US005382259A

United States Patent [19]

Phelps et al.

[11] Patent Number: 5,382,259

[45] Date of Patent: Jan. 17, 1995

[54] VASOOCCLUSION COIL WITH ATTACHED TUBULAR WOVEN OR BRAIDED FIBROUS COVERING

[75] Inventors: **James J. Phelps**, Sunnyvale; **Nga T. Van**, Santa Clara, both of Calif.

[73] Assignee: **Target Therapeutics, Inc.**, Fremont, Calif.

[21] Appl. No.: **965,973**

[22] Filed: **Oct. 26, 1992**

[51] **Int. Cl.**[6] **A61F 2/02**; A61B 17/00

[52] **U.S. Cl.** **606/151**; 623/1; 606/191

[58] **Field of Search** 606/108, 191, 198, 194, 606/151; 604/107, 104, 105; 623/1, 12

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,687,129	8/1972	Nuwayser	606/191
3,834,394	9/1974	Hunter et al. .	
4,754,685	7/1988	Kite et al. .	
4,870,887	10/1989	Tresslar et al. .	
4,921,484	5/1990	Hillstead .	
4,994,069	2/1991	Ritchart et al. .	
5,064,435	11/1991	Porter	606/198
5,078,726	1/1992	Kreamer	606/194
5,108,407	4/1992	Geremia et al.	606/108
5,151,105	9/1992	Kwan-Gett	606/191
5,211,658	5/1993	Clouse .	

FOREIGN PATENT DOCUMENTS

385925	9/1990	European Pat. Off.	623/1
464755	1/1992	European Pat. Off.	623/12
2671482	7/1992	France	623/1

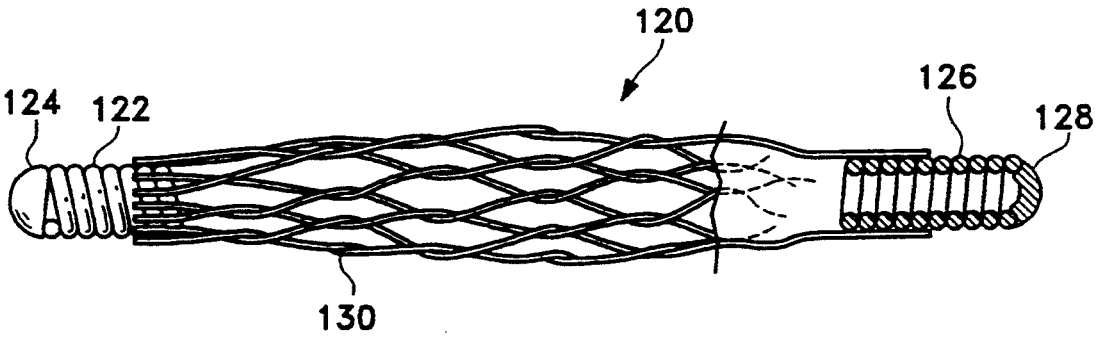
OTHER PUBLICATIONS

U.S. patent application Ser. No. 07/771,013 (filed Oct. 2, 1991).

Primary Examiner—Tamara L. Graysay

Attorney, Agent, or Firm—Morrison & Foerster

[57] **ABSTRACT**

This invention is in the field of vasoocclusion devices. More particularly, it relates to a vasoocclusion coil which may be segmented, onto which a fibrous, woven or braided, tubular covering or element is attached.

27 Claims, 11 Drawing Sheets