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(54) Title: METHODS OF FORMING A FIBER, FIBER ACTUATORS, FIBER BUNDLE AND METHOD OF FORMING THE FIBER BUNDLE

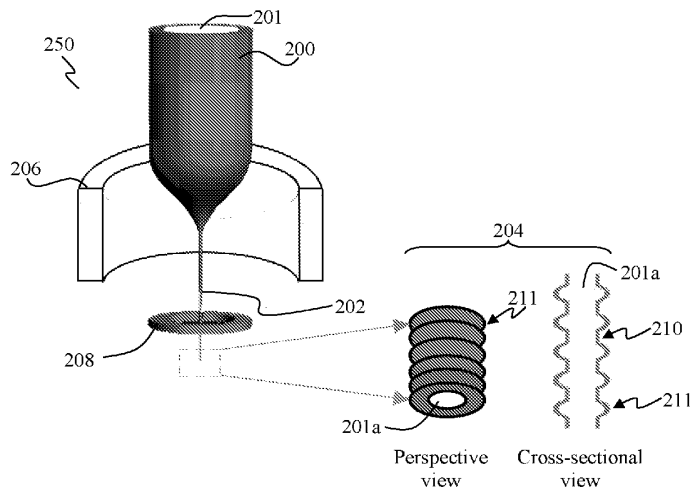


FIG. 2A

(57) Abstract: Methods of forming a fiber are provided. The methods include subjecting a preform to a thermal drawing process to draw the preform into a fiber. One of the methods further includes applying, at intervals, a compressive force to sections of the fiber along a length of the fiber during the thermal drawing process to reduce a dimension of the sections to form the fiber into an accordion-like fiber. Another of the methods further includes inducing a relative rotational movement between the preform and a region of the fiber during the thermal drawing process to twist the fiber until the twisted fiber becomes coiled to form a spring-like fiber. According to further embodiments of the present invention, fiber actuators, fiber bundle and a method of forming the fiber bundle are also provided.

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