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United States Patent [19] Fleischhauer et al.

[11] **Patent Number:** 5,591,368
[45] **Date of Patent:** Jan. 7, 1997

[54] **HEATER FOR USE IN AN ELECTRICAL SMOKING SYSTEM**

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5,388,594	2/1995	Counts et al.	
5,408,574	4/1995	Deevi et al.	

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[73] **Assignee:** Philip Morris Incorporated, New York, N.Y.

[21] **Appl. No.:** 426,165

[22] **Filed:** Apr. 20, 1995

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 380,718, Jan. 30, 1995, which is a continuation of Ser. No. 118,665, Sep. 10, 1993, Pat. No. 5,388,594, and a continuation-in-part of Ser. No. 943,504, Sep. 11, 1992, Pat. No. 5,505,214, which is a continuation-in-part of Ser. No. 666,926, Mar. 11, 1991, abandoned.

[51] **Int. Cl.⁶** H05B 3/58; A24F 1/22

[52] **U.S. Cl.** 219/535; 219/539; 338/310; 131/194

[58] **Field of Search** 219/535-6, 538, 219/539, 260; 392/390, 391; 131/194, 197; 338/306, 310, 318, 319

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Primary Examiner—Teresa J. Walberg

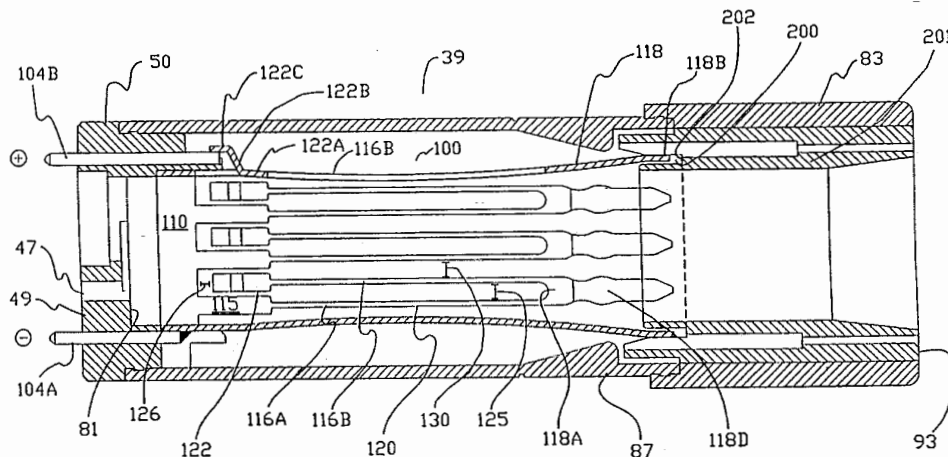
Assistant Examiner—Sam Paik

Attorney, Agent, or Firm—James T. Moore; James E. Schardt; Charles E. B. Glenn

[57] ABSTRACT

A provided heater comprises a supporting hub and a plurality of electrically resistive heater blades defining a receptacle to receive an inserted cigarette. Each blade comprises a first heater blade leg having a first end and a second end and extending at the first end from the supporting hub, a second heater blade leg having a first end and a second end, and a connecting section connecting the second end of the first leg and the first end of the second leg. The second end of the second leg extends toward the supporting hub and is electrically insulated therefrom. A resistive heating circuit is formed to heat the electrically resistive heater blade which in turn heats the inserted cigarette. The first and second legs are separated by a gap to permit entrainment of flavor substances into the heated cigarette upon drawing by a smoker.

44 Claims, 12 Drawing Sheets



RAI Strategic Holdings, Inc.
Exhibit 2011
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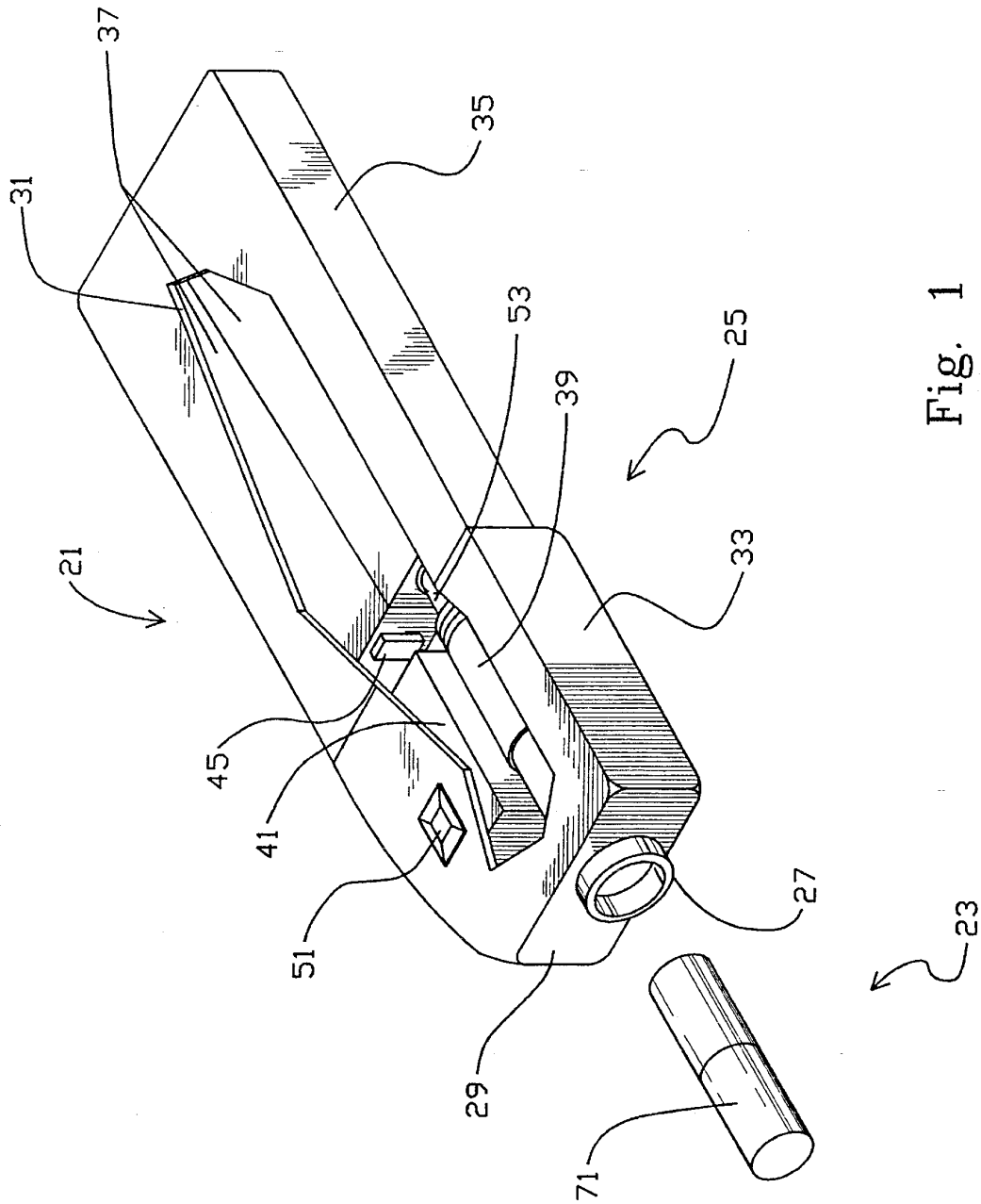


Fig. 1

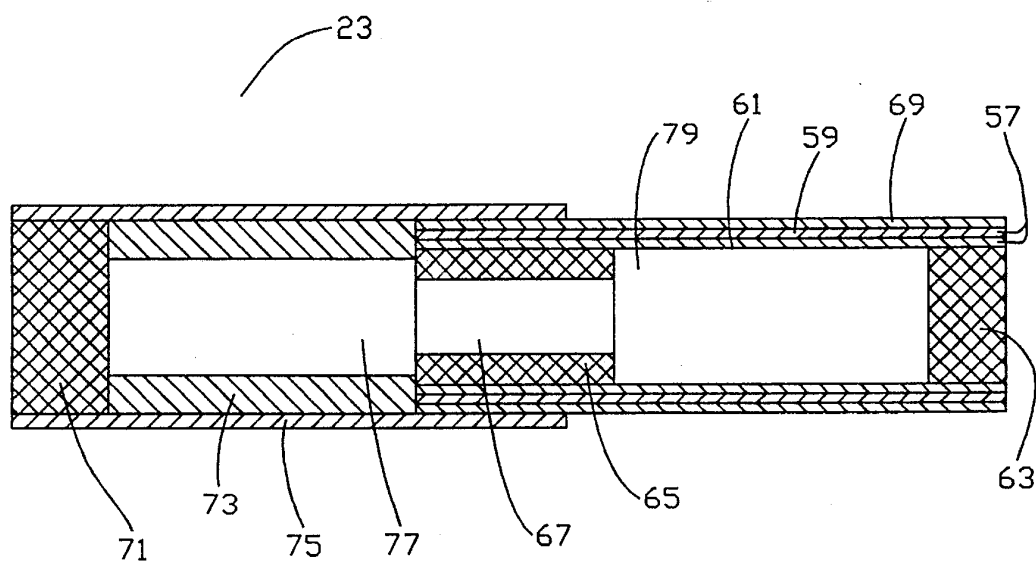


Fig. 2

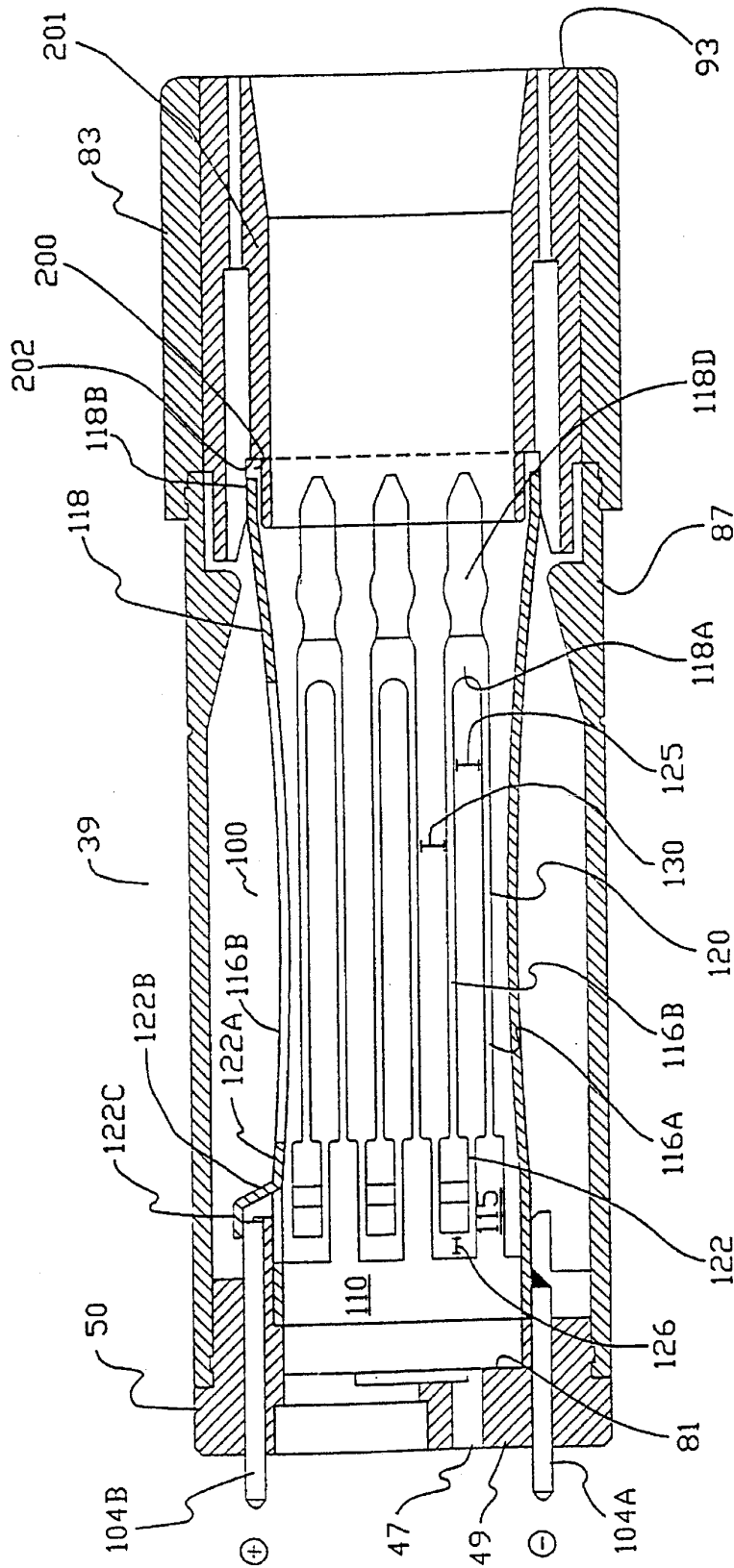


FIG. 3

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