Southern Illinois University System

Material Retrieval Device and Method of Using

Applications

- Kidney stone removal

Inventors

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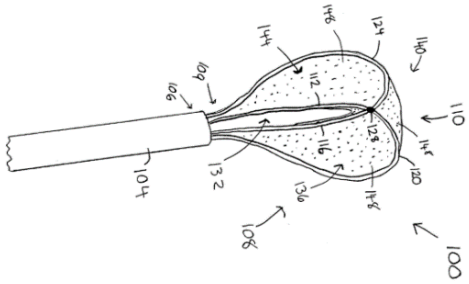
Urinary calculi affects roughly 1-5% of the population in the United States. There are many devices available to entrap calculi and remove them from the body. Generally, these devices are composed of a basket or entrapment device that has three or more wires that are used to “trap” the stone. A handle is normally used to operate (mainly open and close) the wires. These devices are usually passed through an instrument, typically an endoscope, enabling the operator to directly visualize stone manipulation and/or entrapment. Stones greater than or equal to 8 mm rarely pass without interventional measures. Using only a basket or entrapment device is usually unsuccessful because the stone is too large to extract. As a result, some type of lithotripsy is typically employed in combination with a basket or other entrapment device.

Invention

SIU researchers have developed a medical device configured to be inserted into a patient's body to retrieve calculi material. The device includes a basket assembly configured to transition between an expanded state and a collapsed state. When in the collapsed state, a side-facing opening may be closed so that the device may be inserted into the patient's body. While in the patient's body, the basket assembly may be transitioned to the expanded state so that the physician may maneuver material into the basket assembly via the side-facing opening. The basket assembly may later be transitioned into the collapsed state so that the basket assembly can be removed from the patient's body.



Key Advantages

- Device is configured to transition between various states
- Collapsed state allows for easy insertion in and out of patient’s body
- Expanded state allows physician to maneuver material into the basket

Status

U.S. patent #7,914,540 was issued on March 29, 2011. The technology is available for license.

Other opportunities related to this technology, included but not limited to sponsored and/or collaborative research, may be available. Please reach out to the designated contact identified at left for more information.