



United States Patent [19]

[11] **Patent Number:** 5,603,947

Wong et al.

[45] **Date of Patent:** Feb. 18, 1997

[54] **METHOD AND DEVICE FOR PROVIDING NICOTINE REPLACEMENT THERAPY TRANSDERMALLY/TRANSBUCCALLY**

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[73] **Assignee:** **Cygnus Therapeutic Systems**, Redwood City, Calif.

[21] **Appl. No.:** 278,277

[22] **Filed:** Jul. 21, 1994

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 247,520, May 23, 1994, abandoned, which is a continuation of Ser. No. 89,971, Jul. 9, 1993, abandoned.

- [51] **Int. Cl.⁶** **A61F 13/00**
- [52] **U.S. Cl.** **424/448; 424/447; 424/449**
- [58] **Field of Search** **424/448, 449, 424/447**

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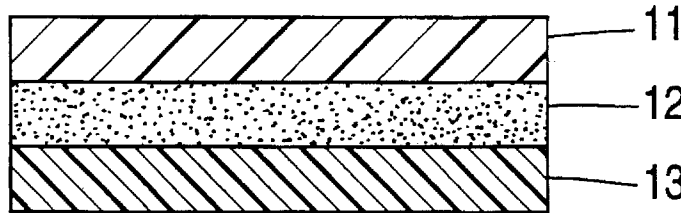
Primary Examiner—D. Gabrielle Phelan

Attorney, Agent, or Firm—Morrison & Foerster LLP

[57] ABSTRACT

A skin or buccal patch for providing nicotine replacement therapy which comprises a matrix type laminated composite in which the matrix is composed of a mixture of nicotine in a polymer wherein the amount of nicotine in the matrix, diffusion coefficient of nicotine in the matrix and the thickness of matrix are such that the release of nicotine is: (1) controlled by the patch; (2) rapid and at a relatively high flux over the prescribed wearing time of patch; and (3) such that a substantial proportion of the nicotine initially in the patch has been released at the end of the prescribed wearing time.

9 Claims, 13 Drawing Sheets



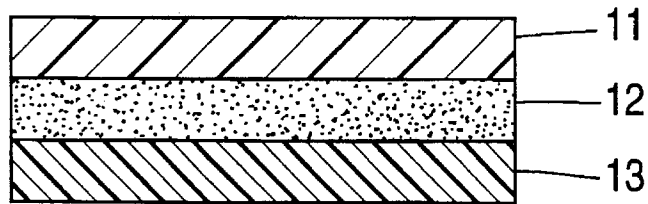


FIG. 1

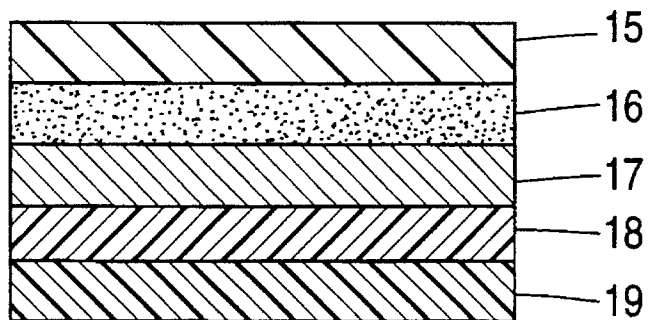


FIG. 2

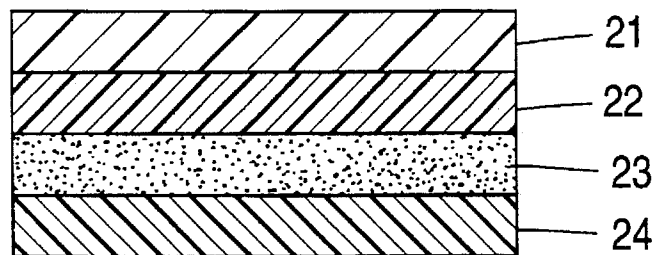


FIG. 3

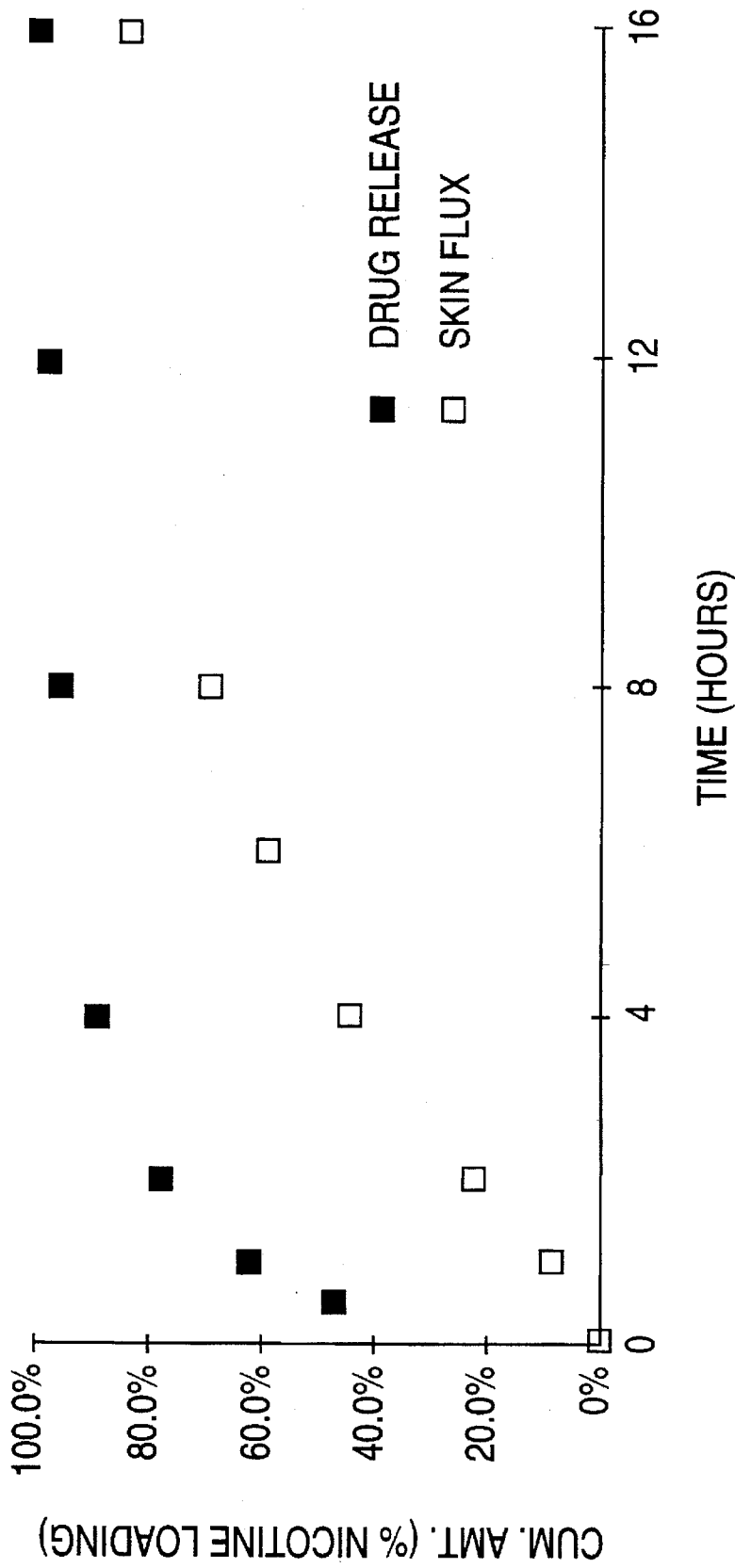


FIG. 4

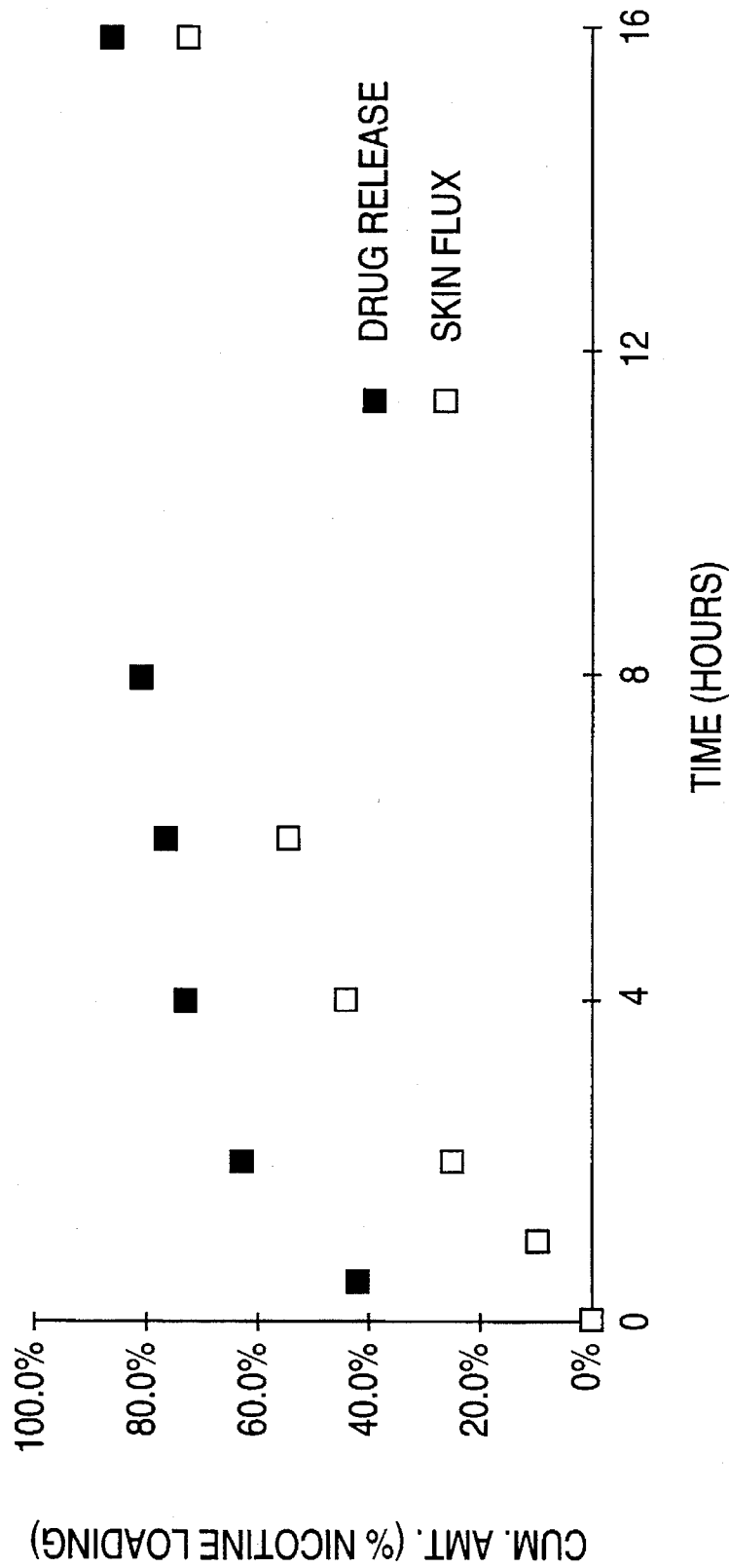


FIG. 5

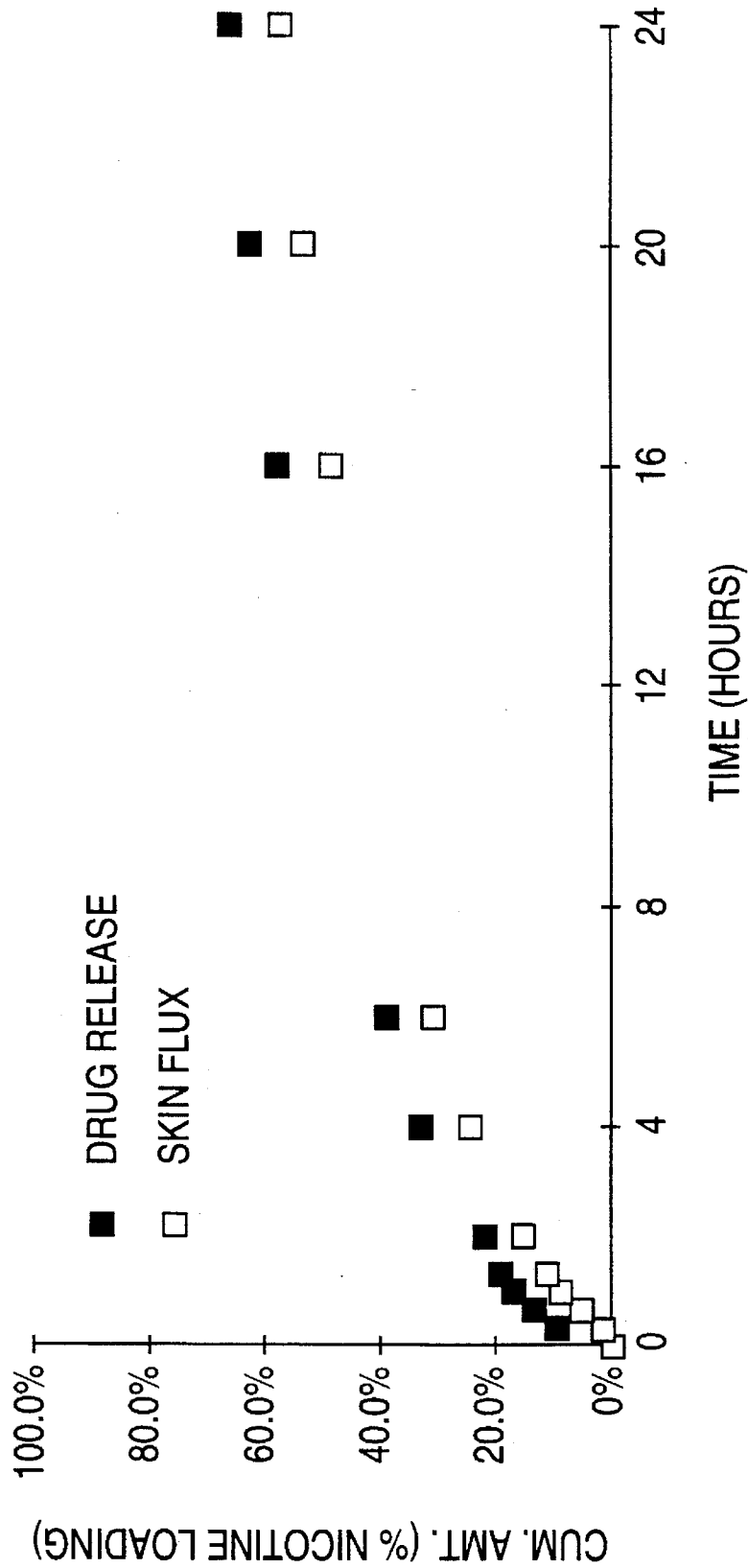


FIG. 6

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