



- (51) International Patent Classification:
A24F 47/00 (2006.01)
- (21) International Application Number:
PCT/EP2015/061318
- (22) International Filing Date:
21 May 2015 (21.05.2015)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
14169342.4 21 May 2014 (21.05.2014) EP
- (71) Applicant: PHILIP MORRIS PRODUCTS S.A.
[CH/CH]; Quai Jeanrenaud 3, CH-2000 Neuchâtel (CH).
- (72) Inventors: PLOJOUX, Julien; Chemin de la Florence 15,
CH-1208 Geneva (CH). RUSCIO, Dani; Route de Troub
29, CH-2088 Cressier (CH). GREIM, Olivier; Rue des
Vernes 7, CH-1400 Yverdon-les-Bains (CH).
- (74) Agent: DOWLING, Ian; Reddie & Grose LLP, 16 Theobalds Road, London Greater London WC1X 8PL (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
28 January 2016

(54) Title: AN ELECTRICALLY HEATED AEROSOL-GENERATING SYSTEM WITH END HEATER

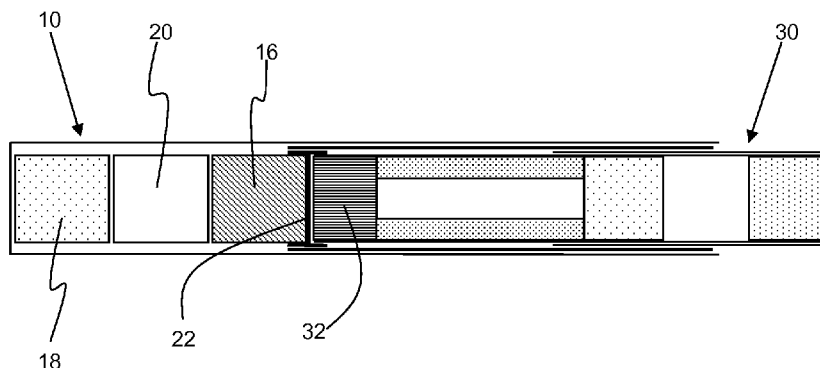


Figure 3

(57) Abstract: An electrically heated aerosol-generating system (10) for receiving an aerosol-forming article (30) is disclosed. The system (10) comprises a tubular portion (12) for receiving an aerosol-forming article (30) and a heater element (16) comprising an end face (22). The heater element (16) is positioned proximate an end of the tubular portion (12) so that the end face (22) is proximate an end of an aerosol-forming article (30) when the aerosol-forming article (30) is inserted into the tubular portion (12). The system (10) is configured to supply a first amount of electrical energy to the heater element (16) to heat the heater element (16) to a first temperature and to supply a second amount of electrical energy to the heater element (16) to maintain the heater element (16) at a second temperature, wherein the difference between the first and second temperatures is at least about 100 degrees Celsius.



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2015/061318

A. CLASSIFICATION OF SUBJECT MATTER INV. A24F47/00 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A24F A61M		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2014/040988 A2 (PHILIP MORRIS PROD [CH]) 20 March 2014 (2014-03-20) page 12, line 29 - page 13, line 27; figure 1 page 15, line 1 - page 17, line 12 -----	1-4,7, 9-12
Y	EP 2 022 349 A1 (HAN LI [HK] FONTEM HOLDINGS 2 B V [NL] FONTEM HOLDINGS 1 B V [NL]) 11 February 2009 (2009-02-11) paragraph [0041] - paragraph [0045] -----	1-7,9, 10,12
Y	WO 2013/160112 A2 (BRITISH AMERICAN TOBACCO CO [GB]) 31 October 2013 (2013-10-31) page 13, line 17 - page 14, line 5 -----	1-7,9-12
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	
"P" document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 14 August 2015	Date of mailing of the international search report 11/12/2015	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Koob, Michael	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2015/061318

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-12

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12

An electrically heated aerosol-generating system for receiving an aerosol-forming article, the system comprising a tubular portion for receiving an aerosol-forming article and a heater element comprising an end face and positioned proximate an end of the tubular portion so that the end face is proximate an end of an aerosol-forming article when the aerosol-forming article is inserted into the tubular portion, wherein the system is configured to supply a first amount of electrical energy to the heater element to heat the heater element to a first temperature, wherein the system is configured to supply a second amount of electrical energy to the heater element to maintain the heater element at a second temperature, and wherein the difference between the first and second temperatures is at least 100 degrees Celsius, as well as a corresponding method.

2. claim: 13

Use of a cylindrical or disc shaped heater element in an electrically heated aerosol-generating system.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2015/061318

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
WO 2014040988	A2	20-03-2014	AU 2013314436 A1	23-04-2015
			CA 2880481 A1	20-03-2014
			CN 105027016 A	04-11-2015
			EP 2895930 A2	22-07-2015
			IL 237099 A	30-04-2015
			JP 2015531600 A	05-11-2015
			KR 20150084779 A	22-07-2015
			PH 12015500131 A1	02-03-2015
			TW 201421180 A	01-06-2014
			US 2015237916 A1	27-08-2015
			WO 2014040988 A2	20-03-2014
EP 2022349	A1	11-02-2009	AU 2007250367 A1	22-11-2007
			AU 2007250368 A1	22-11-2007
			BR PI0711395 A2	01-11-2011
			BR PI0711401 A2	01-11-2011
			CA 2647212 A1	22-11-2007
			CA 2647234 A1	22-11-2007
			CA 2768122 A1	22-11-2007
			CN 201067079 Y	04-06-2008
			CN 201079011 Y	02-07-2008
			DK 2022349 T3	08-09-2014
			EA 200802045 A1	27-02-2009
			EA 200802046 A1	27-02-2009
			EP 2022349 A1	11-02-2009
			EP 2022350 A1	11-02-2009
			EP 2359705 A1	24-08-2011
			EP 2789250 A2	15-10-2014
			EP 2878215 A1	03-06-2015
			ES 2520018 T3	11-11-2014
			HK 1203127 A1	23-10-2015
			JP 5103561 B2	19-12-2012
			JP 5385418 B2	08-01-2014
			JP 5648111 B2	07-01-2015
			JP 2009537119 A	29-10-2009
			JP 2009537120 A	29-10-2009
			JP 2012223190 A	15-11-2012
			JP 2014039553 A	06-03-2014
			KR 20090005139 A	12-01-2009
			KR 20090018039 A	19-02-2009
			KR 20110131320 A	06-12-2011
			KR 20120002555 A	05-01-2012
			NZ 572309 A	29-04-2011
			NZ 572310 A	29-10-2010
			US 2009095311 A1	16-04-2009
US 2009126745 A1	21-05-2009			
US 2011209717 A1	01-09-2011			
US 2013125906 A1	23-05-2013			
US 2013139833 A1	06-06-2013			
US 2013276798 A1	24-10-2013			
US 2014209110 A1	31-07-2014			
US 2015250230 A1	10-09-2015			
US 2015250231 A1	10-09-2015			
US 2015250232 A1	10-09-2015			
WO 2007131449 A1	22-11-2007			
WO 2007131450 A1	22-11-2007			
ZA 200809062 A	25-11-2009			
ZA 200809063 A	25-11-2009			

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2015/061318

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2013160112	A2	31-10-2013	
		AU 2013251940	A1 18-09-2014
		CA 2865967	A1 31-10-2013
		CL 2014002840	A1 26-12-2014
		CN 104244751	A 24-12-2014
		EP 2840914	A2 04-03-2015
		JP 2015513922	A 18-05-2015
		KR 20150016265	A 11-02-2015
		PH 12014502022	A1 24-11-2014
		US 2015040925	A1 12-02-2015
		WO 2013160112	A2 31-10-2013