

[54] **DRUG-DELIVERY DEVICE WITH STRETCHED, RATE-CONTROLLING MEMBRANE**

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[57] **ABSTRACT**

Drug-delivery device for releasing drug at a controlled rate for a prolonged period of time is formed from a solid inner matrix material having drug dispersed therethrough. Surrounding the inner matrix is an intimately contacting outer polymeric membrane, insoluble in body fluids, which contracts about the matrix as the matrix decreases in volume upon drug release. Both the inner matrix material and the outer polymeric membrane are permeable to passage of the drug by diffusion but the drug diffuses through the outer polymer membrane at a lesser rate so that passage through the polymeric membrane is the drug release rate controlling step. The integrity of the intimate contact between the membrane and the matrix is assured even upon matrix depletion immediately following manufacture and for an extended period of time by reason of the reserve elastic recovery stress in the membrane.

9 Claims, 3 Drawing Figures

