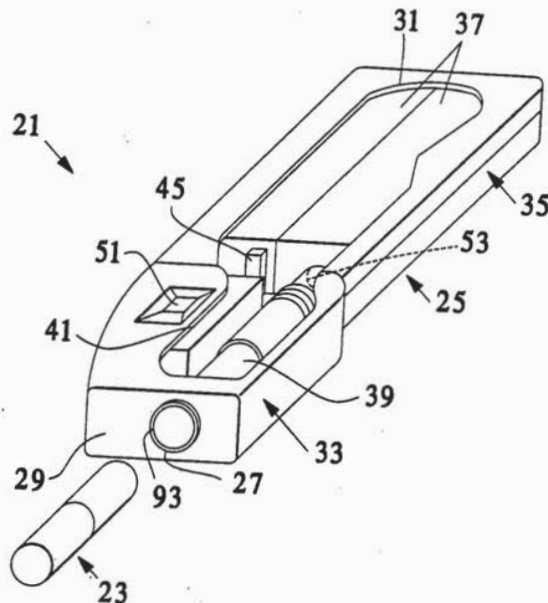




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁵ : A24F 47/00	A1	(11) International Publication Number: WO 94/06314 (43) International Publication Date: 31 March 1994 (31.03.94)
<p>(21) International Application Number: PCT/US93/08457</p> <p>(22) International Filing Date: 10 September 1993 (10.09.93)</p> <p>(30) Priority data: 943,504 11 September 1992 (11.09.92) US</p> <p>(71) Applicant: PHILIP MORRIS PRODUCTS INC. [US/US]; 3601 Commerce Road, Richmond, VA 23234 (US).</p> <p>(72) Inventors: COLLINS, Alfred, L. ; 2058 Hancock Road, Po-whatan, VA 23139 (US). COUNTS; Mary, Ellen ; 4506 Cutshaw Avenue, Richmond, VA 23112 (US). DAS, Am-itabh ; 7201 Decidedly Lane, Midlothian, VA 23112 (US). DEEVI, Seetharama, C. ; 8519 Whirlaway Drive, Midlothian, VA 23112 (US). FLEISCHHAUER, Grier, S. ; 1004 Lady Jean Court, Midlothian, VA 23113 (US). HAJALOGOL, Mohammad, R. ; 4509 Adelaide Avenue, Richmond, VA 23234 (US). HAYES, Patrick, H. ; 4540 Forrestral Road, Chester, VA 23831 (US). HIG-GINS, Charles, T. ; 30 Glenbrooke Circle, Richmond, VA 23339 (US). HOUCK, Willie, G., Jr. ; 7753 Lake Forest Drive, Richmond, VA 23835 (US). KEEN, Billy, J., Jr. ; 12911 Blue Stack Court, Chesterfield, VA 23832 (US). LAROY, Bernard, C. ; 12821 Bailey Bridge Road, Richmond, VA 23112 (US). LEE, Robert, E., III ; 11802 Prince Regent Place, Richmond, VA 23233 (US). LILLY, A., Clifton, Jr. ; 9641 Waterfowl Flyway, Chesterfield, VA 23832 (US). LIPOWICZ, Peter, J. ; 4300 North Heritage Woods Road, Midlothian, VA 23112 (US). LOSEE, D., Bruce, Jr. ; 3912 Park Avenue, Richmond, VA 23221 (US). McCAFFERTY, Hugh, J. ; 2811 Bosham Lane, Midlothian, VA 23113 (US). MISER, Donald, E. ; 6912 Velvet Antler Drive, Midlothian, VA 23112 (US).</p>		<p>NICHOLS, Constance, H. ; 9608 Summercliff Court, Chesterfield, VA 23832 (US). RAYMOND, Wynn, R. ; 6401 Wilton Road, Richmond, VA 23832 (US). RIPLEY, Robert, L. ; 8140 Ammonette Drive, Richmond, VA 23235 (US). RITT, Renzer, R., Sr. ; 1517 Chevelle Drive, Richmond, VA 23235 (US). SCOTT, G., Robert ; 13381 Drakewood Road, Midlothian, VA 23113 (US). SPRINKEL, F., Murphy ; Route 4, Box 347, Glen Allen, VA 23060 (US). STEVENS, William, H. ; 1959 Albion Road, Midlothian, VA 23113 (US). SUBBIAH, Mantharam ; 2430 Olde Queen Terrace, Midlothian, VA 23113 (US). UTSCH, Francis, V. ; 13000 Robious Road, Midlothian, VA 23113 (US). WATKINS, Michael, L. ; 3318 Grove Avenue, Chester, VA 23831 (US). WRENN, Susan, E. ; 12130 Ivy Mill Road, Chesterfield, Virginia 23832 (US).</p> <p>(74) Agents: MAGNONE, Joseph, R. et al.; Burns, Doane, Swecker & Mathis, George Mason Building, Washington and Prince Streets, P.O. Box 1404, Alexandria, VA 22313-1404 (US).</p> <p>(81) Designated States: AU, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LV, NO, NZ, PL, RO, RU, SK, UA, UZ, VN, European patent (BE, FR, GR, IE, IT, MC), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>

(54) Title: ELECTRICAL SMOKING SYSTEM FOR DELIVERING FLAVORS AND METHOD FOR MAKING SAME



(57) Abstract

A smoking system (21) is provided in which a replaceable cigarette (23) containing tobacco flavor material is electrically heated by a set of electrical heater elements contained within a lighter (25) to evolve tobacco flavors or other components in vapor or aerosol form for delivery to a smoker. The cigarette (23) and lighter (25) are adapted to provide air flow patterns through the smoking system such that air flows transversely into the cigarette (23). Such patterns improve aerosol and flavor delivery to the smoker and reduce the condensation of residual heater-region vapor/aerosol in the smoking system.

RAI Strategic Holdings, Inc.

Exhibit 2022

Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc.
IPR2020-00919

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	FR	France	MR	Mauritania
AU	Australia	GA	Gabon	MW	Malawi
BB	Barbados	GB	United Kingdom	NE	Niger
BE	Belgium	GN	Guinea	NL	Netherlands
BF	Burkina Faso	GR	Greece	NO	Norway
BG	Bulgaria	HU	Hungary	NZ	New Zealand
BJ	Benin	IE	Ireland	PL	Poland
BR	Brazil	IT	Italy	PT	Portugal
BY	Belarus	JP	Japan	RO	Romania
CA	Canada	KP	Democratic People's Republic of Korea	RU	Russian Federation
CF	Central African Republic	KR	Republic of Korea	SD	Sudan
CG	Congo	KZ	Kazakhstan	SE	Sweden
CH	Switzerland	LI	Liechtenstein	SI	Slovenia
CI	Côte d'Ivoire	LK	Sri Lanka	SK	Slovak Republic
CM	Cameroon	LU	Luxembourg	SN	Senegal
CN	China	LV	Latvia	TD	Chad
CS	Czechoslovakia	MC	Monaco	TG	Togo
CZ	Czech Republic	MG	Madagascar	UA	Ukraine
DE	Germany	ML	Mali	US	United States of America
DK	Denmark	MN	Mongolia	UZ	Uzbekistan
ES	Spain			VN	Viet Nam
FI	Finland				

**ELECTRICAL SMOKING SYSTEM FOR DELIVERING
FLAVORS AND METHOD FOR MAKING SAME**

Cross-Reference to Related Applications

This application is a continuation-in-part of copending, commonly-assigned United States Patent Application Serial No. 07/666,926, filed March 11, 1991, now
5 abandoned in favor of file-wrapper continuation application Serial No. 08/012,799, filed February 2, 1993, which is hereby incorporated in its entirety.

Background of the Invention

This invention relates to smoking systems in which
10 cigarettes are used with lighters, and methods for making the same.

An electrical smoking article is described in commonly-assigned United States Patent No. 5,060,671, which is hereby incorporated by reference in its entirety. That
15 patent describes a smoking article which is provided with a disposable set of electrical heating elements. A charge of tobacco flavor medium containing, for example, tobacco or tobacco-derived material is deposited on each of the heating elements. The disposable heater/flavor unit is mated to a
20 source of electrical energy such as a battery or capacitor, as well as to control circuitry to actuate the heating elements in response to a puff by a smoker on the article or in response to the depression of a manual switch. The circuitry is designed so that at least one, but less than
25 all of the heating elements are actuated for any one puff, and so that a predetermined number of puffs, each containing a pre-measured amount of tobacco flavor substance, e.g., an aerosol containing tobacco flavors or a flavored tobacco response, is delivered to the smoker. The circuitry also
30 preferably prevents the actuation of any particular heater more than once, to prevent overheating of the tobacco flavor medium thereon.

- 2 -

With such articles, the heater is thrown away with the spent remainder of tobacco material. Also, the electrical connections between the heaters and the battery must be able to endure repeated release and reconnection as
5 flavor units are replaced.

In copending, commonly-assigned United States Patent Application Serial No. 07/666,926, filed March 11, 1991, now abandoned in favor of Continuing Application Serial No. 08/012,799, filed February 2, 1993, an electrical
10 smoking article is disclosed that has reusable heating elements and a disposable portion for tobacco flavor generation. The disposable portion preferably includes a flavor segment and a filter segment, attached by a tipping paper or other fastening arrangement. Certain operational
15 difficulties are, however, associated with reusable heating elements, particularly in that residual aerosol tends to settle and condense on the heating elements and other permanent structural components of the article.

In light of the above, it is therefore desirable
20 to be able to provide an improved smoking system in which the heating elements of the lighter are reusable.

It is also desirable to be able to provide such a system in which condensation of aerosol onto the heating elements and other structural components of the lighter is
25 minimized.

It is further desirable to provide a smoking article which is easier to manufacture.

It is still further desirable to provide a smoking article which provides improved flavor delivery to the
30 smoker.

Summary of the Invention

Accordingly, a primary object of the present invention is to provide a novel smoking system which provides advantages over prior systems.

- 3 -

Another object of the present invention is to provide improved flavor delivery from a smoking system in which cigarettes are used with lighters.

It is also an object of this invention to provide
5 a smoking system in which the heating elements of a lighter are reusable, and of which the volume of disposable portions is minimized.

It is also an object of this invention to provide a system in which condensation of aerosol onto heating
10 elements and other structural components of a lighter is minimized.

It is a further object of this invention to provide a smoking article and manufacturing processes for making the same that are easier and cost effective, even at
15 state-of-the-art mass production speeds.

It is a still further object of this invention to provide improved aerosol and flavor delivery to the smoker.

In accordance with one aspect of the present invention, a cigarette for use in a smoking system for
20 delivering a flavored tobacco response to a smoker, the system including heating means, is provided. The cigarette includes a carrier having first and second ends spaced apart in a longitudinal direction and having first and second surfaces. The first surface defines a cavity between the
25 first and second ends, and the second surface includes an area for being disposed adjacent heating means. Tobacco flavor material is disposed on the first surface of the carrier. The tobacco flavor material generates the flavored tobacco response in the cavity for delivery to a smoker when
30 the tobacco flavor material is heated by the heating means. The carrier and the tobacco flavor material allow transverse air flow into the cavity.

In accordance with another aspect of the present invention, a lighter for use in combination with a removable
35 cigarette in a smoking system that delivers a flavored tobacco response to a smoker is provided. The lighter includes a heater fixture for receiving, through a first

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.