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# United States Patent [19]

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**Kupiecki et al.**

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[54] ANEURYSM CLOSURE DEVICE ASSEMBLY

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### [57] ABSTRACT

[\*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

This is an artificial occlusion kit for implanting and retaining an artificial occlusion device in a body space adjacent to and extending from a body lumen in a mammal. The includes at least one occlusion device and a retaining device for blocking the migration of the occlusion device out of the occlusion site. The retaining device is radially expandable at a retaining site adjacent the body space to be occluded to a diameter that is sufficient to engage the body lumen wall at the retaining site and form a barrier across the entrance zone of the body space to be occluded. The expanded retaining device also forms a lumen for flow through body lumen at the retaining site. At least one semi-penetrable space may also be provided in the retaining device, allowing introduction of occlusion devices into the body space to be occluded, but preventing subsequent migration of the occlusion devices out of the body space. This semi-penetrable space may also be distensible to allow for delivery of occlusion devices therethrough. An introducer wire or a tapered-tip delivery catheter may be used to distend the distensible space and deliver the occlusion devices. The retaining device structure may further include a radiopaque metal wire wound into a primary helix over an inner core member made of a superelastic alloy of nickel and titanium. An implantable medical device assembly is also provided, having the structure described for the retaining device of the novel artificial occlusion kit, and which is attached to an elongate pusher via a sacrificial link that is electrolytically dissolvable.

[21] Appl. No.: **08/690,183**

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[51] Int. Cl.<sup>6</sup> ..... **A61M 31/00**

[52] U.S. Cl. .... **606/32; 606/108; 606/194; 604/52; 604/104**

[58] Field of Search ..... **606/32-42, 45-50, 606/108, 191, 194; 604/104, 52; 579/533**

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**21 Claims, 10 Drawing Sheets**

