

Handheld/Portable Apparatus for the Production of Fine Fibers

The invention is a microfiber/nanofibers producing system in handheld/portable form using a speed-controlled and micro-controlled spinneret design that reduces chamber size while avoiding entanglement and enhancing uniformity of deposited fibers.

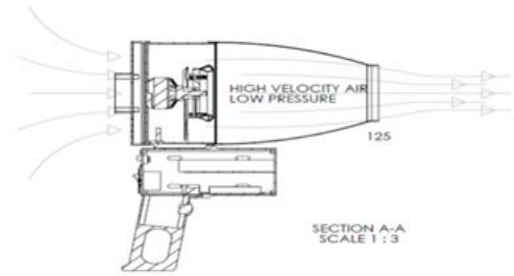
Problem

The apparatus commonly employed for producing nanofibers are often bulky and immobile. They have limited design in their utility in crucial point-of-need/point-of-care applications.

Solution

This invention can produce fine fibers with a portable/handheld apparatus. The apparatus has no needles, no high electric field, and has safety characteristics for in-situ applications, including medical therapeutics.

Schematic diagram of portable fiber producing device



Value Proposition

The proposed technology is an easily portable, handheld fiber-producing apparatus. The technology employs our proprietary centrifugal process with no high electric field.

Competitive Advantages

- The apparatus overcomes the limitations of immobile benchtop spinners because of its portability
- Uses centrifugal spinning method by which fibers are produced without the use of an electric field
- The fiber producing system can be aimed in a direction that the fibers are needed
- Fine fibers can be doped with a variety of active ingredients such as painkillers, anti-inflammatory, and antimicrobial agents to speed wound healing.

Status of Development

- Commercialization Ready
- Prototype demonstration in operational environment

IP Status

- Patent Pending: US16/652,928
- Licensing Available