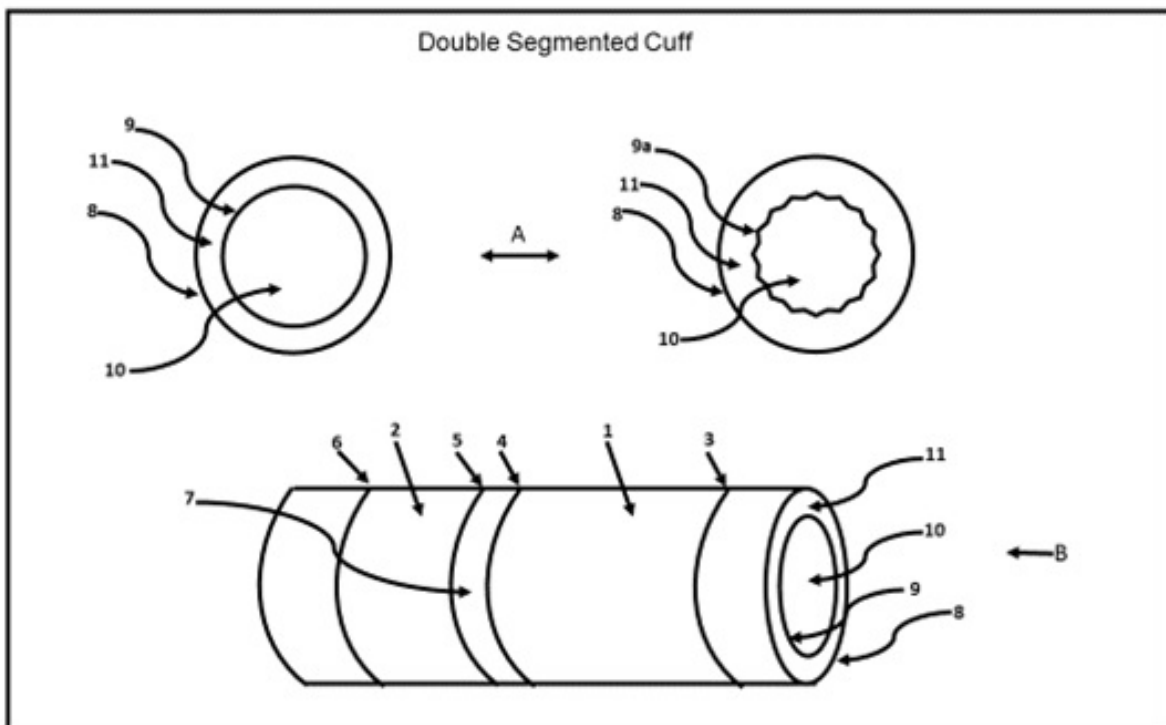


Double Extra-Aortic Counterpropulsion Device (RFT-532)

Invention Summary

Scientists at NDSU have developed a double extra-aortic cuff to treat heart failure. Counterpulsation devices (CPDs) have been the most widely used mechanical circulatory support (MCS) devices for treating heart failure (HF) patients. However, these CPDs provide insufficient cardiac output (CO) to meet the needs of New York Health Association (NYHA) ambulatory class IV HF patients. During extra-aortic CPD deflation, retrograde flow may result that reduces the forward kinetic energy (KE) of the aortic flow (AOF) which reduces the potential improvement in CO. To enhance the physiological benefits extra-aortic CPDs we have designed a non-blood contacting extra-aortic two-segmented CPD that can optimize the KE of the AOF and provide additional increase CO to patients' lives.



Benefits

- Reduces retrograde aortic flow
- Increases forward kinetic energy and cardiac outflow
- Non-blood contacting
- Timed sequential inflation and deflation

Patents

This technology is patent pending with fully preserved PCT patent rights and is available for licensing/partnering opportunities.

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