



US00D866756S

(12) **United States Design Patent** (10) **Patent No.:** **US D866,756 S**
Allen et al. (45) **Date of Patent:** **** Nov. 12, 2019**

(54) **FLEXIBLE PORT USED TO CONNECT A WOUND DRESSING TO A SOURCE OF NEGATIVE PRESSURE**

(71) Applicant: **Smith & Nephew PLC**, Watford, Hertfordshire (GB)

(72) Inventors: **Julie Allen**, Hull (GB); **Sarah Jenny Collinson**, Hull (GB); **Philip Gowans**, York (GB); **Steven Carl Mehta**, Lincoln (GB); **Derek Nicolini**, Hull (GB); **Carol Wagner**, Cheektowaga, NY (US)

(73) Assignee: **Smith & Nephew PLC**, Watford (GB)

(**) Term: **15 Years**

(21) Appl. No.: **29/630,908**

(22) Filed: **Dec. 22, 2017**

(56) **References Cited**
U.S. PATENT DOCUMENTS

2,613,696 A	10/1952	MacIntyre
2,682,873 A	7/1954	Evans et al.
3,342,183 A	9/1967	Edenbaum
3,568,675 A	3/1971	Harvey
3,935,863 A	2/1976	Kliger
D267,510 S	1/1983	Golub
4,564,010 A	1/1986	Coughlan et al.
4,587,146 A	5/1986	Anhauser et al.
4,605,399 A	8/1986	Weston et al.
4,627,429 A	12/1986	Tsuk
D292,826 S	11/1987	Sproles
4,808,172 A	2/1989	Murata
4,846,164 A	7/1989	Martz
4,917,112 A	4/1990	Kalt
4,921,492 A	5/1990	Schultz
4,969,880 A	11/1990	Zamierowski
5,052,381 A	10/1991	Gilbert et al.
5,056,510 A	10/1991	Gilman
5,100,396 A	3/1992	Zamierowski
5,115,801 A	5/1992	Cartmell et al.
5,160,328 A	11/1992	Cartmell et al.
5,176,663 A	1/1993	Svedman et al.
5,197,945 A	3/1993	Cole et al.
5,261,893 A	11/1993	Zamierowski
5,266,371 A	11/1993	Sugii et al.
5,336,219 A	8/1994	Krantz
5,354,261 A	10/1994	Clark et al.
D352,782 S	11/1994	Kirk et al.
5,364,381 A	11/1994	Soga et al.
5,380,294 A	1/1995	Persson
D357,742 S	4/1995	Peery et al.
5,437,651 A	8/1995	Todd et al.
D362,505 S	9/1995	Fabricant
5,447,492 A	9/1995	Cartmell et al.
5,456,660 A	10/1995	Reich et al.
5,480,377 A	1/1996	Cartmell et al.
5,497,788 A	3/1996	Inman et al.
D369,907 S	5/1996	Sayovitz et al.
D370,127 S	5/1996	Bonaddio et al.
5,527,293 A	6/1996	Zamierowski
D372,098 S	7/1996	Lattin et al.
5,538,500 A	7/1996	Peterson
D372,978 S *	8/1996	Harvey D24/133
5,549,584 A	8/1996	Gross
5,562,107 A	10/1996	Lavender et al.
5,579,765 A	12/1996	Cox et al.
5,599,289 A	2/1997	Castellana
5,603,946 A	2/1997	Constantine
5,636,643 A	6/1997	Argenta et al.

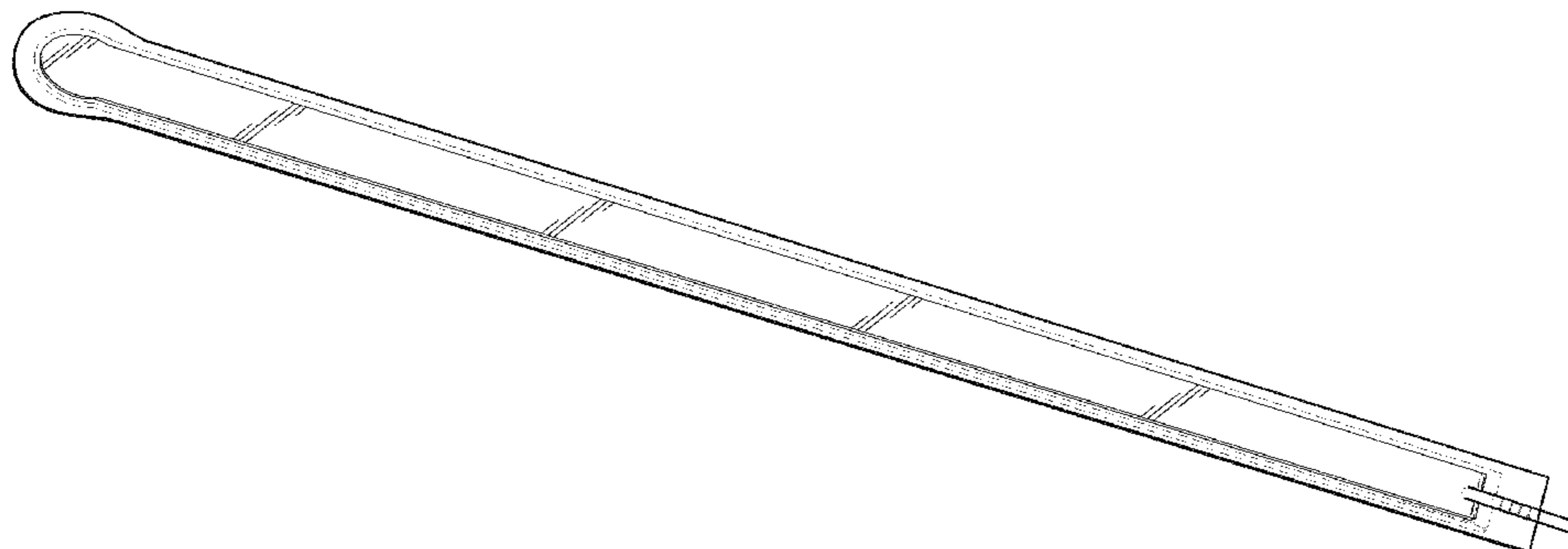
Related U.S. Application Data

(60) Division of application No. 29/581,843, filed on Oct. 21, 2016, now Pat. No. Des. 806,243, which is a continuation of application No. 14/403,036, filed as application No. PCT/IB2013/001469 on May 22, 2013, now Pat. No. 9,907,703.

(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/129**

(58) **Field of Classification Search**
USPC D24/127-131, 112-114, 133, 186; 606/181, 185; 604/264, 523-528, 272, 604/187, 158, 164.01-164.11, 181, 184, 604/227; 600/101, 139, 143; 128/200.24, 207.14, 207.15
CPC .. A61M 25/065; A61M 5/42; A61M 25/0612; A61M 25/00; A61M 39/00; A61M 27/00; A61M 25/0043; A61M 25/0067; A61M 25/0097; A61F 2/958
See application file for complete search history.



US D866,756 S

Page 2

5,637,080 A	6/1997	Geng	7,438,705 B2	10/2008	Karpowicz et al.
5,645,081 A	7/1997	Argenta et al.	7,476,205 B2	1/2009	Erdmann
D382,343 S	8/1997	Wandell et al.	7,485,112 B2	2/2009	Karpowicz et al.
5,662,599 A	9/1997	Reich et al.	7,503,910 B2	3/2009	Adahan
D384,745 S	10/1997	Lattin et al.	7,511,187 B2	3/2009	Kelly
D385,038 S	10/1997	Shultz	7,531,711 B2	5/2009	Sigurjonsson et al.
5,678,564 A	10/1997	Lawrence et al.	7,534,927 B2	5/2009	Lockwood
5,701,917 A	12/1997	Khoury	7,563,940 B2	7/2009	Kurata
5,702,356 A	12/1997	Hathman	7,569,742 B2	8/2009	Haggstrom et al.
D389,581 S	1/1998	Fein	7,576,256 B2	8/2009	Björnberg et al.
5,704,905 A	1/1998	Jensen et al.	D600,354 S	9/2009	Sachi
5,713,384 A	2/1998	Roach et al.	7,605,298 B2	10/2009	Bechert et al.
5,795,584 A	8/1998	Totakura et al.	D604,424 S	11/2009	Coubetergues
5,827,213 A	10/1998	Jensen	7,615,036 B2	11/2009	Joshi et al.
5,840,052 A	11/1998	Johns	7,622,629 B2	11/2009	Aail
5,843,025 A	12/1998	Shaari	D605,299 S	12/2009	Iwahashi et al.
5,897,541 A	4/1999	Uitenbroek et al.	7,625,362 B2	12/2009	Boehringer et al.
5,911,222 A	6/1999	Lawrence et al.	7,645,269 B2	1/2010	Zamierowski
5,998,694 A	12/1999	Jensen et al.	D609,922 S	2/2010	Bridges et al.
6,011,194 A	1/2000	Buglino et al.	7,670,323 B2	3/2010	Hunt et al.
6,040,493 A	3/2000	Cooke et al.	7,678,102 B1	3/2010	Heaton
D424,699 S	5/2000	Allen	7,686,785 B2	3/2010	Boehringer et al.
6,071,267 A	6/2000	Zamierowski	7,723,561 B2	5/2010	Propp
6,075,177 A	6/2000	Bahia et al.	D618,810 S	6/2010	Tanigawa et al.
6,124,520 A	9/2000	Roberts	D620,122 S	7/2010	Cotton
6,124,521 A	9/2000	Roberts	D620,123 S	7/2010	Igwebuike
6,142,982 A	11/2000	Hunt et al.	7,749,531 B2	7/2010	Booher
6,297,423 B1	10/2001	Schoenfeldt et al.	7,759,537 B2	7/2010	Bishop et al.
6,345,623 B1	2/2002	Heaton et al.	7,759,539 B2	7/2010	Shaw et al.
6,362,390 B1	3/2002	Carlucci et al.	7,772,582 B2	8/2010	Lina et al.
6,458,109 B1	10/2002	Henley et al.	7,775,998 B2	8/2010	Riesinger
6,468,295 B2	10/2002	Augustine et al.	7,776,028 B2	8/2010	Miller et al.
6,506,175 B1	1/2003	Goldstein	7,779,625 B2	8/2010	Joshi et al.
6,528,696 B1	3/2003	Ireland	7,794,438 B2	9/2010	Henley et al.
D477,086 S	7/2003	Tsuruda et al.	D625,017 S	10/2010	Iwahashi et al.
6,586,653 B2	7/2003	Graeme, III et al.	D625,018 S	10/2010	Smith et al.
6,613,953 B1	9/2003	Altura	D631,166 S	1/2011	Leffew et al.
6,626,891 B2	9/2003	Ohmstede	D631,541 S *	1/2011	Min D24/127
6,648,862 B2	11/2003	Watson	7,862,718 B2	1/2011	Doyen et al.
6,685,681 B2	2/2004	Lockwood et al.	7,880,050 B2	2/2011	Robinson et al.
6,706,940 B2	3/2004	Worthley	7,922,703 B2	4/2011	Riesinger
6,719,742 B1	4/2004	McCormack et al.	7,935,066 B2	5/2011	Shives et al.
6,752,794 B2	6/2004	Lockwood et al.	7,959,624 B2	6/2011	Reisinger
6,755,807 B2	6/2004	Risk et al.	7,964,766 B2	6/2011	Blott et al.
6,762,337 B2	7/2004	Boukanov et al.	7,976,519 B2	7/2011	Bubb et al.
6,764,459 B1	7/2004	Donaldson	7,981,098 B2	7/2011	Boehringer et al.
D495,056 S	8/2004	Watanabe	D642,594 S	8/2011	Mattson et al.
6,776,769 B2	8/2004	Smith	7,988,673 B2	8/2011	Wright et al.
6,787,682 B2	9/2004	Gilman	8,021,347 B2	9/2011	Vitaris et al.
D499,017 S *	11/2004	Nestenberg D24/112	8,080,702 B2	12/2011	Blott et al.
6,855,135 B2	2/2005	Lockwood et al.	8,083,712 B2	12/2011	Biggie et al.
D505,067 S *	5/2005	Nestenberg D24/112	8,092,436 B2	1/2012	Christensen
D506,547 S *	6/2005	Cruz D24/128	8,133,211 B2	3/2012	Cavanaugh, II et al.
6,936,037 B2	8/2005	Bubb et al.	8,147,468 B2	4/2012	Barta et al.
D509,299 S	9/2005	Watanabe	8,148,595 B2	4/2012	Robinson et al.
6,951,553 B2	10/2005	Bubb et al.	8,152,785 B2	4/2012	Vitaris
D515,701 S	2/2006	Horhota et al.	8,158,844 B2	4/2012	McNeil
6,998,511 B2	2/2006	Worthley	8,162,907 B2	4/2012	Heagle
7,004,915 B2	2/2006	Boynton et al.	8,168,848 B2	5/2012	Lockwood et al.
7,049,478 B1	5/2006	Smith et al.	8,187,237 B2	5/2012	Seegert
7,070,584 B2	7/2006	Johnson et al.	8,188,331 B2	5/2012	Barta et al.
7,108,683 B2	9/2006	Zamierowski	8,192,409 B2	6/2012	Hardman et al.
7,118,545 B2	10/2006	Boyde	8,202,261 B2	6/2012	Kazala, Jr. et al.
7,195,624 B2	3/2007	Lockwood et al.	8,212,101 B2	7/2012	Propp
7,198,046 B1	4/2007	Argenta	8,241,261 B2	8/2012	Randolph et al.
7,216,651 B2	5/2007	Argenta et al.	8,246,606 B2	8/2012	Stevenson et al.
7,279,612 B1	10/2007	Heaton et al.	8,252,971 B2	8/2012	Aali et al.
7,294,751 B2	11/2007	Propp et al.	8,267,908 B2	9/2012	Coulthard
7,294,752 B1	11/2007	Propp	8,298,200 B2	10/2012	Vess et al.
7,316,672 B1	1/2008	Hunt et al.	8,314,283 B2	11/2012	Kingsford et al.
7,338,482 B2	3/2008	Lockwood et al.	8,328,858 B2	12/2012	Barsky et al.
7,354,426 B2 *	4/2008	Young A61F 5/4405 604/403	8,361,043 B2	1/2013	Hu et al.
D571,922 S	6/2008	Freeland	8,372,049 B2	2/2013	Jaeb et al.
7,381,859 B2	6/2008	Hunt et al.	8,382,731 B2	2/2013	Johannison
D572,367 S	7/2008	Freeland	8,403,899 B2	3/2013	Sherman
D572,824 S	7/2008	Propp	8,404,921 B2	3/2013	Lee et al.
D572,825 S	7/2008	Freeland	D679,819 S	4/2013	Peron
7,429,689 B2	9/2008	Chen et al.	D679,820 S	4/2013	Peron
			8,444,611 B2	5/2013	Wilkes et al.

US D866,756 S

Page 4

EP	0 941 726	9/1999	WO	WO 08/043067	4/2008
EP	1 018 967	7/2000	WO	WO 08/049277	5/2008
EP	0 865 304 B1	7/2001	WO	WO 08/100437	8/2008
EP	0 853 950 B1	10/2002	WO	WO 08/100440	8/2008
EP	0 708 620	5/2003	WO	WO 08/100446	8/2008
EP	1 088 569 B1	8/2003	WO	WO 08/131895	11/2008
EP	0 993 317	9/2003	WO	WO 08/135997	11/2008
EP	1 440 667	7/2004	WO	WO 08/141470	11/2008
EP	1 448 261	8/2004	WO	WO 09/002260	12/2008
EP	1 452 156	9/2004	WO	WO 09/019227	2/2009
EP	1 100 574	2/2005	WO	WO 09/019229	2/2009
EP	0 688 189	6/2005	WO	WO 09/146441	3/2009
EP	1 284 777	4/2006	WO	WO 09/068665	6/2009
EP	0 982 015	8/2006	WO	WO 09/086580	7/2009
EP	0 620 720 B1	11/2006	WO	WO 09/088925	7/2009
EP	1 171 065	3/2007	WO	WO 09/103031	8/2009
EP	1 227 853	1/2008	WO	WO 09/111655	9/2009
EP	1 476 217	3/2008	WO	WO 09/111657	9/2009
EP	1 233 808	7/2008	WO	WO 09/137194	11/2009
EP	1 977 776	10/2008	WO	WO 09/140376	11/2009
EP	2 098 257 A1	9/2009	WO	WO 09/145894	12/2009
EP	1 513 478	12/2009	WO	WO 09/158125	12/2009
EP	2 127 690	12/2009	WO	WO 09/158126	12/2009
EP	1 905 465	1/2010	WO	WO 09/158127	12/2009
EP	2 127 690	3/2010	WO	WO 09/158129	12/2009
EP	2 161 011	3/2010	WO	WO 10/014177	2/2010
EP	2 172 164	4/2010	WO	WO 10/033271	3/2010
EP	2 319 550	5/2011	WO	WO 10/033272	3/2010
EP	2 335 749 A1	6/2011	WO	WO 10/033574	3/2010
EP	1 578 477	9/2011	WO	WO 10/033769	3/2010
EP	2 366 721	9/2011	WO	WO 10/035017	4/2010
EP	1 487 389	10/2011	WO	WO 10/051073	5/2010
EP	1 169 071	2/2012	WO	WO 10/059712	5/2010
EP	2 529 766	12/2012	WO	WO 10/059730	5/2010
EP	2 413 858	1/2013	WO	WO 10/072395	7/2010
EP	2 545 946	3/2013	WO	WO 10/078166	7/2010
EP	2 659 915	11/2013	WO	WO 10/082872	7/2010
EP	2 628 500	5/2014	WO	WO 10/089448	8/2010
EP	1 339 366	6/2014	WO	WO 10/139926	12/2010
EP	2 051 675	6/2014	WO	WO 10/147533	12/2010
GB	2 099 306	12/1982	WO	WO 10/147592	12/2010
GB	2 307 180	6/2000	WO	WO 11/019476	2/2011
GB	2 336 546	6/2000	WO	WO 11/023275	3/2011
GB	2 344 531	7/2000	WO	WO 11/023650	3/2011
GB	2 435 422	8/2007	WO	WO 11/049562	4/2011
WO	WO 94/23677	10/1994	WO	WO 11/087871	7/2011
WO	WO 95/04511	2/1995	WO	WO 11/100851	8/2011
WO	WO 95/14451	6/1995	WO	WO 11/115908	9/2011
WO	WO 96/21410	7/1996	WO	WO 11/128651	10/2011
WO	WO 97/11658	4/1997	WO	WO 11/135285	11/2011
WO	WO 99/01173	1/1999	WO	WO 12/009370	1/2012
WO	WO 99/39671	8/1999	WO	WO 12/074512	6/2012
WO	WO 00/07653	2/2000	WO	WO 12/142002	10/2012
WO	WO 00/42957	7/2000	WO	WO 12/146656	11/2012
WO	WO 01/85248	11/2001	WO	WO 12/150235	11/2012
WO	WO 02/17840	3/2002	WO	WO 12/166428	12/2012
WO	WO 02/26180	4/2002	WO	WO 13/016239	1/2013
WO	WO 02/38096	5/2002	WO	WO 13/019438	2/2013
WO	WO 02/076379	10/2002	WO	WO 13/043972	3/2013
WO	WO 03/057070	7/2003	WO	WO 13/123005	8/2013
WO	WO 03/086232	10/2003	WO	WO 14/043238	9/2014
WO	WO 04/073566	9/2004	WO	WO 14/158526	10/2014
WO	WO 05/016179	2/2005			
WO	WO 05/061025	7/2005			
WO	WO 06/052338	5/2006			
WO	WO 06/052745	5/2006			
WO	WO 07/006306	1/2007			
WO	WO 07/013049	2/2007			
WO	WO 07/013064	2/2007			
WO	WO 07/016590	2/2007			
WO	WO 07/019038	2/2007			
WO	WO 07/085396	8/2007			
WO	WO 07/092397	8/2007			
WO	WO 07/095180	8/2007			
WO	WO 07/106590	9/2007			
WO	WO 07/106591	9/2007			
WO	WO 08/008032	1/2008			
WO	WO 08/012278	1/2008			
WO	WO 08/027449	3/2008			

OTHER PUBLICATIONS

US 7,186,244 B1, 03/2007, Hunt et al. (withdrawn)

Allevyn Educational Booklet, Smith & Nephew Medical Ltd, Apr. 2014.

Allevyn Wound Dressings Pamphlet, Smith & Nephew, Inc., 2008.

International Search Report and Written Opinion for International Application No. PCT/IB2013/001469, dated Feb. 7, 2014.

KCI Licensing, PREVENA™ Incision Management System, Jan. 2010.

KCI Licensing, PREVENA™ Incision Management System Patient Guide, Jan. 2010.

KCI, PREVENA™ Incision Management System Clinician Guide, Jan. 2010.

Smith & Nephew, "PICO Simplified Negative Pressure Wound Therapy", sales brochure in 2 pages, Jul. 2011, Australia and New Zealand.

Design U.S. Appl. No. 29/551,890.

Design U.S. Appl. No. 29/548,270.

Teder et al., "Continuous Wound Irrigation in the Pig," *Journal of Investigative Surgery*, vol. 3, 1990, pp. 399-407.

European Extended Search Report, re EPO Application No. 09839009.9, dated Feb. 23, 2016.

International Invitation to Pay and Partial Search Report re PCT/IB2013/001469, dated Nov. 25, 2013.

* cited by examiner

Primary Examiner — David G Muller

(74) *Attorney, Agent, or Firm* — Knobbe, Martens, Olson & Bear LLP

(57)

CLAIM

The ornamental design for a flexible port used to connect a wound dressing to a source of negative pressure, as shown and described.

DESCRIPTION

FIG. 1 is a perspective top view of an ornamental design of one embodiment of a flexible port used to connect a wound dressing to a source of negative pressure.

FIG. 2 is a top plan view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1. FIG. 3 is a bottom view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1. FIG. 4 is a far side view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1. FIG. 5 is a near side view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1. FIG. 6 is a front view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1. FIG. 7 is a rear view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1. FIG. 8 is an exploded view of the flexible port used to connect a wound dressing to a source of negative pressure of FIG. 1.

FIG. 9 is an enlarged view of the rear view of FIG. 6; and, FIG. 10 is an enlarged view of the front view of FIG. 7.

The broken lines illustrate portions of the flexible port used to connect a wound dressing to a source of negative pressure which form no part of the claimed design.

1 Claim, 8 Drawing Sheets

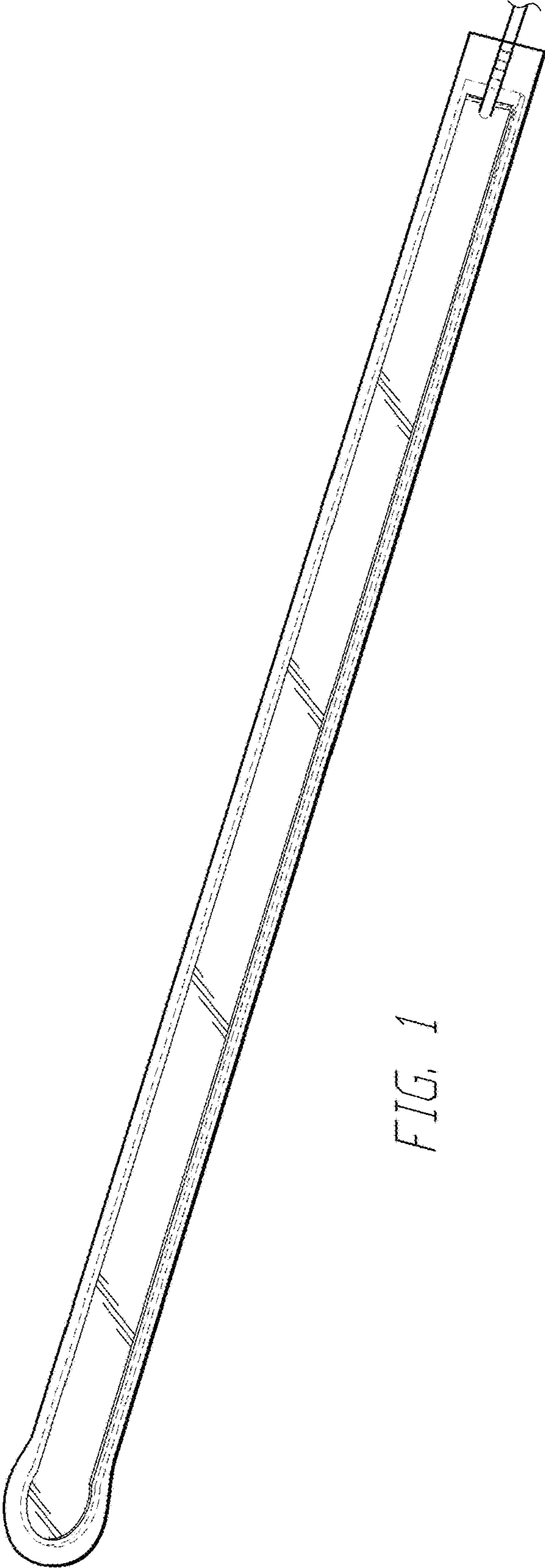


FIG. 1

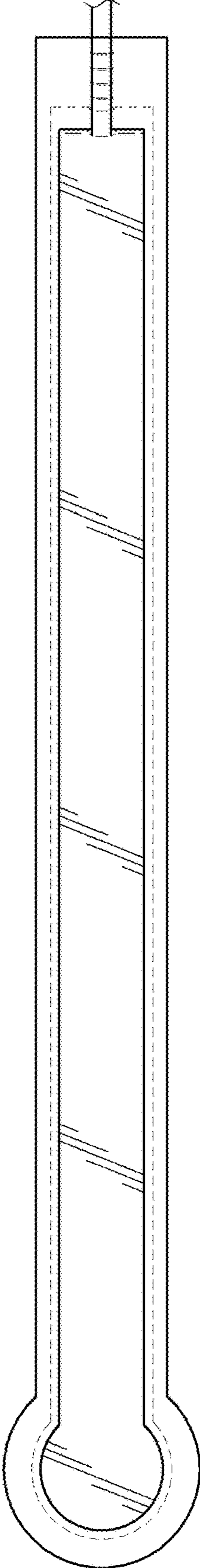


FIG. 2

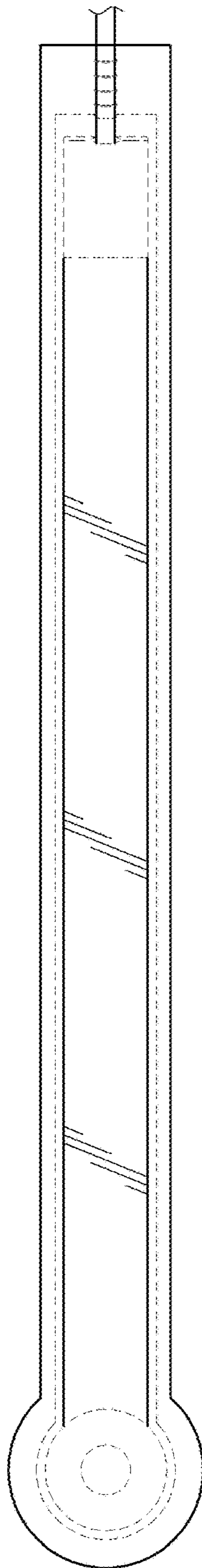


FIG. 3



FIG. 4

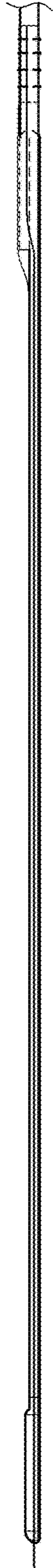


FIG. 5



FIG. 6

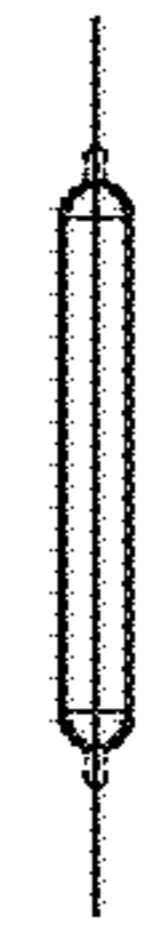


FIG. 7

FIG. 8

