



US006228048B1

(12) **United States Patent**
Robbins

(10) **Patent No.:** **US 6,228,048 B1**
(45) **Date of Patent:** **May 8, 2001**

(54) **COLONIC IRRIGATION APPARATUS AND METHOD**

(75) Inventor: **Mark Robbins**, Englewood, CO (US)

(73) Assignee: **CM Robbins Company Inc.**, Englewood, CO (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/178,375**

(22) Filed: **Oct. 23, 1998**

(51) Int. Cl.⁷ **A61M 1/00**

(52) U.S. Cl. **604/31; 604/27; 604/500**

(58) Field of Search 604/27, 48, 65, 604/67, 73, 113, 114, 246, 247, 257, 271, 131, 151, 275-277, 30-36; 4/420, 420.1, 420.5, 443, 445

(56) **References Cited**

U.S. PATENT DOCUMENTS

906,711	12/1908	McClung et al. .	
1,217,692	2/1917	Bookman .	
1,317,851	10/1919	Arnett .	
1,758,332	5/1930	Pittam et al. .	
1,945,031	1/1934	Decker	51/170
1,945,081	1/1934	Ryan et al.	128/227
1,958,100	5/1934	Borosini	128/227
2,027,588	1/1936	Hannon	128/227
2,133,626	10/1938	Mayberry	128/227
2,176,235	10/1939	Woodard	128/227
2,252,569	8/1941	Kennison	128/227
2,420,507	5/1947	Stratton	128/227
2,506,183	5/1950	Touchberry	128/33
2,564,135	8/1951	Touchberry	311/9
2,955,596	10/1960	Knoch	128/251
3,004,537	10/1961	Turluc	128/227
3,142,298	7/1964	Koski et al.	128/276
3,401,694	9/1968	Touchberry	128/227
3,678,932	7/1972	Hudson	128/227
3,750,668	8/1973	Perl	128/227
3,771,522	11/1973	Waysilk et al.	128/227

3,830,235	8/1974	Marsan	128/227
4,187,057	2/1980	Xanthopoulos	417/63
4,190,059	2/1980	Holt	128/750
4,262,239	4/1981	Kawa	318/561
4,403,982	9/1983	Clayton	604/28
4,504,270	3/1985	Miller	604/275
4,518,382	5/1985	Bloxom, Jr.	604/27
4,617,011	10/1986	Bloxom, Jr.	604/27
4,626,239	12/1986	Ardizzone	604/31
4,637,814	1/1987	Leiboff	604/27
4,682,979	7/1987	Girouard	604/48
4,790,811	12/1988	Bloxom, Jr.	604/27
4,792,332	12/1988	Lansel	604/276
4,842,580	6/1989	Ouelette	604/30
4,874,363	10/1989	Abell	604/28
4,893,634	1/1990	Kulik et al.	128/748
5,019,056	5/1991	Lee et al.	604/257
5,190,519	3/1993	Mead et al.	604/27
5,309,899 *	5/1994	Ginsberg	604/38
5,405,319	4/1995	Abell et al.	604/27
5,527,275 *	6/1996	Ginsberg	604/38
5,871,463 *	2/1999	Baker et al.	604/27
5,951,511 *	9/1999	Lowder	604/73

* cited by examiner

Primary Examiner—Manuel Mendez

(74) *Attorney, Agent, or Firm*—Sheridan Ross P.C.

(57) **ABSTRACT**

A colonic irrigation apparatus for cleaning bodily orifices such as the large intestine, which converts pressurized water from a building's water supply into a gravity flow and which provides precise temperature control even at extremely low flow rates. Water temperature is regulated by alternating the flow from separate hot and cold water inlets around a preset temperature set point, and sending the water into a filter. The filter blends the water, evening the temperature, whereupon the water passes through a temperature safety valve and on to an elevated pressure-to-gravity converter. Pressure is regulated by the converter, which receives the pressurized water, drains most of it under the flow of gravity to the patient at a preset flow rate, and vents the excess pressure by diverting a variable flow of the incoming water down to a drain.

26 Claims, 6 Drawing Sheets

