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(54) **METHODS FOR INTEGRATING A FUNCTIONAL COMPONENT INTO A MICROFLUIDIC DEVICE**

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USPC **264/33**; 422/50; 422/68.1; 422/502; 422/503

(58) **Field of Classification Search**
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See application file for complete search history.

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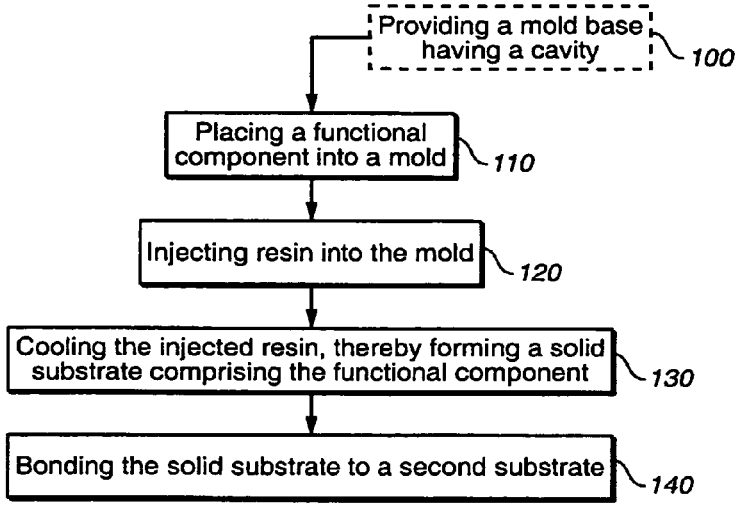
(57) **ABSTRACT**

Injection molding is used to form microfluidic devices with integrated functional components. One or more functional components are placed in a mold cavity, which is then closed. Molten thermoplastic resin is injected into the mold and then cooled, thereby forming a solid substrate including the functional component(s). The solid substrate including the functional component(s) is then bonded to a second substrate, which may include microchannels or other features.

16 Claims, 3 Drawing Sheets