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# United States Patent [19]

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Wolff

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## [54] ARTICULATED STENT

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### Related U.S. Application Data

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[51] Int. Cl.<sup>5</sup> ..... **A61F 29/00**

[52] U.S. Cl. .... **623/1**

[58] Field of Search ..... 623/1, 2, 11, 12, 66;  
606/191, 198

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## [57] ABSTRACT

In a first embodiment a number of stent segments are connected together by hinges welded in place to provide articulation between the stent segments. The hinges can be, among other shapes, either a straight wire or a coiled wire of biocompatible material. A second embodiment uses a stent of a previous invention made up of a number of wires welded together for the stent segments with connection between adjacent stents provided by having one of the wires of adjacent stents continue between these adjacent stents to provide a hinge action. In this embodiment the wire portion extending between the segments is ground to a smaller diameter than the wire of the stent segment itself, to provide the necessary hinge flexibility. This articulated stent, made up of a number of individual stent segments, gives support for curved arteries, with the hinges between the segments providing both articulation and spacing between the stent segments. This articulated stent is tailored to match the curvature existing in the artery and is positioned at the site with the necessary preferred angular orientation using a previous catheter system.

19 Claims, 3 Drawing Sheets

