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**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

**Before the Honorable Clark S. Cheney
Administrative Law Judge**

In the Matter of

**CERTAIN TOBACCO HEATING
ARTICLES AND COMPONENTS
THEREOF**

Investigation No. 337-TA-1199

RESPONDENTS' PREHEARING BRIEF

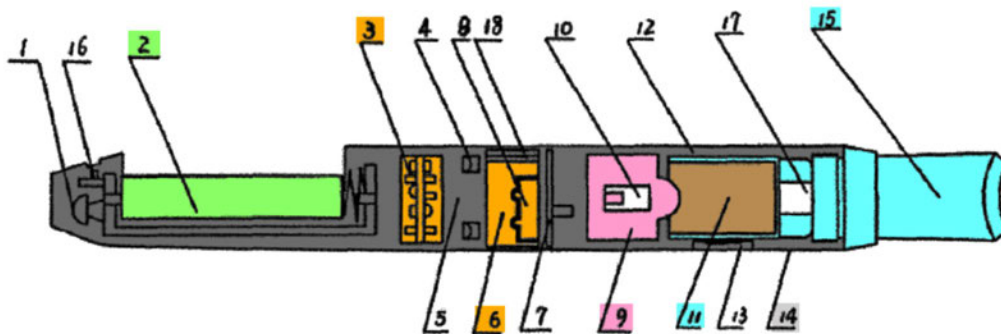
**RAI Strategic Holdings, Inc.
Exhibit 2003
Philip Morris Products, S.A. v. RAI Strategic Holdings, Inc.
IPR2020-01602**

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11-14, 16-19, 21, 23-26 for the same reasons explained above with respect to the Ruyan e-Cigars that Complainants reverse engineered.³⁹⁰

4. Hon '043 Alone and in Combination with Secondary References Invalidates Claims 1-7, 9, 11-19, 21, 23-26

Chinese Patent No. 2719043Y, RX-0088, RX-0103³⁹¹ (“Hon '043”) anticipates and/or renders obvious all of the DI Claims along or together with secondary references. Hon '043 was issued to Hon Lik, the inventor of the Ruyan e-Cigar discussed above. Complainants stipulated that Hon '043 is prior art to the '123 patent under 35 U.S.C. § 102(b). JX-0011C, ¶ 98. Hon '043 taught a vaping device with a battery (green), puff-sensor and electrical control electronics (orange), a heater/wick atomizer (pink), and a removable mouthpiece/cartridge assembly (blue) that contained liquid extract and glycerin (brown).³⁹²



(1) Claim 1/15: preamble

The preamble of claims 1 and 15 states: “An electrically-powered, aerosol generating smoking article comprising.” No party in this Investigation contends these preambles are limiting, and Complainants stipulated that Hon '043 discloses this limitation.³⁹³

³⁹⁰ RX-0210; RX-0165C; RX-166C; JX-0011C at ¶¶ 95, 97.

³⁹¹ RX-0088 is a certified translation of Hon '043 used by Complainants in *R.J. Reynolds Vapor Co. v. Fontem Holdings I B.V.*, IPR2016-01268. RX-0103 is a certified translation of Hon '043 produced by Respondents.

³⁹² RX-0088, RX-0103 at Figure 1 (annotated).

³⁹³ JX-0011C at ¶¶ 99, 101.

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(2) Claim 1/15[a]: an electrical power source

Claim 1 recites: “an electrical power source within a tubular outer housing having a mouth-end and an end distal to the mouth-end.” Claim 15 is nearly identical, but adds that the electrical power source is a battery: “an electrical power source in the form of a battery within a tubular outer housing having a mouth-end and an end distal to the mouth-end.” Complainants stipulated that Hon ’043 discloses these limitations.³⁹⁴

(3) Claim 1/15[b]: electrical resistance heater

Limitation (b) in claims 1 and 15 both recite: “at least one electrical resistance heater powered by said electrical power source.” Complainants stipulated that Hon ’043 discloses this limitation.³⁹⁵

(4) Claim 1/15[c]: puff-actuated controller

Limitation [c] of claims 1 and 15 both recite:

a puff-actuated controller within the tubular outer housing and adapted for regulating current flow through the electrical resistance heater during draw, the controller comprising a sensor adapted for sensing draw on the smoking article by a user.

Complainants stipulated that Hon ’043 discloses “a puff-actuated controller within the tubular outer housing” and “the controller comprising a sensor adapted for sensing draw on the smoking article by a user.”³⁹⁶ Thus, the only dispute with respect to limitation [c] of claims 1 and 15 is whether Hon ’043 discloses that the controller is “adapted for regulating current flow through the electrical resistance heater during draw.”

Hon ’043 disclosed a controller that was adapted for regulating current flow through the electrical resistance heater during draw. Mr. Fox will explain that when the reed (pressure) switch

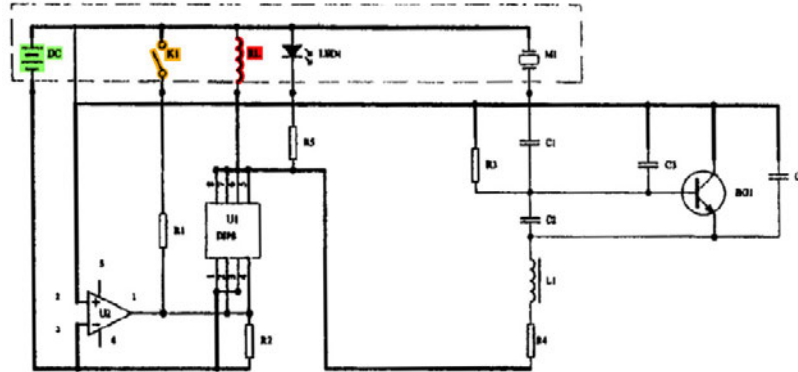
³⁹⁴ *Id.*

³⁹⁵ *Id.*

³⁹⁶ *Id.*

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K1 closes, Hon '043's field effect transistor ("FET") U1 turns on, and the battery energizes the heater "RL".³⁹⁷



Mr. Fox will further testify that when field effect transistor U1 is turned on as described above, current flows through heating element RL. Current flow continues until the user stops drawing on the device, when K1 opens and turns off FET U1. Hon '043 at 6 ("[W]hen K1 is closed, U1, i.e. the field effect transistor, is turned on; RL starts"). This functionality alone meets this limitation.

In addition to starting/stopping current flow when the user's puff (or draw) starts and stops, the evidence will show that Hon '043's circuit also regulates current in that it stops current flow if voltage drops below a certain level, including during a puff/draw. Specifically, if battery voltage is too low, circuit element U2 will turn off FET U1 (even if K1 is shut), and thus stop current flow through the heaters.³⁹⁸

As with the Ruyan e-Cigar, Complainants argue that Hon '043 does not disclose this limitation because it does not actively control the heater's temperature during draw. As explained above, this interpretation of the claim language is overly narrow and incorrect. Furthermore, Hon

³⁹⁷ RX-0088, RX-0103 at Figure 12 (color added).

³⁹⁸ RX-0088, RX-0103 at 6 (describing the "the low voltage detection element for over-discharge protection of the lithium ion battery").

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'043 discloses current regulating functionality such as over discharge protection that was operable “during draw,” in addition to turning the current on/off in response to the change in pressure.

Nevertheless, Mr. Fox is expected to testify that a POSA would have been motivated to improve the electronic control circuitry in Hon '043 with a more sophisticated system like the one disclosed by Brooks. Mr. Fox is further expected to explain that the system taught by Brooks would allow the use of a high-powered heater that can rapidly heat up to the optimum temperature (providing the optimum rate of aerosol generation sooner), and then maintain that optimum temperature by reducing the current (or more precisely, average current) for the remainder of the puff.³⁹⁹ Mr. Fox will provide additional details on the motivation to combine and reasonable expectation of success, as set forth above with respect to the Ruyan e-Cigar.

Mr. Fox will also testify that Hon '043 improved with the control system taught by Brooks meets this limitation, even under Complainants' narrow interpretation of it. Furthermore, the '123 patent admits that Brooks disclosed suitable types of electronic control components and airflow sensing mechanisms as claimed.⁴⁰⁰ Complainants have stipulated that Brooks discloses “a puff-actuated controller within the tubular outer housing and adapted for regulating current flow through the electrical resistance heater during draw, the controller comprising a sensor adapted for sensing draw on the smoking article by a user.”⁴⁰¹ Therefore, the only issue is whether a POSA would have been motivated to use Brooks' controller. The record evidence will demonstrate that POSA would have been motivated to use Brooks' controller and had a reasonable expectation of success.

(5) Claim 1/15[d]: rod-shaped carrier device

³⁹⁹ RX-0001 at 5:1-38 (also noting that maximum aerosol generation may be achieved in 0.5 seconds or less).

⁴⁰⁰ JX-0002 at 20:33-60.

⁴⁰¹ JX-0011C at ¶ 106.

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