US 20220361291A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2022/0361291 A1

Tremel et al. (43) Pub. Date: Nov. 10, 2022

(54) **MOVEABLE GRIPPER FOR GRIPPING A CONTAINER AND HEATING CONTENTS OF THE CONTAINER THROUGH DYNAMICALLY CONTROLLED THERMAL CONTACT AND HEAT SETTINGS**

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(21) Appl. No.: **17/313,177**

(22) Filed: **May 6, 2021**

Publication Classification

(51) **Int. Cl.**

H05B 1/02	(2006.01)
B25J 13/08	(2006.01)
B25J 15/00	(2006.01)
H05B 3/06	(2006.01)
G06N 20/00	(2006.01)

(52) **U.S. Cl.**

CPC ***H05B 1/023*** (2013.01); ***B25J 13/08*** (2013.01); ***B25J 15/0038*** (2013.01); ***H05B 3/06*** (2013.01); ***G06N 20/00*** (2019.01); *H05B 2203/005* (2013.01)

(57) **ABSTRACT**

Embodiments of the invention are directed to an apparatus that includes a moveable gripper element including a flexible inner sleeve. A mechanical energy source mechanism is communicatively coupled to the moveable gripper element, and a sensor network is communicatively coupled to the moveable gripper. A controller is communicatively coupled to the mechanical energy source mechanism and the sensor network. The flexible inner sleeve defines an adjustable opening. The controller controls the mechanical energy source mechanism to transfer to the moveable gripper element a gripping force configured to move the moveable outer sleeve, reduce a size of the adjustable opening, and bring the flexible inner sleeve into an initial level of thermal contact with a container positioned within the adjustable opening. The controller is configured to, subsequent to establishing the initial level of thermal contact, control the mechanical energy source mechanism to make adjustments to the gripping force.