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- (71) **Applicant:** PHILIP MORRIS PRODUCTS S.A.
[CH/CH]; Quai Jeanrenaud 3, 2000 Neuchâtel (CH).
- (72) **Inventors:** FURSA, Oleg; Rue du Montilier 21, 2523 Lignières (CH). MIRONOV, Oleg; Rue des Battieux 1, 2000 Neuchâtel (CH). ZINOVIK, Ihar Nikolaevich; Rue du Chasselas 20a, 2034 Peseux (CH).
- (74) **Agent:** BOHEST AG; Holbeinstrasse 36-38, 4051 Basel (CH).

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(54) **Title:** INDUCTIVE HEATING DEVICE, AEROSOL-DELIVERY SYSTEM COMPRISING AN INDUCTIVE HEATING DEVICE, AND METHOD OF OPERATING SAME

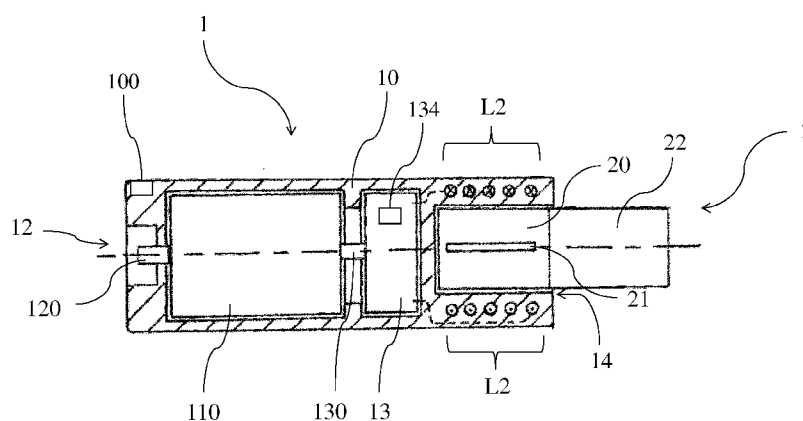


Fig. 3

(57) **Abstract:** An inductive heating device (1) for heating an aerosol-forming substrate (20) comprising a susceptor (21) comprises: a device housing (10), a DC power source (11) for providing a DC supply voltage (V_{DC}) and a DC current (I_{DC}), a power supply electronics (13) comprising a DC/AC converter (132) comprising an LC load network (1323) comprising a series connection of a capacitor (C2) and an inductor (L2) having an ohmic resistance (R_{coil}), a cavity (14) in the device housing (10) for accommodating a portion of the aerosol-forming substrate (20) to inductively couple the inductor (L2) to the susceptor (21). The power supply electronics (13) further comprises a microcontroller (131) programmed to determine from the DC supply voltage (V_{DC}) and from the DC current (I_{DC}) an apparent ohmic resistance (R_a), and from the apparent ohmic resistance (R_a) the temperature (T) of the susceptor (21). It is further programmed to monitor changes in the apparent ohmic resistance (R_a) and to detect a puff when a decrease of the apparent ohmic resistance (R_a) is determined which is indicative of a temperature decrease of the susceptor (21) during a user inhalation.