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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0361294 A1**  
(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**(52) **U.S. Cl.**CPC ..... *H05B 3/06* (2013.01); *H05B 3/146*  
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**Strubhar**, Newark, DE (US)(21) Appl. No.: **17/313,141**(22) Filed: **May 6, 2021****Publication Classification**(51) **Int. Cl.**  
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*H05B 3/10* (2006.01)  
*B25J 15/00* (2006.01)(57) **ABSTRACT**

Embodiments of the invention are directed to an apparatus that includes a moveable gripper element that includes a flexible inner sleeve. A mechanical energy source mechanism is communicatively coupled to the moveable gripper element, and the flexible sleeve defines an opening. The mechanical energy source mechanism transfers 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 mechanical energy source mechanism is configured to, subsequent to establishing the initial level of thermal contact, make adjustments to the gripping force, wherein the adjustment to gripping force increase thermal contact points at an interface between the flexible inner sleeve and the container; and displace air from the interface between the flexible inner sleeve and the container.

