

- [54] ITERATIVE AND REGENERATIVE DNA SEQUENCING METHOD
- [75] Inventor: Douglas H. Jones, Iowa City, Iowa
- [73] Assignee: The University of Iowa Research Foundation, Iowa City, Iowa
- [21] Appl. No.: 742,755
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- [51] Int. Cl.<sup>6</sup> ..... C12Q 1/68; C12P 19/34
- [52] U.S. Cl. .... 435/6; 435/91.1; 435/91.2
- [58] Field of Search ..... 435/6, 91.1, 91.2

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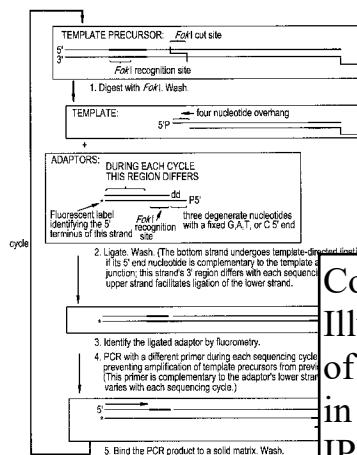
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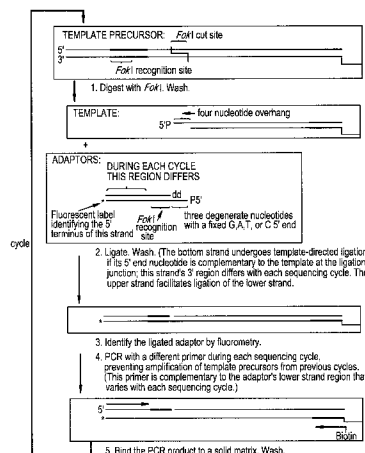
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- Primary Examiner*—Kenneth R. Horlick  
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[57]

**ABSTRACT**

An iterative and regenerative method for sequencing DNA is described. This method sequences DNA in discrete intervals starting at one end of a double stranded DNA segment. This method overcomes problems inherent in other sequencing methods, including the need for gel resolution of DNA fragments and the generation of artifacts caused by single-stranded DNA secondary structures. A particular advantage of this invention is that it can create offset collections of DNA segments and sequence the segments in parallel to provide continuous sequence information over long intervals. This method is also suitable for automation and multiplex automation to sequence large sets of segments.

**118 Claims, 9 Drawing Sheets**

FIG. 1

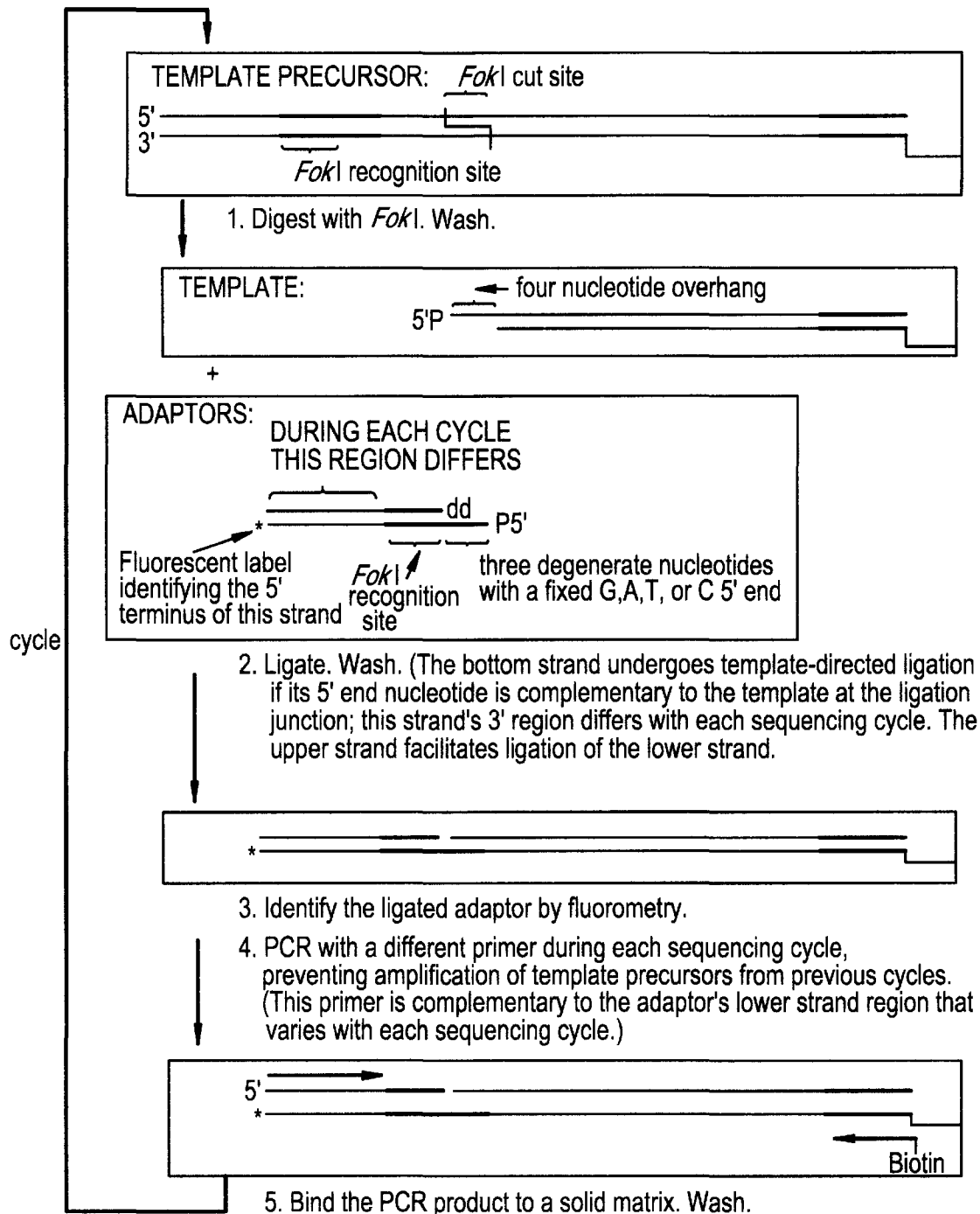
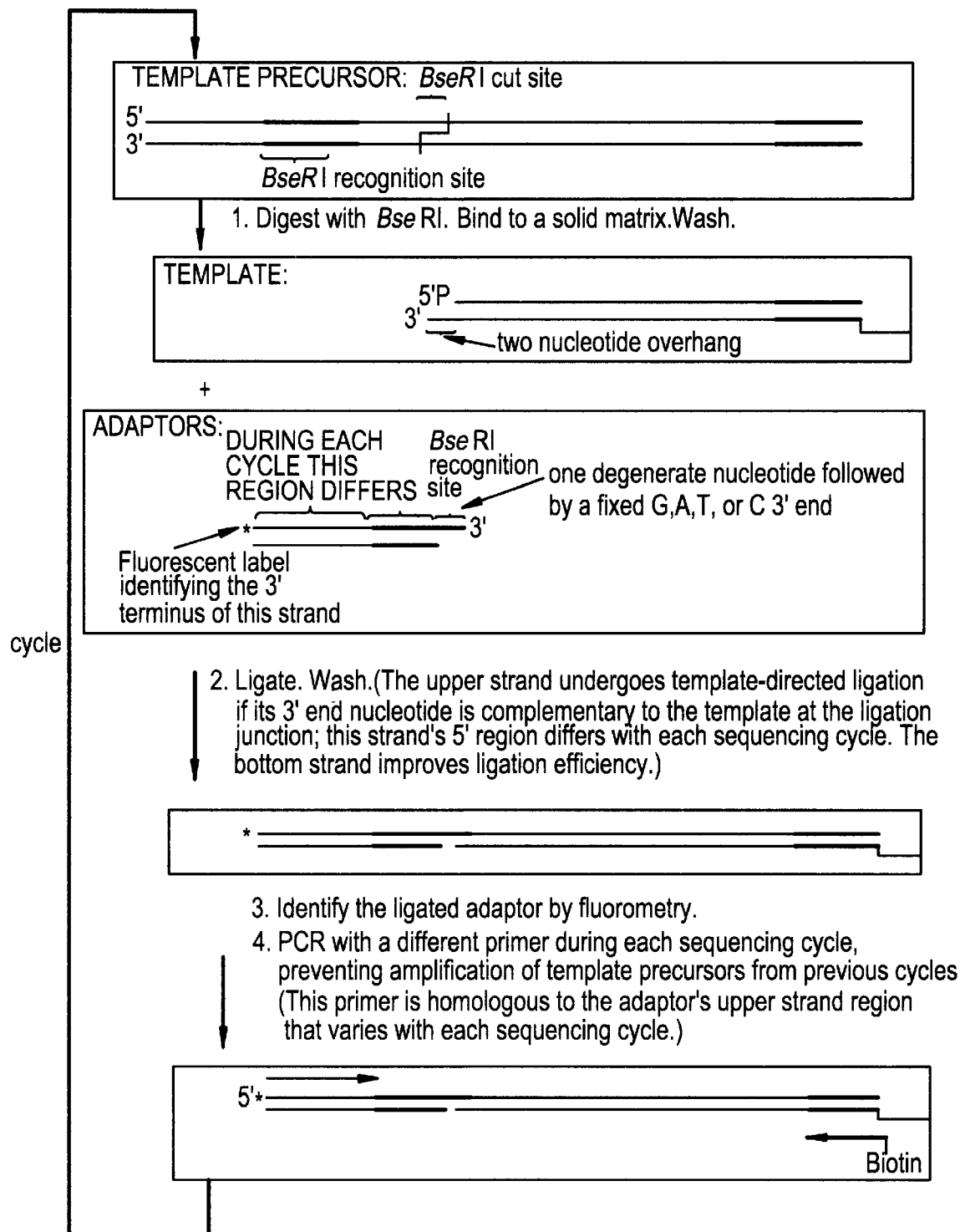


FIG. 2



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