United States Patent [19]

Spears

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[54] **METHOD AND APPARATUS FOR ANGIOPLASTY**

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[51] **Int. Cl.**[4] **A61M 29/02**

[52] **U.S. Cl.** **128/303.1**; 128/344; 128/348.1

[58] **Field of Search** 128/303.1, 303.11, 303.12, 128/303.14, 303.17, 344, 304, 348.1; 604/20, 21

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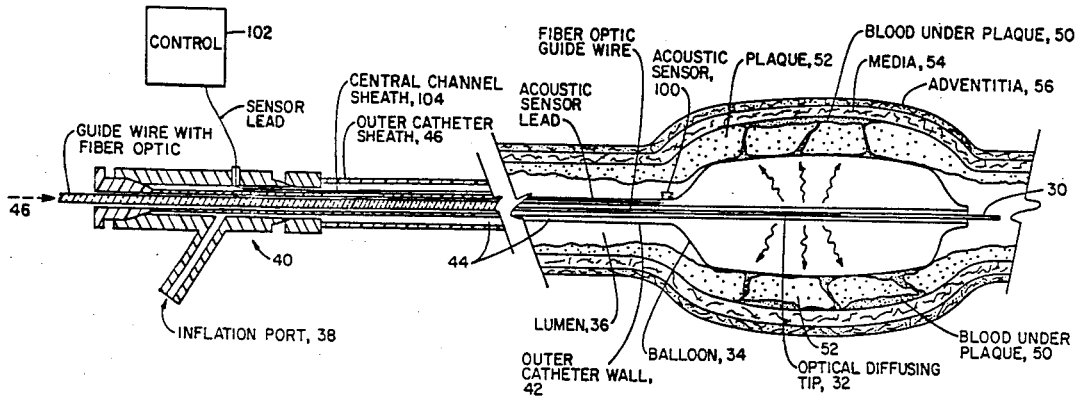
[57] **ABSTRACT**

The region surrounding the balloon utilized in percutaneous transluminal coronary angioplasty is heated by means within the balloon or within the skin of the balloon upon inflation of the balloon such that disrupted tissues of the plaque in the arterial wall are heated in order to fuse together fragmented segments of tissue and to coagulate blood trapped within dissected planes of tissue and within fissures created by wall fracture such that upon subsequent balloon deflation a smooth cylindrically-shaped channel results, thereby to prevent collapse of any flap of material which could cause either abrupt arterial closure and an acute myocardial infarction or gradual restenosis at the site of balloon inflation.

65 Claims, 6 Drawing Sheets