|"20050066983"|"20050066984"|"20050066986"|"20050076929"|"20050133051"|"20050133052"|"20050150786"|"20050194014"|"20050252693"|"20050274390"|"20060021624"|"20060025292"|"20070023056"|"20070190347"|"3101723"|"3217715"|"3258015"|"3263244"|"3308600"|"3347247"|"3356094"|"3370595"|"3419015"|"35164	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2010/01/06 09:13 PM

		17"|"3614956"|"364871 1"|"3738374"|"3844294" |"3878850"|"3931824"|" 3943941"|"3957563"|"3 972335"|"4044777"|"40 54145"|"4079742"|"417 4720"|"4201234"|"4219 031"|"4223597"|"42339 93"|"4280187"|"428167 0"|"4286604"|"4294353" |"4326544"|"4340072"|" 4347855"|"4391285"|"4 449541"|"4508525"|"45 34463"|"4700727"|"471 4082"|"4715497"|"4756 318"|"4771795"|"47933 65"|"4807809"|"482381 7"|"4836224"|"4848374" |"4852734"|"4874000"|" 4881556"|"4887619"|"4 893637"|"4893639"|"49 03714"|"4917121"|"491 7128"|"4920990"|"4924 883"|"4924886"|"49248 88"|"4938238"|"494787 4"|"4961438"|"4966171" |"4969476"|"4977908"|" 4989619"|"4991606"|"4 995405"|"5012829"|"50 20548"|"5022416"|"502 5814"|"5027836"|"5027 837"|"5033483"|"50405 51"|"5046514"|"505062 1"|"5052413"|"5056537" |"5060676"|"5065776"|" 5067499"|"5072744"|"5 074320"|"5074321"|"50 76295"|"5076296"|"507 6297"|"5088507"|"5092 353"|"5099861"|"51018 39"|"5103842"|"510583 1"|"5105834"|"5105835" |"5105836"|"5105837"|" 5105838"|"5115820"|"5 129409"|"5137034"|"51 39140"|"5146934"|"514 8821"|"5156170"|"5159 940"|"5159942"|"51599 44"|"5178167"|"518306 2"|"5203355"|"5211684" |"5220930"|"5224498"|" 5240014"|"5240016"|"5 247947"|"5261425"|"52 71419"|"5285798"|"530 3720"|"5327917"|"5345 955"|"5357984"|"53600 23"|"5369723"|"539690 9"|"5396911"|"5462073"					

		|"5469871"|"5533530"|"5546965"|"5551451"|"5560376"|"5568819"|"5588446"|"5593792"|"5595577"|"5598868"|"5622190"|"5699812"|"5706834"|"5711320"|"5715844"|"5718250"|"5727571"|"5778899"|"5819751"|"5829453"|"5865185"|"5874508"|"5878752"|"5880439"|"5902431"|"5915387"|"5934289"|"5938018"|"5944025"|"6089857"|"6095152"|"6164287"|"6182670"|"6229115"|"6367481"|"6378528"|"6397852"|"6408856"|"6530377"|"6537186"|"6578584"|"6584979"|"6595218"|"6615842"|"6631722"|"6656412"|"6730832"|"6761174"|"6779528"|"6789547"|"6805174"|"6814786"|"6823873"|"6848450"|"6907885"|"6913784"|"7004896").PN.					
L17	2	("20120060853").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/27 01:59 PM
L18	598	("2881770"|"20020000235"|"20020014453"|"20030075193"|"20030114298"|"20030131859"|"20030154993"|"20040084056"|"20040107973"|"20040134631"|"20040173229"|"20040194792"|"20040217023"|"20040226569"|"20040237984"|"20040255965"|"20040256253"|"20040261807"|"20050005947"|"20050016549"|"20050016556"|"20050049128"|"20050066983"|"20050066984"|"20050066986"|"20050076929"|"20050133051"|"20050133052"|"20050150786"|"20050194014"|"20050252693"|"20050274390"|"20060021624"|"20060025292"|"20070023056"|"20070190347"|"3101723"|"3217715"|"3258015"|"32	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 04:59 PM

		63244"|"3308600"|"334 7247"|"3356094"|"3370 595"|"3419015"|"35164 17"|"3614956"|"364871 1"|"3738374"|"3844294" |"3878850"|"3931824"|" 3943941"|"3957563"|"3 972335"|"4044777"|"40 54145"|"4079742"|"417 4720"|"4201234"|"4219 031"|"4223597"|"42339 93"|"4280187"|"428167 0"|"4286604"|"4294353" |"4326544"|"4340072"|" 4347855"|"4391285"|"4 449541"|"4508525"|"45 34463"|"4700727"|"471 4082"|"4715497"|"4756 318"|"4771795"|"47933 65"|"4807809"|"482381 7"|"4836224"|"4848374" |"4852734"|"4874000"|" 4881556"|"4887619"|"4 893637"|"4893639"|"49 03714"|"4917121"|"491 7128"|"4920990"|"4924 883"|"4924886"|"49248 88"|"4938238"|"494787 4"|"4961438"|"4966171" |"4969476"|"4977908"|" 4989619"|"4991606"|"4 995405"|"5012829"|"50 20548"|"5022416"|"502 5814"|"5027836"|"5027 837"|"5033483"|"50405 51"|"5046514"|"505062 1"|"5052413"|"5056537" |"5060676"|"5065776"|" 5067499"|"5072744"|"5 074320"|"5074321"|"50 76295"|"5076296"|"507 6297"|"5088507"|"5092 353"|"5099861"|"51018 39"|"5103842"|"510583 1"|"5105834"|"5105835" |"5105836"|"5105837"|" 5105838"|"5115820"|"5 129409"|"5137034"|"51 39140"|"5146934"|"514 8821"|"5156170"|"5159 940"|"5159942"|"51599 44"|"5178167"|"518306 2"|"5203355"|"5211684" |"5220930"|"5224498"|" 5240014"|"5240016"|"5 247947"|"5261425"|"52 71419"|"5285798"|"530 3720"|"5327917"|"5345					

		955"|"5357984"|"5360023"|"5369723"|"5396909"|"5396911"|"5462073"|"5469871"|"5533530"|"5546965"|"5551451"|"5560376"|"5568819"|"5588446"|"5593792"|"5595577"|"5598868"|"5622190"|"5699812"|"5706834"|"5711320"|"5715844"|"5718250"|"5727571"|"5778899"|"5819751"|"5829453"|"5865185"|"5874508"|"5878752"|"5880439"|"5902431"|"5915387"|"5934289"|"5938018"|"5944025"|"6089857"|"6095152"|"6164287"|"6182670"|"6229115"|"6367481"|"6378528"|"6397852"|"6408856"|"6530377"|"6537186"|"6578584"|"6584979"|"6595218"|"6615842"|"6631722"|"6656412"|"6730832"|"6761174"|"6779528"|"6789547"|"6805174"|"6814786"|"6823873"|"6848450"|"6907885"|"6913784"|"7004896").PN.					
L19	38	L18 and cartridge	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 04:59 PM
L20	29	A24F47/$ and cartridge and substrate	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 05:00 PM
L22	4	(("20120060853") or ("7726320")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 05:02 PM
L24	21	A24F$/$ and polyethylene near2 terephthalate and electronic	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:14 PM
L27	18	polyethylene near2 terephthalate and electronic and absorbent and tobacco and smoking	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:17 PM
L28	359	("20030131859"|"20040173229"|"20050016549"|"20050066986"|"20060185687"|"20060196518"|"20070062549"|"3258015"|"3356094"|"3516417"|"3614956"|"37383	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2014/01/29 05:17 PM

		74"|"3844294"|"387885 0"|"3931824"|"3943941" |"4044777"|"4079742"|" 4190046"|"4219031"|"4 233993"|"4284089"|"42 86604"|"4326544"|"434 0072"|"4347855"|"4391 285"|"4635651"|"47007 27"|"4714082"|"473521 7"|"4756318"|"4771795" |"4793365"|"4800903"|" 4807809"|"4819665"|"4 823817"|"4836225"|"48 48374"|"4874000"|"489 2109"|"4893639"|"4917 121"|"4917128"|"49209 90"|"4924886"|"494787 4"|"4961438"|"4966171" |"4969476"|"4972855"|" 4977908"|"4991606"|"5 020548"|"5025814"|"50 33483"|"5040551"|"505 0621"|"5060667"|"5060 671"|"5060676"|"50657 76"|"5072744"|"507432 1"|"5076296"|"5076297" |"5092353"|"5099861"|" 5101839"|"5105835"|"5 105836"|"5105837"|"51 05838"|"5115820"|"514 6934"|"5148821"|"5159 940"|"5159942"|"51781 67"|"5183062"|"520335 5"|"5211684"|"5224498" |"5240014"|"5240016"|" 5271419"|"5285798"|"5 293883"|"5327917"|"53 45955"|"5357984"|"536 0023"|"5369723"|"5388 574"|"5396911"|"55335 30"|"5551451"|"558844 6"|"5593792"|"5595577" |"5598868"|"5692525"|" 5715844"|"5743251"|"5 778899"|"5799663"|"58 19751"|"5829453"|"586 5185"|"5878752"|"5880 439"|"5915387"|"59342 89"|"6033623"|"605317 6"|"6089857"|"6095152" |"6146934"|"6164287"|" 6182670"|"6234167"|"6 289898"|"6397852"|"64 08856"|"6516796"|"653 2965"|"6537186"|"6578 584"|"6591841"|"65986 07"|"6615840"|"673083 2"|"6823873"|"7117867"					

		).PN.					
L31	713	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:20 PM
L32	12	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber) and base near2 web	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:20 PM
L33	65	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber) and absorbent	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:34 PM
L34	28	(polyethylene near2 terephthalate near2 fiber) same bio	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 12:35 AM
L38	2	("3486508").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 01:31 AM
L40	22	A24F$/$ and paper same "metallic foil"	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 01:32 AM
L42	14	A24F$/$ and paper and base near2 web and calcium near carbonate	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/03 03:41 PM
L43	2	("8079371").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/03 09:22 PM
L44	7	cigarette near2 paper and carbon near2 fiber and carbon near2 particle and carbonate near2 particle	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:31 PM
L45	0	(A24B15/165).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:32 PM
L46	2	(A24B15/14).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:32 PM
L47	0	(A24D1/18).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:33 PM
L49	142	("1771366"|"2057353"|"2104266"|"20020146242"|"20030226837"|"20040129280"|"20040200488"|"20040226568"|"20050016550"|"20060016453"|"20060196518"|"20070074734"|"20070102013"|"20070215167"|"3200819"|"4303083"|"4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2014/09/29 11:59 PM

		907606"|"4945931"|"4986286"|"5019122"|"5042510"|"5093894"|"5261424"|"5353813"|"5408574"|"5468936"|"5498850"|"5515842"|"5530225"|"5564442"|"5649554"|"5666977"|"5687746"|"5726421"|"5727571"|"5865186"|"5894841"|"5954979"|"5967148"|"6095153"|"6125853"|"6155268"|"6164287"|"6196218"|"6196219"|"6601776"|"6772756"|"6803545"|"6854461"|"6854470"|"7293565").PN.					
L50	1	L49 and glycerin and (electrical electronic) and controller	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/30 12:00 AM
L53	122	smoking near2 article and tobacco near extract and heater	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 08:40 PM
L54	2	("8899238").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:47 PM
L55	0	(smoking and puff and carrier and wick and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:55 PM
L56	1	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:55 PM
L58	4	(("7726320") or ("8899238")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:42 AM
L59	2	("20150047656").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:46 AM
L60	6	(("7726320") or ("8899238") or ("8079371")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 02:00 AM
L61	2	("20150047656").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:33 PM
L62	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:46 PM
L64	921	("1771366"|"2057353"|"2104266"|"20020146242"|"20030131859"|"20030226837"|"200400205	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/19 11:29 PM

		08"|"20040118401"|"20 040129280"|"20040173 229"|"20040198127"|"2 0040200488"|"2004022 6568"|"20050016549"|" 20050016550"|"200500 66986"|"20060016543"| "20060185687"|"20060 196518"|"20070062549 "|"20070074734"|"2007 0102013"|"2007021516 7"|"20070267031"|"200 80085103"|"200800929 12"|"20080257374"|"20 090095311"|"20090095 312"|"20090126745"|"2 0090188490"|"2009023 0117"|"20090272379"|" 20090283103"|"200903 20863"|"20100043809"| "20100083959"|"20100 200006"|"20100229881 "|"20100242974"|"2010 0307518"|"2010031390 1"|"20110005535"|"201 10011396"|"201100363 63"|"20110036365"|"20 110094523"|"20110126 848"|"20110155153"|"2 0110155718"|"2011016 8194"|"20110265806"|" 20110309157"|"201200 42885"|"20120060823"| "20120060853"|"20120 111347"|"20120132643 "|"20120227752"|"2012 0231464"|"2012026092 7"|"20120279512"|"201 20318882"|"201300370 41"|"20130056013"|"20 130081625"|"20130081 642"|"20130192619"|"2 0130255702"|"2013030 6084"|"20130319439"|" 20130340750"|"201303 40775"|"20140000638"| "20140060554"|"20140 060555"|"20140096781 "|"20140096782"|"2014 0109921"|"2014015758 3"|"20140209105"|"201 40253144"|"201402614 08"|"20140261486"|"20 140261487"|"20140261 495"|"20140270727"|"2 0140270729"|"2014027 0730"|"20140345631"|" 3200819"|"3258015"|"3					

		486508"|"3516417"|"36 14956"|"3738274"|"376 6000"|"3844294"|"3878 850"|"3931824"|"39439 41"|"4044777"|"407974 2"|"4190046"|"4219031" |"4233993"|"4284089"|" 4286604"|"4303083"|"4 326544"|"4340072"|"43 47855"|"4391285"|"463 6561"|"4700727"|"4714 082"|"4735217"|"47563 18"|"4771995"|"479336 5"|"4800903"|"4807809" |"4819665"|"4823817"|" 4836225"|"4848374"|"4 874000"|"4892109"|"48 93639"|"4907606"|"491 7121"|"4917128"|"4920 990"|"4922901"|"49248 86"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4969476"|" 4972855"|"4977908"|"4 981522"|"4986286"|"50 19122"|"5042510"|"509 3894"|"5159942"|"5178 167"|"5183062"|"52033 55"|"5211684"|"522449 8"|"5240014"|"5240016" |"5249586"|"5261424"|" 5271419"|"5285798"|"5 293883"|"5322075"|"53 27917"|"5345955"|"535 3813"|"5357984"|"5360 023"|"5369723"|"53721 48"|"5388594"|"539691 1"|"5408574"|"5468936" |"5498850"|"5505214"|" 5515842"|"5530225"|"5 533530"|"5564442"|"55 88446"|"5593792"|"559 5577"|"5598868"|"5649 554"|"5665262"|"56669 77"|"5687746"|"569252 5"|"5715844"|"5726421" |"5727571"|"5743251"|" 5778899"|"5799663"|"5 819751"|"5819756"|"58 29453"|"5865185"|"586 5186"|"5878752"|"5880 439"|"5894841"|"59153 87"|"5934289"|"595497 9"|"5967148"|"0551451" |"6033623"|"6040560"|" 6053176"|"6089857"|"6 095152"|"6095153"|"61 25853"|"6146287"|"615					

		5268"|"6164287"|"6182670"|"6196218"|"6196219"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6688313"|"6730832"|"6772756"|"6803546"|"6823873"|"6854461"|"6854470"|"6994096"|"7117867"|"7293565"|"7513253"|"7775459"|"7832410"|"7845359"|"7896006"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069").PN.					
L65	7	L64 and carrier and wick and extract and mainstream and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/20 12:04 AM
L66	1	("15286087").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/09/28 10:53 PM
L69	3	("5666978").PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	ON	ON	2018/01/12 12:27 AM
L70	76	ep near2 "0503767"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/01/12 12:28 AM
L71	3	ep near2 "2949114"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/01/12 12:30 AM
L74	3	"15286087"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/03/19 10:20 AM
L77	9	"14527287"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/03/19 10:21 AM
L78	216	A24F$/$ and polyethylene near2 terephthalate and electronic	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2018/05/23 12:10 AM
L79	33	(("9901123") or ("9801416") or ("8899238") or ("8079371") or ("7726320")).PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	ON	ON	2018/05/23 12:11 AM
L80	3	("5692525").PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	OFF	OFF	2018/05/24 10:28 AM
L83	593	("4924886"|"4945931"|"	(US-PGPUB; USPAT;	OR	OFF	OFF	2018/10/13

		4947874"|"4947875"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4981522"|"4986286"|"4991606"|"5019122"|"5020548"|"5025814"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5099861"|"5101839"|"5105835"|"5105836"|"5105838"|"5115820"|"5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5249586"|"5261424"|"5271419"|"5285798"|"5293883"|"5322075"|"5327917"|"5345955"|"5353813"|"5357984"|"5360023"|"5369723"|"5388574"|"5388594"|"5396911"|"5408574"|"5468936"|"5498850"|"5505214"|"5515842"|"5530225"|"5533530"|"5551451"|"5564442"|"5588446"|"5593792"|"5595577"|"5598868"|"5649554"|"5665262"|"5666977"|"5666978"|"5687746"|"5692525"|"5715844"|"5726421"|"5727571"|"5743251"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5954979"|"5967148"|"6033623"|"6040560"|"6053176"|"6089857"|"6095152"|"6095153"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"66	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:18 PM

		88313"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6994096"|"7117867"|"7293565"|"7513253"|"7775459"|"7832410"|"7845359"|"7896006"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").PN.					
L84	1137	("0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1517584"|"1879128"|"20010026788"|"20030011579"|"20030033055"|"20030108342"|"20030189826"|"20040149282"|"20040234916"|"20040261802"|"20050115243"|"20060093977"|"20070030306"|"20110120482"|"2032695"|"2086192"|"2140516"|"2461664"|"2472282"|"2545851"|"2959664"|"3060429"|"3203025"|"3234357"|"3281637"|"3292635"|"3385303"|"3428053"|"3431393"|"3502588"|"3651240"|"3685521"|"3685522"|"3747120"|"3860012"|"3933643"|"3934117"|"4016878"|"4207457"|"4219032"|"4270552"|"4506682"|"4531178"|"4589428"|"4629665"|"4637407"|"4676237"|"4771295"|"4771796"|"4797692"|"4878506"|"4941486"|"4945448"|"4945929"|"4968263"|"4990939"|"5005593"|"5124200"|"5129409"|"5177424"|"5224265"|"5255674"|"5266746"|"5327915"|"5372148"|"5497791"|"5646666"|"5703633"|"5732685"|"5745985"|"5944025"|"5996589"|"6062213"|"6102036"|"6217315"|"6232784"|"6285017"|"6311561"|"6322268"|"6476151"|"6501052"|"6620659"|"6690121"|"6719443"|"6	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 03:18 PM

		722763"|"6885814"|"69 38986"|"7159464"|"728 4424"|"7337782"|"7445 007"|"7997280"|"00000 05"|"0726320"|"151468 2"|"1771366"|"2002014 6242"|"20030131859"|" 20030226837"|"200400 20508"|"20040118401"| "20040129280"|"20040 173229"|"20040198127 "|"20040200488"|"2004 0226568"|"2005001654 9"|"20050016550"|"200 50066986"|"200600164 53"|"20060185687"|"20 060196518"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20080085103"|"200800 92912"|"20080257367"| "20080276947"|"20080 302374"|"20090095311 "|"20090095312"|"2009 0126745"|"2009018849 0"|"20090230117"|"200 90272379"|"200902831 03"|"20090320863"|"20 100043809"|"20100083 959"|"20100200006"|"2 0100229881"|"2010024 2974"|"20100307518"|" 20100313901"|"201100 05535"|"20110011396"| "20110036363"|"20110 036365"|"20110094523 "|"20110126848"|"2011 0155153"|"2011015571 8"|"20110168194"|"201 10265806"|"201103091 57"|"20120042885"|"20 120060853"|"20120111 347"|"20120132643"|"2 0120227752"|"2012023 1464"|"20120260927"|" 20120279512"|"201203 18882"|"20130037041"| "20130056013"|"20130 081625"|"20130081642 "|"20130192619"|"2013 0255702"|"2013030608 4"|"20130319439"|"201 30340750"|"201303407 75"|"20140000638"|"20 140060554"|"20140060 555"|"20140096781"|"2 0140096782"|"2014010					

		9921"|"20140157583"|"20140209105"|"20140253144"|"20140261408"|"20140261486"|"20140261487"|"20140261495"|"20140270727"|"20140270729"|"20140270730"|"20140345631"|"2057353"|"2104266"|"3200819"|"3258015"|"3356094"|"3479561"|"3486508"|"3516417"|"3614956"|"3738374"|"3766000"|"3844294"|"3878850"|"3931824"|"3943941"|"4044777"|"4079742"|"4190046"|"4219031"|"4233993"|"4284089"|"4286604"|"4303083"|"4326544"|"4340072"|"4347855"|"4391285"|"4635651"|"4700727"|"4714082"|"4735217"|"4756318"|"4771795"|"4793365"|"4800903"|"4807809"|"4819665"|"4823817"|"4836225"|"4848374"|"4874000"|"4892109"|"4893639"|"4907606"|"4917121"|"4917128"|"4920990"|"4922901").PN.					
L86	593	("4924886"|"4945931"|"4947874"|"4947875"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4981522"|"4986286"|"4991606"|"5019122"|"5020548"|"5025814"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5099861"|"5101839"|"5105835"|"5105836"|"5105838"|"5115820"|"5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5249586"|"5261424"|"5271419"|"5285798"|"5293883"|"5322075"|"5327917"|"5345955"|"5353813"|"53	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM

		57984"|"5360023"|"536 9723"|"5388574"|"5388 594"|"5396911"|"54085 74"|"5468936"|"549885 0"|"5505214"|"5515842" |"5530225"|"5533530"|" 5551451"|"5564442"|"5 588446"|"5593792"|"55 95577"|"5598868"|"564 9554"|"5665262"|"5666 977"|"5666978"|"56877 46"|"5692525"|"571584 4"|"5726421"|"5727571" |"5743251"|"5778899"|" 5799663"|"5819751"|"5 819756"|"5829453"|"58 65185"|"5865186"|"587 8752"|"5880439"|"5894 841"|"5915387"|"59342 89"|"5954979"|"596714 8"|"6033623"|"6040560" |"6053176"|"6089857"|" 6095152"|"6095153"|"6 125853"|"6146934"|"61 55268"|"6164287"|"618 2670"|"6196218"|"6196 219"|"6234167"|"62898 98"|"6397852"|"640885 6"|"6516796"|"6532965" |"6537186"|"6578584"|" 6591841"|"6598607"|"6 601776"|"6615840"|"66 88313"|"6730832"|"677 2756"|"6803545"|"6823 873"|"6854461"|"68544 70"|"6994096"|"711786 7"|"7293565"|"7513253" |"7775459"|"7832410"|" 7845359"|"7896006"|"8 079371"|"8127772"|"83 14591"|"8365742"|"840 2976"|"8499766"|"8528 569"|"8550069"|"88992 38").PN.					
L87	1137	("0438310"|"0705919"|" 0780087"|"1016844"|"1 084304"|"1147416"|"13 47631"|"1446087"|"151 7584"|"1879128"|"2001 0026788"|"2003001157 9"|"20030033055"|"200 30108342"|"200301898 26"|"20040149282"|"20 040234916"|"20040261 802"|"20050115243"|"2 0060093977"|"2007003 0306"|"20110120482"|" 2032695"|"2086192"|"2	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM

		140516"|"2461664"|"24 72282"|"2545851"|"295 9664"|"3060429"|"3203 025"|"3234357"|"32816 37"|"3292635"|"338530 3"|"3428053"|"3431393" |"3502588"|"3651240"|" 3685521"|"3685522"|"3 747120"|"3860012"|"39 33643"|"3934117"|"401 6878"|"4207457"|"4219 032"|"4270552"|"45066 82"|"4531178"|"458942 8"|"4629665"|"4637407" |"4676237"|"4771295"|" 4771796"|"4797692"|"4 878506"|"4941486"|"49 45448"|"4945929"|"496 8263"|"4990939"|"5005 593"|"5124200"|"51294 09"|"5177424"|"522426 5"|"5255674"|"5266746" |"5327915"|"5372148"|" 5497791"|"5646666"|"5 703633"|"5732685"|"57 45985"|"5944025"|"599 6589"|"6062213"|"6102 036"|"6217315"|"62327 84"|"6285017"|"631156 1"|"6322268"|"6476151" |"6501052"|"6620659"|" 6690121"|"6719443"|"6 722763"|"6885814"|"69 38986"|"7159464"|"728 4424"|"7337782"|"7445 007"|"7997280"|"00000 05"|"0726320"|"151468 2"|"1771366"|"2002014 6242"|"20030131859"|" 20030226837"|"200400 20508"|"20040118401"| "20040129280"|"20040 173229"|"20040198127 "|"20040200488"|"2004 0226568"|"2005001654 9"|"20050016550"|"200 50066986"|"200600164 53"|"20060185687"|"20 060196518"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20080085103"|"200800 92912"|"20080257367"| "20080276947"|"20080 302374"|"20090095311 "|"20090095312"|"2009 0126745"|"2009018849					

		0"|"20090230117"|"200 90272379"|"200902831 03"|"20090320863"|"20 100043809"|"20100083 959"|"20100200006"|"2 0100229881"|"2010024 2974"|"20100307518"|" 20100313901"|"201100 05535"|"20110011396"| "20110036363"|"20110 036365"|"20110094523 "|"20110126848"|"2011 0155153"|"2011015571 8"|"20110168194"|"201 10265806"|"201103091 57"|"20120042885"|"20 120060853"|"20120111 347"|"20120132643"|"2 0120227752"|"2012023 1464"|"20120260927"|" 20120279512"|"201203 18882"|"20130037041"| "20130056013"|"20130 081625"|"20130081642 "|"20130192619"|"2013 0255702"|"2013030608 4"|"20130319439"|"201 30340750"|"201303407 75"|"20140000638"|"20 140060554"|"20140060 555"|"20140096781"|"2 0140096782"|"2014010 9921"|"20140157583"|" 20140209105"|"201402 53144"|"20140261408"| "20140261486"|"20140 261487"|"20140261495 "|"20140270727"|"2014 0270729"|"2014027073 0"|"20140345631"|"205 7353"|"2104266"|"3200 819"|"3258015"|"33560 94"|"3479561"|"348650 8"|"3516417"|"3614956" |"3738374"|"3766000"|" 3844294"|"3878850"|"3 931824"|"3943941"|"40 44777"|"4079742"|"419 0046"|"4219031"|"4233 993"|"4284089"|"42866 04"|"4303083"|"432654 4"|"4340072"|"4347855" |"4391285"|"4635651"|" 4700727"|"4714082"|"4 735217"|"4756318"|"47 71795"|"4793365"|"480 0903"|"4807809"|"4819 665"|"4823817"|"48362					

		25"|"4848374"|"4874000"|"4892109"|"4893639"|"4907606"|"4917121"|"4917128"|"4920990"|"4922901").PN.					
L88	9	(L87 L86) and wicked and tobacco	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM
L90	881	("0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"20010026788"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040173229"|"20040198127"|"20040200488"|"20040226568"|"20040234916"|"20040261802"|"20050016549"|"20050016550"|"20050066986"|"20050115243"|"20060016453"|"20060093977"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20080085103"|"20080092912"|"20080257367"|"20080276947"|"20080302374"|"20090002301"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090272379"|"20090283103"|"20090320863"|"20100043809"|"20100083959"|"20100200006"|"20100229881"|"20100242974"|"20100307518"|"20100313901"|"20110005535"|"20110011396"|"20110036363"|"20110036365"|"20110094523"|"20110120482"|"20110126848"|"20110155153"|"20110155718"|"2011016819	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/20 12:47 PM

		4"|"20110265806"|"201 10309157"|"201200428 85"|"20120060853"|"20 120111347"|"20120132 643"|"20120227752"|"2 0120231464"|"2012026 0927"|"20120279512"|" 20120318882"|"201300 37041"|"20130056013"| "20130081625"|"20130 081642"|"20130192619 "|"20130255702"|"2013 0306084"|"2013031943 9"|"20130340750"|"201 30340775"|"201400006 38"|"20140060554"|"20 140060555"|"20140096 781"|"20140096782"|"2 0140109921"|"2014015 7583"|"20140209105"|" 20140253144"|"201402 61408"|"20140261486"| "20140261487"|"20140 261495"|"20140270727 "|"20140270729"|"2014 0270730"|"2014034563 1"|"2032695"|"2057353" |"2086192"|"2104266"|" 2140516"|"2461664"|"2 472282"|"2545851"|"29 59664"|"3060429"|"320 0819"|"3203025"|"3234 357"|"3258015"|"32816 37"|"3292635"|"335609 4"|"3385303"|"3428053" |"3431393"|"3479561"|" 3486508"|"3502588"|"3 516417"|"3614956"|"36 51240"|"3685521"|"368 5522"|"3738374"|"3747 120"|"3766000"|"38442 94"|"3860012"|"387885 0"|"3931824"|"3933643" |"3934117"|"3943941"|" 4016878"|"4044777"|"4 079742"|"4190046"|"42 07457"|"4219031"|"421 9032"|"4233993"|"4270 552"|"4284089"|"42866 04"|"4303083"|"432654 4"|"4340072"|"4347855" |"4391285"|"4506682"|" 4531178"|"4589428"|"4 629665"|"4635651"|"46 37407").PN.				
L91	854	("4676237"|"4700727"|" 4714082"|"4735217"|"4 756318"|"4771295"|"47	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	OFF	2019/05/20 12:48 PM

		71795"|"4771796"|"479 3365"|"4797692"|"4800 903"|"4807809"|"48196 65"|"4823817"|"483622 5"|"4848374"|"4874000" |"4878506"|"4892109"|" 4893639"|"4907606"|"4 917121"|"4917128"|"49 20990"|"4922901"|"492 4886"|"4941486"|"4945 448"|"4945929"|"49459 31"|"4947874"|"494787 5"|"4961438"|"4966171" |"4968263"|"4969476"|" 4972855"|"4977908"|"4 981522"|"4986286"|"49 90939"|"4991606"|"500 5593"|"5019122"|"5020 548"|"5025814"|"50334 83"|"5040551"|"504251 0"|"5046514"|"5050621" |"5060667"|"5060671"|" 5060676"|"5065776"|"5 072744"|"5074321"|"50 76296"|"5076297"|"509 2353"|"5093894"|"5099 861"|"5101839"|"51058 35"|"5105836"|"510583 7"|"5105838"|"5115820" |"5124200"|"5129409"|" 5144962"|"5146934"|"5 148821"|"5159940"|"51 59942"|"5177424"|"517 8167"|"5183062"|"5203 355"|"5211684"|"52242 65"|"5224498"|"524001 4"|"5240016"|"5249586" |"5255674"|"5261424"|" 5266746"|"5271419"|"5 285798"|"5293883"|"53 22075"|"5327915"|"532 7917"|"5345955"|"5353 813"|"5357984"|"53600 23"|"5369723"|"537214 8"|"5388574"|"5388594" |"5396911"|"5408574"|" 5468936"|"5497791"|"5 498850"|"5505214"|"55 15842"|"5530225"|"553 3530"|"5551451"|"5564 442"|"5588446"|"55937 92"|"5595577"|"559886 8"|"5646666"|"5649554" |"5665262"|"5666977"|" 5666978"|"5687746"|"5 692525"|"5703633"|"57 15844"|"5726421"|"572 7571"|"5732685"|"5743	IBM_TDB)				

		251"|"5745985"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5944025"|"5954979"|"5967148"|"5996589"|"6033623"|"6040560"|"6053176"|"6062213"|"6089857"|"6095152"|"6095153"|"6102036"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").PN.					
L92	8	(("20180146713") or ("10231488")).PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/20 01:10 PM
L93	258	("1771336" | "1968509" | "2057353" | "2104266" | "2442004" | "2974669" | "3200819" | "3255760" | "3363633" | "3402723" | "3482580" | "3496336" | "3591753" | "3608560" | "3738374" | "3744496" | "3804100" | "3889690" | "4016061" | "4068672" | "4077784" | "4131119"	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/05/21 03:10 PM

		| "4141369" | "4164230" | "4193411" | "4194108" | "4203025" | "4215708" | "4219032" | "4246913" | "4256945" | "4259564" | "4259970" | "4303083" | "4319591" | "4393884" | "4431903" | "4436100" | "4463247" | "4505282" | "4510950" | "4562337" | "4570646" | "4580583" | "4621649" | "4623401" | "4629604" | "4637407" | "4659912" | "4682010" | "4686353" | "4692590" | "4694824" | "4735217" | "4771796" | "4776353" | "4837421" | "4846199" | "4848376" | "4874924" | "4877989" | "4922901" | "4945931" | "4947874" | "4947875" | "4966171" | "4981522" | "4991606" | "4998541" | "5016656" | "5040552" | "5042510" | "5060671" | "5076296" | "5093894" | "5095921" | "5144962" | "5159940" | "5179966" | "5188130" | "5224498" | "5235157" | "5249586" | "5269327" | "5274214" | "5285050" | "5388594" | "5479948").PN. OR ("5692525").URPN.					
L94	65	L93 and wick	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/05/21 03:11 PM
L95	2245	electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:54 PM
L97	218	131/$.ccls. and electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L98	205	128/$.ccls. and electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L99	32	128/$.ccls. and electrical near2 resistance and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L100	93	131/$.ccls. and electrical near2	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	OFF	OFF	2019/05/21 05:56 PM

		resistance and mouth and liquid and aerosol and cartridge	JPO; DERWENT; IBM_TDB)				
L101	22	("2057353").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:00 PM
L102	218	("2057353").URPN.	(USPAT)	OR	OFF	OFF	2019/05/21 06:01 PM
L104	147	L102 and mouth	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:01 PM
L105	137	L102 and mouth and liquid	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:03 PM
L106	98	L102 and mouth and liquid and wick	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:03 PM
L107	640	electronic near2 cigarette and "hon"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:33 AM
L108	198	electronic near2 cigarette and "hon" and channel	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:34 AM
L109	120	electronic near2 cigarette and "hon" and channel and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:34 AM
L110	2	"20190166917"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/11/12 02:22 PM
L111	4	("5692525").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 01:56 AM
L112	7	("10231488").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 02:37 AM
L113	103397	aerosol and cartridge and liquid ane heat$4 and mouthpiece	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 03:51 PM
L115	949	aerosol and cartridge and liquid and electrical near2 resistance and path	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/01 01:46 AM

L116	71	(131/$.ccls. 128/$.ccls.) and aerosol and cartridge and liquid and electrical near2 resistance and path	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/01 01:47 AM
L117	4	("4583559").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:49 PM
L118	571	("4168712"|"4583559"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"20010026788"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040173229"|"20040198127"|"20040200488"|"20040226568"|"20040234916"|"20040261802"|"20050016549"|"20050016550"|"20050066986"|"20050115243"|"20060016453"|"20060093977"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20080085103"|"20080092912"|"20080257367"|"20080276947"|"20080302374"|"20090002301"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090272379"|"20090283103"|"20090320863"|"20100043809"|"20100083959"|"20100200006"|"20100229881"|"20100242974"|"20100307518"|"20100313901"|"20110005535"|"20110011396"|"20110036363"|"20110036365"|"20110094523"|"20110120482"|"20110126848"|"20110155153"|"20110	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:52 PM

		155718"|"20110168194"|"20110265806"|"20110309157"|"20120042885"|"20120060853"|"20120111347"|"20120132643"|"20120227752"|"20120231464"|"20120260927"|"20120279512"|"20120318882"|"20130037041"|"20130056013"|"20130081625"|"20130081642"|"20130192619"|"20130255702"|"20130306084"|"20130319439"|"20130340750"|"20130340775"|"20140000638"|"20140060554"|"20140060555"|"20140096781"|"20140096782"|"20140109921"|"20140157583"|"20140209105"|"20140253144"|"20140261408"|"20140261486"|"20140261487"|"20140261495"|"20140270727"|"20140270729"|"20140270730"|"20140345631"|"2032695"|"2057353"|"2086192"|"2104266"|"2140516"|"2461664"|"2472282"|"2545851").PN.					
L119	1205	("2959664"|"3060429"|"3200819"|"3203025"|"3234357"|"3258015"|"3281637"|"3292635"|"3356094"|"3385303"|"3428053"|"3431393"|"3479561"|"3486508"|"3502588"|"3516417"|"3614956"|"3651240"|"3685521"|"3685522"|"3738374"|"3747120"|"3766000"|"3844294"|"3860012"|"3878850"|"3931824"|"3933643"|"3934117"|"3943941"|"4016878"|"4044777"|"4079742"|"4190046"|"4207457"|"4219031"|"4219032"|"4233993"|"4270552"|"4284089"|"4286604"|"4303083"|"4326544"|"4340072"|"4347855"|"4391285"|"4506682"|"4531178"|"4589428"|"4629665"|"4635651"|"4637407"|"4676237"|"4700727"|"4714082"|"4735217"|"4756318"|"47	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:52 PM

		71295"|"4771795"|"477 1796"|"4793365"|"4797 692"|"4800903"|"48078 09"|"4819665"|"482381 7"|"4836225"|"4848374" |"4874000"|"4878506"|" 4892109"|"4893639"|"4 907606"|"4917121"|"49 17128"|"4920990"|"492 2901"|"4924886"|"4941 486"|"4945448"|"49459 29"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4968263"|" 4969476"|"4972855"|"4 977908"|"4981522"|"49 86286"|"4990939"|"499 1606"|"5005593"|"5019 122"|"5020548"|"50258 14"|"5033483"|"504055 1"|"5042510"|"5046514" |"5050621"|"5060667"|" 5060671"|"5060676"|"5 065776"|"5072744"|"50 74321"|"5076296"|"507 6297"|"5092353"|"5093 894"|"5099861"|"51018 39"|"5105835"|"510583 6"|"5105837"|"5105838" |"5115820"|"5124200"|" 5129409"|"5144962"|"5 146934"|"5148821"|"51 59940"|"5159942"|"517 7424"|"5178167"|"5183 062"|"5203355"|"52116 84"|"5224265"|"522449 8"|"5240014"|"5240016" |"5249586"|"5255674"|" 5261424"|"5266746"|"5 271419"|"5285798"|"52 93883"|"5322075"|"532 7915"|"5327917"|"5345 955"|"5353813"|"53579 84"|"5360023"|"536972 3"|"5372148"|"5388574" |"5388594"|"5396911"|" 5408574"|"5468936"|"5 497791"|"5498850"|"55 05214"|"5515842"|"553 0225"|"5533530"|"5551 451"|"5564442"|"55884 46"|"5593792"|"559557 7"|"5598868"|"5646666" |"5649554"|"5665262"|" 5666977"|"5666978"|"5 687746"|"5692525"|"57 03633"|"5715844"|"572 6421"|"5727571"|"5732					

		685"|"5743251"|"5745985"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5944025"|"5954979"|"5967148"|"5996589"|"6033623"|"6040560"|"6053176"|"6062213"|"6089857"|"6095152"|"6095153"|"6102036"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").pn.					
L120	92	(L118 L119) and cartridge and liquid and heat$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:53 PM
L121	68	L120 and battery	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:54 PM
L122	378	("2005/0016550").URPN.	(USPAT)	OR	OFF	OFF	2020/05/02 10:02 PM
L123	574	("4168712"|"4583559"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM

		682"|"1517584"|"17713 66"|"1879128"|"200100 26788"|"20020146242"| "20030011579"|"20030 033055"|"20030108342 "|"20030131859"|"2003 0189826"|"2003022683 7"|"20040020508"|"200 40118401"|"200401292 80"|"20040149282"|"20 040173229"|"20040198 127"|"20040200488"|"2 0040226568"|"2004023 4916"|"20040261802"|" 20050016549"|"200500 16550"|"20050066986"| "20050115243"|"20060 016453"|"20060093977 "|"20060185687"|"2006 0196518"|"2007003030 6"|"20070062549"|"200 70074734"|"200701020 13"|"20070215167"|"20 070267031"|"20080085 103"|"20080092912"|"2 0080257367"|"2008027 6947"|"20080302374"|" 20090002301"|"200900 95311"|"20090095312"| "20090126745"|"20090 188490"|"20090272379 "|"20090283103"|"2009 0320863"|"2010004380 9"|"20100083959"|"201 00200006"|"201002298 81"|"20100242974"|"20 100307518"|"20100313 901"|"20110005535"|"2 0110011396"|"2011003 6363"|"20110036365"|" 20110094523"|"201101 20482"|"20110126848"| "20110155153"|"20110 155718"|"20110168194 "|"20110265806"|"2011 0309157"|"2012004288 5"|"20120060853"|"201 20111347"|"201201326 43"|"20120227752"|"20 120231464"|"20120260 927"|"20120279512"|"2 0120318882"|"2013003 7041"|"20130056013"|" 20130081625"|"201300 81642"|"20130192619"| "20130255702"|"20130 306084"|"20130319439 "|"20130340750"|"2013					

		0340775"|"2014000063 8"|"20140060554"|"201 40060555"|"201400967 81"|"20140096782"|"20 140109921"|"20140157 583"|"20140209105"|"2 0140253144"|"2014026 1408"|"20140261486"|" 20140261487"|"201402 61495"|"20140270727"| "20140270729"|"20140 270730"|"20140345631 "|"2032695"|"2057353"|" 2086192"|"2104266"|"2 140516"|"2461664"|"24 72282"|"2545851").PN.					
L124	1222	("2959664"|"3060429"|" 3200819"|"3203025"|"3 234357"|"3258015"|"32 81637"|"3292635"|"335 6094"|"3385303"|"3428 053"|"3431393"|"34795 61"|"3486508"|"350258 8"|"3516417"|"3614956" |"3651240"|"3685521"|" 3685522"|"3738374"|"3 747120"|"3766000"|"38 44294"|"3860012"|"387 8850"|"3931824"|"3933 643"|"3934117"|"39439 41"|"4016878"|"404477 7"|"4079742"|"4190046" |"4207457"|"4219031"|" 4219032"|"4233993"|"4 270552"|"4284089"|"42 86604"|"4303083"|"432 6544"|"4340072"|"4347 855"|"4391285"|"45066 82"|"4531178"|"458942 8"|"4629665"|"4635651" |"4637407"|"4676237"|" 4700727"|"4714082"|"4 735217"|"4756318"|"47 71295"|"4771795"|"477 1796"|"4793365"|"4797 692"|"4800903"|"48078 09"|"4819665"|"482381 7"|"4836225"|"4848374" |"4874000"|"4878506"|" 4892109"|"4893639"|"4 907606"|"4917121"|"49 17128"|"4920990"|"492 2901"|"4924886"|"4941 486"|"4945448"|"49459 29"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4968263"|" 4969476"|"4972855"|"4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM

		977908"|"4981522"|"49 86286"|"4990939"|"499 1606"|"5005593"|"5019 122"|"5020548"|"50258 14"|"5033483"|"504055 1"|"5042510"|"5046514" |"5050621"|"5060667"|" 5060671"|"5060676"|"5 065776"|"5072744"|"50 74321"|"5076296"|"507 6297"|"5092353"|"5093 894"|"5099861"|"51018 39"|"5105835"|"510583 6"|"5105837"|"5105838" |"5115820"|"5124200"|" 5129409"|"5144962"|"5 146934"|"5148821"|"51 59940"|"5159942"|"517 7424"|"5178167"|"5183 062"|"5203355"|"52116 84"|"5224265"|"522449 8"|"5240014"|"5240016" |"5249586"|"5255674"|" 5261424"|"5266746"|"5 271419"|"5285798"|"52 93883"|"5322075"|"532 7915"|"5327917"|"5345 955"|"5353813"|"53579 84"|"5360023"|"536972 3"|"5372148"|"5388574" |"5388594"|"5396911"|" 5408574"|"5468936"|"5 497791"|"5498850"|"55 05214"|"5515842"|"553 0225"|"5533530"|"5551 451"|"5564442"|"55884 46"|"5593792"|"559557 7"|"5598868"|"5646666" |"5649554"|"5665262"|" 5666977"|"5666978"|"5 687746"|"5692525"|"57 03633"|"5715844"|"572 6421"|"5727571"|"5732 685"|"5743251"|"57459 85"|"5778899"|"579966 3"|"5819751"|"5819756" |"5829453"|"5865185"|" 5865186"|"5878752"|"5 880439"|"5894841"|"59 15387"|"5934289"|"594 4025"|"5954979"|"5967 148"|"5996589"|"60336 23"|"6040560"|"605317 6"|"6062213"|"6089857" |"6095152"|"6095153"|" 6102036"|"6125853"|"6 146934"|"6155268"|"61 64287"|"6182670"|"619					

		6218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").pn.					
L125	92	(L123 L124) and cartridge and liquid and heat$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM
L127	7	("0005247"|"20050005947"|"5027837").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/06/19 11:52 PM
L130	22	("20050067503"|"20140305453"|"20150245659"|"5331981"|"6533395"|"6739700"|"8375957").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2021/12/18 11:37 PM
L132	639	("5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5177424"|"5178167"|"5179966"|"5183062"|"5203355"|"5211684"|"5220930"|"5224265"|"5224498"|"5228460"|"5230354"|"5235992"|"5240014"|"5240016"|"5243999"|"5246018"|"5247947"|"5249586"|"5255674"|"5261424"|"5266746"|"5269327"|"5271419"|"5282798"|"5285798"|"5293883"|"5301694"|"5303720"|"5318050"|"5322075"|"5322076"|"5327915"|"5327917"|"5	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:55 PM

		331981"|"5339838"|"53 45951"|"5345955"|"535 3813"|"5357984"|"5360 023"|"5369723"|"53721 48"|"5377698"|"538857 4"|"5388594"|"5396911" |"5408574"|"5415186"|" 5435325"|"5445169"|"5 468266"|"5468936"|"54 79948"|"5497791"|"549 8850"|"5498855"|"5499 636"|"5501237"|"55052 14"|"5515842"|"553022 5"|"5533530"|"5551450" |"5551451"|"5564442"|" 5573692"|"5588446"|"5 591368"|"5593792"|"55 95577"|"5596706"|"559 8868"|"5611360"|"5613 504"|"5613505"|"56466 66"|"5649552"|"564955 4"|"5659656"|"5665262" |"5666976"|"5666977"|" 5666978"|"5687746"|"5 692525"|"5692526"|"57 03633"|"5708258"|"571 1320"|"5715844"|"5726 421"|"5727571"|"57301 58"|"5732685"|"574325 1"|"5745985"|"5750964" |"5778899"|"5799663"|" 5816263"|"5819751"|"5 819756"|"5829453"|"58 65185"|"5865186"|"587 8752"|"5880439"|"5894 841"|"5915387"|"59342 89"|"5944025"|"595497 9"|"5967148"|"5996589" |"6026820"|"6033623"|" 6040560"|"6053176"|"6 062213"|"6089857"|"60 95152"|"6095153"|"610 2036"|"6116247"|"6119 700"|"6125853"|"61258 55"|"6125866"|"614693 4"|"6155268"|"6164287" |"6182670"|"6196218"|" 6196219"|"6216706"|"6 217315"|"6232784"|"62 34167"|"6285017"|"628 9898"|"6311561"|"6322 268"|"6349729"|"63576 71"|"6397852"|"640885 6"|"6418938"|"6446426" |"6476151"|"6501052"|" 6516796"|"6532965"|"6 533395"|"6537186"|"65 78584"|"6591841"|"659					

		8607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6701936"|"6715494"|"6719443"|"6722756"|"6722763"|"6730832"|"6739700"|"6772756"|"6803545"|"6803550"|"6810883"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7011096"|"7017585"|"7025066"|"7117867"|"7159464"|"7163015"|"7173322"|"7185659"|"7234470"|"7284424"|"7290549"|"7293565"|"7337782"|"7392809"|"7445007"|"7513253"|"7647932"|"7690385"|"7692123"|"7726320"|"7775459"|"7810505"|"7832410"|"7845359"|"7878209"|"7896006"|"7997280"|"8066010"|"8079371"|"8127772"|"8314591"|"8365742"|"8375957"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238"|"8950587"|"9930915").PN.					
L133	223	("9814268"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"1968509"|"20010026788"|"20010036365"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020500"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040149296"|"20040173229"|"20040198127"|"20040200488"|"20040224435"|"20040226568"|"20040234916"|"20040255965"|"20040261802"|"20050005947"|"20050016549"|"20050016550"|"20050066986"|"20050067503"|"20050115243"|"20050151126"|"20050172976"|"20	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:55 PM

		050274390"|"20060016453"|"20060032501"|"20060070633"|"20060093977"|"20060162733"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20070283972"|"20080085103"|"20080092912"|"20080149118"|"20080245377"|"20080257367"|"20080276947"|"20080302374"|"20090065010"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090230117"|"20090260641"|"20090260642"|"20090272379"|"20090283103"|"20090293892"|"20090320863"|"20090320864"|"20090324206"|"20100006113"|"20100024834").pn.					
L134	795	("20100043809"|"20100059070"|"20100059073"|"20100065075"|"20100083959"|"20100163063"|"20100200006"|"20100229881"|"20100242974"|"20100242976"|"20100258139"|"20100300467"|"20100307518"|"20100313901"|"20110005535"|"20110011286"|"20110011396"|"20110015513"|"20110036363"|"20110036365"|"20110073121"|"20110088707"|"20110094523"|"20110120480"|"20110120482"|"20110126847"|"20110126848"|"20110155153"|"20110155718"|"20110162663"|"20110168194"|"20110180082"|"20110265806"|"20110309157"|"20120042885"|"20120060853"|"20120111347"|"20120132643"|"20120227752"|"20120231464"|"20120260927"|"20120279512"|"20120318882"|"20130037031"|"20130037041"|"20130056013"|"20130081	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:56 PM

		25"|"20130081642"|"20 130192619"|"20130255 702"|"20130306074"|"2 0130306084"|"2013031 9439"|"20130340750"|" 20130340775"|"201400 00638"|"20140060554"| "20140060555"|"20140 096781"|"20140096782 "|"20140109921"|"2014 0157583"|"2014020910 5"|"20140253144"|"201 40261408"|"201402614 86"|"20140261487"|"20 140261495"|"20140270 727"|"20140270729"|"2 0140270730"|"2014030 5453"|"20140345631"|" 20150245659"|"203269 5"|"2057353"|"2086192" |"2104266"|"2140516"|" 2461664"|"2472282"|"2 545851"|"2805669"|"29 59664"|"3060429"|"320 0819"|"3203025"|"3234 357"|"3258015"|"32816 37"|"3292635"|"331691 9"|"3356094"|"3385303" |"3398754"|"3419015"|" 3424171"|"3428053"|"3 431393"|"3476118"|"34 79561"|"3486508"|"350 2588"|"3516417"|"3614 956"|"3651240"|"36855 21"|"3685522"|"373837 4"|"3747120"|"3766000" |"3844294"|"3860012"|" 3878850"|"3931824"|"3 933643"|"3934117"|"39 43941"|"4016878"|"404 4777"|"4054145"|"4079 742"|"4131117"|"41506 77"|"4168712"|"419004 6"|"4207457"|"4219031" |"4219032"|"4233993"|" 4259970"|"4270552"|"4 284089"|"4286604"|"43 03083"|"4326544"|"434 0072"|"4347855"|"4391 285"|"4449541"|"44843 76"|"4506682"|"451095 0"|"4531178"|"4583559" |"4589428"|"4629665"|" 4635651"|"4637407"|"4 674519"|"4676237"|"47 00727"|"4708151"|"471 4082"|"4735217"|"4756 318"|"4771295"|"47717					

		95"|"4771796"|"4776353"|"4793365"|"4797692"|"4800903"|"4807809"|"4819665"|"4821749"|"4823817"|"4830028"|"4836224"|"4836225"|"4848374"|"4874000"|"4878506"|"4880018"|"4887619"|"4892109"|"4893639"|"4907606"|"4913168"|"4917119"|"4917121"|"4917128"|"4920990"|"4922901"|"4924886"|"4924888"|"4928714"|"4938236"|"4941483"|"4941484"|"4941486"|"4945448"|"4945929"|"4945931"|"4947874"|"4947875"|"4961438"|"4966171"|"4968263"|"4969476"|"4972854"|"4972855"|"4977908"|"4981522"|"4986286"|"4987906"|"4990939"|"4991606"|"5005593"|"5019122"|"5020548"|"5022416"|"5025814"|"5027837"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5056537"|"5060667"|"5060669"|"5060671"|"5060676"|"5065775"|"5065776"|"5072744"|"5074319"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5095921"|"5097850"|"5099861"|"5099862"|"5099864"|"5101839"|"5103842"|"5105835"|"5105836"|"5105837"|"5105838"|"5115820"|"5121757"|"5124200"|"5129409"|"5131415"|"5137034"|"5143097").pn.					
L135	192	("10524511"|"1304075"|"20090151717"|"20100028766"|"20100319686"|"20110036346"|"20110226236"|"20110290248"|"20110290268"|"20120186594"|"20120199146"|"20120227753"|"20130042865"|"20130213418"|"20130213419"|"20130220315"|"20130228191"|"20130284192"|"20130298905"|"201303	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2022/09/30 10:39 PM

		12742"|"20130312776"|"20130319431"|"20140020696"|"20140034071"|"20140060552"|"20140076310"|"20140083442"|"20140261489"|"20140290674"|"20140334804"|"20140366898"|"20150020824"|"20150147055"|"20150201675"|"20150208729"|"20160198767"|"3393927"|"4361374"|"4550967"|"4848376"|"6349728"|"6443146"|"6808407"|"7173222"|"8156944"|"8205622"|"8393331"|"8833364"|"8851068"|"9259035"|"9301549"|"9427022"|"9462832"|"9549573"|"9714878"|"9839238"|"9980514"|"9993024").PN.					
L136	14	(tobacco AND rod AND heater AND controller AND cartridge).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2023/01/11 11:47 PM
L137	40	cn near2 "1530041"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/01 04:03 AM
L138	12	(tobacco AND aerosol AND tubular AND cartridge SAME (open near2 ends) AND heater AND controller).clm.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/05/01 04:16 AM
L139	3276	("0438310"|"0705919"|"0780087"|"1016844"|"10524511"|"1084304"|"1147416"|"1304075"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"1968509"|"20010026788"|"20010036365"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2023/06/15 12:59 AM

		20030189826"|"200302 26837"|"20040020500"| "20040020508"|"20040 118401"|"20040129280 "|"20040149282"|"2004 0149296"|"2004017322 9"|"20040198127"|"200 40200488"|"200402244 35"|"20040226568"|"20 040234916"|"20040255 965"|"20040261802"|"2 0050005947"|"2005001 6549"|"20050016550"|" 20050066986"|"200500 67503"|"20050115243"| "20050151126"|"20050 172976"|"20050274390 "|"20060016453"|"2006 0032501"|"2006007063 3"|"20060093977"|"200 60162733"|"200601856 87"|"20060196518"|"20 070030306"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20070283972"|"200800 85103"|"20080092912"| "20080149118"|"20080 245377"|"20080257367 "|"20080276947"|"2008 0302374"|"2009006501 0"|"20090095311"|"200 90095312"|"200901267 45"|"20090151717"|"20 090188490"|"20090230 117"|"20090260641"|"2 0090260642"|"2009027 2379"|"20090283103"|" 20090293892"|"200903 20863"|"20090320864"| "20090324206"|"20100 006113"|"20100024834 "|"20100028766"|"2010 0043809"|"2010005907 0"|"20100059073"|"201 00065075"|"201000839 59"|"20100163063"|"20 100200006"|"20100229 881"|"20100242974"|"2 0100242976"|"2010025 8139"|"20100300467"|" 20100307518"|"201003 13901"|"20100319686"| "20110005535"|"20110 011286"|"20110011396 "|"20110015513"|"2011 0036346"|"2011003636	TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				

		3"|"20110036365"|"201 10073121"|"201100887 07"|"20110094523"|"20 110120480"|"20110120 482"|"20110126847"|"2 0110126848"|"2011015 5153"|"20110155718"|" 20110162663"|"201101 68194"|"20110180082"| "20110226236"|"20110 265806"|"20110290248 "|"20110290268"|"2011 0309157"|"2012004288 5"|"20120060853"|"201 20111347"|"201201326 43"|"20120186594"|"20 120199146"|"20120227 752"|"20120227753"|"2 0120231464"|"2012026 0927"|"20120279512"|" 20120318882"|"201300 37031"|"20130037041"| "20130042865"|"20130 056013"|"20130081625 "|"20130081642"|"2013 0192619"|"2013021341 8"|"20130213419"|"201 30220315"|"201302281 91"|"20130255702"|"20 130284192"|"20130298 905"|"20130306074"|"2 0130306084"|"2013031 2742"|"20130312776"|" 20130319431"|"201303 19439"|"20130340750"| "20130340775"|"20140 000638"|"20140014124 "|"20140020696"|"2014 0034071"|"2014006055 2"|"20140060554"|"201 40060555"|"201400763 10"|"20140083442"|"20 140096781"|"20140096 782"|"20140109921"|"2 0140157583"|"2014020 9105"|"20140253144"|" 20140261408"|"201402 61486"|"20140261487"| "20140261489"|"20140 261495"|"20140270727 "|"20140270729"|"2014 0270730"|"2014029067 4"|"20140305453"|"201 40334804"|"201403456 31"|"20140366898"|"20 150020824"|"20150147 055"|"20150201675"|"2 0150208729"|"2015024					

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L140	10	L139 AND mouthpiece AND electrical near2 heater AND wick AND controller AND current	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/15 01:00 AM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N16	1	(tobacco and aerosol and heating and cartridge).clm.	(USPAT)	OR	ON	ON	2010/01/11 01:26 PM
N48	5	(tobacco and tub$3 and electric$3 and heater and aerosol).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/08/02 11:34 PM
N51	0	(tobacco and tub$3 and electric$3 and heater	(US-PGPUB; USPAT)	OR	ON	ON	2014/09/30 12:14 AM

		and aerosol and absorbent).clm.					
N52	1	(tobacco and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/09/30 12:15 AM
N57	1	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2016/10/02 09:55 PM
N63	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/06/19 10:26 PM
N67	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 10:58 PM
N68	2	(smoking and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 10:58 PM
N72	3	(smoking and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/01/12 12:33 AM
N73	7	(tobacco and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/01/12 12:33 AM
N89	6	(tobacco and electric$3 and heater and aerosol and wicked).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/10/13 10:21 PM
N126	26	(tobacco and aerosol and heating and cartridge).clm.	(USPAT)	OR	ON	ON	2020/11/07 11:56 PM
N128	1	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(USPAT)	OR	ON	ON	2021/06/19 11:53 PM
N129	5	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/06/19 11:53 PM
N131	6	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2021/12/18 11:37 PM
N132	9	(tobacco AND rod AND heater AND controller AND cartridge).clm.	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/01/11 11:47 PM
N133	9	(tobacco AND aerosol AND tubular AND cartridge SAME (open near2 ends) AND heater AND controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/01 04:16 AM

N134	163	a24b15/167.cpc. AND cartridge AND controller AND activate	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/09/18 11:45 PM
N135	10	a24b13/02.cpc. AND cartridge AND controller AND activate	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/09/18 11:45 PM

Bibliographic Data

Application No: 18/129,643

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /PHU H NGUYEN/ (Examiner's Signature) P.N (Initials)

Title: TOBACCO-CONTAINING SMOKING ARTICLE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/31/2023	131	1747	R60999 1400USC13T1(5803.9
RULE			

APPLICANTS

RAI Strategic Holdings, Inc.,

INVENTORS

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David William Griffith Jr., Winston-Salem, NC, UNITED STATES

Billy Tyrone Conner, Clemmons, NC, UNITED STATES

Evon Llewellyn Crooks, Mocksville, NC, UNITED STATES

Dempsey Bailey Brewer Jr., East Bend, NC, UNITED STATES

CONTINUING DATA

This application is a CON of 17673424 02/16/2022 PAT 11758936

17673424 is a CON of 16271443 02/08/2019

16271443 is a CON of 15879268 01/24/2018 PAT 10231488

15879268 is a CON of 15286087 10/05/2016 PAT 9901123

15286087 is a CON of 14527287 10/29/2014 PAT 9801416

14527287 is a CON of 13297983 11/16/2011 PAT 8899238

13297983 is a CON of 12763890 04/20/2010 PAT 8079371

12763890 is a CON of 11550634 10/18/2006 PAT 7726320

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

04/18/2023

STATE OR COUNTRY

UNITED STATES

ADDRESS

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037
UNITED STATES

FILING FEE RECEIVED

$6,160

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	18/129,643	Filing Date	2023-03-31	Docket Number (if applicable)	R60999 1400US.C13 (5803.9	Art Unit	1747
First Named Inventor	John Howard Robinson			Examiner Name	Phu Hoang Nguyen		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☐ Amendment/Reply
- ☒ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 090528

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/ryan w. cagle/	Date (YYYY-MM-DD)	2023-10-25
Name	Ryan W. Cagle	Registration Number	47,468

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Attorney's Docket No. **R60999 1400US.C13 (5803.9)** PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Robinson *et al.*	Confirmation No.:	4055
Appl. No.:	18/129,643	Group Art Unit:	1747
Filed:	March 31, 2023	Examiner:	Phu Hoang Nguyen
For:	TOBACCO-CONTAINING SMOKING ARTICLE		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT CITATION UNDER 37 C.F.R. § 1.97(e)

Sir:

Attached is a list of documents on form PTO-1449 along with a copy of any cited foreign patent documents and non-patent literature document in accordance with 37 CFR 1.98(a)(2). Also enclosed is a translation or a concise explanation of each non-English language document.

It is requested that the Examiner consider these documents and officially make them of record in accordance with the provisions of 37 C.F.R. § 1.97 and Section 609 of the MPEP. By identifying the listed documents, Applicant in no way makes any admission as to the prior art status of the listed documents, but is instead identifying the listed documents for the sake of full disclosure.

This Information Disclosure Statement is submitted in accordance with 37 C.F.R. § 1.97(b)(4), before the mailing of a first office action and after the filing of a request for continued examination under § 1.114.

Customer No. 26158
Womble Bond Dickinson (US) LLP
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Atlanta, GA 30357
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Respectfully submitted,

/ryan w. cagle/

Ryan W. Cagle
Registration No. 47,468

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON OCTOBER 25, 2023.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	18/129,643
				Filing Date	March 31, 2023
				First Named Inventor	John Howard Robinson
				Art Unit	1747
				Examiner Name	Nguyen, Phu Hoang
Sheet	1	of	1	Attorney Docket Number	R60999 1400US.C13 (5803.9)

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached
	1049	KR 101069342	10-04-2011	Ha Jonk Suk		Machine Translation

OTHER DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s) , volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON OCTOBER 25, 2023

Electronic Patent Application Fee Transmittal

Application Number:	18129643
Filing Date:	31-Mar-2023
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Filer:	Ryan W. Cagle/Diann Gravius
Attorney Docket Number:	R60999 1400USC13T1(5803.9

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
		Total in USD ($)		**1360**

Electronic Acknowledgement Receipt

EFS ID:	48763674
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	25-OCT-2023
Filing Date:	31-MAR-2023
Time Stamp:	18:17:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1360
RAM confirmation Number	E20230OI17399903
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	R60999_1400US_C13_RCE.pdf	1667165 948b812394a4e836f4a10c223199a68985415f82	no	3
Warnings:					
Information:					
2	Transmittal Letter	R60999_1400US_C13_Supplemental_IDS_Coversheet.pdf	118838 e7b236bf99c7dbf7c919e414f342c7f133dde42b	no	1
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3	Information Disclosure Statement (IDS) Form (SB08)	R60999_1400US_C13_Supplemental_IDS_Form_1449.pdf	128942 72aeb2eefaf53c88d42d64de37dafe4a8d53b4ac	no	1
Warnings:					
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4	Fee Worksheet (SB06)	fee-info.pdf	38288 d55f9fc96151910c1e11226e33f9692afc2ed436	no	2
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Espacenet

Bibliographic data: KR101069342 (B1) — 2011-10-04

INHALATION TYPE ANTI-SMOKING PREPARATION

Inventor(s): HA JONG SUK [KR] ± (HA, JONG SUK)

Applicant(s): HA JONG SUK [KR] ± (HA, JONG SUK)

Classification: **- international:** ***A24D1/14; A24F47/00; A61M15/06***
- cooperative: **A24B15/167 (KR)**; **A24F40/10 (KR)**; **A24F40/42 (KR)**; **A24F40/46 (KR)**; **A24F40/48 (KR)**; **A61M15/06 (KR)**; A61M2205/8206 (KR)

Application number: KR20110039221 20110426 Global Dossier

Priority number(s): KR20110039221 20110426

Abstract not available for KR101069342 (B1)

Inhalation type anti-smoking preparation

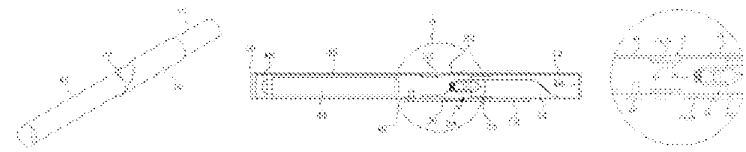
Abstract

translated from Korean

The present invention relates to an inhalation type non-smoking aid comprising a cartridge, a carburetor, and a power supply, which allows a smoker to freely control the opening and closing of the intake hole penetrated between the carburetor and the power supply, and to effectively block heat generated from the vaporizer. .

Specifically, the present invention is a cartridge containing the tobacco solution containing the tobacco and smokers inhaled in the mouth; An evaporator having a built-in electric heating device and connected to the tip of the cartridge to vaporize the tobacco oil containing solution and deliver it to the cartridge; A power supply unit having a built-in battery for driving the vaporizer and connected to the tip of the vaporizer to supply driving power to the vaporizer; At least one intake hole penetrating along an outer surface of the vaporizer or the power supply unit to transfer external air to the vaporizer; It is slidably enclosed on the outer surface of the carburetor to provide an inhalation type non-smoking aid comprising a cylindrical sliding cover to seal part or all of the intake hole according to the degree of sliding.

Images (3)



KR101069342B1

South Korea

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Other languages: Korean

Inventor: 하종석

Worldwide applications

2011 KR

Application KR1020110039221A events

2011-04-26 Application filed by 하종석

2011-04-26 Priority to KR1020110039221A

2011-10-04 Application granted

2011-10-04 Publication of KR101069342B1

Info: Cited by (10), Legal events, Similar documents, Priority and Related Applications

External links: Espacenet, Global Dossier, Discuss

Classifications

» A24F40/46 Shape or structure of electric heating means

View 6 more classifications

Claims (3)

Hide Dependent

translated from Korean

A cartridge 12 in which a tobacco containing oil solution is stored and a suction hole 16 penetrates through the rear end thereof and a smoker sucks the mouth;

A vaporizer 32 having a built-in electric heat-generating device 34 and connected to the front end of the cartridge 12 to vaporize the soft colostrum-containing solution and deliver it to the cartridge 12;

A power supply unit 42 having a battery 44 for driving the vaporizer 34 and connected to the tip of the vaporizer 32 to supply driving power to the vaporizer 34;

At least one intake hole (H) passing through the vaporizer 32 and the power supply unit 42 to transfer external air to the vaporizer 34; And

Cylindrical sliding cover is slidably enclosed on the outer surface of the vaporizer 32 and the tip toward the power supply unit 42 tapered diagonally to sequentially seal or open the intake hole H according to the sliding degree (inhalation aid comprising 52).

The method according to claim 1,

Inhalation type non-smoking aid further comprises a detent hole and a detent protrusion (54,56) provided to correspond to each other on the inner surface of the sliding cover 52 and the surface of the cartridge 12 or the vaporizer 32 facing the inner surface .

The method according to claim 1,

The rear end of the sliding cover (52) facing the cartridge (12) is a suction type non-smoking aid that slides in a state covering a part or all of the vaporizer (32).

Description

translated from Korean

Inhalation type anti-smoking preparation

The present invention relates to inhalation type anti-smoking preparations. More specifically, the present invention is an inhalation type non-smoking aid comprising a cartridge, a carburetor, and a power supply unit, and in particular, a smoker can freely control the opening and closing degree of the intake hole penetrated between the carburetor and the power supply unit and can effectively block heat from the high temperature of the carburetor. It relates to an anti-smoking supplement.

Generally speaking, non-smoking supplements are substances, devices, and devices that help quit smoking. Among them, inhalation-type non-smoking aids, called electronic cigarettes, are vaporized by evaporating the tobacco-containing solution filled in the cartridge. By providing it refers to an electrical device for meeting the smoking needs of smokers.

Hereinafter, in the present specification, the smoking cessation aid means the inhalation cessation aid.

It is well known that smoking cigarettes, such as cigarettes, leaf krill, and pipe tobacco, cause various damages not only to smokers but also to those around them. In particular, smoking cigarettes contain not only nicotine, the main component of tobacco leaves, but also harmful substances such as tar, nitrosamine, hydrocarbons, and carbon monoxide. May cause.

inhalation aids are used instead of smoking cigarettes to minimize the damage of the surrounding people and to satisfy the smoking needs of the smoker, while ultimately inducing smoking, the overall appearance of the cigarette or similar cylindrical shape The part that smokers bite into the cartridge, the carburetor is coupled to the tip of the cartridge, can be divided into a power supply coupled to the tip of the carburetor.

At this time, the cartridge is stored with the colostrum-containing solution, the vaporizer is built-in vaporizer to vaporize the colostrum-containing solution at high heat to provide a smoker through the cartridge, the power supply unit supplies the driving power for driving the vaporizer. Therefore, if a smoker inhales the cartridge in his mouth, he is provided with water vapor of the tobacco oil-containing solution, and when the tobacco oil-containing solution is exhausted after a certain period of time, the entire cartridge is replaced and reused.

However, the inhalation smoking aids are significantly different from the smoking cigarettes when the feeling of inhalation, which is why many smokers are reluctant to use the inhalation smoking aids. In other words, the inhalation smoking aids include a variety of configurations to give a feeling similar to the smoking cigarette, but as one of the typical difference, the inhalation pressure during inhalation is significantly different from the smoking cigarette, so most smokers feel heterogeneity.

Furthermore, when using the inhalation type smoking aids, the part held by the smoker is mainly a vaporizer corresponding to the middle part, and a high temperature vaporization device is built therein to vaporize the tobacco-containing solution. This also acts as a major factor in reluctant to use the smoking cessation aid.

The present invention has been made to solve the above problems. That is, the present invention aims at presenting a specific method that can freely adjust the suction pressure felt during smoking of a general type of inhalation smoking aid according to the taste of the smoker and can effectively block the high temperature of the vaporizer.

In order to achieve the above object, the present invention, the cartridge containing the tobacco solution containing the smoked smoker inhaled in the mouth; An evaporator having a built-in electric heating device and connected to the tip of the cartridge to vaporize the tobacco oil containing solution and deliver it to the cartridge; A power supply unit having a built-in battery for driving the vaporizer and connected to the tip of the vaporizer to supply driving power to the vaporizer; At least one intake hole penetrating along an outer surface of the vaporizer or the power supply unit to transfer external air to the vaporizer; it is slidably enclosed on the outer surface of the carburetor to provide a suction type non-smoking aid comprising a cylindrical sliding cover for sealing part or all of the intake hole according to the degree of sliding.

At this time, the front end of the sliding cover toward the power source is tapered in an oblique shape, the inner surface of the sliding cover and the cartridge or carburetor surface facing the inner surface is further provided with a detent hole and detent projections corresponding to each other. It is characterized by including. In addition, the rear end of the sliding cover toward the cartridge is characterized in that the sliding part covering all or part of the carburetor.

Inhalation type anti-smoking aid according to the present invention exhibits the advantage that can be freely adjusted according to the taste of the smoker inhalation pressure and the content of vaporization during smoking.

That is, the suction type smoking aid according to the present invention controls the suction pressure by adjusting the opening and closing degree of the intake hole penetrated between the carburetor and the power supply by sliding the sliding cover, as well as freely to adjust the vapor concentration of the solution containing tobacco oil according to the taste of the smoker. There is an advantage that can be adjusted.

Furthermore, the suction type non-smoking aid according to the present invention can effectively block the high heat of the vaporizer by using the sliding cover, which shows the advantage that it can be used more conveniently.

1 is a perspective view of a suction type smoking cessation aid according to the present invention.
Figure 2 is a cross-sectional view of the inhalation type smoking aid.
3 is an enlarged view of a portion A in FIG. 2;

EMBODIMENT OF THE INVENTION Hereinafter, one preferable aspect of this invention is looked at with reference to drawings.

1 and 2 are a perspective view and a cross-sectional view of the suction type smoking aid.

As can be seen, the inhalable smoking aid according to the present invention exhibits a cigarette or similar cylindrical shape in appearance, and for convenience, a vaporizer 32 coupled to a cartridge 12, a cartridge 12, the tip of which is inhaled by a smoker from the smoker's side, The power supply 42 coupled to the tip of the vaporizer 32, the cartridge 12 and the carburetor 32 can be divided into a sliding cover 52 which is slid by the user.

Looking at each of them in detail as follows.

The cartridge 12 stores the smoked colostrum-containing solution as a part of the smoker's mouth and sucks, and when the smoked colostrum-containing solution is vaporized in the vaporizer 32 to be described later is supplied to the smoker with the outside air.

The cartridge 12 for this purpose has a cylindrical shape through which the hollow penetrates along the inner longitudinal direction, and a solution storage unit 14 for storing tobacco oil containing solution is defined at the inner end of the cartridge 12 to define the vaporizer 32. It is connected to the vaporization device 34, the rear end of the cartridge 12 is passed through the suction hole 16 for delivering the vaporized vaporized solution containing the tobacco oil to the smoker. At this time, preferably, the solution storage unit 14 is filled with a hygroscopic fiber member such as cotton to absorb the colostrum oil-containing solution.

The vaporizer 32 is a portion connected to the front end of the cartridge 12 to vaporize the solution containing the colostrum oil of the solution storage unit 14 and delivers to the cartridge 12.

The carburetor 32 for this purpose has a cylindrical shape through which the hollow penetrates along the inner longitudinal direction, and the vaporizer 32 having the coil 36 embedded therein is built in the vaporizer 32. It is connected to the solution storage unit 14 of the cartridge 12 through a solution delivery unit 38 made of a hygroscopic fiber member such as cotton. At this time, preferably, the cartridge 12 and the vaporizer 32 are detachably fitted, and when the cartridge 12 and the vaporizer 32 are coupled, the solution transfer part 38 is connected to the solution storage part 14. The tobacco containing oil solution is delivered to the vaporization device (34).

The power supply 42 is a part connected to the front end of the vaporizer 32 has a battery 44 for driving the vaporizer 34.

For this purpose, the power supply unit 42 has a cylindrical shape through which a hollow penetrates along an inner longitudinal direction thereof, and a rechargeable secondary battery 44 is provided in the power supply unit 42 in a leisurely manner, and in the rear end of the power supply unit 42. A hydraulic switch 46 is turned on / off according to the flow of air, and a light emitting element 48 such as an LED is provided inside the front end of the power supply 42, and the front end of the power supply is sealed by the light emitting window 50. .

At this time, preferably, the battery 44 is electrically connected to the vaporizer 34 and the light emitting element 48 via the hydraulic switch 46. Therefore, when the smoker bites the cartridge 12 into the mouth, the hydraulic switch 46 is turned on to light the light emitting element 48 and to drive the vaporizer 34. As a result, the light

of the light emitting device 48 is emitted to the outside through the light emitting window 50 to produce an effect similar to a cigarette, and the coil 36 of the vaporization device 34 is transmitted through the solution delivery unit 38 The tobacco containing oil solution is vaporized and delivered to the smoker through the cartridge 12.

In addition, at least one intake hole (H) through which external air flows into one of the vaporizer 32 or the power supply 42 of the inhalation type smoking cessation aid according to the present invention is vaporized from the vaporization device 36 and the external air. The mixture is delivered to the smoker through the cartridge 12, in particular, the inhalation type non-smoking aid according to the present invention is slidably enclosed on the outer surface of the vaporizer 32, depending on the degree of sliding part or all of the intake hole (H) It is characterized in that the cylindrical sliding cover 52 is provided to seal.

FIG. 3 is an enlarged perspective view of part A of the circle of FIG. 2, with reference to FIGS. 1 and 2.

As can be seen, at least one intake hole (H) is penetrated through one of the vaporizer 32 or the power supply unit 42 of the inhalation type smoking cessation aid according to the present invention. At this time, preferably, the vaporizer 32 and the power supply 42 are coupled to the first and second threads S1 and S2, and the intake hole H is present at the connection point between the vaporizer 32 and the power supply 42. Can be. For example, assuming that the first thread S1 of the power supply 42 is coupled to the outer surface of the second thread S2 of the vaporizer 32, at least one hole along the rear end of the second thread S2 (40 is penetrated and the rear end of the first thread S1 is coupled to the vaporizer 32 at a certain distance. And if necessary, a semi-circular groove is provided at the rear end of the first thread S1.

Accordingly, when the vaporizer 32 and the power supply 42 are screwed together, external air may be introduced into the vaporizer 32 through the intake hole H.

And along the outer surface of the vaporizer 32 there is a cylindrical sliding cover 52 slidably enclosed. At this time, preferably, the tip of the sliding cover 52 facing the power supply unit 42 has a tapered shape with an oblique line, and the inner surface of the sliding cover 52 and the surface of the cartridge 12 or the carburetor 32 facing the same. Detent holes and detent protrusions 54 and 56 corresponding to each other are provided.

Therefore, when the smoker moves the sliding cover 52 toward the power supply 42, the tip of the sliding cover 52 sequentially moves the intake hole H while the detent hole and the protrusions 54 and 56 perform the detent operation. In the opposite direction, the tip of the sliding cover 52 opens the intake hole H in turn while taking a detent operation.

In addition, when the smoker bites the cartridge 12 in the mouth while inhaling the intake hole H relatively, the smoker absorbs the vaporized vapor containing the relatively high amount of vaporized oil and at the same time feels a high suction pressure. If the hole (H) is inhaled in a relatively closed state, the tobacco oil-containing solution absorbs relatively less vaporized vapor and at the same time feels a lower suction pressure.

Therefore, the smoker can freely inhale a gas having a content suitable for his or her taste by adjusting the opening degree of the intake hole H by sliding the sliding cover 52, and can freely adjust the suction pressure.

In addition, the sliding cover 52 preferably represents a size covering at least two-thirds of the area of the vaporizer 32, whereby the rear end of the sliding cover 52 is always covered with part or all of the vaporizer (32) is sliding into.

As a result, the smoker using the inhalation type non-smoking aid according to the present invention is used to hold the sliding cover 52 rather than the vaporizer 32, the heat of the vaporization device 34 is blocked by the sliding cover 52 to heat It can be used comfortably without feeling.

The above drawings and descriptions are merely examples of the invention and do not limit the invention. That is, the present invention may be modified in various ways, but should be included in the scope of the present invention if these modifications are within the technical spirit of the present invention, the scope of the present invention is determined by the following claims and equivalents thereto. Should be.

12: carburetor 14: solution storage unit
16: suction hole 32: carburetor
34: vaporizer 36: coil
38: solution delivery part 40: hole
42: power supply 44: battery
46: hydraulic switch 48: light emitting element
50: light emitting window 52: sliding cover
54,56: Detent hole and detent protrusion
S1, S2: first and second thread

Cited By (10)

Publication number	Priority date	Publication date	Assignee	Title
KR200461081Y1	2012-05-25	2012-06-22	(주)칸티아시아	Electronic cigarette cartridges with a system for preventing backflow
KR200473606Y1 *	2013-11-15	2014-07-17	박선호	Smoking Controller
KR101549306B1	2013-11-05	2015-09-01	주식회사 케이티앤지	Unit to control suction pressure and smokeless cigarette having the same
KR20190018846A	2017-08-16	2019-02-26	서광일	Composition for herbal cigarettes and manufacturing method threrof
KR20200098997A *	2019-02-13	2020-08-21	주식회사 케이티앤지	Aerosol generating device including magnetic sensor and method of operating same
KR20200122668A *	2019-04-18	2020-10-28	주식회사 케이티앤지	Aerosol generating apparatus
KR20200126588A *	2019-04-30	2020-11-09	주식회사 케이티앤지	Aerosol generating device and operation method thereof
KR20200126610A *	2019-04-30	2020-11-09	주식회사 케이티앤지	Aerosol generating device and cover for covering the same
KR20200126628A *	2019-04-30	2020-11-09	주식회사 케이티앤지	Aerosol generating device and operation method thereof
WO2021020768A1 *	2019-07-30	2021-02-04	Kt&G Corporation	Aerosol generating device and operation method thereof

Family To Family Citations

* Cited by examiner, † Cited by third party, ‡ Family to family citation

Similar Documents

Publication	Publication Date	Title
KR101069342B1	2011-10-04	Inhalation type anti-smoking preparation
RU2747838C2	2021-05-14	Aerosol delivery device with replaceable wick and heater assembly (options)
KR20120121314A	2012-11-05	cartridge of inhalation type anti-smoking preparation and cartridge case for the same
US10874146B2	2020-12-29	Electronic device for tobacco
ES2746505T3	2020-03-06	Vaporizer with permeable electric heat resistant film and vaporizer membrane
US20080257367A1	2008-10-23	Electronic evaporable substance delivery device and method
JP2012005412A	2012-01-12	Chemical liquid used for atomizer, and atomizer
US20120318882A1	2012-12-20	Vapor delivery devices
US20060016453A1	2006-01-26	Cigarette substitute device
KR20120098343A	2012-09-05	Electronic cigaret
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WO2011146318A3	2012-04-05	Atomizer-vaporizer for a personal vaporizing inhaler
WO2011146315A3	2012-03-01	Personal vaporizing inhaler with mouthpiece cover
WO2011146317A3	2012-04-19	Personal vaporizing inhaler cartridge
KR101084048B1	2011-11-16	Electronic cigarette
CN103532265B	2016-03-02	Rod-shaped tobacco heating device
KR200465795Y1	2013-03-11	Electronic smoking device
KR200452359Y1	2011-02-22	Electronic cigarette
KR200448259Y1	2010-03-29	Electronic cigarette
KR100860566B1	2008-09-26	Electronic cigar for giving up smoking
KR101824063B1	2018-03-14	Suction device and cartridge for non-smoking
KR101756725B1	2017-07-12	Contact type Multi cartridge type electronic cigarette apparatus
KR201000006999U	2010-07-08	Liquid vaporizing and inhaling apparatus
KR100846401B1	2008-07-17	assisting pipe for a prohibition of smoking
KR200900003871U	2009-04-27	Liquid vaporizing and inhaling apparatus

Priority And Related Applications

Priority Applications (1)

Application	Priority date	Filing date	Title
KR1020110039221A	2011-04-26	2011-04-26	Inhalation type anti-smoking preparation

Applications Claiming Priority (1)

Application	Filing date	Title
KR1020110039221A	2011-04-26	Inhalation type anti-smoking preparation

Legal Events

Date	Code	Title	Description
2011-04-26	A201	Request for examination	
2011-04-27	A302	Request for accelerated examination	
2011-06-20	E902	Notification of reason for refusal	
2011-09-22	E701	Decision to grant or registration of patent right	
2011-09-26	GRNT	Written decision to grant	
2014-09-26	FPAY	Annual fee payment	**Payment date:** 20140929 **Year of fee payment:** 4
2015-08-21	FPAY	Annual fee payment	**Payment date:** 20150824 **Year of fee payment:** 5
2016-09-27	LAPS	Lapse due to unpaid annual fee	

Concepts

machine-extracted

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Name	Image	Sections	Count	Query match
anti-smoking		title,description	4	0.000
preparation method		title,description	2	0.000
vaporizer		claims,abstract,description	53	0.000
smoking		claims,abstract,description	32	0.000
Nicotiana		claims,abstract,description	18	0.000
Nicotiana tabacum		claims,abstract,description	18	0.000
Colostrum		claims,description	7	0.000
colostrum		claims,description	7	0.000
electric heating		abstract,description	2	0.000
penetrating		abstract,description	2	0.000

Show all concepts from the description section

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(19) 대한민국특허청(KR)
(12) 등록특허공보(B1)

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(56) 선행기술조사문헌
KR2020110002806 U*
*는 심사관에 의하여 인용된 문헌

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전종학

전체 청구항 수 : 총 3 항 심사관 : 조성호

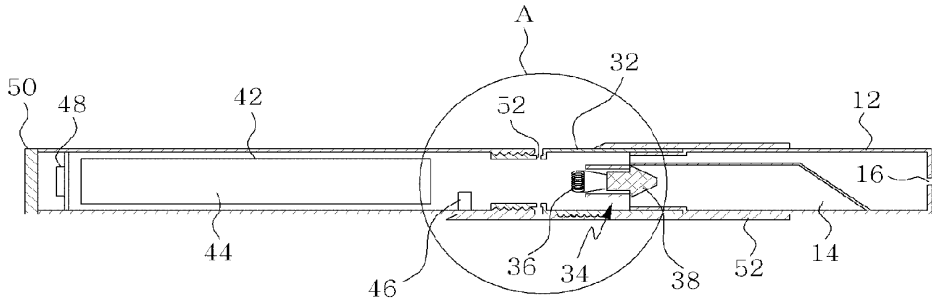
(54) 흡입식 금연보조제

(57) 요 약

본 발명은 카트리지, 기화기, 전원부를 포함하는 흡입식 금연보조제로서 기화기와 전원부 사이에 관통된 흡기공의 개폐정도를 흡연자가 자유롭게 조절할 수 있고 기화기에서 발생되는 열을 효과적으로 차단할 수 있는 흡입식 금연보조제에 관한 것이다.

구체적으로 본 발명은 연초유 함유용액이 저장되고 흡연자가 입에 물어 흡입하는 카트리지; 전기 발열하는 기화장치가 내장되고 상기 카트리지 선단에 연결되어 상기 연초유 함유용액을 기화시켜 상기 카트리지로 전달하는 기화기; 상기 기화장치의 구동을 위한 배터리가 내장되고 상기 기화기 선단에 연결되어 상기 기화장치에 구동전력을 공급하는 전원부; 상기 기화기 또는 상기 전원부의 외면을 따라 관통되어 상기 기화장치에 외부공기를 전달하는 적어도 하나의 흡기홀; 상기 기화기 외면에 슬라이딩 가능하게 둘러 붙여져 상기 슬라이딩 정도에 따라 상기 흡기홀의 일부 또는 전부를 밀폐하는 원통 형상의 슬라이딩커버를 포함하는 흡입식 금연보조제를 제공한다.

대 표 도 - 도2



특허청구의 범위

청구항 1

연초유 함유용액이 저장되고 후단에 흡입홀(16)이 관통되어 흡연자가 입에 물어 흡입하는 카트리지(12);

전기 발열하는 기화장치(34)가 내장되고 상기 카트리지(12) 선단에 연결되어 상기 연초유 함유용액을 기화시켜 상기 카트리지(12)로 전달하는 기화기(32);

상기 기화장치(34)의 구동을 위한 배터리(44)가 내장되고 상기 기화기(32) 선단에 연결되어 상기 기화장치(34)에 구동전력을 공급하는 전원부(42);

상기 기화기(32)와 상기 전원부(42) 사이를 따라 둘러 관통되어 상기 기화장치(34)에 외부공기를 전달하는 적어도 하나의 흡기홀(H); 및

상기 기화기(32) 외면에 슬라이딩 가능하게 둘러 붙여지고 상기 전원부(42)를 향하는 선단이 사선으로 테이퍼져 상기 슬라이딩 정도에 따라 상기 흡기홀(H)을 순차적으로 밀폐 또는 개방하는 원통 형상의 슬라이딩커버(52)를 포함하는 흡입식 금연보조제.

청구항 2

청구항 1에 있어서,

상기 슬라이딩커버(52)의 내면과 상기 내면에 대면하는 상기 카트리지(12) 또는 기화기(32) 표면에 서로 대응되게 구비된 디텐트홀 및 디텐트돌기(54,56)를 더 포함하는 흡입식 금연보조제.

청구항 3

청구항 1에 있어서,

상기 카트리지(12)를 향하는 상기 슬라이딩커버(52)의 후단은 상기 기화기(32)의 일부 또는 전부를 덮은 상태로 슬라이딩되는 흡입식 금연보조제.

명 세 서

기 술 분 야

[0001] 본 발명은 흡입식 금연보조제(inhalation type anti-smoking preparation)에 관한 것이다. 보다 구체적으로 본 발명은 카트리지, 기화기, 전원부를 포함하는 흡입식 금연보조제로서, 특히 기화기와 전원부 사이에 관통된 흡기공의 개폐정도를 흡연자가 자유롭게 조절할 수 있고 기화기의 고열을 열을 효과적으로 차단할 수 있는 흡입식 금연보조제에 관한 것이다.

배 경 기 술

[0002] 일반적으로 금연보조제는 담배를 끊는 데 도움을 주는 물질, 장치, 기구를 총칭하며, 이 중에서도 일명 전자담배(electronic cigarette)라 불리는 흡입식 금연보조제는 카트리지에 충전된 연초유 함유용액을 기화시켜 증기 상태로 제공함으로써 흡연자의 흡연욕구를 충족시키기 위한 전기장치를 지칭한다.

[0003] 이하, 본 명세서에서 금연보조제는 상기의 흡입식 금연보조제를 의미한다.

[0004] 권련, 엽권련, 파이프 담배 등의 흡연식 담배가 흡연자뿐만 아니라 그 주변사람에게도 각종 피해를 준다는 사실은 너무나도 잘 알려져 있다. 특히, 흡연식 담배는 담뱃잎의 주성분인 니코틴 이외에도 타르, 니트로아민, 탄화

수소, 일산화탄소 등 인체에 해로운 물질을 다량 함유하고, 특유의 냄새와 담뱃진 등으로 인해 흡연자와 주변사람의 건강에 해로운 것은 물론 심한 불쾌감을 유발할 수 있다.

[0005] 흡입식 금연보조제는 흡연식 담배를 대신해서 주변사람의 피해를 최소화하고 흡연자의 흡연욕구를 충족시킬 수 있도록 하는 한편 궁극적으로는 금연을 유도하기 위한 것으로서, 전체적인 외관은 담배 또는 이와 유사한 원통형상을 나타내는 가운데 흡연자가 입에 무는 부분인 카트리지, 카트리지 선단에 결합되는 기화기, 기화기 선단에 결합되는 전원부로 나누어볼 수 있다.

[0006] 이때, 카트리지에는 연초유 함유용액이 저장되고, 기화기에는 기화장치가 내장되어 연초유 함유용액을 고열로 기화하여 카트리지를 통해 흡연자에게 제공하며, 전원부는 기화장치의 구동을 위한 구동전력을 공급한다. 따라서 흡연자가 카트리지를 입에 물고 흡입하면 연초유 함유용액의 수증기를 제공받게 되고, 일정기간 사용 후 연초유 함유용액이 소진되면 카트리지 전체를 교환하여 재사용한다.

[0007] 하지만, 흡입식 금연보조제는 흡입시 느껴지는 느낌이 흡연식 담배와 상당한 차이를 나타내며, 이로 인해 많은 흡연자가 흡입식 금연보조제의 사용을 꺼리고 있는 실정이다. 즉, 흡입식 금연보조제에도 흡연식 담배와 유사한 느낌을 주기 위한 여러 가지 구성을 포함하지만, 대표적인 차이점 중 하나로서 흡입시 흡입압력이 흡연식 담배와 상당히 상이하여 대다수 흡연자가 이질감을 느끼고 있다.

[0008] 더 나아가 흡입식 금연보조제의 사용시 흡연자가 손으로 잡는 부분은 주로 중간 부분에 해당되는 기화기인데, 그 내부에는 연초유 함유용액을 기화시키기 위한 고열의 기화장치가 내장되므로 수분 정도 지나면 뜨거움을 느끼게 된다. 이 역시 상기 금연보조제의 사용을 꺼리는 주요 요인으로 작용하고 있다.

발명의 내용

해결하려는 과제

[0009] 본 발명은 상기와 같은 문제점을 해결하기 위해 안출된 것이다. 즉, 본 발명은 일반적인 흡입식 금연보조제의 흡연시 느껴지는 흡입압력을 흡연자의 취향에 따라 자유로이 조절할 수 있는 동시에 기화기의 고열을 효과적으로 차단할 수 있는 구체적인 방도를 제시하는데 그 목적을 둔다.

과제의 해결 수단

[0010] 상기와 같은 목적을 달성하기 위하여 본 발명은, 연초유 함유용액이 저장되고 흡연자가 입에 물어 흡입하는 카트리지; 전기 발열하는 기화장치가 내장되고 상기 카트리지 선단에 연결되어 상기 연초유 함유용액을 기화시켜 상기 카트리지로 전달하는 기화기; 상기 기화장치의 구동을 위한 배터리가 내장되고 상기 기화기 선단에 연결되어 상기 기화장치에 구동전력을 공급하는 전원부; 상기 기화기 또는 상기 전원부의 외면을 따라 관통되어 상기 기화장치에 외부공기를 전달하는 적어도 하나의 흡기홀; 상기 기화기 외면에 슬라이딩 가능하게 둘러 붙여져 상기 슬라이딩 정도에 따라 상기 흡기홀의 일부 또는 전부를 밀폐하는 원통 형상의 슬라이딩커버를 포함하는 흡입식 금연보조제를 제공한다.

[0011] 이때, 상기 전원부를 향하는 상기 슬라이딩커버의 선단은 사선으로 테이퍼진 형상이고, 상기 슬라이딩커버의 내면 및 상기 내면에 대면하는 상기 카트리지 또는 기화기 표면에는 서로 대응되게 구비된 디텐트홀 및 디텐트돌기를 더 포함하는 것을 특징으로 한다. 또한 상기 카트리지를 향하는 상기 슬라이딩커버의 후단은 상기 기화기의 일부 또는 전부를 덮어 슬라이딩되는 것을 특징으로 한다.

발명의 효과

[0012] 본 발명에 따른 흡입식 금연보조제는 흡연시 느껴지는 흡입압력과 기화증기의 함유량을 흡연자 취향에 따라 자유로이 조절할 수 있는 장점을 나타낸다.

[0013] 즉, 본 발명에 따른 흡입식 금연보조제는 슬라이딩커버를 슬라이딩시켜 기화기와 전원부 사이에 관통된 흡기공의 개폐정도를 조절함으로써 흡입압력을 조절하는 것은 물론 연초유 함유용액의 증기농도를 흡연자 취향에 따라

자유로이 조절할 수 있는 장점이 있다.

[0014] 더 나아가 본 발명에 따른 흡입식 금연보조제는 슬라이딩커버를 이용하여 기화기의 고열을 효과적으로 차단할 수 있어 한층 더 편리하게 사용 가능한 장점을 나타낸다.

도면의 간단한 설명

[0015] 도 1은 본 발명에 따른 흡입식 금연보조제의 사시도.

도 2는 본 발명에 따른 흡입식 금연보조제의 단면도.

도 3은 도 2의 원내 A 부분에 대한 확대도.

발명을 실시하기 위한 구체적인 내용

[0016] 이하, 도면을 참조하여 본 발명의 바람직한 일 양태(樣態)를 살펴본다.

[0017] 도 1과 도 2는 본 발명에 따른 흡입식 금연보조제의 사시도와 단면도이다.

[0018] 보이는 것처럼, 본 발명에 따른 흡입식 금연보조제는 외관상 담배 또는 이와 유사한 원통 형상을 나타내며, 편의상 흡연자 측으로부터 흡연자가 입에 물어 흡입하는 카트리지(12), 카트리지(12) 선단에 결합되는 기화기(32), 기화기(32) 선단에 결합되는 전원부(42), 카트리지(12)와 기화기(32)를 덮어 사용자에 의해 슬라이딩되는 슬라이딩커버(52)로 나누어볼 수 있다.

[0019] 각각을 상세히 살펴보면 다음과 같다.

[0020] 카트리지(12)는 흡연자가 입에 물어 흡입하는 부분으로서 연초유 함유용액을 저장하고, 후술하는 기화기(32)에서 연초유 함유용액이 기화되면 외부공기와 함께 흡연자에게 공급한다.

[0021] 이를 위한 카트리지(12)는 내부 길이방향을 따라 중공이 관통된 원통 형상을 나타내며, 카트리지(12)의 내부 선단에는 연초유 함유용액이 저장되는 용액저장부(14)가 정의되어 기화기(32)의 기화장치(34)에 연결되고, 카트리지(12)의 후단에는 흡연자에게 연초유 함유용액이 기화된 증기를 전달하기 위한 흡입홀(16)이 관통된다. 이때, 바람직하게는 용액저장부(14)에는 솜 등의 흡습성 섬유부재가 충진되어 연초유 함유용액을 흡수하고 있다.

[0022] 기화기(32)는 카트리지(12)의 선단에 연결되는 부분으로서 용액저장부(14)의 연초유 함유용액을 기화시켜 카트리지(12)로 전달한다.

[0023] 이를 위한 기화기(32)는 내부 길이방향을 따라 중공이 관통된 원통 형상을 나타내며, 기화기(32)의 내부에는 코일(36)이 내장된 기화장치(34)가 내장되고, 기화장치(34)는 솜 등의 흡습성 섬유부재로 이루어진 용액전달부(38)를 통해 카트리지(12)의 용액저장부(14)와 연결된다. 이때, 바람직하게는 카트리지(12)와 기화기(32)는 착탈 가능하게 억지 끼움되며, 카트리지(12)와 기화기(32)가 결합되면 용액전달부(38)가 용액저장부(14)에 연결되어 연초유 함유용액을 기화장치(34)로 전달한다.

[0024] 전원부(42)는 기화기(32)의 선단에 연결되는 부분으로서 기화장치(34)의 구동을 위한 배터리(44)가 내장된다.

[0025] 이를 위한 전원부(42)는 내부 길이방향을 따라 중공이 관통된 원통 형상을 나타내고, 전원부(42)의 내부에는 충전 가능한 2차 배터리(44)가 여유있게 내장되며, 전원부(42)의 후단 내부에는 공기의 유동에 따라 온/오프되는 유압스위치(46)가 내장되고, 전원부(42)의 선단 내부에는 LED 등의 발광소자(48)가 구비되며, 전원부의 선단은 발광창(50)으로 밀폐된다.

[0026] 이때, 바람직하게는 배터리(44)는 유압스위치(46)를 매개로 기화장치(34) 및 발광소자(48)와 전기적으로 연결된다. 따라서 흡연자가 카트리지(12)를 입에 물고 흡입하면 유압스위치(46)가 온(on) 되어 발광소자(48)를 발광시키는 동시에 기화장치(34)를 구동시킨다. 그 결과 발광소자(48)의 빛은 발광창(50)을 통해 외부로 비추어져 담뱃불과 유사한 효과를 연출하고, 기화장치(34)의 코일(36)은 용액전달부(38)를 통해 전달되는 연초유 함유용액을 기화시켜 카트리지(12)를 통해 흡연자에게 전달한다.

[0027] 그 밖에도 본 발명에 따른 흡입식 금연보조제의 기화기(32) 또는 전원부(42) 중 하나에는 외부공기가 유입되는 적어도 하나의 흡기홀(H)이 관통되어 기화장치(36)에서 기화된 증기와 외부공기를 혼합해서 카트리지(12)를 통해 흡연자에게 전달하는데, 특히 본 발명에 따른 흡입식 금연보조제는 기화기(32)의 외면에 슬라이딩 가능하게

둘러 붙여져 그 슬라이딩 정도에 따라 흡기홀(H)의 일부 또는 전부를 밀폐하는 원통 형상의 슬라이딩커버(52)가 구비된 것을 특징으로 한다.

[0028] 첨부된 도 3은 도 2의 원내 A 부분에 대한 확대사시도로서, 도 1 및 도 2와 함께 참조한다.

[0029] 보이는 것처럼, 본 발명에 따른 흡입식 금연보조제의 기화기(32) 또는 전원부(42) 중 하나에는 적어도 하나의 흡기홀(H)이 둘러 관통된다. 이때, 바람직하게는 기화기(32)와 전원부(42)는 제 1 및 제 2 나사산(S1,S2)으로 결합되고, 흡기홀(H)은 기화기(32)와 전원부(42)의 연결지점에 존재할 수 있다. 일례로 전원부(42)의 제 1 나사산(S1)이 기화기(32)의 제 2 나사산(S2) 외면에 결합되는 경우를 가정하면, 제 2 나사산(S2)의 후단을 따라서는 적어도 하나의 홀(40)이 관통되고 제 1 나사산(S1)의 후단은 기화기(32)와 일정정도 거리를 두고 결합된다. 그리고 필요하다면 제 1 나사산(S1) 후단에 반원형태의 홈이 마련된다.

[0030] 따라서 기화기(32)와 전원부(42)를 나사 결합하면 흡기홀(H)을 통해 그 내부로 외부공기가 유입될 수 있다

[0031] 그리고 기화기(32)의 외면을 따라서는 슬라이딩 가능하게 둘러 붙여진 원통형상의 슬라이딩커버(52)가 존재한다. 이때, 바람직하게는 전원부(42)를 향하는 슬라이딩커버(52)의 선단은 사선으로 테이퍼진 형상을 나타내고, 슬라이딩커버(52)의 내면 및 이와 대면하는 카트리지(12) 또는 기화기(32)의 표면에는 서로 대응되는 디텐트홀 및 디텐트돌기(54,56)가 구비된다.

[0032] 따라서 흡연자가 슬라이딩커버(52)를 전원부(42) 방향으로 이동시키면 슬라이딩커버(52)의 선단은 디텐트홀 및 돌기(54,56)에 의한 디텐트 동작을 취하면서 흡기홀(H)을 순차적으로 밀폐하고, 그 반대의 경우에 슬라이딩커버(52)의 선단은 디텐트 동작을 취하면서 흡기홀(H)을 차례로 개방한다.

[0033] 그리고 흡기홀(H)을 상대적으로 많이 밀폐한 상태에서 흡연자가 카트리지(12)를 입에 물고 흡입하면 흡연자는 연초유 함유용액이 기화된 증기를 상대적으로 많이 흡수하는 동시에 흡입압력을 높게 느끼고, 흡기홀(H)을 상대적으로 적게 밀폐한 상태에서 흡입하면 연초유 함유용액이 기화된 증기를 상대적으로 적게 흡수하는 동시에 흡입압력을 낮게 느낀다.

[0034] 따라서 흡연자는 슬라이딩커버(52)를 슬라이딩시켜 흡기홀(H)의 개방정도를 조절함으로써 자신의 취향에 맞는 함량의 기체를 자유로이 흡입할 수 있고, 흡입압력도 자유로이 조절할 수 있다.

[0035] 또한, 바람직하게는 슬라이딩커버(52)는 기화기(32) 면적의 2/3 이상을 덮는 사이즈를 나타내며, 이로써 슬라이딩커버(52)의 후단은 상시적으로 기화기(32)의 일부 또는 전부를 덮은 상태로 슬라이딩 된다.

[0036] 그 결과 본 발명에 따른 흡입식 금연보조제를 사용하는 흡연자는 기화기(32)가 아닌 슬라이딩커버(52)를 잡고 사용하게 되며, 슬라이딩커버(52)에 의해 기화장치(34)의 열이 차단되므로 뜨거움을 느끼지 않고 편안하게 사용할 수 있다.

[0037] 이상의 도면 및 설명은 본 발명의 한가지 예시에 지나지 않으며 본 발명을 한정하지 않는다. 즉, 본 발명은 다양한 변형이 가능하지만 이들 변형이 본 발명의 기술사상 내에 있다면 본 발명의 권리범위에 속한다 해야 할 것인바, 본 발명의 권리범위는 이하의 특허청구범위 및 이와 균등한 것에 의해 결정되어야 한다.

부호의 설명

[0038] 12 : 기화기　　14 : 용액저장부

16 : 흡입홀　　32 : 기화기

34 : 기화장치　　36 : 코일

38 : 용액전달부　　40 : 홀

42 : 전원부　　44 : 배터리

46 : 유압스위치　　48 : 발광소자

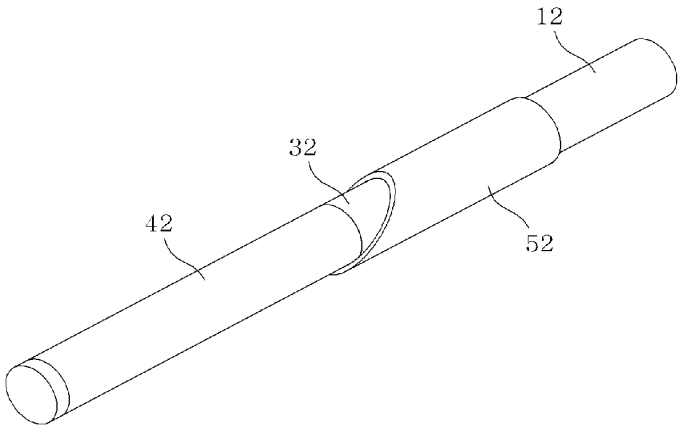
50 : 발광창　　52 : 슬라이딩커버

54,56 : 디텐트홀 및 디텐트돌기

S1,S2 : 제 1 및 제2 나사산

도면

도면1



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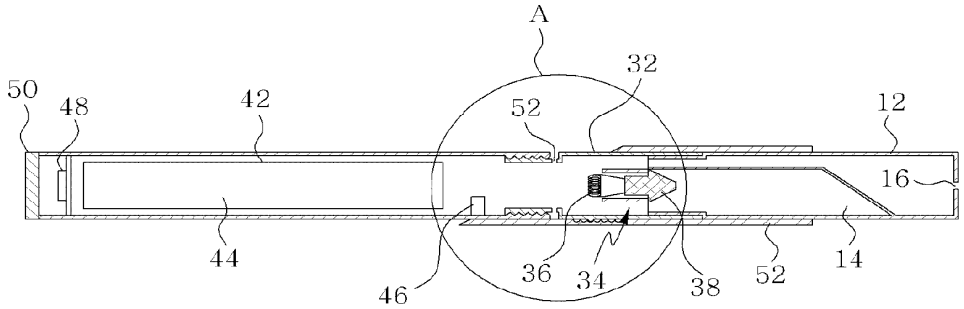
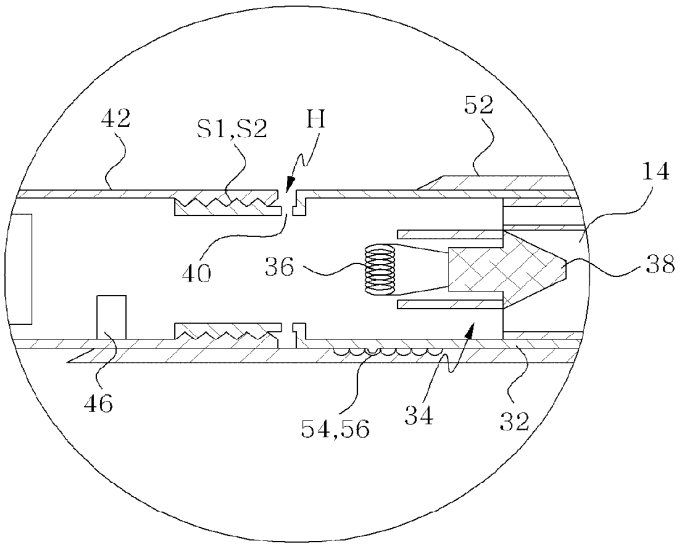


도면3



Electronic Acknowledgement Receipt

EFS ID:	48763705
Application Number:	18129643
International Application Number:	
Confirmation Number:	4055
Title of Invention:	TOBACCO-CONTAINING SMOKING ARTICLE
First Named Inventor/Applicant Name:	John Howard Robinson
Customer Number:	26158
Filer:	Ryan W. Cagle/Diann Gravius
Filer Authorized By:	Ryan W. Cagle
Attorney Docket Number:	R60999 1400USC13T1(5803.9
Receipt Date:	25-OCT-2023
Filing Date:	31-MAR-2023
Time Stamp:	18:25:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	FOR-KR101069342.pdf	566172 b0c9933c5b8c6f127d4973871cfb1a70d4fcc3b8	no	13
Warnings:					

Information:	
Total Files Size (in bytes):	566172

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26158 7590 12/13/2023

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

EXAMINER	
NGUYEN, PHU HOANG	
ART UNIT	PAPER NUMBER
1747	

DATE MAILED: 12/13/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

TITLE OF INVENTION: TOBACCO-CONTAINING SMOKING ARTICLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	03/13/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26158 7590 12/13/2023

WOMBLE BOND DICKINSON (US) LLP
ATTN: IP DOCKETING
P.O. Box 570489
ATLANTA, GA 30357-0037

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

TITLE OF INVENTION: TOBACCO-CONTAINING SMOKING ARTICLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	03/13/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, PHU HOANG	1747	131-275000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑Issue Fee ❑Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

26158 7590 12/13/2023

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ATLANTA, GA 30357-0037

EXAMINER	
NGUYEN, PHU HOANG	
ART UNIT	PAPER NUMBER
1747	

DATE MAILED: 12/13/2023

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/ owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

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4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 18/129,643	Applicant(s) Robinson et al.	
	Examiner PHU H NGUYEN	Art Unit 1747	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 10/25/2023.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 31-60 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/PHU H NGUYEN/
Examiner, Art Unit 1747

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	Art Unit
	PHU H NGUYEN	1747

CPC - Searched*		
Symbol	Date	Examiner

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
See Search History	06/15/2023	P.N
See Search History	09/18/2023	P.N
See Search History	12/02/2023	P.N

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	See Search History	09/18/2023	P.N
	See Search History	12/02/2023	P.N

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	Art Unit
	PHU H NGUYEN	1747

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/15/2023	09/18/2023	12/02/2023						
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2	32	✓	=	=						
3	33	✓	=	=						
4	34	✓	=	=						
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28	58	✓	=	=						
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30	60	✓	=	=						

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	**Art Unit**
	PHU H NGUYEN	1747

CPC						
Symbol					**Type**	**Version**
A24B	/	3	/	14	F	2013-01-01
A24D	/	1	/	20	I	2020-01-01
A24F	/	40	/	40	I	2020-01-01
A24F	/	40	/	42	I	2020-01-01
A24B	/	15	/	12	I	2013-01-01
A24D	/	1	/	002	I	2013-01-01
A24B	/	13	/	02	I	2013-01-01
A24B	/	15	/	167	I	2016-11-01
H05B	/	3	/	42	I	2013-01-01
A24F	/	40	/	10	A	2020-01-01
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H05B	/	2203	/	021	A	2013-01-01

CPC Combination Sets							
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	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	30	
/PHU H NGUYEN/ Examiner, Art Unit 1747	02 December 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20231202

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	**Art Unit**
	PHU H NGUYEN	1747

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A24B3/14	/	3	/	14
A24D1/20	/	1	/	20
A24F40/40	/	40	/	40
A24F40/42	/	40	/	42
A24B15/12	/	15	/	12
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A24B13/02	/	13	/	02
A24B15/167	/	15	/	167
H05B3/42	/	3	/	42
A24F40/10	/	40	/	10
A24F40/20	/	40	/	20

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	30	
/PHU H NGUYEN/ Examiner, Art Unit 1747	02 December 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No.: 20231202

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	18/129,643	Robinson et al.
	Examiner	**Art Unit**
	PHU H NGUYEN	1747

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	31	10	40	19	49	28	58								
2	32	11	41	20	50	29	59								
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5	35	14	44	23	53										
6	36	15	45	24	54										
7	37	16	46	25	55										
8	38	17	47	26	56										
9	39	18	48	27	57										

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	30	
/PHU H NGUYEN/ Examiner, Art Unit 1747	02 December 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office Part of Paper No.: 20231202

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
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		63244"|"3308600"|"334 7247"|"3356094"|"3370 595"|"3419015"|"35164 17"|"3614956"|"364871 1"|"3738374"|"3844294" |"3878850"|"3931824"|" 3943941"|"3957563"|"3 972335"|"4044777"|"40 54145"|"4079742"|"417 4720"|"4201234"|"4219 031"|"4223597"|"42339 93"|"4280187"|"428167 0"|"4286604"|"4294353" |"4326544"|"4340072"|" 4347855"|"4391285"|"4 449541"|"4508525"|"45 34463"|"4700727"|"471 4082"|"4715497"|"4756 318"|"4771795"|"47933 65"|"4807809"|"482381 7"|"4836224"|"4848374" |"4852734"|"4874000"|" 4881556"|"4887619"|"4 893637"|"4893639"|"49 03714"|"4917121"|"491 7128"|"4920990"|"4924 883"|"4924886"|"49248 88"|"4938238"|"494787 4"|"4961438"|"4966171" |"4969476"|"4977908"|" 4989619"|"4991606"|"4 995405"|"5012829"|"50 20548"|"5022416"|"502 5814"|"5027836"|"5027 837"|"5033483"|"50405 51"|"5046514"|"505062 1"|"5052413"|"5056537" |"5060676"|"5065776"|" 5067499"|"5072744"|"5 074320"|"5074321"|"50 76295"|"5076296"|"507 6297"|"5088507"|"5092 353"|"5099861"|"51018 39"|"5103842"|"510583 1"|"5105834"|"5105835" |"5105836"|"5105837"|" 5105838"|"5115820"|"5 129409"|"5137034"|"51 39140"|"5146934"|"514 8821"|"5156170"|"5159 940"|"5159942"|"51599 44"|"5178167"|"518306 2"|"5203355"|"5211684" |"5220930"|"5224498"|" 5240014"|"5240016"|"5 247947"|"5261425"|"52 71419"|"5285798"|"530 3720"|"5327917"|"5345					

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L19	38	L18 and cartridge	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 04:59 PM
L20	29	A24F47/$ and cartridge and substrate	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 05:00 PM
L22	4	(("20120060853") or ("7726320")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/28 05:02 PM
L24	21	A24F$/$ and polyethylene near2 terephthalate and electronic	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:14 PM
L27	18	polyethylene near2 terephthalate and electronic and absorbent and tobacco and smoking	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:17 PM
L28	359	("20030131859"|"20040173229"|"20050016549"|"20050066986"|"20060185687"|"20060196518"|"20070062549"|"3258015"|"3356094"|"3516417"|"3614956"|"37383	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2014/01/29 05:17 PM

		74"|"3844294"|"387885 0"|"3931824"|"3943941" |"4044777"|"4079742"|" 4190046"|"4219031"|"4 233993"|"4284089"|"42 86604"|"4326544"|"434 0072"|"4347855"|"4391 285"|"4635651"|"47007 27"|"4714082"|"473521 7"|"4756318"|"4771795" |"4793365"|"4800903"|" 4807809"|"4819665"|"4 823817"|"4836225"|"48 48374"|"4874000"|"489 2109"|"4893639"|"4917 121"|"4917128"|"49209 90"|"4924886"|"494787 4"|"4961438"|"4966171" |"4969476"|"4972855"|" 4977908"|"4991606"|"5 020548"|"5025814"|"50 33483"|"5040551"|"505 0621"|"5060667"|"5060 671"|"5060676"|"50657 76"|"5072744"|"507432 1"|"5076296"|"5076297" |"5092353"|"5099861"|" 5101839"|"5105835"|"5 105836"|"5105837"|"51 05838"|"5115820"|"514 6934"|"5148821"|"5159 940"|"5159942"|"51781 67"|"5183062"|"520335 5"|"5211684"|"5224498" |"5240014"|"5240016"|" 5271419"|"5285798"|"5 293883"|"5327917"|"53 45955"|"5357984"|"536 0023"|"5369723"|"5388 574"|"5396911"|"55335 30"|"5551451"|"558844 6"|"5593792"|"5595577" |"5598868"|"5692525"|" 5715844"|"5743251"|"5 778899"|"5799663"|"58 19751"|"5829453"|"586 5185"|"5878752"|"5880 439"|"5915387"|"59342 89"|"6033623"|"605317 6"|"6089857"|"6095152" |"6146934"|"6164287"|" 6182670"|"6234167"|"6 289898"|"6397852"|"64 08856"|"6516796"|"653 2965"|"6537186"|"6578 584"|"6591841"|"65986 07"|"6615840"|"673083 2"|"6823873"|"7117867"					

		).PN.					
L31	713	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:20 PM
L32	12	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber) and base near2 web	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:20 PM
L33	65	(polyethylene near2 terephthalate near2 fiber) same (carbon near2 fiber) and absorbent	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 05:34 PM
L34	28	(polyethylene near2 terephthalate near2 fiber) same bio	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 12:35 AM
L38	2	("3486508").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 01:31 AM
L40	22	A24F$/$ and paper same "metallic foil"	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/02 01:32 AM
L42	14	A24F$/$ and paper and base near2 web and calcium near carbonate	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/03 03:41 PM
L43	2	("8079371").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/02/03 09:22 PM
L44	7	cigarette near2 paper and carbon near2 fiber and carbon near2 particle and carbonate near2 particle	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:31 PM
L45	0	(A24B15/165).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:32 PM
L46	2	(A24B15/14).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:32 PM
L47	0	(A24D1/18).cpc. and controller and aerosol and heater	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2014/08/02 11:33 PM
L49	142	("1771366"|"2057353"|"2104266"|"20020146242"|"20030226837"|"20040129280"|"20040200488"|"20040226568"|"20050016550"|"20060016453"|"20060196518"|"20070074734"|"20070102013"|"20070215167"|"3200819"|"4303083"|"4	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2014/09/29 11:59 PM

		907606"|"4945931"|"4986286"|"5019122"|"5042510"|"5093894"|"5261424"|"5353813"|"5408574"|"5468936"|"5498850"|"5515842"|"5530225"|"5564442"|"5649554"|"5666977"|"5687746"|"5726421"|"5727571"|"5865186"|"5894841"|"5954979"|"5967148"|"6095153"|"6125853"|"6155268"|"6164287"|"6196218"|"6196219"|"6601776"|"6772756"|"6803545"|"6854461"|"6854470"|"7293565").PN.					
L50	1	L49 and glycerin and (electrical electronic) and controller	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/30 12:00 AM
L53	122	smoking near2 article and tobacco near extract and heater	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 08:40 PM
L54	2	("8899238").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:47 PM
L55	0	(smoking and puff and carrier and wick and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:55 PM
L56	1	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2016/10/02 09:55 PM
L58	4	(("7726320") or ("8899238")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:42 AM
L59	2	("20150047656").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:46 AM
L60	6	(("7726320") or ("8899238") or ("8079371")).PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 02:00 AM
L61	2	("20150047656").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:33 PM
L62	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/04/01 01:46 PM
L64	921	("1771366"|"2057353"|"2104266"|"20020146242"|"20030131859"|"20030226837"|"200400205	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/19 11:29 PM

		08"|"20040118401"|"20 040129280"|"20040173 229"|"20040198127"|"2 0040200488"|"2004022 6568"|"20050016549"|" 20050016550"|"200500 66986"|"20060016543"| "20060185687"|"20060 196518"|"20070062549 "|"20070074734"|"2007 0102013"|"2007021516 7"|"20070267031"|"200 80085103"|"200800929 12"|"20080257374"|"20 090095311"|"20090095 312"|"20090126745"|"2 0090188490"|"2009023 0117"|"20090272379"|" 20090283103"|"200903 20863"|"20100043809"| "20100083959"|"20100 200006"|"20100229881 "|"20100242974"|"2010 0307518"|"2010031390 1"|"20110005535"|"201 10011396"|"201100363 63"|"20110036365"|"20 110094523"|"20110126 848"|"20110155153"|"2 0110155718"|"2011016 8194"|"20110265806"|" 20110309157"|"201200 42885"|"20120060823"| "20120060853"|"20120 111347"|"20120132643 "|"20120227752"|"2012 0231464"|"2012026092 7"|"20120279512"|"201 20318882"|"201300370 41"|"20130056013"|"20 130081625"|"20130081 642"|"20130192619"|"2 0130255702"|"2013030 6084"|"20130319439"|" 20130340750"|"201303 40775"|"20140000638"| "20140060554"|"20140 060555"|"20140096781 "|"20140096782"|"2014 0109921"|"2014015758 3"|"20140209105"|"201 40253144"|"201402614 08"|"20140261486"|"20 140261487"|"20140261 495"|"20140270727"|"2 0140270729"|"2014027 0730"|"20140345631"|" 3200819"|"3258015"|"3					

		486508"|"3516417"|"36 14956"|"3738274"|"376 6000"|"3844294"|"3878 850"|"3931824"|"39439 41"|"4044777"|"407974 2"|"4190046"|"4219031" |"4233993"|"4284089"|" 4286604"|"4303083"|"4 326544"|"4340072"|"43 47855"|"4391285"|"463 6561"|"4700727"|"4714 082"|"4735217"|"47563 18"|"4771995"|"479336 5"|"4800903"|"4807809" |"4819665"|"4823817"|" 4836225"|"4848374"|"4 874000"|"4892109"|"48 93639"|"4907606"|"491 7121"|"4917128"|"4920 990"|"4922901"|"49248 86"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4969476"|" 4972855"|"4977908"|"4 981522"|"4986286"|"50 19122"|"5042510"|"509 3894"|"5159942"|"5178 167"|"5183062"|"52033 55"|"5211684"|"522449 8"|"5240014"|"5240016" |"5249586"|"5261424"|" 5271419"|"5285798"|"5 293883"|"5322075"|"53 27917"|"5345955"|"535 3813"|"5357984"|"5360 023"|"5369723"|"53721 48"|"5388594"|"539691 1"|"5408574"|"5468936" |"5498850"|"5505214"|" 5515842"|"5530225"|"5 533530"|"5564442"|"55 88446"|"5593792"|"559 5577"|"5598868"|"5649 554"|"5665262"|"56669 77"|"5687746"|"569252 5"|"5715844"|"5726421" |"5727571"|"5743251"|" 5778899"|"5799663"|"5 819751"|"5819756"|"58 29453"|"5865185"|"586 5186"|"5878752"|"5880 439"|"5894841"|"59153 87"|"5934289"|"595497 9"|"5967148"|"0551451" |"6033623"|"6040560"|" 6053176"|"6089857"|"6 095152"|"6095153"|"61 25853"|"6146287"|"615					

		5268"|"6164287"|"6182670"|"6196218"|"6196219"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6688313"|"6730832"|"6772756"|"6803546"|"6823873"|"6854461"|"6854470"|"6994096"|"7117867"|"7293565"|"7513253"|"7775459"|"7832410"|"7845359"|"7896006"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069").PN.					
L65	7	L64 and carrier and wick and extract and mainstream and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/20 12:04 AM
L66	1	("15286087").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2017/09/28 10:53 PM
L69	3	("5666978").PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	ON	ON	2018/01/12 12:27 AM
L70	76	ep near2 "0503767"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/01/12 12:28 AM
L71	3	ep near2 "2949114"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/01/12 12:30 AM
L74	3	"15286087"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/03/19 10:20 AM
L77	9	"14527287"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	OFF	OFF	2018/03/19 10:21 AM
L78	216	A24F$/$ and polyethylene near2 terephthalate and electronic	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2018/05/23 12:10 AM
L79	33	(("9901123") or ("9801416") or ("8899238") or ("8079371") or ("7726320")).PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	ON	ON	2018/05/23 12:11 AM
L80	3	("5692525").PN.	(US-PGPUB; USPAT; USOCR; EPO; DERWENT)	OR	OFF	OFF	2018/05/24 10:28 AM
L83	593	("4924886"|"4945931"|"	(US-PGPUB; USPAT;	OR	OFF	OFF	2018/10/13

		4947874"|"4947875"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4981522"|"4986286"|"4991606"|"5019122"|"5020548"|"5025814"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5099861"|"5101839"|"5105835"|"5105836"|"5105838"|"5115820"|"5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5249586"|"5261424"|"5271419"|"5285798"|"5293883"|"5322075"|"5327917"|"5345955"|"5353813"|"5357984"|"5360023"|"5369723"|"5388574"|"5388594"|"5396911"|"5408574"|"5468936"|"5498850"|"5505214"|"5515842"|"5530225"|"5533530"|"5551451"|"5564442"|"5588446"|"5593792"|"5595577"|"5598868"|"5649554"|"5665262"|"5666977"|"5666978"|"5687746"|"5692525"|"5715844"|"5726421"|"5727571"|"5743251"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5954979"|"5967148"|"6033623"|"6040560"|"6053176"|"6089857"|"6095152"|"6095153"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6234167"|"6289898"|"6397852"|"6408856"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"66	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)				03:18 PM

		88313"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6994096"|"7117867"|"7293565"|"7513253"|"7775459"|"7832410"|"7845359"|"7896006"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").PN.					
L84	1137	("0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1517584"|"1879128"|"20010026788"|"20030011579"|"20030033055"|"20030108342"|"20030189826"|"20040149282"|"20040234916"|"20040261802"|"20050115243"|"20060093977"|"20070030306"|"20110120482"|"2032695"|"2086192"|"2140516"|"2461664"|"2472282"|"2545851"|"2959664"|"3060429"|"3203025"|"3234357"|"3281637"|"3292635"|"3385303"|"3428053"|"3431393"|"3502588"|"3651240"|"3685521"|"3685522"|"3747120"|"3860012"|"3933643"|"3934117"|"4016878"|"4207457"|"4219032"|"4270552"|"4506682"|"4531178"|"4589428"|"4629665"|"4637407"|"4676237"|"4771295"|"4771796"|"4797692"|"4878506"|"4941486"|"4945448"|"4945929"|"4968263"|"4990939"|"5005593"|"5124200"|"5129409"|"5177424"|"5224265"|"5255674"|"5266746"|"5327915"|"5372148"|"5497791"|"5646666"|"5703633"|"5732685"|"5745985"|"5944025"|"5996589"|"6062213"|"6102036"|"6217315"|"6232784"|"6285017"|"6311561"|"6322268"|"6476151"|"6501052"|"6620659"|"6690121"|"6719443"|"6	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 03:18 PM

		722763"|"6885814"|"69 38986"|"7159464"|"728 4424"|"7337782"|"7445 007"|"7997280"|"00000 05"|"0726320"|"151468 2"|"1771366"|"2002014 6242"|"20030131859"|" 20030226837"|"200400 20508"|"20040118401"| "20040129280"|"20040 173229"|"20040198127 "|"20040200488"|"2004 0226568"|"2005001654 9"|"20050016550"|"200 50066986"|"200600164 53"|"20060185687"|"20 060196518"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20080085103"|"200800 92912"|"20080257367"| "20080276947"|"20080 302374"|"20090095311 "|"20090095312"|"2009 0126745"|"2009018849 0"|"20090230117"|"200 90272379"|"200902831 03"|"20090320863"|"20 100043809"|"20100083 959"|"20100200006"|"2 0100229881"|"2010024 2974"|"20100307518"|" 20100313901"|"201100 05535"|"20110011396"| "20110036363"|"20110 036365"|"20110094523 "|"20110126848"|"2011 0155153"|"2011015571 8"|"20110168194"|"201 10265806"|"201103091 57"|"20120042885"|"20 120060853"|"20120111 347"|"20120132643"|"2 0120227752"|"2012023 1464"|"20120260927"|" 20120279512"|"201203 18882"|"20130037041"| "20130056013"|"20130 081625"|"20130081642 "|"20130192619"|"2013 0255702"|"2013030608 4"|"20130319439"|"201 30340750"|"201303407 75"|"20140000638"|"20 140060554"|"20140060 555"|"20140096781"|"2 0140096782"|"2014010					

		9921"|"20140157583"|"20140209105"|"20140253144"|"20140261408"|"20140261486"|"20140261487"|"20140261495"|"20140270727"|"20140270729"|"20140270730"|"20140345631"|"2057353"|"2104266"|"3200819"|"3258015"|"3356094"|"3479561"|"3486508"|"3516417"|"3614956"|"3738374"|"3766000"|"3844294"|"3878850"|"3931824"|"3943941"|"4044777"|"4079742"|"4190046"|"4219031"|"4233993"|"4284089"|"4286604"|"4303083"|"4326544"|"4340072"|"4347855"|"4391285"|"4635651"|"4700727"|"4714082"|"4735217"|"4756318"|"4771795"|"4793365"|"4800903"|"4807809"|"4819665"|"4823817"|"4836225"|"4848374"|"4874000"|"4892109"|"4893639"|"4907606"|"4917121"|"4917128"|"4920990"|"4922901").PN.					
L86	593	("4924886"|"4945931"|"4947874"|"4947875"|"4961438"|"4966171"|"4969476"|"4972855"|"4977908"|"4981522"|"4986286"|"4991606"|"5019122"|"5020548"|"5025814"|"5033483"|"5040551"|"5042510"|"5046514"|"5050621"|"5060667"|"5060671"|"5060676"|"5065776"|"5072744"|"5074321"|"5076296"|"5076297"|"5092353"|"5093894"|"5099861"|"5101839"|"5105835"|"5105836"|"5105838"|"5115820"|"5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5178167"|"5183062"|"5203355"|"5211684"|"5224498"|"5240014"|"5240016"|"5249586"|"5261424"|"5271419"|"5285798"|"5293883"|"5322075"|"5327917"|"5345955"|"5353813"|"53	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM

		57984"|"5360023"|"536 9723"|"5388574"|"5388 594"|"5396911"|"54085 74"|"5468936"|"549885 0"|"5505214"|"5515842" |"5530225"|"5533530"|" 5551451"|"5564442"|"5 588446"|"5593792"|"55 95577"|"5598868"|"564 9554"|"5665262"|"5666 977"|"5666978"|"56877 46"|"5692525"|"571584 4"|"5726421"|"5727571" |"5743251"|"5778899"|" 5799663"|"5819751"|"5 819756"|"5829453"|"58 65185"|"5865186"|"587 8752"|"5880439"|"5894 841"|"5915387"|"59342 89"|"5954979"|"596714 8"|"6033623"|"6040560" |"6053176"|"6089857"|" 6095152"|"6095153"|"6 125853"|"6146934"|"61 55268"|"6164287"|"618 2670"|"6196218"|"6196 219"|"6234167"|"62898 98"|"6397852"|"640885 6"|"6516796"|"6532965" |"6537186"|"6578584"|" 6591841"|"6598607"|"6 601776"|"6615840"|"66 88313"|"6730832"|"677 2756"|"6803545"|"6823 873"|"6854461"|"68544 70"|"6994096"|"711786 7"|"7293565"|"7513253" |"7775459"|"7832410"|" 7845359"|"7896006"|"8 079371"|"8127772"|"83 14591"|"8365742"|"840 2976"|"8499766"|"8528 569"|"8550069"|"88992 38").PN.					
L87	1137	("0438310"|"0705919"|" 0780087"|"1016844"|"1 084304"|"1147416"|"13 47631"|"1446087"|"151 7584"|"1879128"|"2001 0026788"|"2003001157 9"|"20030033055"|"200 30108342"|"200301898 26"|"20040149282"|"20 040234916"|"20040261 802"|"20050115243"|"2 0060093977"|"2007003 0306"|"20110120482"|" 2032695"|"2086192"|"2	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM

		140516"|"2461664"|"24 72282"|"2545851"|"295 9664"|"3060429"|"3203 025"|"3234357"|"32816 37"|"3292635"|"338530 3"|"3428053"|"3431393" |"3502588"|"3651240"|" 3685521"|"3685522"|"3 747120"|"3860012"|"39 33643"|"3934117"|"401 6878"|"4207457"|"4219 032"|"4270552"|"45066 82"|"4531178"|"458942 8"|"4629665"|"4637407" |"4676237"|"4771295"|" 4771796"|"4797692"|"4 878506"|"4941486"|"49 45448"|"4945929"|"496 8263"|"4990939"|"5005 593"|"5124200"|"51294 09"|"5177424"|"522426 5"|"5255674"|"5266746" |"5327915"|"5372148"|" 5497791"|"5646666"|"5 703633"|"5732685"|"57 45985"|"5944025"|"599 6589"|"6062213"|"6102 036"|"6217315"|"62327 84"|"6285017"|"631156 1"|"6322268"|"6476151" |"6501052"|"6620659"|" 6690121"|"6719443"|"6 722763"|"6885814"|"69 38986"|"7159464"|"728 4424"|"7337782"|"7445 007"|"7997280"|"00000 05"|"0726320"|"151468 2"|"1771366"|"2002014 6242"|"20030131859"|" 20030226837"|"200400 20508"|"20040118401"| "20040129280"|"20040 173229"|"20040198127 "|"20040200488"|"2004 0226568"|"2005001654 9"|"20050016550"|"200 50066986"|"200600164 53"|"20060185687"|"20 060196518"|"20070062 549"|"20070074734"|"2 0070102013"|"2007021 5167"|"20070267031"|" 20080085103"|"200800 92912"|"20080257367"| "20080276947"|"20080 302374"|"20090095311 "|"20090095312"|"2009 0126745"|"2009018849					

		0"|"20090230117"|"200 90272379"|"200902831 03"|"20090320863"|"20 100043809"|"20100083 959"|"20100200006"|"2 0100229881"|"2010024 2974"|"20100307518"|" 20100313901"|"201100 05535"|"20110011396"| "20110036363"|"20110 036365"|"20110094523 "|"20110126848"|"2011 0155153"|"2011015571 8"|"20110168194"|"201 10265806"|"201103091 57"|"20120042885"|"20 120060853"|"20120111 347"|"20120132643"|"2 0120227752"|"2012023 1464"|"20120260927"|" 20120279512"|"201203 18882"|"20130037041"| "20130056013"|"20130 081625"|"20130081642 "|"20130192619"|"2013 0255702"|"2013030608 4"|"20130319439"|"201 30340750"|"201303407 75"|"20140000638"|"20 140060554"|"20140060 555"|"20140096781"|"2 0140096782"|"2014010 9921"|"20140157583"|" 20140209105"|"201402 53144"|"20140261408"| "20140261486"|"20140 261487"|"20140261495 "|"20140270727"|"2014 0270729"|"2014027073 0"|"20140345631"|"205 7353"|"2104266"|"3200 819"|"3258015"|"33560 94"|"3479561"|"348650 8"|"3516417"|"3614956" |"3738374"|"3766000"|" 3844294"|"3878850"|"3 931824"|"3943941"|"40 44777"|"4079742"|"419 0046"|"4219031"|"4233 993"|"4284089"|"42866 04"|"4303083"|"432654 4"|"4340072"|"4347855" |"4391285"|"4635651"|" 4700727"|"4714082"|"4 735217"|"4756318"|"47 71795"|"4793365"|"480 0903"|"4807809"|"4819 665"|"4823817"|"48362					

		25"|"4848374"|"4874000"|"4892109"|"4893639"|"4907606"|"4917121"|"4917128"|"4920990"|"4922901").PN.					
L88	9	(L87 L86) and wicked and tobacco	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2018/10/13 10:18 PM
L90	881	("0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"20010026788"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040173229"|"20040198127"|"20040200488"|"20040226568"|"20040234916"|"20040261802"|"20050016549"|"20050016550"|"20050066986"|"20050115243"|"20060016453"|"20060093977"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20080085103"|"20080092912"|"20080257367"|"20080276947"|"20080302374"|"20090002301"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090272379"|"20090283103"|"20090320863"|"20100043809"|"20100083959"|"20100200006"|"20100229881"|"20100242974"|"20100307518"|"20100313901"|"20110005535"|"20110011396"|"20110036363"|"20110036365"|"20110094523"|"20110120482"|"20110126848"|"20110155153"|"20110155718"|"20110168	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/20 12:47 PM

		4"|"20110265806"|"201 10309157"|"201200428 85"|"20120060853"|"20 120111347"|"20120132 643"|"20120227752"|"2 0120231464"|"2012026 0927"|"20120279512"|" 20120318882"|"201300 37041"|"20130056013"| "20130081625"|"20130 081642"|"20130192619 "|"20130255702"|"2013 0306084"|"2013031943 9"|"20130340750"|"201 30340775"|"201400006 38"|"20140060554"|"20 140060555"|"20140096 781"|"20140096782"|"2 0140109921"|"2014015 7583"|"20140209105"|" 20140253144"|"201402 61408"|"20140261486"| "20140261487"|"20140 261495"|"20140270727 "|"20140270729"|"2014 0270730"|"2014034563 1"|"2032695"|"2057353" |"2086192"|"2104266"|" 2140516"|"2461664"|"2 472282"|"2545851"|"29 59664"|"3060429"|"320 0819"|"3203025"|"3234 357"|"3258015"|"32816 37"|"3292635"|"335609 4"|"3385303"|"3428053" |"3431393"|"3479561"|" 3486508"|"3502588"|"3 516417"|"3614956"|"36 51240"|"3685521"|"368 5522"|"3738374"|"3747 120"|"3766000"|"38442 94"|"3860012"|"387885 0"|"3931824"|"3933643" |"3934117"|"3943941"|" 4016878"|"4044777"|"4 079742"|"4190046"|"42 07457"|"4219031"|"421 9032"|"4233993"|"4270 552"|"4284089"|"42866 04"|"4303083"|"432654 4"|"4340072"|"4347855" |"4391285"|"4506682"|" 4531178"|"4589428"|"4 629665"|"4635651"|"46 37407").PN.				
L91	854	("4676237"|"4700727"|" 4714082"|"4735217"|"4 756318"|"4771295"|"47	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	OFF	2019/05/20 12:48 PM

		71795"|"4771796"|"479 3365"|"4797692"|"4800 903"|"4807809"|"48196 65"|"4823817"|"483622 5"|"4848374"|"4874000" |"4878506"|"4892109"|" 4893639"|"4907606"|"4 917121"|"4917128"|"49 20990"|"4922901"|"492 4886"|"4941486"|"4945 448"|"4945929"|"49459 31"|"4947874"|"494787 5"|"4961438"|"4966171" |"4968263"|"4969476"|" 4972855"|"4977908"|"4 981522"|"4986286"|"49 90939"|"4991606"|"500 5593"|"5019122"|"5020 548"|"5025814"|"50334 83"|"5040551"|"504251 0"|"5046514"|"5050621" |"5060667"|"5060671"|" 5060676"|"5065776"|"5 072744"|"5074321"|"50 76296"|"5076297"|"509 2353"|"5093894"|"5099 861"|"5101839"|"51058 35"|"5105836"|"510583 7"|"5105838"|"5115820" |"5124200"|"5129409"|" 5144962"|"5146934"|"5 148821"|"5159940"|"51 59942"|"5177424"|"517 8167"|"5183062"|"5203 355"|"5211684"|"52242 65"|"5224498"|"524001 4"|"5240016"|"5249586" |"5255674"|"5261424"|" 5266746"|"5271419"|"5 285798"|"5293883"|"53 22075"|"5327915"|"532 7917"|"5345955"|"5353 813"|"5357984"|"53600 23"|"5369723"|"537214 8"|"5388574"|"5388594" |"5396911"|"5408574"|" 5468936"|"5497791"|"5 498850"|"5505214"|"55 15842"|"5530225"|"553 3530"|"5551451"|"5564 442"|"5588446"|"55937 92"|"5595577"|"559886 8"|"5646666"|"5649554" |"5665262"|"5666977"|" 5666978"|"5687746"|"5 692525"|"5703633"|"57 15844"|"5726421"|"572 7571"|"5732685"|"5743	IBM_TDB)				

		251"|"5745985"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5944025"|"5954979"|"5967148"|"5996589"|"6033623"|"6040560"|"6053176"|"6062213"|"6089857"|"6095152"|"6095153"|"6102036"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").PN.					
L92	8	(("20180146713") or ("10231488")).PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/20 01:10 PM
L93	258	("1771336" | "1968509" | "2057353" | "2104266" | "2442004" | "2974669" | "3200819" | "3255760" | "3363633" | "3402723" | "3482580" | "3496336" | "3591753" | "3608560" | "3738374" | "3744496" | "3804100" | "3889690" | "4016061" | "4068672" | "4077784" | "4131119"	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/05/21 03:10 PM

		| "4141369" | "4164230" | "4193411" | "4194108" | "4203025" | "4215708" | "4219032" | "4246913" | "4256945" | "4259564" | "4259970" | "4303083" | "4319591" | "4393884" | "4431903" | "4436100" | "4463247" | "4505282" | "4510950" | "4562337" | "4570646" | "4580583" | "4621649" | "4623401" | "4629604" | "4637407" | "4659912" | "4682010" | "4686353" | "4692590" | "4694824" | "4735217" | "4771796" | "4776353" | "4837421" | "4846199" | "4848376" | "4874924" | "4877989" | "4922901" | "4945931" | "4947874" | "4947875" | "4966171" | "4981522" | "4991606" | "4998541" | "5016656" | "5040552" | "5042510" | "5060671" | "5076296" | "5093894" | "5095921" | "5144962" | "5159940" | "5179966" | "5188130" | "5224498" | "5235157" | "5249586" | "5269327" | "5274214" | "5285050" | "5388594" | "5479948").PN. OR ("5692525").URPN.					
L94	65	L93 and wick	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/05/21 03:11 PM
L95	2245	electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:54 PM
L97	218	131/$.ccls. and electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L98	205	128/$.ccls. and electrical and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L99	32	128/$.ccls. and electrical near2 resistance and mouth and liquid and aerosol and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 05:55 PM
L100	93	131/$.ccls. and electrical near2	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	OFF	OFF	2019/05/21 05:56 PM

		resistance and mouth and liquid and aerosol and cartridge	JPO; DERWENT; IBM_TDB)				
L101	22	("2057353").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:00 PM
L102	218	("2057353").URPN.	(USPAT)	OR	OFF	OFF	2019/05/21 06:01 PM
L104	147	L102 and mouth	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:01 PM
L105	137	L102 and mouth and liquid	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:03 PM
L106	98	L102 and mouth and liquid and wick	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/21 06:03 PM
L107	640	electronic near2 cigarette and "hon"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:33 AM
L108	198	electronic near2 cigarette and "hon" and channel	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:34 AM
L109	120	electronic near2 cigarette and "hon" and channel and cartridge	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/05/27 12:34 AM
L110	2	"20190166917"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2019/11/12 02:22 PM
L111	4	("5692525").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 01:56 AM
L112	7	("10231488").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 02:37 AM
L113	103397	aerosol and cartridge and liquid ane heat$4 and mouthpiece	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/03/31 03:51 PM
L115	949	aerosol and cartridge and liquid and electrical near2 resistance and path	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/01 01:46 AM

L116	71	(131/$.ccls. 128/$.ccls.) and aerosol and cartridge and liquid and electrical near2 resistance and path	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/01 01:47 AM
L117	4	("4583559").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:49 PM
L118	571	("4168712"|"4583559"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"20010026788"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040173229"|"20040198127"|"20040200488"|"20040226568"|"20040234916"|"20040261802"|"20050016549"|"20050016550"|"20050066986"|"20050115243"|"20060016453"|"20060093977"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20080085103"|"20080092912"|"20080257367"|"20080276947"|"20080302374"|"20090002301"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090272379"|"20090283103"|"20090320863"|"20100043809"|"20100083959"|"20100200006"|"20100229881"|"20100242974"|"20100307518"|"20100313901"|"20110005535"|"20110011396"|"20110036363"|"20110036365"|"20110094523"|"20110120482"|"20110126848"|"20110155153"|"20110	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:52 PM

		155718"|"20110168194"|"20110265806"|"20110309157"|"20120042885"|"20120060853"|"20120111347"|"20120132643"|"20120227752"|"20120231464"|"20120260927"|"20120279512"|"20120318882"|"20130037041"|"20130056013"|"20130081625"|"20130081642"|"20130192619"|"20130255702"|"20130306084"|"20130319439"|"20130340750"|"20130340775"|"20140000638"|"20140060554"|"20140060555"|"20140096781"|"20140096782"|"20140109921"|"20140157583"|"20140209105"|"20140253144"|"20140261408"|"20140261486"|"20140261487"|"20140261495"|"20140270727"|"20140270729"|"20140270730"|"20140345631"|"2032695"|"2057353"|"2086192"|"2104266"|"2140516"|"2461664"|"2472282"|"2545851").PN.					
L119	1205	("2959664"|"3060429"|"3200819"|"3203025"|"3234357"|"3258015"|"3281637"|"3292635"|"3356094"|"3385303"|"3428053"|"3431393"|"3479561"|"3486508"|"3502588"|"3516417"|"3614956"|"3651240"|"3685521"|"3685522"|"3738374"|"3747120"|"3766000"|"3844294"|"3860012"|"3878850"|"3931824"|"3933643"|"3934117"|"3943941"|"4016878"|"4044777"|"4079742"|"4190046"|"4207457"|"4219031"|"4219032"|"4233993"|"4270552"|"4284089"|"4286604"|"4303083"|"4326544"|"4340072"|"4347855"|"4391285"|"4506682"|"4531178"|"4589428"|"4629665"|"4635651"|"4637407"|"4676237"|"4700727"|"4714082"|"4735217"|"4756318"|"47	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:52 PM

		71295"|"4771795"|"477 1796"|"4793365"|"4797 692"|"4800903"|"48078 09"|"4819665"|"482381 7"|"4836225"|"4848374" |"4874000"|"4878506"|" 4892109"|"4893639"|"4 907606"|"4917121"|"49 17128"|"4920990"|"492 2901"|"4924886"|"4941 486"|"4945448"|"49459 29"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4968263"|" 4969476"|"4972855"|"4 977908"|"4981522"|"49 86286"|"4990939"|"499 1606"|"5005593"|"5019 122"|"5020548"|"50258 14"|"5033483"|"504055 1"|"5042510"|"5046514" |"5050621"|"5060667"|" 5060671"|"5060676"|"5 065776"|"5072744"|"50 74321"|"5076296"|"507 6297"|"5092353"|"5093 894"|"5099861"|"51018 39"|"5105835"|"510583 6"|"5105837"|"5105838" |"5115820"|"5124200"|" 5129409"|"5144962"|"5 146934"|"5148821"|"51 59940"|"5159942"|"517 7424"|"5178167"|"5183 062"|"5203355"|"52116 84"|"5224265"|"522449 8"|"5240014"|"5240016" |"5249586"|"5255674"|" 5261424"|"5266746"|"5 271419"|"5285798"|"52 93883"|"5322075"|"532 7915"|"5327917"|"5345 955"|"5353813"|"53579 84"|"5360023"|"536972 3"|"5372148"|"5388574" |"5388594"|"5396911"|" 5408574"|"5468936"|"5 497791"|"5498850"|"55 05214"|"5515842"|"553 0225"|"5533530"|"5551 451"|"5564442"|"55884 46"|"5593792"|"559557 7"|"5598868"|"5646666" |"5649554"|"5665262"|" 5666977"|"5666978"|"5 687746"|"5692525"|"57 03633"|"5715844"|"572 6421"|"5727571"|"5732					

		685"|"5743251"|"5745985"|"5778899"|"5799663"|"5819751"|"5819756"|"5829453"|"5865185"|"5865186"|"5878752"|"5880439"|"5894841"|"5915387"|"5934289"|"5944025"|"5954979"|"5967148"|"5996589"|"6033623"|"6040560"|"6053176"|"6062213"|"6089857"|"6095152"|"6095153"|"6102036"|"6125853"|"6146934"|"6155268"|"6164287"|"6182670"|"6196218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").pn.					
L120	92	(L118 L119) and cartridge and liquid and heat$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:53 PM
L121	68	L120 and battery	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/05/02 09:54 PM
L122	378	("2005/0016550").URPN.	(USPAT)	OR	OFF	OFF	2020/05/02 10:02 PM
L123	574	("4168712"|"4583559"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM

		682"|"1517584"|"17713 66"|"1879128"|"200100 26788"|"20020146242"| "20030011579"|"20030 033055"|"20030108342 "|"20030131859"|"2003 0189826"|"2003022683 7"|"20040020508"|"200 40118401"|"200401292 80"|"20040149282"|"20 040173229"|"20040198 127"|"20040200488"|"2 0040226568"|"2004023 4916"|"20040261802"|" 20050016549"|"200500 16550"|"20050066986"| "20050115243"|"20060 016453"|"20060093977 "|"20060185687"|"2006 0196518"|"2007003030 6"|"20070062549"|"200 70074734"|"200701020 13"|"20070215167"|"20 070267031"|"20080085 103"|"20080092912"|"2 0080257367"|"2008027 6947"|"20080302374"|" 20090002301"|"200900 95311"|"20090095312"| "20090126745"|"20090 188490"|"20090272379 "|"20090283103"|"2009 0320863"|"2010004380 9"|"20100083959"|"201 00200006"|"201002298 81"|"20100242974"|"20 100307518"|"20100313 901"|"20110005535"|"2 0110011396"|"2011003 6363"|"20110036365"|" 20110094523"|"201101 20482"|"20110126848"| "20110155153"|"20110 155718"|"20110168194 "|"20110265806"|"2011 0309157"|"2012004288 5"|"20120060853"|"201 20111347"|"201201326 43"|"20120227752"|"20 120231464"|"20120260 927"|"20120279512"|"2 0120318882"|"2013003 7041"|"20130056013"|" 20130081625"|"201300 81642"|"20130192619"| "20130255702"|"20130 306084"|"20130319439 "|"20130340750"|"2013					

		0340775"|"2014000063 8"|"20140060554"|"201 40060555"|"201400967 81"|"20140096782"|"20 140109921"|"20140157 583"|"20140209105"|"2 0140253144"|"2014026 1408"|"20140261486"|" 20140261487"|"201402 61495"|"20140270727"| "20140270729"|"20140 270730"|"20140345631 "|"2032695"|"2057353"|" 2086192"|"2104266"|"2 140516"|"2461664"|"24 72282"|"2545851").PN.					
L124	1222	("2959664"|"3060429"|" 3200819"|"3203025"|"3 234357"|"3258015"|"32 81637"|"3292635"|"335 6094"|"3385303"|"3428 053"|"3431393"|"34795 61"|"3486508"|"350258 8"|"3516417"|"3614956" |"3651240"|"3685521"|" 3685522"|"3738374"|"3 747120"|"3766000"|"38 44294"|"3860012"|"387 8850"|"3931824"|"3933 643"|"3934117"|"39439 41"|"4016878"|"404477 7"|"4079742"|"4190046" |"4207457"|"4219031"|" 4219032"|"4233993"|"4 270552"|"4284089"|"42 86604"|"4303083"|"432 6544"|"4340072"|"4347 855"|"4391285"|"45066 82"|"4531178"|"458942 8"|"4629665"|"4635651" |"4637407"|"4676237"|" 4700727"|"4714082"|"4 735217"|"4756318"|"47 71295"|"4771795"|"477 1796"|"4793365"|"4797 692"|"4800903"|"48078 09"|"4819665"|"482381 7"|"4836225"|"4848374" |"4874000"|"4878506"|" 4892109"|"4893639"|"4 907606"|"4917121"|"49 17128"|"4920990"|"492 2901"|"4924886"|"4941 486"|"4945448"|"49459 29"|"4945931"|"494787 4"|"4947875"|"4961438" |"4966171"|"4968263"|" 4969476"|"4972855"|"4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM

		977908"|"4981522"|"49 86286"|"4990939"|"499 1606"|"5005593"|"5019 122"|"5020548"|"50258 14"|"5033483"|"504055 1"|"5042510"|"5046514" |"5050621"|"5060667"|" 5060671"|"5060676"|"5 065776"|"5072744"|"50 74321"|"5076296"|"507 6297"|"5092353"|"5093 894"|"5099861"|"51018 39"|"5105835"|"510583 6"|"5105837"|"5105838" |"5115820"|"5124200"|" 5129409"|"5144962"|"5 146934"|"5148821"|"51 59940"|"5159942"|"517 7424"|"5178167"|"5183 062"|"5203355"|"52116 84"|"5224265"|"522449 8"|"5240014"|"5240016" |"5249586"|"5255674"|" 5261424"|"5266746"|"5 271419"|"5285798"|"52 93883"|"5322075"|"532 7915"|"5327917"|"5345 955"|"5353813"|"53579 84"|"5360023"|"536972 3"|"5372148"|"5388574" |"5388594"|"5396911"|" 5408574"|"5468936"|"5 497791"|"5498850"|"55 05214"|"5515842"|"553 0225"|"5533530"|"5551 451"|"5564442"|"55884 46"|"5593792"|"559557 7"|"5598868"|"5646666" |"5649554"|"5665262"|" 5666977"|"5666978"|"5 687746"|"5692525"|"57 03633"|"5715844"|"572 6421"|"5727571"|"5732 685"|"5743251"|"57459 85"|"5778899"|"579966 3"|"5819751"|"5819756" |"5829453"|"5865185"|" 5865186"|"5878752"|"5 880439"|"5894841"|"59 15387"|"5934289"|"594 4025"|"5954979"|"5967 148"|"5996589"|"60336 23"|"6040560"|"605317 6"|"6062213"|"6089857" |"6095152"|"6095153"|" 6102036"|"6125853"|"6 146934"|"6155268"|"61 64287"|"6182670"|"619					

		6218"|"6196219"|"6217315"|"6232784"|"6234167"|"6285017"|"6289898"|"6311561"|"6322268"|"6397852"|"6408856"|"6476151"|"6501052"|"6516796"|"6532965"|"6537186"|"6578584"|"6591841"|"6598607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6719443"|"6722763"|"6730832"|"6772756"|"6803545"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7117867"|"7159464"|"7284424"|"7293565"|"7337782"|"7445007"|"7513253"|"7726320"|"7775459"|"7832410"|"7845359"|"7896006"|"7997280"|"8079371"|"8127772"|"8314591"|"8365742"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238").pn.					
L125	92	(L123 L124) and cartridge and liquid and heat$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2020/11/07 11:56 PM
L127	7	("0005247"|"20050005947"|"5027837").PN.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2021/06/19 11:52 PM
L130	22	("20050067503"|"20140305453"|"20150245659"|"5331981"|"6533395"|"6739700"|"8375957").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	OFF	OFF	2021/12/18 11:37 PM
L132	639	("5144962"|"5146934"|"5148821"|"5159940"|"5159942"|"5177424"|"5178167"|"5179966"|"5183062"|"5203355"|"5211684"|"5220930"|"5224265"|"5224498"|"5228460"|"5230354"|"5235992"|"5240014"|"5240016"|"5243999"|"5246018"|"5247947"|"5249586"|"5255674"|"5261424"|"5266746"|"5269327"|"5271419"|"5282798"|"5285798"|"5293883"|"5301694"|"5303720"|"5318050"|"5322075"|"5322076"|"5327915"|"5327917"|"5	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:55 PM

		331981"|"5339838"|"53 45951"|"5345955"|"535 3813"|"5357984"|"5360 023"|"5369723"|"53721 48"|"5377698"|"538857 4"|"5388594"|"5396911" |"5408574"|"5415186"|" 5435325"|"5445169"|"5 468266"|"5468936"|"54 79948"|"5497791"|"549 8850"|"5498855"|"5499 636"|"5501237"|"55052 14"|"5515842"|"553022 5"|"5533530"|"5551450" |"5551451"|"5564442"|" 5573692"|"5588446"|"5 591368"|"5593792"|"55 95577"|"5596706"|"559 8868"|"5611360"|"5613 504"|"5613505"|"56466 66"|"5649552"|"564955 4"|"5659656"|"5665262" |"5666976"|"5666977"|" 5666978"|"5687746"|"5 692525"|"5692526"|"57 03633"|"5708258"|"571 1320"|"5715844"|"5726 421"|"5727571"|"57301 58"|"5732685"|"574325 1"|"5745985"|"5750964" |"5778899"|"5799663"|" 5816263"|"5819751"|"5 819756"|"5829453"|"58 65185"|"5865186"|"587 8752"|"5880439"|"5894 841"|"5915387"|"59342 89"|"5944025"|"595497 9"|"5967148"|"5996589" |"6026820"|"6033623"|" 6040560"|"6053176"|"6 062213"|"6089857"|"60 95152"|"6095153"|"610 2036"|"6116247"|"6119 700"|"6125853"|"61258 55"|"6125866"|"614693 4"|"6155268"|"6164287" |"6182670"|"6196218"|" 6196219"|"6216706"|"6 217315"|"6232784"|"62 34167"|"6285017"|"628 9898"|"6311561"|"6322 268"|"6349729"|"63576 71"|"6397852"|"640885 6"|"6418938"|"6446426" |"6476151"|"6501052"|" 6516796"|"6532965"|"6 533395"|"6537186"|"65 78584"|"6591841"|"659					

		8607"|"6601776"|"6615840"|"6620659"|"6688313"|"6690121"|"6701936"|"6715494"|"6719443"|"6722756"|"6722763"|"6730832"|"6739700"|"6772756"|"6803545"|"6803550"|"6810883"|"6823873"|"6854461"|"6854470"|"6885814"|"6938986"|"6994096"|"7011096"|"7017585"|"7025066"|"7117867"|"7159464"|"7163015"|"7173322"|"7185659"|"7234470"|"7284424"|"7290549"|"7293565"|"7337782"|"7392809"|"7445007"|"7513253"|"7647932"|"7690385"|"7692123"|"7726320"|"7775459"|"7810505"|"7832410"|"7845359"|"7878209"|"7896006"|"7997280"|"8066010"|"8079371"|"8127772"|"8314591"|"8365742"|"8375957"|"8402976"|"8499766"|"8528569"|"8550069"|"8899238"|"8950587"|"9930915").PN.					
L133	223	("9814268"|"0438310"|"0705919"|"0780087"|"1016844"|"1084304"|"1147416"|"1347631"|"1446087"|"1514682"|"1517584"|"1771366"|"1879128"|"1968509"|"20010026788"|"20010036365"|"20020146242"|"20030011579"|"20030033055"|"20030108342"|"20030131859"|"20030189826"|"20030226837"|"20040020500"|"20040020508"|"20040118401"|"20040129280"|"20040149282"|"20040149296"|"20040173229"|"20040198127"|"20040200488"|"20040224435"|"20040226568"|"20040234916"|"20040255965"|"20040261802"|"20050005947"|"20050016549"|"20050016550"|"20050066986"|"20050067503"|"20050115243"|"20050151126"|"20050172976"|"20	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:55 PM

		050274390"|"20060016453"|"20060032501"|"20060070633"|"20060093977"|"20060162733"|"20060185687"|"20060196518"|"20070030306"|"20070062549"|"20070074734"|"20070102013"|"20070215167"|"20070267031"|"20070283972"|"20080085103"|"20080092912"|"20080149118"|"20080245377"|"20080257367"|"20080276947"|"20080302374"|"20090065010"|"20090095311"|"20090095312"|"20090126745"|"20090188490"|"20090230117"|"20090260641"|"20090260642"|"20090272379"|"20090283103"|"20090293892"|"20090320863"|"20090320864"|"20090324206"|"20100006113"|"20100024834").pn.					
L134	795	("20100043809"|"20100059070"|"20100059073"|"20100065075"|"20100083959"|"20100163063"|"20100200006"|"20100229881"|"20100242974"|"20100242976"|"20100258139"|"20100300467"|"20100307518"|"20100313901"|"20110005535"|"20110011286"|"20110011396"|"20110015513"|"20110036363"|"20110036365"|"20110073121"|"20110088707"|"20110094523"|"20110120480"|"20110120482"|"20110126847"|"20110126848"|"20110155153"|"20110155718"|"20110162663"|"20110168194"|"20110180082"|"20110265806"|"20110309157"|"20120042885"|"20120060853"|"20120111347"|"20120132643"|"20120227752"|"20120231464"|"20120260927"|"20120279512"|"20120318882"|"20130037031"|"20130037041"|"20130056013"|"20130081	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	OFF	OFF	2022/05/19 11:56 PM

		25"|"20130081642"|"20 130192619"|"20130255 702"|"20130306074"|"2 0130306084"|"2013031 9439"|"20130340750"|" 20130340775"|"201400 00638"|"20140060554"| "20140060555"|"20140 096781"|"20140096782 "|"20140109921"|"2014 0157583"|"2014020910 5"|"20140253144"|"201 40261408"|"201402614 86"|"20140261487"|"20 140261495"|"20140270 727"|"20140270729"|"2 0140270730"|"2014030 5453"|"20140345631"|" 20150245659"|"203269 5"|"2057353"|"2086192" |"2104266"|"2140516"|" 2461664"|"2472282"|"2 545851"|"2805669"|"29 59664"|"3060429"|"320 0819"|"3203025"|"3234 357"|"3258015"|"32816 37"|"3292635"|"331691 9"|"3356094"|"3385303" |"3398754"|"3419015"|" 3424171"|"3428053"|"3 431393"|"3476118"|"34 79561"|"3486508"|"350 2588"|"3516417"|"3614 956"|"3651240"|"36855 21"|"3685522"|"373837 4"|"3747120"|"3766000" |"3844294"|"3860012"|" 3878850"|"3931824"|"3 933643"|"3934117"|"39 43941"|"4016878"|"404 4777"|"4054145"|"4079 742"|"4131117"|"41506 77"|"4168712"|"419004 6"|"4207457"|"4219031" |"4219032"|"4233993"|" 4259970"|"4270552"|"4 284089"|"4286604"|"43 03083"|"4326544"|"434 0072"|"4347855"|"4391 285"|"4449541"|"44843 76"|"4506682"|"451095 0"|"4531178"|"4583559" |"4589428"|"4629665"|" 4635651"|"4637407"|"4 674519"|"4676237"|"47 00727"|"4708151"|"471 4082"|"4735217"|"4756 318"|"4771295"|"47717					

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L140	10	L139 AND mouthpiece AND electrical near2 heater AND wick AND controller AND current	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/06/15 01:00 AM
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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N16	1	(tobacco and aerosol and heating and cartridge).clm.	(USPAT)	OR	ON	ON	2010/01/11 01:26 PM
N48	5	(tobacco and tub$3 and electric$3 and heater and aerosol).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/08/02 11:34 PM

N51	0	(tobacco and tub$3 and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/09/30 12:14 AM
N52	1	(tobacco and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2014/09/30 12:15 AM
N57	1	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2016/10/02 09:55 PM
N63	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/06/19 10:26 PM
N67	2	(smoking and puff and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2017/09/28 10:58 PM
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N72	3	(smoking and carrier and wick$3 and heater and controller).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/01/12 12:33 AM
N73	7	(tobacco and electric$3 and heater and aerosol and absorbent).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/01/12 12:33 AM
N89	6	(tobacco and electric$3 and heater and aerosol and wicked).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2018/10/13 10:21 PM
N126	26	(tobacco and aerosol and heating and cartridge).clm.	(USPAT)	OR	ON	ON	2020/11/07 11:56 PM
N128	1	(tobacco and aerosol and heating and cartridge and air near2 (passage path)).clm.	(USPAT)	OR	ON	ON	2021/06/19 11:53 PM
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N132	9	(tobacco AND rod AND heater AND controller AND cartridge).clm.	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/01/11 11:47 PM
N133	9	(tobacco AND aerosol AND tubular AND cartridge SAME (open near2 ends) AND	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/01 04:16 AM

		heater AND controller).clm.					
N134	163	a24b15/167.cpc. AND cartridge AND controller AND activate	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/09/18 11:45 PM
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N136	5	(aerosol AND mouthpiece AND electric$4 near2 heater AND storage AND passageway AND controller).clm.	(US-PGPUB; USPAT)	OR	OFF	OFF	2023/12/02 09:03 PM

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	18/129,643
				Filing Date	March 31, 2023
				First Named Inventor	John Howard Robinson
				Art Unit	1747
				Examiner Name	Nguyen, Phu Hoang
Sheet	1	of	1	Attorney Docket Number	R60999 1400US.C13 (5803.9)

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	Document Number Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.	Foreign Patent Document Country Code - Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	English Language Translation Attached
	1049	KR 101069342	10-04-2011	Ha Jonk Suk		Machine Translation

OTHER DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s) , volume-issue number(s), publisher, city and/or country where published.	English Language Translation Attached

Examiner Signature	/PHU H NGUYEN/	Date Considered	12/02/2023

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.H.N/

Bibliographic Data

Application No: 18/129,643

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /PHU H NGUYEN/ (Examiner's Signature) P.N (Initials)

Title: TOBACCO-CONTAINING SMOKING ARTICLE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/31/2023	131	1747	R60999 1400USC13T1(5803.9
RULE			

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Evon Llewellyn Crooks, Mocksville, NC, UNITED STATES

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CONTINUING DATA

This application is a CON of 17673424 02/16/2022 PAT 11758936

17673424 is a CON of 16271443 02/08/2019 PAT 11785978

16271443 is a CON of 15879268 01/24/2018 PAT 10231488

15879268 is a CON of 15286087 10/05/2016 PAT 9901123

15286087 is a CON of 14527287 10/29/2014 PAT 9801416

14527287 is a CON of 13297983 11/16/2011 PAT 8899238

13297983 is a CON of 12763890 04/20/2010 PAT 8079371

12763890 is a CON of 11550634 10/18/2006 PAT 7726320

FOREIGN APPLICATIONS

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/129,643	**02/02/2024 04:29:36 PM Z ET**	**R60999 1400USC13T1(5803.9**

Title of Invention

TOBACCO-CONTAINING SMOKING ARTICLE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4055	FILED BY	Shari Elofson
PATENT CENTER #	64192953	FILING DATE	03/31/2023
CUSTOMER #	26158	FIRST NAMED INVENTOR	John Howard Robinson
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Lauren Anderson

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
R60999_1400US_C13_5803_9_Issue_Fee.pdf	1	Issue Fee Payment (PTO-85B)	189 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
R60999_1400US_C13_5803_9_Issue_Fee.pdf	A38C207A7EE9EE98A649F6917424FF3B2701106DA388A0727DB0DFB57BC17DF7B3713C7E7B3A7776555B54D5B80976666F9EEBDF3B0293F92E2A516B098260BB

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
18/129,643	**02/02/2024 04:29:36 PM Z ET**	**R60999 1400USC13T1(5803.9**

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PATENT CENTER #	64192953	AUTHORIZED BY	Lauren Anderson
CUSTOMER #	26158	FILING DATE	03/31/2023
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	John Howard Robinson

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 090528	**E202422G30455127**	**Shari Elofson**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	**$1,200.00**

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New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
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Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26158 7590 12/13/2023
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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

Shari Elofson	(Typed or printed name)
/Shari Elofson/	(Signature)
Filed February 2, 2024	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/31/2023	John Howard Robinson	R60999 1400USC13T1(5803.9	4055

TITLE OF INVENTION: TOBACCO-CONTAINING SMOKING ARTICLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1200	$0.00	$0.00	$1200	03/13/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, PHU HOANG	1747	131-275000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Womble Bond Dickinson (US) LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: RAI Strategic Holdings, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Winston-Salem, North Carolina

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ☒ Corporation or other private group entity ❑ Government

4a. Fees submitted: ☒ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

☒ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 09-0528

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Lauren F. Anderson/ Date February 2, 2024

Typed or printed name Lauren F. Anderson Registration No. 69,344

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	3	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

U. S. PATENT DOCUMENTS					
	52	US-3,747,120	07-17-1973	Stemme	
	53	US-3,766,000	10-16-1973	Gibson	
	54	US-3,860,012	01/1975 ~~01-14-1974~~	Selke	
	55	US-3,844,294	10-29-1974	Webster	
	56	US-3,878,850	04-22-1975	Gibson *et al.*	
	57	US-3,931,824	01-13-1976	Miano *et al.*	
	58	US-3,933,643	01-20-1976	Colvin	
	59	US-3,934,117	01-20-1976	Schladitz	
	60	US-3,943,941	03-16-1976	Boyd *et al.*	
	61	US-4,016,878	04-12-1977	Castel *et al.*	
	62	US-4,044,777	08-30-1977	Boyd *et al.*	
	63	US-4,054,145	10-18-1977	Berndt *et al.*	
	64	US-4,079,742	03-21-1978	Rainer *et al.*	
	65	US-4,131,117	12-26-1978	Kite *et al.*	
	66	US-4,150,677	04-24-1979	Osborne, Jr. *et al.*	
	67	US-4,168,712	09-25-1979	Labbe	
	68	US-4,190,046	02-26-1980	Virag	
	69	US-4,207,457	06-10-1980	Haglund	
	70	US-4,219,031	08-26-1980	Rainer *et al.*	
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	72	US-4,233,993	11-18-1980	Miano *et al.*	
	73	US-4,259,970	04-07-1981	Green, Jr.	
	74	US-4,270,552	06-02-1981	Jenkins	
	75	US-4,284,089	08-18-1981	Ray	
	76	US-4,286,604	09-01-1981	Ehretsmann *et al.*	
	77	US-4,303,083	12-01-1981	Burruss, Jr.	
	78	US-4,326,544	04-27-1982	Hardwick *et al.*	

Change(s) applied to document,
/C.S./
10/9/2023

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT AND TRADEMARK OFFICE ON MARCH 31, 2023.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.H.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Complete if Known	
				Application Number	CON of 17/673,424
				Filing Date	*Filed concurrently herewith*
				First Named Inventor	John Howard Robinson
				Art Unit	*Not yet assigned*
				Examiner Name	*Not yet assigned*
Sheet	2	of	57	Attorney Docket Number	R60999 1400US.C13T1 (5803.9)

Change(s) applied to document;
/C.S./
10/9/2023

U. S. PATENT DOCUMENTS					
	25	US-3,060,429	10-23-1962	Winston	
	26	US-3,281,637	10/1966 ~~09-23-1963~~	Hultquist	
	27	US-3,200,819	08-17-1965	Gilbert	
	28	US-3,203,025	08-31-1965	Schreur	
	29	US-3,234,357	02-08-1966	Seuthe	
	30	US-3,258,015	06-28-1966	Ellis *et al.*	
	31	US-3,281,637	10-25-1966	Hultquist	
	32	US-3,292,635	12-20-1966	Kolodny	
	33	US-3,316,919	05-02-1967	Green *et al.*	
	34	US-3,356,094	12-05-1967	Ellis *et al.*	
	35	US-3,385,303	05-28-1968	Hind	
	36	US-3,393,927	07-23-1968	Kelly *et al.*	
	37	US-3,398,754	08-27-1968	Tughan	
	38	US-3,419,015	12-31-1968	Wochnowski	
	39	US-3,424,171	01-28-1969	Rooker	
	40	US-3,428,053	02-18-1969	Schoenbaum	
	41	US-3,431,393	03-04-1969	Katsuda	
	42	US-3,476,118	11-04-1969	Gotthard Luttich	
	43	US-3,479,561	11-18-1969	Janning	
	44	US-3,486,508	12-30-1969	Sipos	
	45	US-3,502,588	03-24-1970	Winberg	
	46	US-3,516,417	06-23-1970	Moses	
	47	US-3,614,956	10-26-1971	Thornton	
	48	US-3,651,240	03-21-1972	Kirkpatrick	
	49	US-3,685,521	08-22-1972	Dock	
	50	US-3,685,522	08-22-1972	Kleinhans	
	51	US-3,738,374	06-12-1973	Bennett	

Examiner Signature		Date Considered	

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.H.N/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/129,643	03/12/2024	11925202	R60999 1400USC13T1(5803.9	4055

26158 7590 02/21/2024

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ATLANTA, GA 30357-0037

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

John Howard Robinson, Kernersville, NC;
David William Griffith Jr., Winston-Salem, NC;
Billy Tyrone Conner, Clemmons, NC;
Evon Llewellyn Crooks, Mocksville, NC;
Dempsey Bailey Brewer Jr., East Bend, NC;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

RAI Strategic Holdings, Inc., Winston-Salem, NC;

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26158 7590 03/12/2024

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ATLANTA, GA 30357-0037

EXAMINER	
NGUYEN, PHU HOANG	

ART UNIT	PAPER NUMBER
1747	

NOTIFICATION DATE	DELIVERY MODE
03/12/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

BostonDocket@wbd-us.com
IPDocketing@wbd-us.com

APPLICATION NO.	ISSUE DATE	PATENT NO.
18/129,643	12-Mar-2024	11925202

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ATLANTA, GA 30357-0037

EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at https://patentcenter.uspto.gov

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit https://www.uspto.gov/electronicgrants