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Waller et al.

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(54) **INKJET PRINTING APPARATUS WITH INK MANIFOLD**

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 08/959,376, filed on Oct. 28, 1997, now Pat. No. 6,123,410, and a continuation-in-part of application No. 09/216,606, filed on Dec. 17, 1998.

(51) **Int. Cl.**<sup>7</sup> ..... **B41J 2/155**

(52) **U.S. Cl.** ..... **347/42; 347/13**

(58) **Field of Search** ..... 347/7, 13, 15, 347/40, 42, 43, 44

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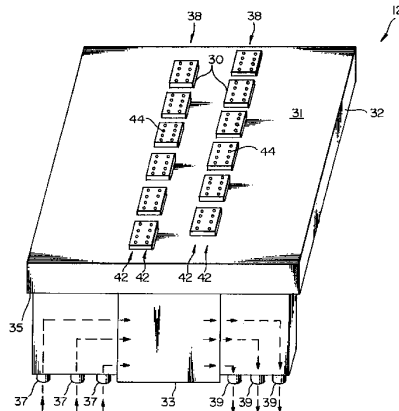
*Primary Examiner*—N. Le

*Assistant Examiner*—Lamson D. Nguyen

(57) **ABSTRACT**

An inkjet printing system includes a scalable printhead with an ink manifold. The scalable printhead is formed by mounting an ink manifold and multiple thermal inkjet printhead dies to a carrier substrate. The carrier substrate is machined to include through-slots. There is a through-slot for each refill slot among the multiple printhead dies. A first end of a given through-slot connects to a refill slot of a corresponding printhead die. An opposite, second end of the through-slot connects to the ink manifold. The ink manifold includes an inlet for coupling to an ink supply reservoir. The ink manifold also includes one or more channels and a plurality of feed openings. Each feed opening connects to a printhead die refill slot by way of a substrate through-slot.

**28 Claims, 6 Drawing Sheets**



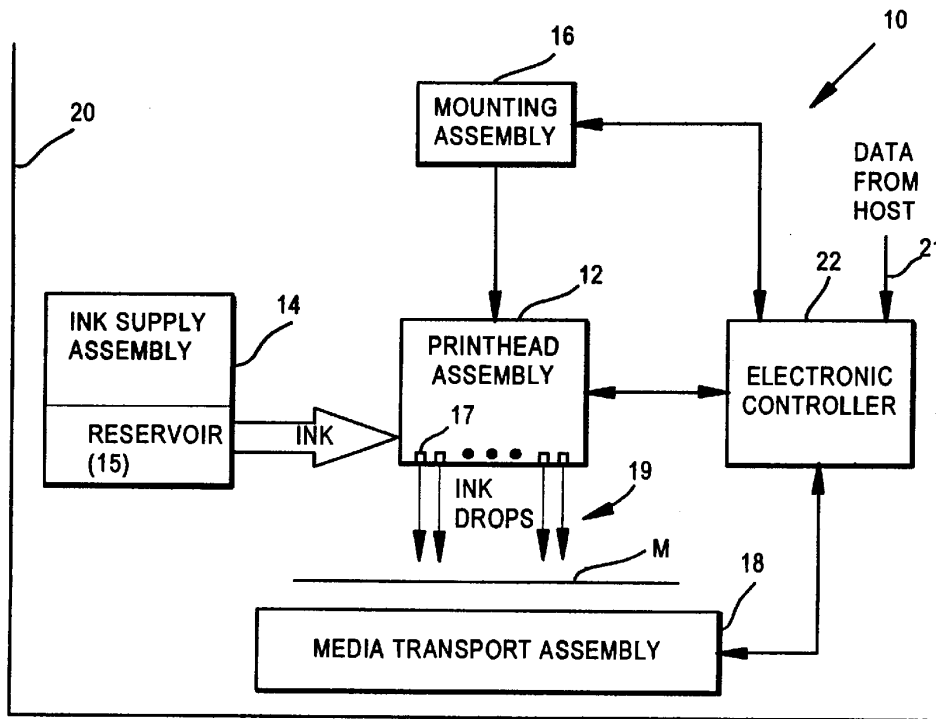
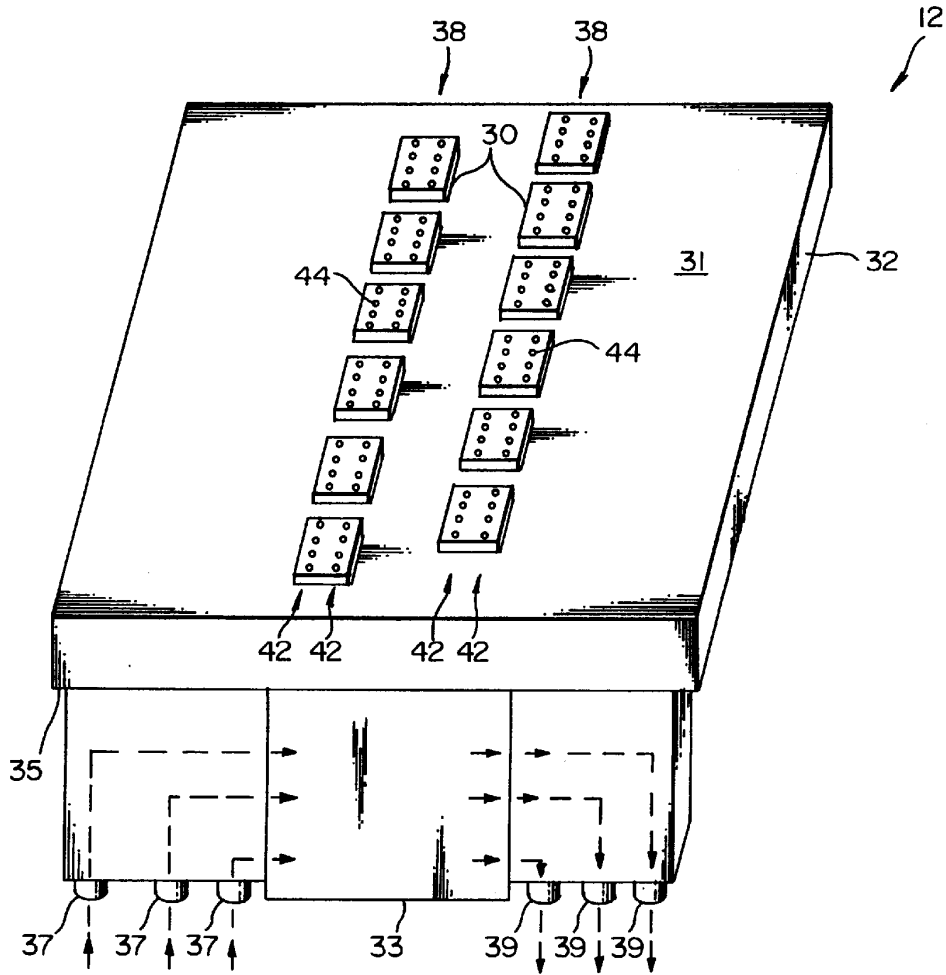


FIG. 1

FIG. 2



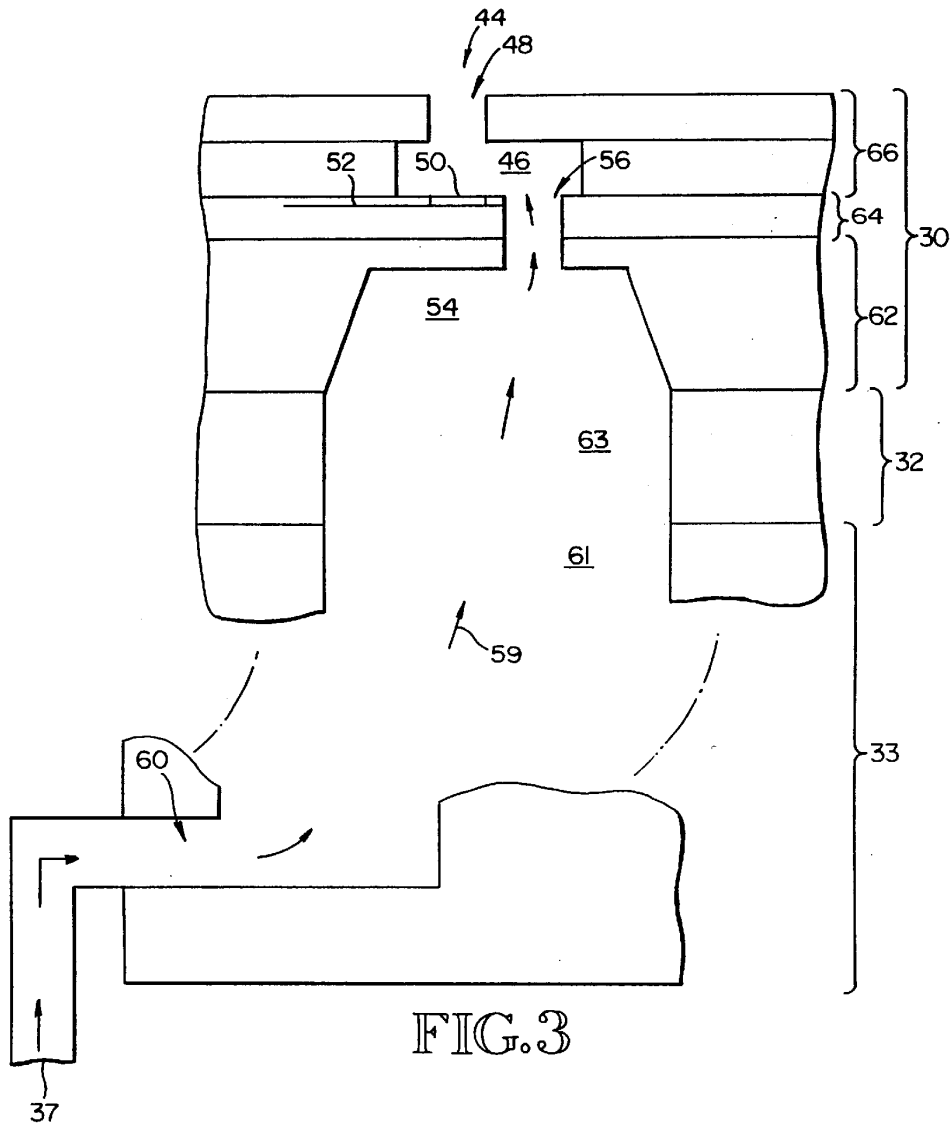


FIG. 3

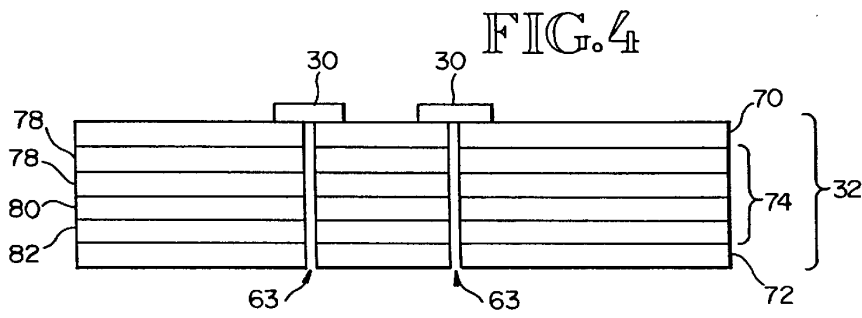


FIG. 4

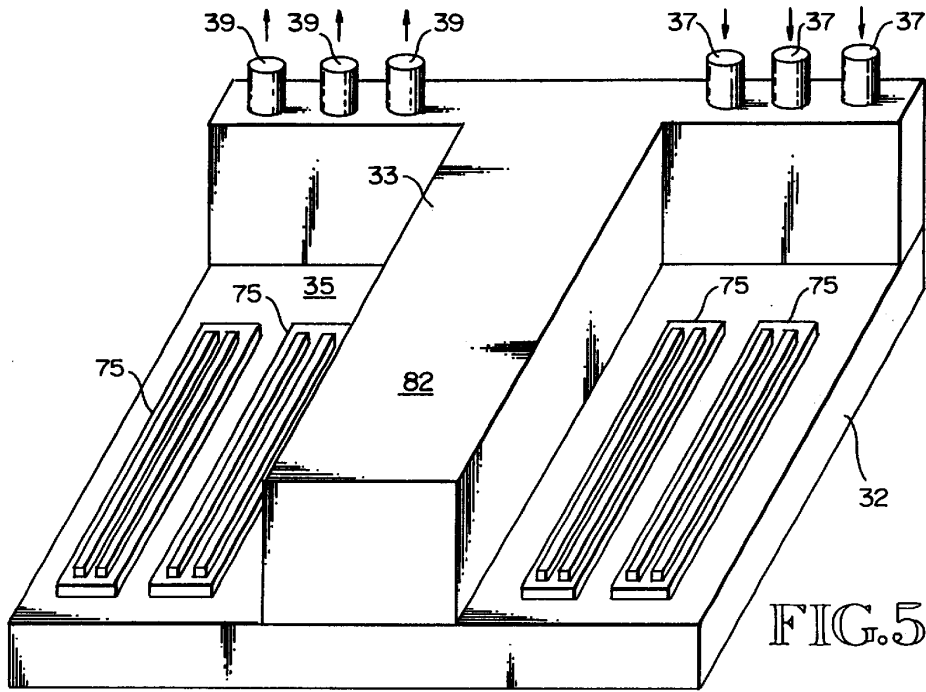


FIG. 5

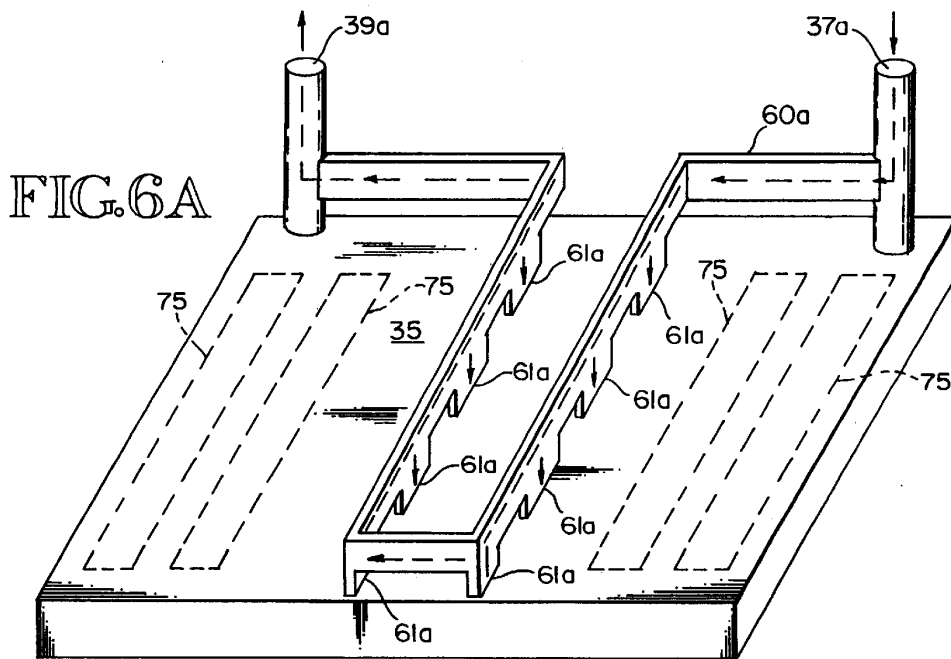


FIG. 6A

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