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(54) Title: AUTOMATED SEWING AND THREAD MANAGEMENT

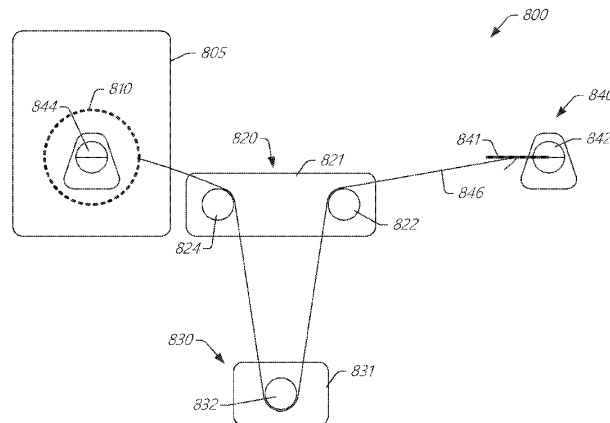


FIG. 8

(57) Abstract: The present disclosure relates to automated systems, devices, and methods of sewing a target device such as a prosthetic implant device. The systems and methods include forming a stitch on the target device, adjusting a thread coupled to a needle used to form the stitch so that the thread is clear of (e.g., does not interfere with) a path of the needle, and applying a targeted tension to the thread to tension the stitch on the target device. The suturing process can also include providing different targeted tensions during formation of the stitch. The suturing process can also include providing different targeted tensions at different stages of the formation of the stitch to aid in forming the stitch, to clear the needle path of the thread, and/or to hold the stitch in place in preparation for the next stitch.

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