Title (en)

MINIMALLY-INVASIVE DIRECT CARDIAC MASSAGE APPARATUS AND METHOD

Title (de)

GERÄT UND VERFAHREN ZUR MINIMALINVASIVEN DIREKTEN HERZMASSAGE

Title (fr)

DISPOSITIF ET PROCEDE DE MASSAGE CARDIAQUE DIRECT AVEC PENETRATION INVASIVE MINIMUM

Publication

EP 1237617 A2 20020911 (EN)

Application

EP 00992659 A 20001207

Priority

- US 0042636 W 20001207
- US 46019599 A 19991213

Abstract (en)

[origin: WO0141695A2] A medical device is disclosed having a spring made up of a plurality of elongate members in substantial juxtaposition so as to be substantially parallel. The spring is alternately deployed and stowed in use of the device, and has a relaxed state and a stressed state. The spring may be arcuate in its relaxed and deployed state and be generally linear in its stressed and stowed state. The elongate members may be configured so that each contributes to the overall bending strength of the spring but none are stressed beyond its respective yield stress in the stressed state of the spring. The elongate members may be flat in cross-section and together define a laminated structure. One of the elongate members may terminate short of a distal tip of the spring so that it is more flexible at the tip than at a proximal base. The device may be a heart massager with plurality of springs deployed from the end of a tubular cannula to combine to form an inverted umbrella-shape with a fabric stretched over the assembly. The material of the elongate members may be Nitinol and the maximum stress imposed on each is less than that which would induce a martensitic phase change.

[origin: WO0141695A2] A medical device (20) has a spring made up of a plurality of elongate members (42) in substantial juxtaposition so as to be substantially parallel. The spring is alternately deployed and stowed in use of the device (20), and has a relaxed state and a stressed state. The spring may be arcuate in its relaxed and deployed state and be generally linear in its stressed and stowed state. The elongate members may be configured so that each contributes to the overall bending strength of the spring but none are stressed beyond its respective yield stress in the stressed state of the spring. The elongate members may be flat in cross-section and together define a laminated structure. One of the elongate members (204a) may terminate short of a distal tip (206) of the spring so that it is more flexible at the tip (206) than at a proximal base (210). The device (20) may be a heart massager with plurality of springs deployed from the end of a tubular cannula to combine to form an inverted umbrella-shape with a fabric (44) stretched over the assembly. The material of the elongate members may be Nitinol and the maximum stress imposed on each is less than that which would induce a martensitic phase change.

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CPC (source: EP)

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Citation (search report)

See references of WO 0141695A2

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