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United States Patent [19]

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Ramacier, Jr. et al.

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[54] **QUICK CONNECTION COUPLING VALVE ASSEMBLY**

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[21] Appl. No.: **217,453**

[22] Filed: **Mar. 24, 1994**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 967,157, Oct. 27, 1992, Pat. No. 5,316,041.

[51] Int. Cl.⁶ **F16L 37/28**

[52] U.S. Cl. **737/614.04; 285/317**

[58] Field of Search 251/284, 285, 251/60, 149.6; 137/614, 614.02, 614.03, 614.04, 614.05; 285/317; 156/73.5

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Primary Examiner—Martin P. Schwadron

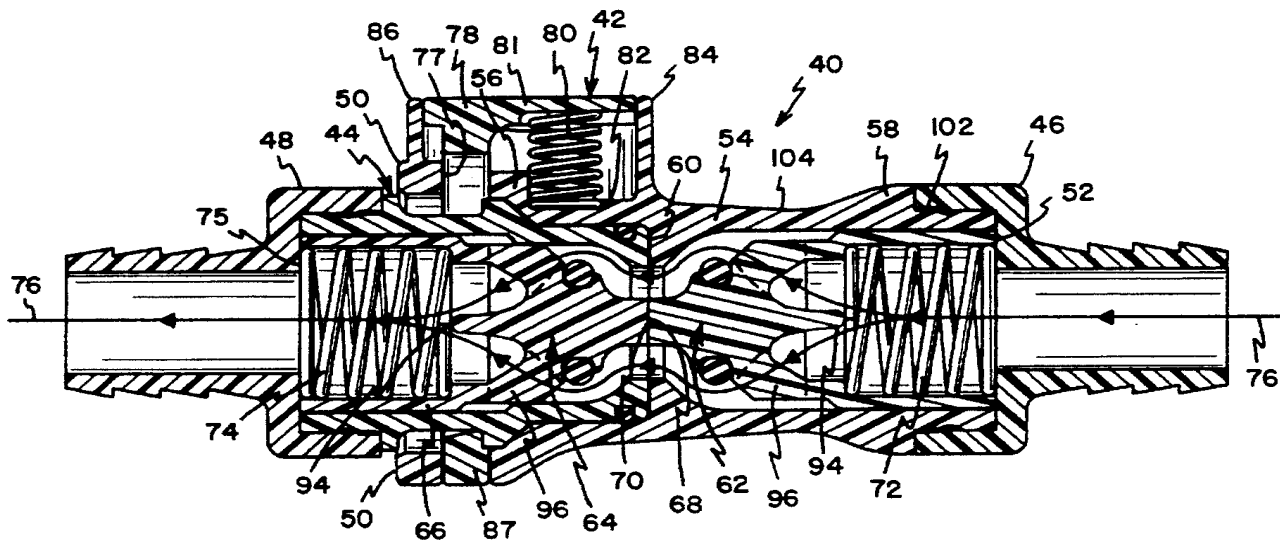
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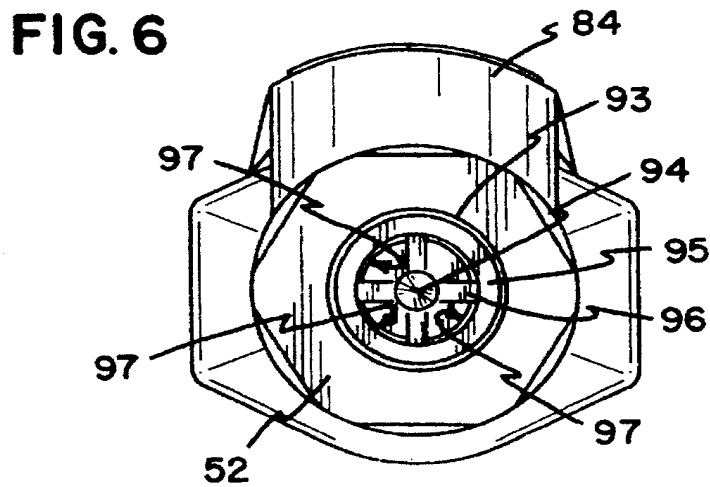
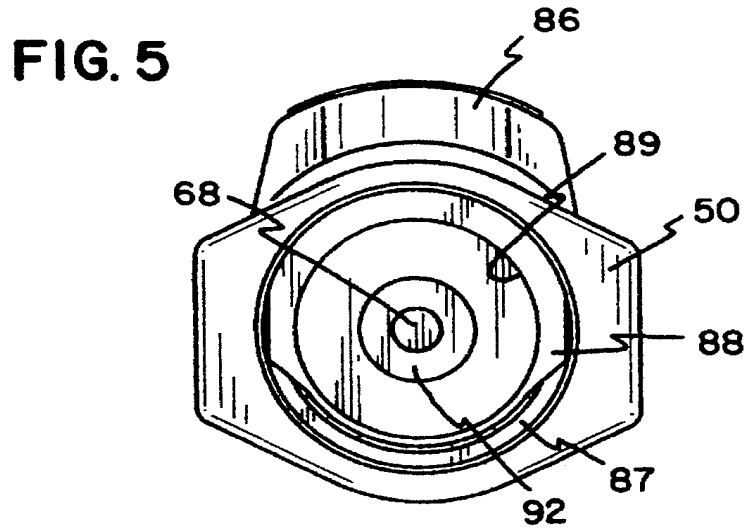
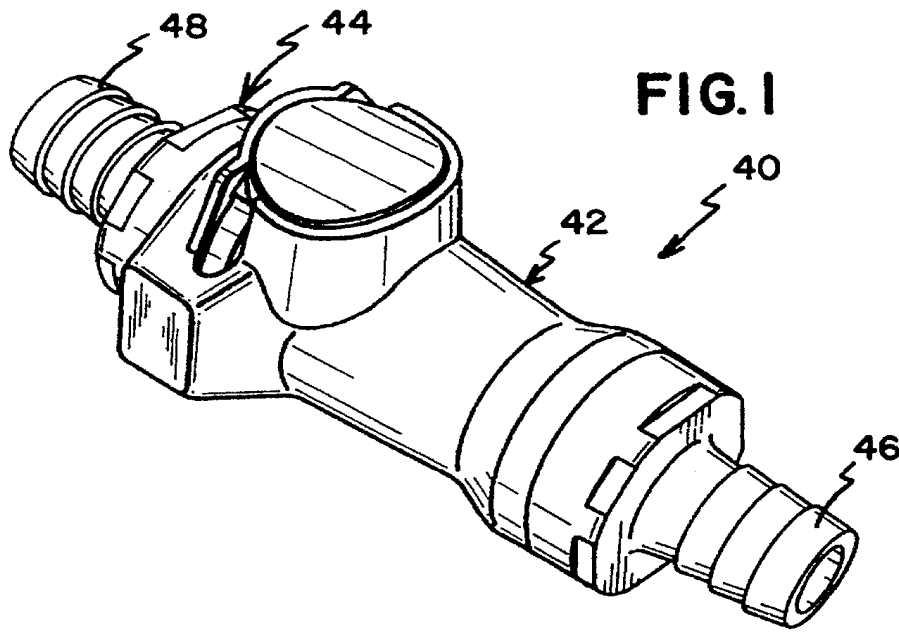
Attorney, Agent, or Firm—Merchant, Gould, Smith, Edell, Welter & Schmidt

[57] ABSTRACT

A quick connection coupling valve assembly having a poppet member in both a male coupling member and female coupling member, a fluid passageway defined therethrough is opened by engaging the poppet members of the male and female coupling members with each other, the fluid passageway is closed by releasing a spring member to disengage the poppet members from each other. A plurality of longitudinal stops are disposed on an inside wall of the male and female coupling members. The stops limit movement of the poppet members.

12 Claims, 14 Drawing Sheets





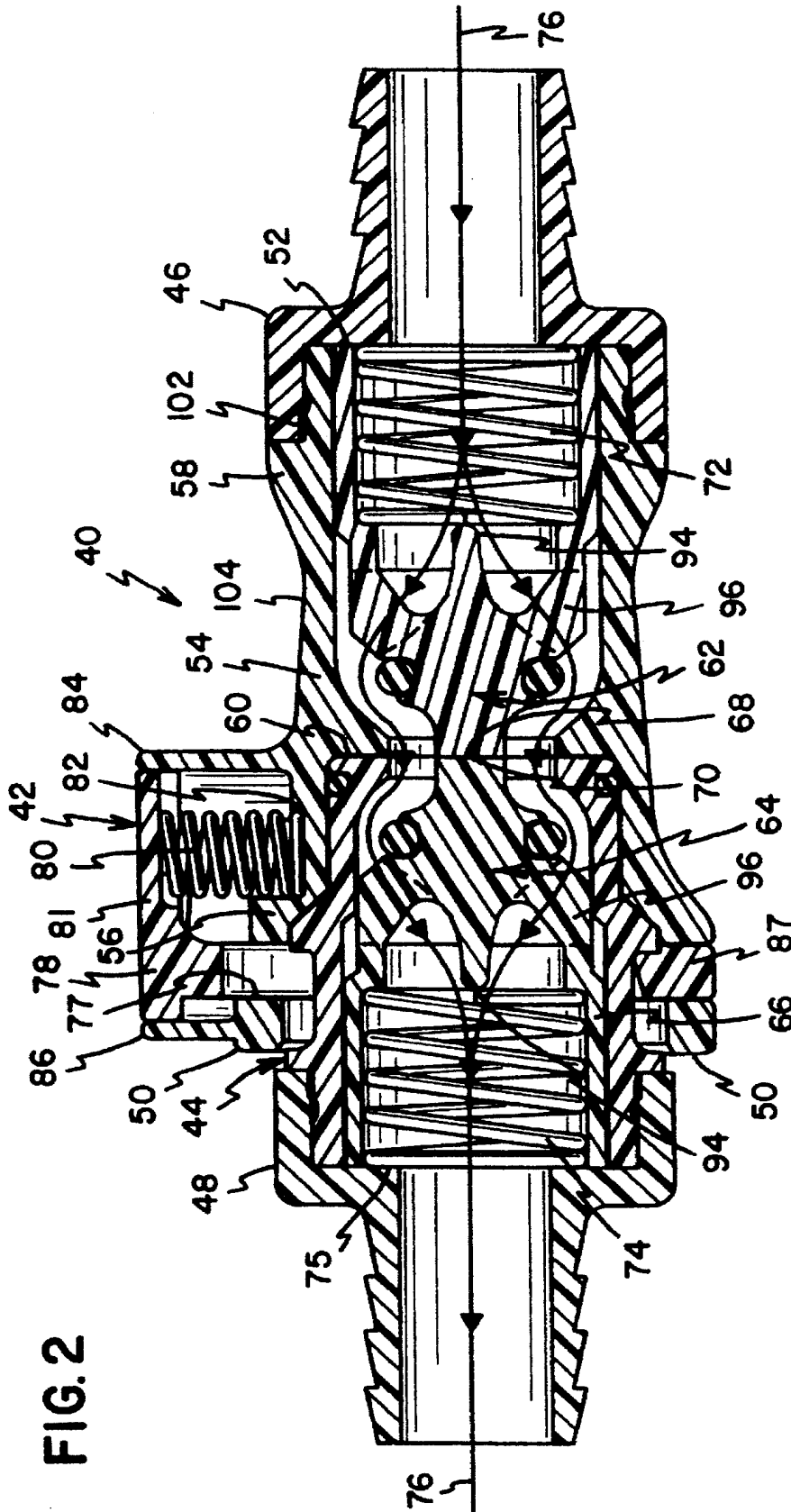


FIG. 2

FIG. 3

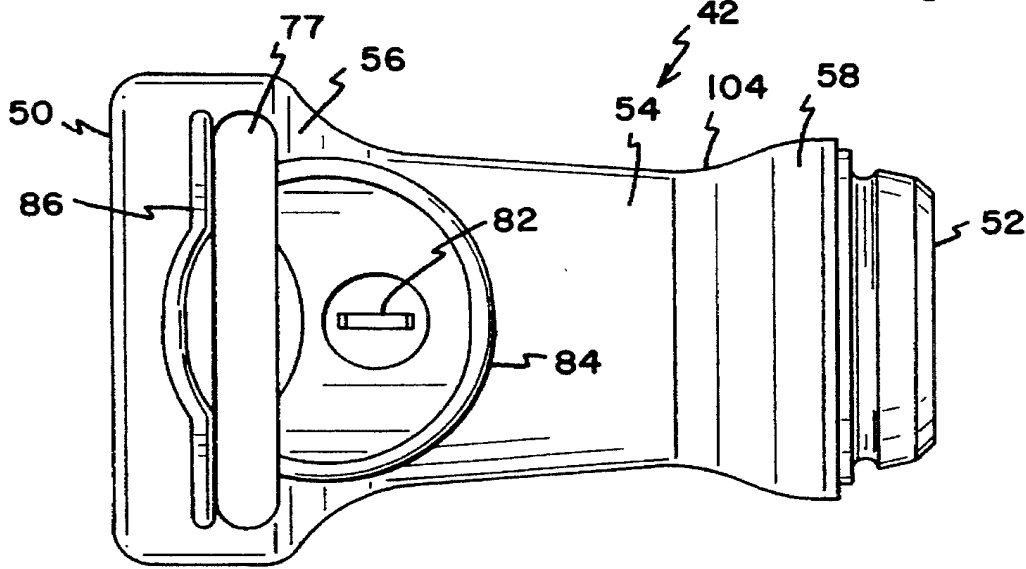


FIG. 4

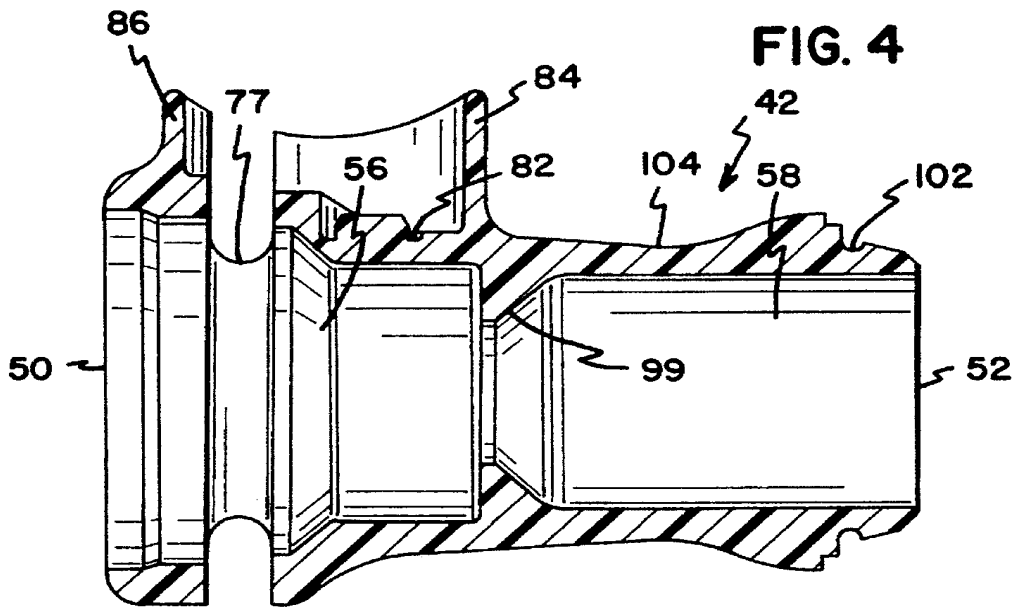


FIG. 8

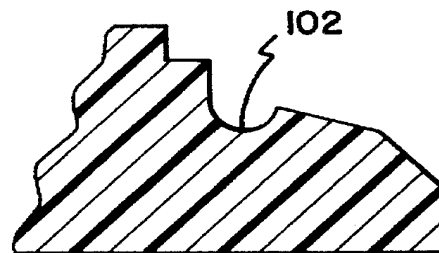


FIG. 7A

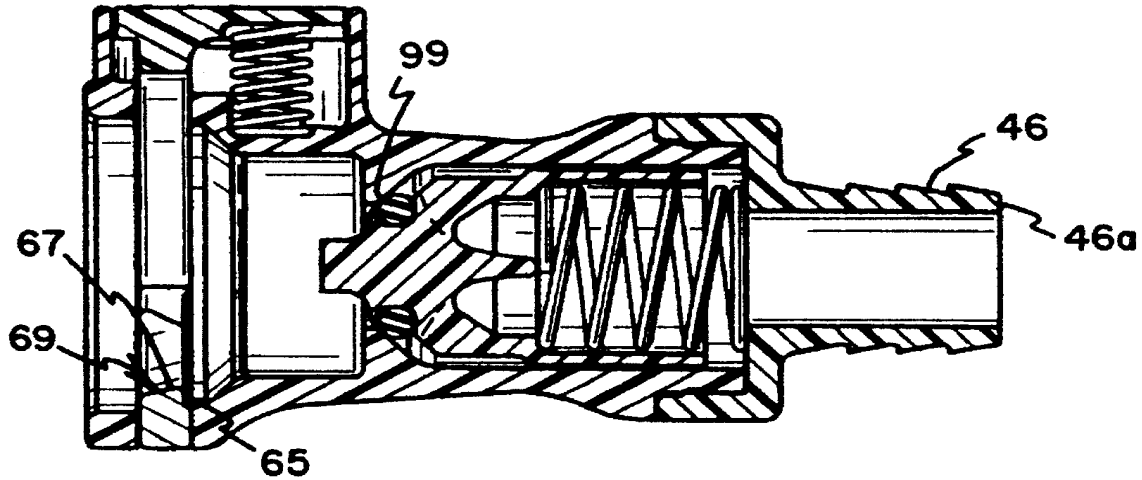
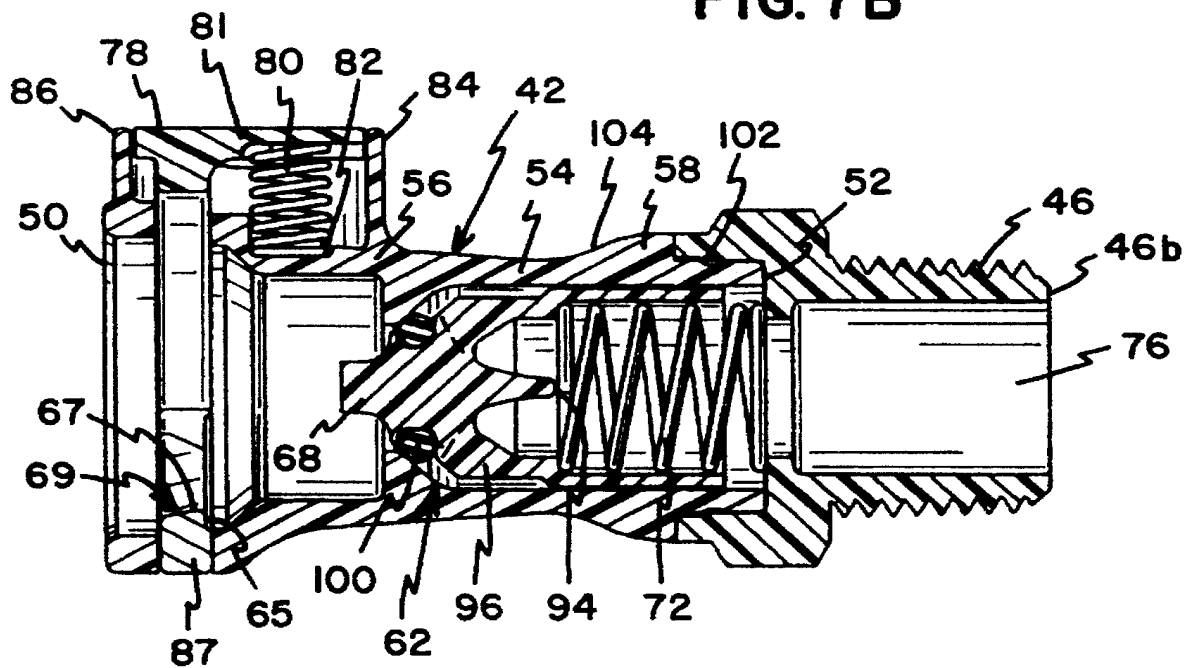


FIG. 7B



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