



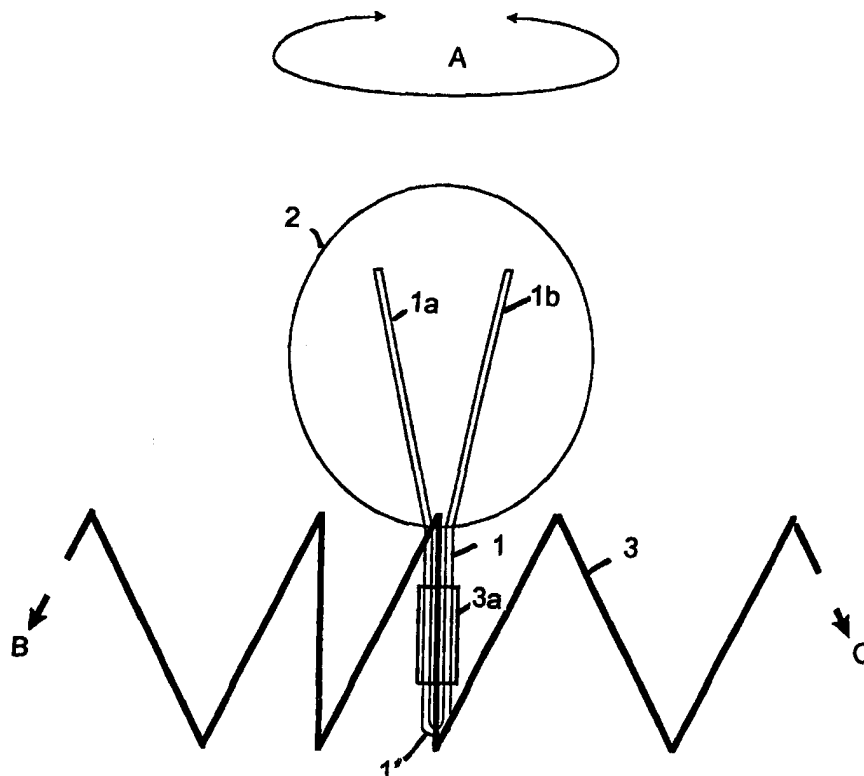
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/EP98/03656 (22) International Filing Date: 17 June 1998 (17.06.98) (30) Priority Data: PCT/IT97/00140 17 June 1997 (17.06.97) WO (34) Countries for which the regional or international application was filed: IT et al. (71)(72) Applicant and Inventor: CAMILLI, Sante [IT/IT]; Via Console d'Elsa, 15, I-00139 Rome (IT). (74) Agent: GERVASI, Gemma; Notarbartolo & Gervasi, Corso di Porta Vittoria, 9, I-20122 Milan (IT).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 25 March 1999 (25.03.99)

(54) Title: IMPLANTABLE VALVE FOR BLOOD VESSELS

(57) Abstract

Implantable valve for use in blood vessels, particularly veins, more particularly venous confluences comprising a first supporting element and a second operative element; said first supporting element can be in the form of a bent body or of a cut sheet; and said operative element can be joined to the first one, by known means, e.g., glueing, soldering, sewing, embedding, embodying, etc., or be integral with said first element. In the former case, the operative element can be made from a number of suitable materials, such as plastics, biological materials and of the same material as the first element; in the latter case such operative element is of the same material as the first element. A catheter-based tool for remotely removing/rescuing the eventually misplaced/mislodged valve, comprising a stiff operative probe-guide, thermally pre-shaped starting from a thermoreactive alloy wire, able to hook up the valve and to withdraw it from the body.



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INTERNATIONAL SEARCH REPORT

International Application No

PC1/EP 98/03656

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 A61F2/24

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 520 126 A (CAMILLI SANTE) 30 December 1992 see column 2, line 2 - line 26; figures	1-4,6, 13,26
A	---	17
X	FR 2 307 516 A (GIRAUX JEAN) 12 November 1976 see column 2, line 2 - line 26; figures	1-4,6, 13,26
A	---	1-3,5,6, 10-13, 17,19,26
	EP 0 667 133 A (CAMILLI SANTE) 16 August 1995 cited in the application see column 4, line 22 - column 5, line 44; figures --- -/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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- "Z" document member of the same patent family

Date of the actual completion of the international search

27 October 1998

Date of mailing of the international search report

28. 01. 1999

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INTERNATIONAL SEARCH REPORT

International Application No

PC1/EP 98/03656

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 4 994 077 A (DOBBEN RICHARD L) 19 February 1991</p> <p>see the whole document ---</p>	<p>1-3,5,6, 10-13, 16,26,34</p>
A	<p>DE 195 32 846 A (BERG GEORG DR) 13 March 1997</p> <p>see the whole document ---</p>	<p>1-3,13, 14,26</p>
A	<p>US 5 332 402 A (TEITELBAUM GEORGE P) 26 July 1994</p> <p>see the whole document ---</p>	<p>1,3,5,6, 10, 13-15, 26,28, 32,33</p>
A	<p>EP 0 145 166 A (RAYCHEM CORP) 19 June 1985</p> <p>see page 10, line 1 - page 11, line 34 -----</p>	<p>1,13-15, 26,28, 32,33</p>

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP 98/ 03656

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 29-31
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body
by surgery
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such
an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all
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2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment
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3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-23, 26, 28, 32, 33, 34

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-23,26,28,32,33,34

Implantable valve comprising a supporting element and an operative element joined to or being integral with the supporting element and both made of the same material

2. Claims: 24,25,27

Catheter-based tool for remote removing of implanted valves comprising a probe-guide made from shape memory material and being inside a working catheter whereby the tool is inserted in a larger transport catheter and slides forwards and backwards due to pushing / pulling means

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/EP 98/03656

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