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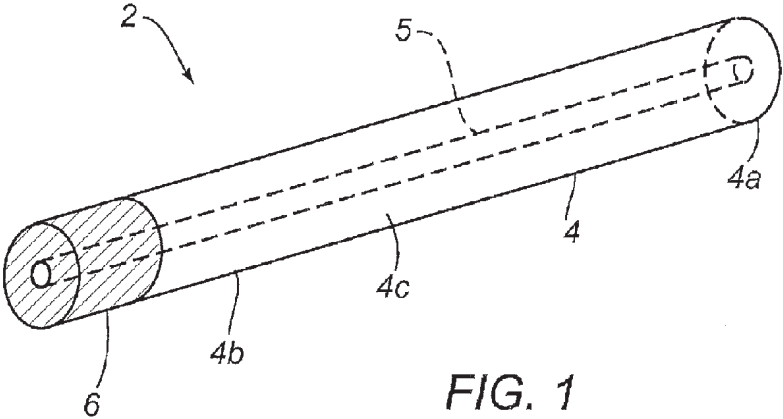
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(54) Title: CHITOSAN AND POLYETHYLENE GLYCOL COPOLYMERS AND METHODS AND DEVICES FOR USING SAME FOR SEALING A VASCULAR PUNCTURE



(57) Abstract: A sealant is provided for sealing a puncture through tissue that comprises an elongate first section including a proximal end, a distal end, and a cross-section sized for delivery into a puncture through tissue, and a second section extending from the distal end of the first section. The first section may be formed from a freeze-dried hydrogel that expands when exposed to physiological fluid within a puncture. The first section comprises chitosan and at least one additional polymer. The second section may be formed from a solid mass of non-freeze-dried, non-cross-linked hydrogel precursors. The precursors are in an unreactive state until exposed to an aqueous physiological environment, whereupon the precursors undergo *in-situ* crosslinking with one another to provide an adhesive layer bonded to the first section. The second section may further comprise chitosan. Apparatus and methods for delivering the sealant into a puncture through tissue are also provided.