



US005771914A

United States Patent [19]

[11] **Patent Number:** **5,771,914**

Ling et al.

[45] **Date of Patent:** **Jun. 30, 1998**

[54] **FLEXIBLE FLUID JUNCTION** 3,724,461 4/1973 Eisenberg 251/4
 3,734,154 5/1973 Polk 251/4
 4,047,844 9/1977 Robinson 251/9
 4,676,476 6/1987 Herrli 251/9
 4,736,925 4/1988 Kamstrup-Larsen 251/4
 4,942,886 7/1990 Timmons 251/9
 4,944,485 7/1990 Daoud 251/9
 4,951,665 8/1990 Schneider 604/284
 5,277,224 1/1994 Hutton 137/597
 5,348,592 9/1994 Ellis 604/284

[75] Inventors: **Michael T. K. Ling**, Vernon Hills;
Lecon Woo, Libertyville, both of Ill.;
Eric J. Hénaut, Arquennes; **Patrick
 Balteau**, Ohey, both of Belgium; **Eric
 P. Loh**, Park Ridge, Ill.; **Francesco
 Peluso**, Heverlee; **Alphonse Heremans**,
 Genappe, both of Belgium; **Ying-Cheng
 Lo**, Green Oaks, Ill.; **Marc Bellotti**,
 Libertyville, Ill.; **Rafael A. Castellanos**,
 Roselle, Ill.; **Robin Peters**, McHenry,
 Ill.

[73] Assignee: **Baxter International Inc.**, Deerfield, Ill.

Primary Examiner—Denise L. Ferencic
Assistant Examiner—Ramyar Farid
Attorney, Agent, or Firm—Charles R. Mattenson; Thomas S. Borecki; Robert M. Barrett

[21] Appl. No.: **799,855**

[57] **ABSTRACT**

[22] Filed: **Feb. 13, 1997**

A flexible fluid junction that links three or more fluid ducts is provided. The junction includes a pair of flexible webs with at least three tubes or fluid ducts disposed between the flexible webs. The outer periphery of the webs is sealed together and around the tubes to define a chamber. An end of each tube terminates inside the chamber so that fluid may flow from each tube through the chamber. Still further, a method of manufacturing a flexible fluid junction and a method of using a flexible fluid junction are also provided.

[51] **Int. Cl.⁶** **E03B 1/00**

[52] **U.S. Cl.** **137/1; 137/597; 137/605; 251/9; 604/27; 604/283; 604/284**

[58] **Field of Search** 251/4, 9; 137/597, 137/605, 1; 604/27, 30, 32, 34, 256, 28, 250, 283, 284

[56] **References Cited**

U.S. PATENT DOCUMENTS

526,338 9/1894 Alexander 251/9

15 Claims, 3 Drawing Sheets

